which consisted of:

Alumina,	6·84
Silica,	7·00
Carbonate of lime,	0·67
Oxide of iron.	0·83
Vegetable, animal and saline matter,	1·33
	16·67

4. A good wheat soil containing three-fifths of sand, or,

Siliceous sand,	60·
Fine matter,	40·
	100·

which 40 per cent. contained

Alumina,	11·6
Silica,	12·8
Carbonate of lime,	11·2
Animal and vegetable matter and moisture,	4·4
	40·0

5. A rich soil containing three-fifths fine siliceous sand and 40 per cent. fine matter, which yielded

Alumina,	14·0
Silica,	16·4
Carbonate of lime,	5·6
Oxide of iron,	1·2
Vegetable, animal and saline matter,	2·8
	40·0

6. A very productive alluvial soil containing one-eighth sand and 87½ per cent. fine matter, which gave by analysis

Alumina,	5·06
Silica,	4·05
Carbonate of lime,	72·92
Oxide of iron,	1·62
Vegetable, animal and saline matter,	3·85
	87·50

7. An excellent soil for pasture contained one-eleventh of coarse sand, or

Coarse sand,	9·09
Finely divided matter,	90·91
	100·00

The 90·91 per cent. fine matter consisted of

Alumina,	6·36
Silica,	12·73
Carbonate of lime,	57·27
Oxide of iron,	1·82
Vegetable, animal and saline matter,	12·73
	90·91

§ 108. To apply the principles and the observations laid down, we may remark that the heavy soils of Pencader and other hundreds in New Castle county may be improved by a yellow gravelly sand and loam which is found in abundance in those districts; the clayey soil of the ridge generally by the application of a yellow sand found in quantity in its vicinity throughout the State; the middle section of Kent containing a sandy loam is sufficiently tenacious to yield profitably, and may be best improved by a judicious, not exhausting system of tillage; the light sandy soil of Sussex and the lower part of Kent should be rendered more coherent by the application of yellow clay or even a sandy loam, or where these are not convenient even by light colored clay, and then a course of improvement by proper tillage will amply reward the outlay of capital; the stiff, clayey bottoms of Sussex will be benefitted by applying sand or a sandy loam, which are every where abundant. There are however certain bluish colored clays both in Kent and Sussex, secs. 82, 86, 89, 91, which by exposure to the air become coated with an effloresence of copperas (recognised by its styptic taste,) in such quantity as to be injurious to land; even these may be employed in default of better, provided lime be used at the same time, for the copperas will then be decomposed and the lime converted into plaster. It may be urged that the moderate value of land in the lower part of the State will not warrant such an expenditure. This is undoubtedly true if it were advised to cover a large tract immediately, but it may be done by slow degrees, commencing with a small lot of ground, and if the result be favorable, the system may be gradually extended according to the means of the individual. Nor should it be forgotten that the improvement here recommended will prove more permanent than all others and will be the foundation on which they can rest with the greater certainty; for all are aware that organic manures have an immediate but transient action, whereas a soil of the proper texture may be viewed as permanently fertile, capable of producing more abundantly with the least expenditure.

§ 109. A view of the mineral constituents of plants, as developed by analysis of their ashes will show how varied should be the nature of the substances in soils. The following analyses of ashes are extracted from Berthier's chemistry, and their accuracy may not be questioned.

1. *Ashes of Oak Wood.*

Alcaline Salts.	
Carbonic acid,	28·4

Sulphuric "	5·9
Muriatic "	4·0
Silica,	1·0
Potassa, Soda,	60·7
	100·0

Insoluble substances.

Carbonic acid,	30·1
Phosphoric "	7·0
Silica,	1·7
Lime,	44·7
Magnesia;	7·9
Oxide of iron,	0·1
" manganese,	2·9
Carbon, &c.	4·5
	98·9

2. *Ashes of Straw.*

Sulphate of potassa,	0·4
Muriate "	3·2
Carbonate "	trace
Silicate "	13·0
Silica, "	71·5
Carbonate of lime,	9·6
Phosphate, "	2·3
	100·0

The following analysis of a good siliceous sandy soil is taken from the work referred to sec. 107.

Gravel,	13·25
Fine sand,	53·
Undecomposed vegetable fibre,	3·50
Water of absorption,	4·75
Finely divided matter,	20·25
Loss of analysis, (chiefly water,)	5·25
	100·

The 20·25 per cent. of finely divided matter consisted of:

Alumina,	3·25
Silica,	4·25
Carbonate of lime,	4·75
Carbonate of magnesia,	·75
Sulphate of lime (gypsum,)	·50
Oxide of iron,	1·25
Matter, chiefly vegetable, (insoluble)	3·75

Soluble matter, chiefly common salt and vegetable extract,	·75
	20·25

There was no potassa apparently found unless a small quantity were contained in the three-quarters of one per cent. of soluble matter, and yet there is no doubt that plants grown in that soil would yield an abundance of that alkali in their ashes, which they must have obtained from the soil. We perceive from the above analysis the difficulty of detecting potassa in small quantity, and from the two former, the necessity or propriety of introducing a larger amount of it into the ground in order to insure more abundant fertility. Now all good farmers are agreed that of mineral manures, ashes is one of the best, whether leached or unleached; and it has been shown above, that it contains potassa and lime in the greatest quantity; even when leached, it still retains no inconsiderable amount of potassa, and a larger quantity of lime, when the latter is employed for running off lye, as is usually the case. What better materials indeed do we need for yielding the fixed constituents of plants, than the same obtained from plants? From the large proportion of lime and potassa in the ashes of plants, and their great fertilising powers when applied to land, we might suppose that a soil should be made replete with them; it is, however, contrary to experience, for an excess will produce equal sterility with a deficiency, and hence the assertion, sec. 103, that silica, alumina, and oxide of iron act as diluents to the other constituents. The muriatic acid is not uncommon in the heavier soils of Delaware, but this acid with the sulphuric and phosphoric are chiefly supplied from organic manures. In conclusion, then, silica and alumina should constitute a very large proportion of the mineral basis of a soil, the former in the state of sand preventing the too adhesive properties of the latter, an effect often produced by oxide of iron, sec. 105; potassa and lime should next follow in their ratios, magnesia in small quantity and the above-mentioned acids also in small proportion. It has been stated, sec. 108, how soils might be improved in texture; and in order to communicate the other constituents, we should employ mineral substances, such as green sand, ashes lime (which generally contains magnesia) &c., and organic manures. Some exception might be made to the necessity of this rule in all cases, and particularly in rocky regions, where the soil often partakes of the nature of the subjacent rock. Thus in the upper hundreds of New Castle county, the detritus of gneiss forms a large proportion of the soil, and introduces substances containing a variety of ingredients, for felspar and mica contain potassa, and while the former is often subject to decomposition, secs. 25, and 157, the latter under peculiar circumstances sec. 157, is also affected, and their separated constituents enter into the soil.

§ 110. But even supposing that a soil is properly constituted, there are methods of increasing fertility to which some attention should be given. The light, drifting sands of the lower part of the State might be advantageously compressed by rolling when wet, and after drying. Nearly all soils, however, are apt to become too compact, and should be render-

ed looser by ploughing, harrowing, &c., the advantages of which are that the rootlets or fine fibres of roots, can ramify with greater freedom and even increase in number, by which a larger proportion of food may be received; that atmospheric air and moisture will be absorbed in greater abundance; that it diffuses the food of plants more uniformly; and that the temperature of the soil may be increased. It is partly with this view that naked fallowing was introduced, but as the utility of this process is at least doubtful, it will not be insisted on. Irrigation is of great utility, not merely in consequence of its supplying moisture, the medium for conveying food, but materials of fertility also, which are usually suspended in water. There is one species of irrigation practised to some extent in Delaware, on the marsh lands bordering on the river, by flooding, or suffering the ingress and egress of the tide on land, which has been embanked, by means of which a large portion of valuable matter suspended in the water is deposited, and gradually raises the surface of the marsh, sec. 101. A system of irrigation might he advantageously adopted on the numberless upland meadows throughout the State, by leading the waters of brooks in channels along the side of the meadows, and suffering it to flow over them through small lateral openings in the channels.

SECTION II.

Organic Manures or those of animal and vegetable origin.

§ 111. Both animal and vegetable substances in their ordinary mixed state undergo a remarkable change by the influence of air, heat and moisture, giving rise to a process which is called the putrefactive fermentation. That these changes are of a purely chemical nature, governed by the ordinary laws of affinity, experiments have fully demonstrated, but at the same time it is much to be regretted that few chemists have investigated them to the extent they deserve, since their results would undoubtedly prove of the highest utility to the noblest and most useful of all pursuits, the science and practice of agriculture. A rich garden-mould, that is, a a soil containing much decomposed organic matter has been found to contain, as the result of organic decomposition, a black or brownish black substance resembling charcoal, to which the name of Hemus-coal is applied, another brown substance with acid properties which is termed the Humic acid, and a third similar to the preceding in appearance, but possessing neither an alkaline nor an acid character, termed Humin. Berzelius applied the terms geine and geic acid to humin and the humic acid, but he has since laid them aside, giving preference to the names which are adopted in this memoir. By examining the mineral spring of Porla in Sweden, in his usual thorough and accurate manner he discovered the existence of two other substances which he calls the crenic and apocrenic acids (acids of a spring,) which he has since found to be products of puterfactive fermentation, and to be contained in some quantity in productive soils. These five substances then constitute the amount of our theoretic

knowledge of organic compounds formed in manures of animal and vegetable origin, but a broad and most useful field has been opened for chemical research, on the results of which the use of manures will eventually be based. A concise description of these substances, may not be amiss, as tending to elucidate a very important, but intricate subject.

§ 112. If a rich vegetable soil be extracted with water, we obtain a yellow solution, which by evaporation in a water-bath, leaves a yellow extract. By dissolving in a little water, a large portion remains containing humic acid; but the extract contains also crenic acid. If the earth after being extracted by water be treated with dilute muriatic acid, lime and magnesia with a little alumina and oxide of iron are dissolved, and then alcali takes up a large amount of humic acid, which was combined with those bases in the soil. After the action of alcali, a blackish substance still remains, humus-coal, which is probably the same as humin. Humin appears to exist under two forms, one of which is converted into humic acid by the action of bases, as potassa and lime, the other retains its indifferent properties. Humic acid as it occurs in the earth has neither alcaline nor acid properties, but if it be dissolved in alcali, then precipitated by an acid and washed with water, it becomes aqeous humic acid and possesses decidedly acid properties. It has a sour and astringent taste, and when evaporated to dryness is no longer soluble in water. It forms soluble neutral salts with potassa, soda and ammonia, being readily dissolved by them in a caustic, and sometimes in a carbonated state. With the alcaline earths, it gives powdery compounds, difficultly soluble in water; the humate of lime requiring 2000, that of magnesia 160 parts of water for solution; but after perfect drying they are insoluble. To the greater solubility of the magnesian salt we may attribute the injurious effects of magnesian limestone on soils containing much humic acid. Humate of alumina while moist is soluble in 4200 parts of water, but is very soluble in carbonated alkalies. A solution of proto-sulphate of iron not being precipitated by a humated alcali, it would appear that the protohumate of iron is soluble, while the perhumate requires 2300 of water, but it is dissolved in great quantity by carbonated alkali. Humus-coal, when exposed for a length of time to the air, becomes gradually soluble in alcali, and may then be precipitated as humic acid. It was supposed soon after the discovery of this acid, that it was the cause of fertility, for where a rich soil had been exhausted by excessive tillage, it was found to have lost humic acid in proportion to its exhaustion. This view is corroborated by experiments on the growth of plants, but since the discovery of the crenic acids, it is not to be regarded as the sole cause of fertilisation. Now the humin does not enter plants as such, but in the state of humic acid; and from the preceding we perceive that bases convert the former into the latter. Hence one of the advantages of ashing and liming lands, by which humic acid is formed, which in a more or less soluble state combined with those bases gains entrance into the rootlets and thus promotes fertility. To the action of protoxide of iron, may in part be attributed the utility of green sand as a fertiliser, and even alumina and peroxide of iron may act in a similar manner, although their salts are but partially soluble in water. But the greater part of these salts are rendered very soluble by

carbonated alcalies, and to this circumstance, we may in part attribute the advantages of potash and of stable-manure, which contains carbonate of ammonia.

§ 113. The detection of crenic acid in the spring of Porla, led Berzelius to look for it in the deposites of chalybeate waters, in ochres and bog-ores, from which it may be obtained by boiling with caustic potassa, until they appear like ordinary precipitated hydrate of peroxide of iron. By supersaturating the filtered liquid with acetic acid and adding acetate of copper, crenate of copper remains in solution or if thrown down is redissolved, leaving an insoluble residue of apocrenate of copper. The solution treated with carbonate of ammonia to saturate the acetic acid precipitates crenate of copper, which filtered off, mixed with water, and treated with sulphuretted hydrogen, gives insoluble sulphuret of copper. A filter separates the last precipitate with some difficulty, and the yellow solution passing through contains crenic acid. It is not yet pure, and must be evaporated to dryness *in vacuo*, treated with alcohol, which dissolves crenic acid and crenate of magnesia, and this solution also evaporated *in vacuo*. It is dissolved again in water, and treated with acetate of lead until a portion of the precipitate dissolves, leaving a brown residue of apocrenate of lead. The filtered solution is next thrown down by basic acetate of lead, producing insoluble crenate of lead, which mixed with water, and treated by sulphuretted hydrogen and filtered, gives a solution of pure crenic acid. By evaporating the solution to dryness *in vacuo*, we obtain a transparent mass colorless in thin, and pale yellow in thicker layers, but after perfect dryness it is a hard fissured body, opake, and of a yellow color. This is crenic acid as pure as Berzelius has yet obtained it. According to an analysis of Hermann, it consists of—

	By experiment.	*Atoms.*	*By calculation.*
Carbon	40·24	7	40·43
Hydrogen	7·69	16	7·54
Nitrogen	7·50	1	6·69
Oxygen	44·57	6	45·34

On which Berzelius remarks that the content of nitrogen appears to be too small.

§ 114. The importance of this acid to chemists, particularly to those who are interested in the application of science to the arts, and the deficiency of some of our chemical works in many of the later discoveries in the science induced the publication of the preceding method for obtaining the pure acid, and will be a sufficient apology for devoting a few moments to its compounds. It is decidedly acid, not only reddening vegetable blue colors, but communicating a sour taste in a solid state or in solution. It combines with silicic acid (flint,) so that alcali cannot wholly decompose the compound. It forms very soluble salts with the alcalies; those of the earths are less so, and with the metallic oxides, its compounds are very difficultly soluble, but by continued washing with water, they dissolve in a greater or less degree. Crenate of lime precipitates from a solution containing another salt, although it is somewhat soluble in pure water; the bicrenate

of lime is very soluble. Crenate of magnesia is more soluble, and its bi-salt still more so. Bicrenate of alumina is soluble, but there is also a neutral crenate of alumina and ammonia perfectly soluble in water. Crenate of protoxide of manganese is partially and the bi-salt perfectly soluble in water. Crenic acid will attack iron with difficulty so far as to form a very soluble bi-salt. Neutral proto-crenate of iron is also soluble, and may be directly obtained by diffusing yellow ochre in water, and passing sulphuretted hydrogen through it, but it is difficult to prevent its passing into a peroxide salt. To apply these observations as far as our limited knowledge of the subject will permit, we observe that crenic acid combines with silica, and it would be interesting to know the extent of its solubility either alone or with such substances as may be met with in soils, as it might unfold the manner in which silica is received into plants. From the degree of solubility of the salts of the alcalies, earths, and the two metallic oxides mentioned, it is evident that this acid may play a more important part in the fertility of soils than the humic acid. Allusion was made, sec. 105, to the greater fertility of yellow clay over white clay soils, and the mechanical causes of the difference pointed out; but the chief reason is of a chemical character, and refers evidently to the content of the crenic acids in the yellow ochrey matter which imparts its characteristic color to the land.

§ 115. If moist crenic acid be exposed to the action of the air, it is converted into the apocrenic. After acidifying the first alcaline solution obtained from the bog-ore, and precipitating by acetate of copper, sec. 113, it was observed that apocrenate of copper remained. The precipitate should be mixed with water, sulphuretted hydrogen passed through it, and the whole filtered. By evaporating the filtered liquid to dryness and treating with warm absolute alcohol, the pure apocrenic acid dissolves. Another portion, however, remains on the filter with the sulphuret of copper, from which it may be extracted by a solution of acetate of potassa; and by evaporating the last to dryness, and treating the residue with alcohol of 0 86, the apocrenate of potassa remains undissolved. It is dissolved in water, and precipitated by muriatic acid. When dry, apocrenic acid is blackish brown, full of fissures and gives a dark red powder; reddens vegetable blues, and has an astringent, but not an acid taste. The salts of apocrenic acid resemble the crenates, sec. 114, excepting that the former are blackish brown, and those of difficult solubility are still more so than the corresponding crenates. According to Hermann this acid contains—

	By experiment.	*Atoms.*	*By calculation.*
Carbon	62·57	14	62·11
Hydrogen	4·50	14	5·07
Nitrogen	15·00	3	15·41
Oxygen	17·63	3	17·47

The apocrenated alcalies are very soluble; those of the earths, as lime, are blackish precipitates, which by continual edulcoration gradually dissolve with a yellow color, but if the bases be in excess they are in-

soluble. It has so strong an affinity for alumina, that if hydrate of alumina be digested with apocrenate of potassa in solution, the whole of the acid is precipitated, and leaves a trace of crenic acid with the potassa, but a portion of the alcali has fallen down, so that an insoluble double salt is formed. Berzelius was unable to separate it from alumina by any process short of decomposition. Protapocrenate of iron is soluble and by exposure to the air forms a basic persalt. There is also a basic protapocrenate, which becomes brown in the air, and closely resembles the ochre deposited from the Porla spring. Although it is an exceedingly difficult matter to solve complex questions on the action of organic manures in the present imperfect state of our knowledge relative to these acids, yet on the assumption strengthened by observation that they play an important part in the vegetable economy, we are enabled to explain the mode of certain operations in agriculture. Thus, for example, if a soil contains an excess of earthy bases in comparison with the amount of organic matter, insoluble basic salts with the organic acids will result, constituting a soil of diminished fertility. The large quantity of manure requisite to render a clayey soil productive may be explained by the well-grounded supposition that much of the organic matter is rendered temporarily inert by its difficultly soluble combination with alumina and other earthy bases, while the very slow and gradual solution of its salts explains in part the fact that such soils yield for a greater length of time.

§ 116. The valuable series of experiments conducted by Berzelius did not terminate with the examination of these acids as obtained from the spring of Porla or ferruginous ores, for he was led to examine for their presence in putrefied vegetable matter, and as usual with all his operations with useful results. He procured the blackish brown pulverulent residue of an oak stem, which had putrefied in marshy ground, from which by a series of operations similar to those described above, secs. 113, 115 he obtained crenic and apocrenic acids, the latter differing in a few points from the same acid described in sec. 115, and in such a manner as led him to view it rather as a combination of that acid with the humic. He farther examined the action of nitric acid on charcoal and found the greater part of it converted into a yellow substance (not examined,) and two acids which resembled the crenic and apocrenic, but the apocrenic thus obtained differed in its atomic weight and power of saturation from the acid obtained from ochres, or that from putrefied vegetable matter. The experiments therefore, although not giving results perfectly conclusive to the theorist or practical man, offer nevertheless the first insight we have obtained into a series of phenomena of the most complicated nature, but at the same time promising the most useful results. Hœnle examined a chalybeate, and found it an organic acid very similar to the crenic, which he called *puteanic acid*, (puteum, a well) and Brandes discovered one in another mineral spring; from all which it would seem as if there were a class or genus of such organic acids, differing more or less from each other and yet possessing certain properties in common, which entitle them to be placed in the same rank.

§ 117. It was shown in sec. 109, how varied the mineral contents of a soil should be in order to its fertility, but even if these constituents are

mingled together in due proportion, there is one point of the greatest importance, the commixture of organic matter, without which no soil can be productive. If we examine the constituents of wood, we find that Pine contains less than one per cent. of ashes or earthy matter, Birch about one per cent.; Hazel one and a half, Oak branches, two and a half, the remainder (90–99 per cent.) being organic matter. The chief constituents of the organic matter are Carbon, Oxygen and Hydrogen; the minor but not less essential are Nitrogen, Sulphur, Phosphorus, &c., of which a large proportion of the first four may be obtained from water and atmospheric air, but undoubtedly the greater part of all these constituents is derived from organic matter in the soil; for although plants will vegetate simply from the presence of air and moisture, yet their feeble and sickly state compared with those growing luxuriantly in a good soil, under similar circumstances, and other things being equal, fertility being in direct proportion to the amount of organic matter, is abundant evidence of its utility and necessity. Growing plants, particularly when inflorescence commences, take up large quantities of organic matter, and if successive crops be removed from the soil, constantly diminish the amount of such matter so that the earth however fertile, would at length cease to be so. This must therefore be replaced by organic manures, or the residues of animal and vegetable matter, which are gradually converted into humin, and the humic, crenic and apocrenic acids. The experiments of De Saussure on mould seem to prove that by the alternate action of air and moisture, a portion of insoluble humin is changed into soluble humic acid, and that the contact of air with a solution of the latter, reconverts it into humin. Humus-coal, sec. 111, generates a portion of carbonic acid with the oxygen of the air, and then becomes humin and humic acid, and indeed on this principle alone we may account for the utility of naked fallowing or frequently by turning up a soil which contains much humus-coal for it loosens the earth and permits the free entrance of the atmosphere.

§ 118. It is to be regretted that few practical experiments have been instituted since the valuable discoveries of Berzelius relative to the crenic acids, but the following analyses made by Hermann of a very fertile soil, which covers a large portion of southern Russia and Siberia and stretches into Hungary, will serve to show the influence of culture on those acids, and the advantages that must flow from their closer investigation. This mould is ordinarily from one to two feet deep, but sometimes attains a thickness of several fathoms, and may not inaptly be compared to our prairie or bottom-lands of the West. *A* is a soil, which has never been under culture; *B* has been long cultivated but never manured, and *C* from the same locality below the former, from a depth not penetrable by the plough.

		A	B	C
Sand,		51·84	53·38	52·77
Clay or finely divided matter.	Silica,	17·80	17·76	18·65
	Alumina,	8·90	8·40	8·85
	Oxide of iron,	5·47	5·66	5·33
	Lime,	0·87	0·93	1·13
	Magnesia,	0·00	0·77	0·67
	Water,	4·08	3·75	4·04
Acids, which were combined with oxide of iron and alumina (and other bases?)	Phosphoric acid,	0·46	0·46	0·46
	Crenic "	2·12	1·67	2·56
	Apocrenic "	1·77	2·34	1·87
	Humic "	1·77	0·78	1·87
Humic extract,		3·10	2·20	0·00
Humin and vegetable fibre,		1·66	1·66	1·66
		99·84	99·76	99·86

From an examination of the first column, we find that the soil contains 20½ per cent. organic matter, 4 of water, and 85½ of earthy material; a comparison of it with the second and third columns shows that the humus extract is produced on the surface, and is probably thrown off by vegetation; a comparison of the second and third proves that by cultivation the humic acid is diminished by more than one per cent. of the whole soil, the crenic seven-eights, and that the apocrenic has increased by nearly one half per cent.; that, therefore, the crenic and humic acids have partly been converted into the apocrenic, and partly received into the growing plants.

§ 119. It is not uncommon to divide soils into fertile or neutral and acid, a correct distinction, but not according to the ordinary views of the subject, for it is not a rare conclusion that a soil is acid because it grows certain weeds, such as the sheep-sorrel. The truth is, that acid soils are very rare, either producing nothing or at best a little moss, and are only found in marshy ground; and farther, the acid existing in sorrel, is very different from those in an acid soil, and is not taken up by the plant, but actually generated and secreted by it. They have nearly the same composition as ordinary soils, excepting that instead of the humic acid being combined with lime, it is united according to Einhof with acetic and phosphoric acids, and according to V. Pontin with the same and also malic acid. Such soils may be rendered fruitful by the application of lime which neutralises the acids, producing large quantities of humate and the crenate of lime. Ashes will produce a similar result. The acidity of a soil may be conveniently tested by litmus paper or an aqueous infusion of a vegetable blue color, which the smallest quantity of free acid will change to a red.

§ 120. The power of a well comminuted and well proportioned soil to absorb moisture was shown, sec. 104, but in proportion as it contains organic matter, this power is greatly increased, so that a good soil may contain three-fourths of its weight of water without appearing to be wet. It is in fact the mould or humus in it to which it is indebted for this valua-

ble property, for it is one of the most powerful of hygroscopic substances. Such decomposed vegetable matter may absorb double its weight of water and yet appear dry, and even after being dried it will take up in the course of 24 hours 80–100 per cent. of its weight of moisture. Like charcoal it is mainly indebted for this property to its porosity, which it loses when converted into humin, by becoming more dense and solid. From this fact we are enabled to account for the continued moisture of a mouldy soil, even in a drought, for it requires a great amount of heat to expel the greater part of the water. Farther, it has the property in a high degree of absorbing the rays of the sun, and by parting rapidly with its acquired heat in the evening, it condenses the dew more readily, which is therefore in contact with it a greater length of time. It is then evident from what has been said relative to soils in the preceding, secs. 111 to 120, that their fertility depends in a higher degree upon the amount of organic matter they contain than on any other condition, and that it is a matter of some moment in what state of decomposition it is found, for if too large an amount of the organic acids be present, the action on vegetation would be too rapid and transient, whereas, if much humin or humus-coal is contained in a soil, the action will be gradual and commensurate with the increasing wants of the plants.

§ 121. Having shown the theory of the operation of organic manures as far as it has been investigated, we will in the next place notice the various kinds which are or may be employed in agriculture in Delaware. All kinds of vegetable matter constitute manure, but as it is composed of various substances, such as gum, sugar, albumen, gluten, oils, fibre, &c., which are variously subject to decomposition, it is necessary that different kinds of plants or the same plants at different seasons should receive a different treatment prior to their application. All green succulent plants are very liable to fermentation and it becomes a question whether it is necessary to suffer them to ferment above the soil. The rich juices they contain render them liable to a rapid change, and they should, therefore, be immediately applied, which may be performed by ploughing them into a shallow depth, so that fermentation may take place slowly in the soil. Hence the acknowledged utility of turning in grass-land, in which the decay of the vegetable matter during the time it lay in grass, and of that which is freshly turned under, consisting of roots, stems and leaves, affords, by a gradual decomposition, much nutriment to the future crop. Indeed, this principle is now so well understood and generally received, that it is not an unfrequent practice to sow crops with the view of turning them under the surface; and in many parts of Delaware, particularly in the middle and southern portions of the State, this method of improvement cannot be too strongly recommended, for the chief deficiency of those soils lies mainly in organic matter. In order to derive the greatest benefit from growing plants as a manure, they should be ploughed in during inflorescence, as it is believed they then contain the largest amount of nutritive matter. Along the bay-shore and sea-beach are to be found large quantities of sea-weed, soft-reed and other plants, both in a green and dry state, which should unquestionably be applied, perhaps not im-

mediately to the land, but to the barn-yard heaps, which they will increase in quantity without detracting from their value.

§ 122. Dried vegetable matter, such as straw, hay and stubble, whether of weeds or of useful plants, affords abundant nutriment. It has been a constant practice, until within a few years, to ferment vegetable substances thoroughly, under the impression that such a process was necessary before they could become nutritive; of late years, however, the plan generally adopted and most approved of by skilful farmers, has been to suffer them to enter an incipient stage of fermentation. This view was based upon the experimental deductions of Sir H. Davy, and the subject should not be passed over without drawing the attention of farmers to the fact that this important change in the application of manures was first induced by theoretic experiments made in the labratory, and ought alone, if other proof were wanting, to satisfy them that what is technically termed book-farming is not without its benefits in the practice of agriculture. There is no doubt that fermentation destroys a large portion of nutritive substance, and that in proportion to the extent of decomposition, but at the same time it is also objectionable to plough in long straw, "from the difficulty of burying it, and from its rendering the husbandry foul," but by a partial fermentation, seeds are more or less rendered incapable of germination, and the manure is more manageable, while there is not an important loss of nutritive matter. The chief reason why a partial fermentation should have taken place, lies in the very difficult decomposability of fibre, which constitutes an essential and large portion of dried vegetable matter. Hence also the chief objection to the use of tanner's spent bark, which being divested of its soluble and more decomposable materials, consists principally of fibre. But even this substance may be fermented by the lapse of time, and will then constitute a manure of considerable fertilising power. It has been employed with success in a few instances in Delaware, where the slow fermentation of several years has rendered it soft and perfectly rotten. To hasten its fermentation, stable-manure should be occasionally added to it; but it is not advisable to throw it on the barn-yard heaps, since it would not be sufficiently decomposed when it is required to haul out the latter manure. Saw-dust and wood-shavings may probably be fermented in a shorter time than spent bark, as they still contain soluble matter.

§ 123. Even charcoal has been employed as a fertiliser, and Sir H. Davy proved by direct experiment that it absorbed oxygen from the air and formed carbonic acid, from which he deduced its efficacy. It probably acts beneficially from two other causes: 1. From the great absorption of gaseous matters and water, and 2. From the changes which some of them undergo. We have just seen that carbonic acid is generated by the absorption of oxygen, but nitrogen is also absorbed, and it is not improbable that nitric acid may be generated, particularly where a base is present to receive it. According to experiment the nitrogen is not changed, but then these experiments were conducted in a short space of time, and no account taken of the changes which nature would produce by length of time or the presence of moisture and bases. If nitric acid be formed, we would be at no loss to account for the utility of charcoal, since we

might refer its action to the phenomena examined by Berzelius, sec. 116, in which substances are formed resembling the crenic and apocrenic acids. It would therefore be both interesting and useful to ascertain whether nitric acid can be generated by the absorption of atmospheric air. It is not, however, necessary to resort to its formation in charcoal, for small quantities of this acid are brought down by rain, and it may have in its diluted state by lapse of time, the same action as more concentrated acid would exhibit in a shorter period. Or since carbonic acid is generated, may not charcoal act in a manner similar to humus-coal, and become more easily convertible into humin and humic acid, as was mentioned in sec. 117. The subject is certainly deserving farther investigation, and experiments may be performed by impregnating fresh charcoal with a weak solution of potash, exposing to sun and air or under the soil for a year, and then examining for the presence of saltpetre, to ascertain whether nitric acid is generated, or with and without potash to ascertain whether it has become more easily convertible into humin.

§ 124. All kinds of animal matter constitute a powerful manure, whether excrementitious or not, and being much more subject to decomposition, their fermentation so far from being attempted should be checked. Flesh, fat, hair and feathers, may all be employed with little or no preparation. The common practice of burying a dead animal should be discarded, since it is actually throwing away a quantity of matter possessed of the highest fertilising powers. They should be covered plentifully by soil with a very little lime, suffered to remain some months, and upon removing them mixed with fresh lime to destroy the effluvia; both the animal residue and the superincumbent soil may be applied to land. Fish are employed with great success, both in Britain, on the coast of New England, and on the shores of the Chesapeake, but their effects are so powerful, that it is advisable to mingle them with a poor soil. It is probable that there are places in Delaware where fish could be obtained in sufficient quantity to be employed as manure, and in the event of their application, the following points should be attended to, viz:—to mingle them with poor earth—to apply them quickly to the soil—to turn them under immediately, and at a considerable depth, for if near the surface they would ferment too rapidly, and dissipate much valuable matter. The refuse of the tanning processes, containing much animal matter and lime, ought to be viewed as a very valuable manure, and fortunately there are many such establishments in Delaware, which may avail themselves of this refuse. Horn and bones constitute a superior manure, the value of which in Delaware is not practically known, for heaps of bones may be sometimes seen filling up holes under fence rows, or whitening in a field, that is *thrown out* after having been impoverished by tillage. After the fatty matter has been removed, they consist chiefly of gelatine and phosphate of lime, both of which are useful in promoting fertility. To attain the greatest amount of benefit from them, they should be reduced to the finest powder, and spread lightly over the soil.

§ 125. Excrementitious animal substances form manures of superior quality, which have been employed from the earliest times, and yet the nature of their operation is far from being satisfactorily understood. Urine

having been examined chemically is found to consist of a large number of alkaline and earthy salts, gelatine, albumen, urea, uric acid, lactic acid, &c., in a state of solution, and is very subject to fermentation chiefly in consequence of the presence of albumen and gelatine, which being destroyed by the operation, render it less valuable as a manure. It should therefore be applied immediately to the soil, being previously diluted with water or earth, in consequence of its excessive richness. Containing all the ingredients necessary for the luxuriant growth of vegetables, and these in a state of solution, it is easy to understand its value as a manure. Dung of every kind is a valuable source of fertility, and although universally acknowledged as such, the best method of its application is far from being generally known. That of birds and domestic fowl ranks among the most powerful, but being very subject to fermentation, if it can be obtained in quantity should be immediately employed. The excrements of cattle, horses and sheep, although less subject to fermentation than the preceding, is sufficiently so, to admit of its immediate application with advantage. A better method of employing it is to apply its fermentative qualities to straw, hay and other refuse vegetable matter of a farm, towards which it acts as yeast to flour, causing the whole to ferment.——One of the most powerful manures, easily obtained and in considerable quantity, and yet remarkable enough, one which is frequently if not generally thrown aside in Delaware, is night soil or human excrementitious matter, every particle of which should possess the highest value in the eyes of an agriculturist. It is valuable whether employed in a moist, dry or fermented state, but as with other similar substances, fermentation lessens its value.——As a large amount of animal and vegetable matter collects in process of time on roads and along fence-rows, it should be taken up together with the subjacent soil, and applied to land either alone or mingled with lime.

§ 126. When we have more or less of the above materials in the barnyard, it is far from being an immaterial point as to the state in which they should be employed. If applied prior to fermentation, a good effect will result although less so than if fermentation had commenced; but if fermentation be carried to its utmost, a very large proportion of nutritious matter is destroyed; but where the proper medium lies, what is that point at which the greatest benefit results, neither practice nor theory have determined with precision. Two experiments of Sir H. Davy are worth introducing here, although they have been often recorded. He filled a retort with hot fermenting dung, and in three days obtained a liquid containing chiefly ammoniacal salts and gaseous matter containing 21 cubic inches of carbonic acid gas. Finding such matter to result which was generally believed to be nutritive, he applied the beak of a retort filled in the same manner to the roots of grass in a garden, and in less than a week, he observed the grass to grow much more luxuriantly than in any other part of the garden. It follows, therefore, that much valuable matter is lost during the process of fermentation; and so conclusive were the arguments deduced from practice and theory, that Sir H. Davy thought it worth the experiment to ascertain whether straw chopped fine would not be a more economical manure than if employed after fermentation; and

yet in another place he observes that "a slight incipient fermentation is undoubtedly of use," in order to decompose woody fibre, which "is always in great excess in the refuse of the farm." The latter observation is the more correct of the two, viz: that fermentation should be commenced in the farm-yard. Independently of numerous practical experiments which prove the superior advantages of only a partial decomposition, the following reasons are conclusive in themselves; fermentation destroys or dissipates in proportion to time and violence, much organic matter, which would have been a source of great fertility to growing plants; it farther occasions a loss of that heat which would be generated by a fermentation in the soil; substances in their nascent state, that is, at the instant of their formation, are much more disposed to enter into new combinations, and hence fermentation in contact with the rootlets of plants will be more likely to excite a more vigorous action; where fermentation has taken place out of the soil, the action of the manure will be more rapid and vigorous for a short time, but where it occurs in the soil, it will be more gradual and salutary in its operation, and the amount of benefit will be greater in the aggregate.

§ 127. Since it is, therefore, a matter of importance that manure should be applied in a partially fermented state, and as it is only applied once or twice during the year, the quantity will necessarily accumulate, and being composed of fermentable materials, we must resort to some method of checking its progressive decomposition. Air, heat and moisture being the active agents in producing the change, they must be excluded or their influence diminished. Watering the dung-hill has been proposed and employed for the purpose of cooling it, but the effect is only temporary, and when the water becomes warmed, the action will be more violent. The contrary course of spreading it out to dry is undoubtedly preferable, nor need we fear that much valuable matter is lost by evaporation, as seems to be apprehended by many agriculturists, for if preserved from moisture, but little danger is to be feared from heat. Covering the heap with a stiff clay is of advantage in keeping off the ready access of air, which is essential to fermentation and may be readily practised in many parts of Delaware. We have, however, more efficient means of obviating the difficulty by resorting to compost or composite nature, which has the additional advantage of increasing the quantity without materially diminishing the intensity of stable manure. As manure is formed and removed to the farm-yard, it should be levelled and not heaped as is usually the case, then covered over by a layer of undecomposed vegetable matter, as straw, hay, weeds, &c., and topped by black soil from marshes, creeks, ponds, &c. The same series may be repeated until the compost has acquired the depth of several feet. The black soil alluded to which abounds in the State, is composed of vegetable matter in various stages of decomposition mingled with variable quantities of earth, but the larger portion of it is peaty and not sufficiently altered to be immediately applied to land in the State in which it is found, so that a partial fermentation adds to its fertilising effects. Hence its application in the way proposed not only improves itself, but prevents the fermenting manure from farther injury by excessive fermentation. To assert that the addition of lime to

manure would check its decomposition might appear to a majority of persons heterodoxical, were it not that there are many facts to show that such is the result. Among other proofs the desiccation of night soil, sec. 125, may be adduced. Being very subject to fermentation, its value would be materially lessened if suffered to remain exposed to the air in a moist condition, and therefore the Chinese mix it with one-third of its weight of fat marl (calcareous,) make it into cakes, and dry them in the sun, in which state it forms an important article of internal commerce. The *poudrette* of the French, and *desiccated night soil* of the English, is a similar article, excepting that it is prepared with quicklime. The fermentation of the night soil in these instances is prevented not merely by the drying nature of the materials with which it is mingled, but chiefly by the chemical action of lime.

§ 128. What has been said above relative to fermenting manures referred more particularly to their solid portions. There is, however, always formed in the dung-hill a liquid, which in many instances is suffered to drain away, as if it were actually detrimental; but who, that has observed the astonishing fertility that marks the course of such a stream from the barn yard, has not been convinced of its fertilising powers? In truth it often contains the richest portions of the manure, where fermentation has been carried to excess, and in every case it should be preserved. This may be conveniently effected by composing the manure with dry materials which will absorb a portion of the liquid, and exercising care in the location of the yard, so that we may have a solid basis impervious to water, such as clay or stone; a floor of the former may be conveniently constructed in any part of the State, and may be so modified, if required, as to conduct the liquid in a shallow cistern, from which it may be removed when wanted, and applied to the garden or other small patch as it is more convenient for this purpose than solid manure. Whatever system be adopted, the method too commonly pursued in Delaware, of suffering the barn-yard to become nearly fluid, or at least, very muddy, connot be too much deprecated nor too soon abandoned.

§ 129. The subject of organic manures has received in the present section such attention as is not inconsistent with the nature of the memoir, when we consider that the main resources of the State are confined to agriculture, but so far from having exhausted the subject, we may safely say that it is a mere outline containing general views, and descending only to particulars where it is thought to be applicable to the wants of the people. We have shown that the constituents of a fertile soil beside earthy matter, are humus coal, humin and the humic, crenic and apocrenic acids, and that these substances evidently play an important part in vegetation secs. 111–120: that the different kinds of animal and vegetable matter form manures which replace those substances extracted from the soil, secs. 121–125; that animal substances should be directly applied without previous chemical preparation, secs. 124–125, and that vegetable substances should have been partially fermented prior to their application, sec. 126, that therefore the fermentation of the latter should be retarded rather than accelerated, sec. 127; and lastly, sec. 128, that the liquid as well as solid parts of manure are endowed with fertilising powers.———

Although chemists have done much to unravel the intricate nature of organic manures, yet it must be acknowledged that the theory of their application is as little understood as the practice, and until the former is placed upon a more certain foundation the latter cannot make that progress which is so desirable, and which will one day place agriculture on a footing with more exact sciences. We must however be rejoiced to perceive that many of the best chemists of the day are applying their theoretic knowledge to the advancement of the arts, and that organic chemistry is at length receiving its due share of attention.

SECTION III.

On Calcareous Manure.

§ 130. Limestone when pure is composed of 56¼ per cent. of lime, and 43¾ of carbonic acid or fixed air. When chalk or powdered limestone is dropped into vinegar, a strong effervescence ensuses with the disengagement of the carbonic acid while the lime is dissolved, and hence the use of vinegar or other acids for testing shell marl which is chiefly valued for the carbonate of lime it contains. By heating also, the fixed air is driven off and quick-lime remains, which is the ordinary process by which lime is obtained in a caustic state. If the quick-lime thus obtained be moistened with a certain quantity of water, it soon becomes heated, throws off a portion of the water in the form of steam, and falls to a very fine white powder which is a hydrate of lime, always containing 24 per cent. water; if, however, more water be added, the same hydrate is formed, but the excess of water agglutinates the powder into lumps or masses which will eventually become hard, and resemble stone. Still more water dissolves it, and forms lime-water. If quick-lime be exposed to the air, it also falls to a coarser powder by absorbing it 12 per cent. of water and 24 per cent. of carbonic acid from the air, constituting a mingled carbonate and hydrate of lime. The same change occurs with that which has been slacked by water and is exposed to the air, the carbonic acid of the atmosphere replacing the water of the hydrate. The carbonate of lime such as exist in chalk, limestone, &c., is scarcely soluble in pure water, but if the latter contain carbonic acid, as rain-water usually does when in contact with the soil, the limestone enters into solution. Magnesia combined with carbonic acid is a common ingredient in limestones, and is rendered caustic in the same manner as lime, but as its attraction for that acid is less powerful than that of lime, when the two are mingled together, the latter will become carbonated before the magnesia begins to attract the same acid from the air. What has been said relative to the two earths will be found sufficient to explain their mode of operation, when employed for promoting fertility.

§ 131. The ground from which we start in order to ascertain the effect

of lime is unfortunately but little understood, for few direct and decisive experiments have been made to ascertain its precise effects on animal or vegetable substances. Much has been written and said relative to its preservative and destructive effects on organic manures from which we learn that it operates both ways according to its chemical state. If employed as quicklime, and placed in contact with organic matter, its alkaline properties would lead us to infer a decomposing influence, which is confirmed by experience; but the effect is of short duration, and is succeeded by the reverse operation, that of preserving such matter from further decomposition. The truth is, if we could insure a continuance of its caustic state, we might be equally sure of its constant decomposing power, but by this action, it generates carbonic acid from the organic matter uniting with it and forming a neutral carbonate, which either acts like other salts in preventing decomposition by its *presence* or *catalytic* influence, or being formed and hardened in the interior of the organised material, protects it from further decay. For this reason it was mentioned sec. 127, that it might be used to prevent excessive fermentation in the dung-hill; and to the same properties we may in part ascribe its utility in the soil, viz. that of permitting the slow and gradual decay of organic matter in quantities suited to the demands of vegetation. It has been supposed that the chief value of lime as a manure lay in its caustic or destructive effects, but that this position is untenable is proved by the successful application of marls and even powdered limestone, which are robbed of their caustic properties. Sir H. Davy and others who have written on the subject of agriculture refer the utility of lime to its causticity, and state that "chalk, marl or carbonate of lime will only improve the texture of the soil or its relation to absorption; it acts merely as one of the earthy ingredients." This view is unquestionably incorrect, for it has been known to produce astonishing effects on peaty soils when applied in the form of carbonate and not caustic lime, and powdered limestone as well as marl have been successfully used on ordinary soils. Besides, if "the formation of soluble matter from insoluble organic materials" be the chief effect of lime, this effect should take place immediately while the lime is in its caustic state, but it appears sec. 130, that it soon becomes carbonated in the soil, or by exposure to the air, and yet its useful effects are more perceptible a considerable time after its application, and may be perceived for many years. Whence it appears that its action on organic matter in the soil is continued (probably not increased) in the soil after carbonation.

§ 132. Much of the vagueness in descriptions relative to the use of lime has arisen from an imperfect knowledge of the organic constituents of soils, which have latterly been partially developed, and a description of which has been given secs. 111—119. Authors have divided the organic matter into soluble and insoluble, by the former of which we understand the humic, crenic, and apocrenic acids, and by the latter humin, humus-coal and vegetable fibre; and they state that lime is injurious where there is much soluble matter in the soil as it forms insoluble combinations. The truth is, the humate of lime is partially soluble sec. 112, the crenate somewhat so, and the bi-crenate very soluble, sec. 114. Now by admitting these acids as active ingredients in soils, we are at no loss to account

for the utility of carbonate of lime, for the weak affinity of the carbonic acid is overcome by their superior attraction, and more soluble salts are formed which may then be received into the rootlets of plants. There can be no doubt however that caustic lime is of greater benefit where a soil contains humin and vegetable fibre, as it promotes their incipient decomposition. The utility of lime, therefore, is threefold; first, that of decomposing organic matter, and rendering it a suitable nourishment for plants, sec. 112; secondly, that of combining with organic matter and rendering it capable of being received into the vessels of vegetable organization for promoting vegetation; and lastly, that of lengthening the time of decomposition of organic matter, which, therefore, yields nutrition in proportion to the demands of a plant in the progress of its growth.

§ 133. It has been supposed by many to be necessary that lime should be caustic as it is only then soluble, but it should not be forgotten that the carbonate is also soluble in water containing carbonic acid, sec. 130, and farther, it is not necessary that either the carbonate or quick-lime alone should be dissolved in order to explain its influence in vegetation, for moisture, the medium of chemical action, is always present in the soil, and assists in its soluble combination with the organic acids. There is, however, another action of lime with reference to the soil itself, which is of importance, viz., that it renders clayey lands looser, and sandy soils more tenacious. The latter of these contrary effects is of a chemical character, and there is little doubt that lime acts like mortar by combining the particles of sand together. The former is partly mechanical, the mingling of less cohesive earthy matter with the clay, and partly chemical, in which the lime dissolved by rains is washed into the crevices and cracks of the clay, where, becombing carbonated, it prevents their farther adhesion. To effect these results most powerfully it is evident that the lime should be employed in a caustic or water-slacked state. According to these views, therefore, it is a matter of less moment on what kind of land lime should be spread as it tends to ameliorate its condition or texture, and is the medium of conveyance of nutrition to vegetable life.

§ 134. It was stated, sec. 130, that magnesia usually enters into the composition of lime, and sec. 39, that a part of that in Jeanes' quarry contains nearly one half of carbonate of magnesia. In facts nearly all the limestone employed in Delaware, for spreading on the soil is magnesian, and it is therefore worth investigating how far the magnesia may be injurious. One of the first limestones employed for this purpose in Pennsylvania, from which lime derived much of its reputation as a manure in this section of country, and which has not lost its character to the present time is nearly of the same composition with Jeanes' stone; a very fair proof that such a content of magnesia is not injurious under certain circumstances. Sir H. Davy's view of the subject appears to be correct, that magnesia in a caustic state is injurious, but that when carbonated it is beneficial. It was stated § 130, that it remains caustic for a long time exposed to the air, and particularly when mingled with lime; therefore, in employing a magnesian limestone if there is little vegetable matter in the soil it will be apt to injure the crops, but this effect may be obviated by

mingling it with fermenting manure which will rapidly carbonate it. There is another view of the subject which has never been broached, viz: the influence of the organic acids in the soil. If much humic acid be present it will form humate of magnesia soluble in 160 parts of water, while humate of lime requires 2000, § 112, so that it will be taken up in greater quantity than lime. But by referring to the quantity required by plants as shown by an analysis of their ashes, we find § 109, that oak requires about 5½ times as much lime as magnesia, and that ashes of straw yield nearly 12 per cent. of carbonate and phosphate of lime and no magnesia, from which it would seem that the latter is injurious to plants from its excess where humic acid is abundant. But if the soil contain much humin, and other insoluble organic matter, its action in a caustic state would be beneficial like that of lime, § 132. We have, therefore, in Delaware abundant means of rendering magnesian lime useful, by employing it in conjunction with peaty matter, the black soil of marshes, creeks, &c.

§ 135. To point out the advantages of the use of lime on the soil would be useless as it is too generally acknowledged; nor is it necessary to enter upon a discussion whether it may be viewed in the light of a nutritive substance itself, for it is undoubtedly as necessary to vegetable as to animal life, and probably plays the same part by assisting in the formation of the skeleton or bony part of vegetables. It will be more advantageous to consider what preparation it should undergo prior to its application. What is the object we have in view in its application? It is to obtain it in the finest possible powder, so that it may be diffused more equally in the soil, and may present the greatest amount of surface to the organic matter on which it is destined to act. It is a general law, and one without exception, that the more finely divided a substance is, the more rapid and intense will be its chemical action; in other words, the action will be energetic, in proportion to the surface exposed. Now it must be evident that if a solid mass of lime be laid on or in the soil, its effects will be trifling, since its surface is small; and if it be broken into two parts, we have not only the original surface of the whole mass, but the additional fractured surfaces, and by pursuing our division into very small pieces, that is, to powder, the increase of surface is almost beyond calculation. The chief object in slacking lime, is to obtain this extended surface. It would be most injudicious to pour an indefinite quantity of water upon quicklime for the reason stated sec. 130, that to form a hydrate an exact quantity is required amounting to 24 per cent. But as there is usually a large proportion of magnesia present which takes up a little more water, more than one-fourth as much water as there is lime should be added to convert the whole into a hydrate. And since the heat developed by the slacking process evaporates a large amount of moisture, still more water should be added so that for a good quality of stone, about one-third as much water as there is lime may be safely employed to convert it into finely powdered slacked lime. Where the lime is known to be of inferior quality, less water will be required, and indeed it is always advisable to add too little, since more may be used to supply the deficit which shows itself after slacking. If too small a quantity be employed,

the whole of the lime will not fall to a fine powder, and this state may be recognisned by its grittiness and coarseness; if too much sec. 130, the powder which is formed adheres together forming a more or less pasty mass. In either case the value of the lime is lessened, but while the former deficiency may be remedied as pointed out above, the latter can only be obviated by recommending it to the kiln. The more common fault in the use of lime is adding too much water, and it is practised to such an extent that one-half if not two-thirds of the lime employed in agriculture is lost to all good effects in the soil. So important is this point, that it would be worth the expense to every farmer to slack his lime under cover, lest the addition of an excess of water from rain might diminish its value. There appears to be a want of union among agriculturists on the question whether it is better to employ it water or air-slacked; but it appears that the air unaccompanied by rain does not bring it to as fine a powder as water alone, and if the rain is permitted to fall on it, we may have an excess of water, since we cannot regulate the quantity; so that under all circumstances it appears to be more advisable to slack it artificially with water alone.

§ 136. The quantity of lime which should be applied to land varies very much with the nature of the soil, and no precise rules on this head can be given. The practice in this section of Pennsylvania, is to apply from 30 to 80 bushels per acre to light soils, and from 100 to 300 bushels to clayey lands, but in England they consider 150 as a good dressing for lighter and as high as 500 have been spread on an acre of heavier lands. Two chief reasons why so little definite is known on the subject are, that sufficient attention has not been given to slacking lime with the proper quantity of water, and that the quantity and nature of the organic matter in the soil has been too much neglected. It might seem incredible to assert that often not more than one-fifth of that which is applied proves serviceable, and yet from the ordinary careless mode of slacking it, the proportion lies within the truth. The lighter soils of Sussex and Kent, containing but small amounts of organic matter, would be as much benefitted by 20 bushels in fine powder, spread evenly over the surface as by 60, as ordinarily employed. In the same manner 100 of fine lime on heavy soils would produce as striking results as 2 or 300 of a half pulverised lime. One point cannot be too strongly insisted on under all circumstances, that of never turning in lime too deep, or otherwise by its sinking much of it becomes valueless.

§ 137. Much diversity of opinion exists relative to the time when lime should be spread. The season is probably of less importance, excepting where much undecomposed matter exists in the soil, in which case lime in its caustic state should be applied during the summer season, when the heat will promote chemical action. Much has been said and written on its application to different crops, and every mode found successful by some individuals because they can scarcely fail in deriving benefit sooner or later; the more preferable method seems to be to spread it on a fresh grass or clover sod and suffer it to lie quietly upon the surface, until the sod is turned under, which should not be done to a great depth. If a green crop alone be ploughed under, its decomposition will probably be too rapid,

and all or nearly all the gaseous matter will escape, whereas by the action of caustic lime, a more rapid decomposition ensues, until in a short time the carbonic acid thus generated being absorbed by the lime, farther decomposition is rendered more gradual. By spreading lime as here advised on the sod, and permitting it to remain, a portion of it will be dissolved by water while in the caustic state, and diffused through the soil, and when the residue is fully carbonated, the rain becoming charged with carbonic acid on the surface of the land, becomes capable of taking it up in small quantities and carries it to the rootlets of the plants. A more luxuriant vegetation should therefore occur, which is indeed agreeable to observation; and hence, when the sod is ploughed up, the remaining lime (which is possibly nine-tenths of that employed) is brought to act in a slow and salutary manner on the decomposing organic matter with the production of humate and crenate of lime. It is thought inadvisable by good farmers to put it on the heap of stable manure, and the reason given for this advice is, that it renders nutritious matter insoluble. That the difficultly soluble humate of lime would be formed cannot be doubted, particularly where it is employed in a caustic state, but it is not improbable that if a light layer of slacked lime were applied, which had been exposed for some time to the air, it would prove advantageous by decreasing the fermentation. It seems as if they had been alarmed by this formation of insoluble compounds, whereas they are in truth partially soluble, and to this slow solubility we must partly attribute the value of lime; and besides, the same compounds will be formed when organic manure and lime are separately spread over the same soil. Where there is a mass of unfermented organic matter, the application of freshly slacked lime will be decidedly beneficial by promoting its incipient decomposition.

§ 138. Beside the lime obtained from the Schuylkill and Jeanes' Quarry, there is one other source which has not received its due share of attention, and which applies more particularly to the lower section of the State, where some other kinds of manure are not very accessible. It is to be found in numberless shell-beds of various dimensions, scattered along the shores of the bay from the middle of Kent to the lower part of Sussex. There are both natural and artificial deposites, and although many of them are strictly subjects of geological inquiry, they were omitted in Pt. II., because of their want of continuity and extent; but the two kinds may now be noticed together with reference to their application to agriculture. Some of them, as that mentioned sec. 81, are too deeply covered to be made available, but generally speaking they lie upon the surface in beds of from six inches to two feet in thickness, imbedded in a dark and even black soil; they consist chiefly of the common species of oyster which now inhabit the bay and creeks, and are in various stages of decomposition, usually crumbling to fine scales with a slight force, but sometimes as hard as fresh shells. There are a few small beds, evidently the production of the Indians, in Little Creek and Jones' necks, but between Jones' river and Murderkill, they are not only more numerous but far more extensive. On the land of G. Emerson in Little creek, a small bed varying from six inches to two feet in thickness, and situated on the banks of a small stream, is evidently an Indian deposite, for the shells

are imbedded in the same clay which constitutes the subsoil. On Jones' neck there is another deposite on a farm belonging to Messrs. Sipple and Pennewill, where the shells are imbedded in a black soil precisely similar to that of the adjoining marsh, but very unlike the yellow clayey subsoil. The bed appears to pass into the marsh and indeed from all circumstances connected with it, it seems to have been a natural deposite. Many similar deposites exist on small branches of Murderkill, but the quantity of shells in them is small when compared with those both natural and artificial, which literally cover the point of land between the mouths of Jones' and Murderkill.

§ 139. On Mispillion neck, and indeed on both sides of the creek, the quantity of shells would entitle them to the appellation of a good calcareous marl, were the beds continuous, but even as they are now situated they may be advantageously employed. On Slaughter and Prime-hook necks these deposites appear to be chiefly of Indian origin, but on Broadkill neck, they are both natural and artificial, and as far as the wants of the neighborhood are concerned, there is sufficient to supply the demand. Although there are such deposites between Broadkill and Lewestown, they are neither numerous nor extensive; below Lewes, however, they again increase in quantity. One of the latter on marsh land belonging to H. F. Hall, is decidedly a natural deposite, the shells belonging to various species of oyster, clam, &c., being so broken and comminuted that scarcely a whole specimen is to be found. Another about three miles S. of Lewes on a high bank is an unusually extensive Indian deposite, the utility of which has been attested, although applied to the land in the same unbroken state in which it is found.——The marly deposite near Dagsborough, and the two in Baltimore hundred, sec. 91, are of a different character from those under description, and evidently lay claim to a much greater antiquity; there are, however, others in Baltimore hundred, of the same nature as those above described of artificial and natural origin, which should not be neglected by the citizens of that section of country.——The western border of the State crosses the rivers and creeks too far inland to admit of the examination of similar deposites within the State; it is known, however, that there are extensive beds of ancient and very modern shells, of which advantage may be taken by those residing in the western part of Delaware.

§ 140. The sources of shell lime for manure in Delaware may be arranged under four groups. 1. Those from which the oyster has been latterly procured for food, large quantities of which are brought from the bay and creeks, and the trifling importance attached to them is proved by the facts, that in a majority of instances they are thrown aside, or when sold, it is at the price of two or three cents per bushel. This source presents the advantage of continuance.—2. Shells drifted on the beach in layers of six inches to two feet, and sometimes nearly free from gravel and sand. They are chiefly the thin-shelled oyster, inhabiting the creeks, from which they are carried out during storm-tides, and driven on the open beach. A deposite of considerable extent existed in 1838, on Thorn Point, S. side of Mispillion, and small mounds of the same of a more ancient date were visible in many places on the marsh lands. 3. Deposites

on the marshes, coast, creeks and their branches, usually imbedded in a black marshy soil, which extends into the adjoining water or cripple. On Bowers' beach at the mouth of Murderkill, they extend below high, and some below low water mark, and are united into a compact mass by a black clayey soil and sea-weeds. Exposed to the action of air only on the surface, and probably not for a great length of time, they are less decomposed and friable than those farther inland. From all the circumstances connected with them, they appear to have been natural shell-beds, the accumulation of a long period of time, which have been undisturbed since their formation, and have been elevated with the general level of the land until many of them are now above high-water mark. 4. Deposites on the banks of creeks, inlets, &c. They differ from the preceding in being contained in an earth similar to the subsoil, for although it may be sometimes black, yet it is decidedly different from the marshy soil which encloses the third group. That they are Indian deposites is shown from their situation on the dry banks of streams navigable at least for canoes, from the accompanying earth which is not marshy; from the nature and size of the shells, which are such as can be used for food; and from the occasional presence of Indian works of art.

§ 141. These various scattered deposites taken in the aggregate contain in all probability a sufficient amount of lime to supply the neighborhood in which they occur for all purposes for which they may be required, and we ought to avail ourselves of every means, however small, of enriching land from its own productions, whether presented by nature or by art. Two methods may be followed to prepare shells for application to the soil, the first of which, to burn them, is ordinarily adopted. The usual mode of burning is sufficient for making a good lime, unless wood has been sparingly used; it consists in erecting a hollow square pile of logs which is filled up by alternate layers of wood and shells, and the whole mass fired. In consequence of the too frequent want of fuel a large proportion of the shells falls into scales by slacking, instead of forming a fine powder, a defect which may easily be remedied by the plentiful use of wood. The process of burning should only be applied to the first and second groups, but even in such a case, how much valuable animal matter is destroyed, which if it could be obtained would render the shells far more efficient as a manure! Whoever has watched the burning of shells, must have observed that they soon become dark and even black, continuing the same color for some time. This arises from the combustion of animal matter, and proves what quantity is present. In order to obviate this loss, the geologist during his tour through the State, has advised the crushing or grinding the shells to powder, from whatever source they may be derived, for although such a process might seem too laborious and expensive at first view, yet it may be shown that it may be done in a very simple and convenient manner without the outlay of much capital. An ordinary horse bark-mill may be employed for grinding the hardest fresh shells, although the operation is imperfectly conducted on a wooden floor, but it may be used with impunity for shells of the second and third groups. The best form of construction would be to arrange an old worn out millstone like the stone of a bark mill, and to make a floor of rammed clay

and shells, or better of brick or stone by which arrangement from one to 500 bushels might be ground to a fine powder in a day. Passing them between two cast iron cylinders would undoubtedly be a preferable arrangement, for speed and perfect crushing; but the advantages would scarcely be justified by the expense attending it. The fresh shells of groups one and two, would undoubtedly tend more to fertilise the soil than if reduced to powder by burning, in consequence of the superior fertilising power of animal over mineral matter; much more would those of the third and fourth groupes prove beneficial if used in the same manner, for the black or dark soil in which the latter are imbedded contains a large amount of both animal and vegetable matter, the whole of which together with that in the shells would be destroyed by burning. They should, therefore, together with the accompanying soil be ground as fine as possible, and without any other preparation be applied to the soil. Even where they have in a few instances been drawn out from their beds and scattered over the land in their unbroken state, increased fertility has been the result; and if applied in the manner proposed, they deserve to be viewed as a fertilising source of the first order.

SECTION IV.

Green Sand.

§ 142. The average composition of the green sand was stated, sec. 79, and the experience of nearly half a century in New Jersey and of a few years in Delaware having proved its efficacy in imparting fertility to the soil, we may now inquire in what manner it operates. The quantity of lime contained in the pure varieties being usually very small, and having treated of this substance at some length in the preceding section, we may neglect it altogether and regard the other constituents. When it is decomposed by the ordinary processes of the labratory, only a small quantity of silica and all the other constituents being dissolved, we may regard the oxide of iron, potassa and alumina as performing the principal functions, assisted by the presence of water. The useful action of potash or of ashes in the soil has been long acknowledged, and hence, as soon as it was known that the green sand contained potassa, its utility was immediately referred to that alcali; latterly, however, the opinion has gained ground that the protoxide of iron plays an important part by acting with the organic matter in the soil, in a manner resembling the saponification of oil by potash. This view is correct as far as it goes, but it can scarcely be deemed admissible to make such a practical generalisation as to call all decomposed organic matter in the soil geine, in the present more advanced condition of the subject, when we know that humic acid (geic acid) is formed from humus (insoluble geine,) and that two other acids, the crenic and apocrenic, are also constituents of soils, as well as of organic manures. The iron in the green sand being in the state of protoxide, amount-

ing to upwards of 20 per cent., and the potassa averaging 7 per cent., both strong bases, we can readily explain their mode of action by assisting in the formation of humic acid at least, sec. 112, and it is highly probable that farther experiments will show a similar generation of the crenic acids. It is also farther probable that where these bases are present, their catalytic influence causes the atmosphere to convert humus into the organic acids with greater rapidity. The humic and crenic acids being present combine with such free bases and even decompose their feeble compounds, forming salts of different solubilities, the protohumate and crenate of iron being very soluble but rapidly convertible into per-salts, the salts with potassa being very soluble and those of alumina and lime difficultly soluble, secs. 112 and 114. The addition of much unleached ashes to a soil determines the formation of salts of potassa, which being very soluble are taken up in excess by growing plants, and produce such luxuriant vegetation as to cause it, technically speaking, to *burn up*. The same operation would probably occur with protoxide of iron were its salts not soon converted into more insoluble humate and crenate of the peroxide. We may further suppose that the protocrenate of iron is received into the vessels of organisation, a portion of the crenic acid yielded up as food, and a basic perapocrenate secreted and ejected by the rootlets of the plants. To the difficult solubility of the humate and crenate of lime may in some measure be referred the utility of that earth, and therefore if we suppose the frequent formation of soluble super-salts, as is sometimes done, they would tend to induce excessive luxuriance, sec. 132.

§ 143. It might be objected by many that green sand being decomposed with difficulty by the powerful acids of the laboratory, there is little probability that it can be resolved into its constituents by the feeble action of humic or atmospheric agents. Independently however of the proof of its decomposition by its inducing increased fertility, and of the mode by which nature, operating with feeble agents during a lengthened period of time, produces great results, it may be shown that it is more readily decomposed than is generally admitted. Wm. M. Uhler, in conjunction with the author of this memoir, has lately been engaged in making a series of experiments on this subject, which, although incomplete, nevertheless afford sufficient grounds for drawing a few conclusions. Dilute acetic acid decomposed green sand after the lapse of a week or more; oxalic acid produced the same result in a few days and in the course of two weeks nearly all the green sand had disappeared and the yellow oxalate of iron precipitated. But the most surprising effects were produced by the action of carbonic acid, one of the feeblest known to the chemist, the use of which for this purpose was first proposed by Mr. Charles Roberts, of Philadelphia. By a well charged solution of this acid a large portion of the sand was decomposed in a few days and a weak solution induced the same effects in the course of a few weeks. Although few experiments were made to determine quantitatively the relative amounts of the constituents taken up by the acids, yet the qualitative tests were sufficient to show that all the ingredients were separated from each other and that the green sand might be analysed even by the feeble operation of carbonic acid. At the time of publishing the present memoir, experi-

ments are being instituted to determine approximatively the effects of the crenic and humic acids on green sand, but from their known power, no doubts can remain relative to their efficacy in promoting its decomposition. If this series of investigations be carried out not only with the above acids in a separate, but also in a combined state, as in organic manures and rich vegetable mould, they may prove of considerable value to agriculture, in developing the mode of operation practised by nature in her extensive laboratory.

§ 144. As the present state of our knowledge of these subjects is limited when compared with that advanced stage which we firmly believe chemistry will produce, in process of time, it would be presumption to make unhesitating assertions relative to the modus operandi of organic and inorganic manures; we may nevertheless, and indeed we ought to draw such inferences as is consistent with our present knowledge of facts. The potassa of the green sand appears to act on organic matter in the soil by catalysis forming soluble salts of potassa; the protoxide of iron acts in a similar manner, but is itself changed to a less soluble compound; and the alumina probably has a similar action proportional to its feeble affinity. To the question that, since potassa acts in this manner, why does not a large quantity of green sand produce excessive luxuriance? it may be answered, that it does where the quantity is very large, but that its action is modified and extenuated by the difficulty with which the marl is decomposed and by the presence of other bases beside potassa. When green sand is decomposed by nature or in the laboratory a small quantity of silica is taken up, and even this substance by forming a salt with crenic acid, sec. 114, may assist in increasing fertility, as it is an essential constituent of plants. The action of lime and magnesia has already been noticed. There are two points touching the theory of the operation of green sand, which remain to be noticed, the first of which is that when its decomposition has commenced it advances in an increasing ratio; and the second, that the constituents of green sand in their nascent state, that is, at the moment of their disengagement from the compound, act with much greater energy. Thus it would appear then that all the constituents of the marl exercise an influence in promoting vegetation, and this action must take place in proportion to their respective affinities, potassa being the most powerful, followed by lime, magnesia, protoxide of iron, alumina and silica; that the four first assist in the generation of organic acids, with which they and a small portion of alumina and silica combine to form salts of different degrees, but generally of difficult solubility, which nourish and invigorate nascent vegetation; that by the presence of a large portion of bases which will form salts of difficult solubility a more prolonged and healthy action is insured.

§ 145. The above remarks relative to the mode of operation of marl apply equally to the several varieties, sec. 18, as far as relates to the content of green grains, but the calcareous species owe their action partly to lime in proportion as its carbonate exists in the marl. When phosphate of iron occurs in quantity, sec. 72, some notice must be taken of its probable influence, for in regard to it, we can only reason from theory, since it has never been applied directly to land with the view of ascer-

taining its effects on vegetation. It appears from the analyses of Berthier, that both phosphate of lime and of iron exist in appreciable quantity in the ashes of plants, for in the composition of oak ashes, given § 109, he divides the 7 per cent. of phosphoric acid between lime and iron in such a manner as to form nearly 14 per cent. of phosphate of lime and one-fifth per cent. of phosphate of iron, and in other cases he gives the amount of the salt of iron as high as 9 per cent.; and we believe from experience that the utility of bone manure is largely due to its phosphate of lime; and hence we may infer that the marl alluded to may be serviceable or even very valuable from its phosphate of iron, and that if it were mingled with a little lime, where it is wanting in the marl, the atmospheric and *humic* agents, if the expression be allowed, will cause such a transmutation of the constituents as to bring both phosphates to exert their influence in advancing the growth of plants. But it would appear unnecessary to add lime in the present instance, as there is already a small quantity in the marl, § 72, were it not that there is still another substance mentioned as occurring chiefly in the marl of the dividing ridge and deep cut, § 73 to § 78. This substance, the sulphuret of iron, is not, it is true, observed in the pits mentioned, § 72, but its presence is shown by the large amount of white efflorescence with which it becomes coated after exposure to the air, precisely similar to those pits where it is observed in pieces of considerable size. After the marl described in § 74 has been exposed to the air for a short time, a whitish efflorescence forms on its surface, which has a strong styptic taste and is the sulphate of iron, formed from the sulphuret, but in the pits alluded to above, § 72, the snow white efflorescence is chiefly sulphate of lime or plaster. Now the latter marl contains lime, and the former does not, and hence this operation of nature in the formation of plaster from sulphuret of iron points out to us the manner of attaining the same result, viz: by mixing with marl, which exhibits an efflorescence after exposure to the air, a quantity of lime sufficient to convert all the sulphuret of iron into sulphate of lime; for if this be not done, the sulphate of iron or copperas will be formed, which is known to be prejudicial to vegetation. The quantity required for this purpose will vary with the amount of sulphuret of iron; where the efflorescence is light, one bushel of lime to 100 of marl will be amply sufficient, and where it is abundant, it may be necessary to use two, three, or four to the 100 of marl. If the green sand contain already a portion of lime, a smaller quantity will be required. The best method of applying it will be to remove the marl from the pit to any convenient, adjoining spot, to form a stratum not more than two feet thick, and after it has been exposed to the air for two weeks or a month, to cover it over with slacked lime. After exposure to one or two rains, it may be then most thoroughly mixed by passing a plough through it, or digging it down with the spade.

§ 146. In what manner and in what quantity should the green sand be applied? All varieties of the marl are more or less compact, when freshly extracted from the pit, and if applied in such a state would be unequally distributed over the soil, and hence the first precaution is to suffer it to be exposed to the air for a few days, according to its compactness or tenacity, in order that it may crumble to powder if possible, for the finer

the pulverisation, as shown of lime sec. 135, the greater will be the immediate benefit. There is another advantage attending this delay, that we may then observe the efflorescence, sec. 145, and obviate its ill effects by lime. Indeed, in a majority of cases, the addition of lime in small quantity will prove serviceable, since it is generally wanting in the pure green varieties, and yet it is an important requisite in the fixed constituents of vegetables. The most economical method of applying the marl as above proposed, will be to cart it from the pits immediately into the fields, to which it is to be applied, to throw it into heaps at convenient distances for spreading, and then to put a small quantity of lime on each heap, excepting in the case of those noticed, sec. 145, which should remain exposed to the air for a longer time. In regard to the quantity to be applied, a variety of opinions exist, and hence from 50 to 1000 bushels per acre have been tried, with and without success. A little attention to the theory of its operation, sec. 142–4, will enable us to approximate to the true proportion. Its strong bases appear to act on the organic matter in the soil, and to combine with it, hence it would be useless to apply a large quantity to a poor and light soil, for which 60 to 100 bushels would suffice, but a clayey soil would be rendered looser by it, and as there is usually more organic matter present in such a case, from 100 to 200 may be employed with advantage. Where the land is already of good quality from 200 to 500 may be used, according to its richness and tenacity. Many persons believe that because one kind of marl is inferior to another, a much larger quantity will be required, but the truth is, that the differences, although important, are less so than is generally believed, and should not lead to the employment of quantities greater than have just been enumerated. Notwithstanding the effects of marl will be shown to be striking on ordinary, and even on very poor land, yet it is essential that the soil should contain a fair proportion of organic matter in order to reap the highest benefit from it. Hence the failure of some experiments made with the green sand, for although it stands superior to lime in requiring the presence or addition of less organic manure, still the views offered to explain its mode of action show the necessity of some organic materials on which to operate, and this conclusion is strengthened by experience.

§ 147. The difficulty of overcoming prejudice is clearly exemplified in the progressive employment of green sand in Delaware. One of the first experiments made with it in St. Georges hundred may probably be dated as far back as the year 1826, when a small quantity was drawn out from the site of the canal. One spot of ground where this was applied was observed in 1837 on the farm of James Wilson, 11 years after its application, and although that soil had received no other assistance, a luxuriant growth of corn clearly pointed out the limit to which it had been spread. Notwithstanding the satisfactory results of this and other experiments on this calcareous marl, how short a time has elapsed since enterprise opened an inexhaustible source of fertility from near the Deep-cut on the canal to within a sort distance of Delaware City. When the survey was commenced, although many persons were well satisfied that the calcareous marl of the canal would prove beneficial to the soil, yet proof

is not wanting to show that there were not ten persons who placed confidence in the effects of the pure green sand, and not four who relied upon its efficacy with such a faith as to induce them to apply it to their soil. The labors of the geologist were chiefly directed to pointing out every inducement to its application by personal intercourse with the inhabitants of that section of country where it is found, rather than to a devotion of his time towards its discovery in new localities, or its farther examination where an opening had been already made. He pointed to its increasing employment, and estimation in New Jersey, proved its value from chemical reasoning on its composition, determined in a general way its boundaries, and urging all to search for it, exhibited or explained the manner in which research should be undertaken. The result was as had been anticipated; men of enterprise taking the lead, it was searched after, found in numberless places, applied to the soil, and its effects forced conviction in the minds of many. Others withheld their assent to its utility, and some even endeavored to dissuade their friends from its application, but the writer, aware that the strongest prejudice must eventually give way, pursued his undeviating course by still urging experiment as the surest means of ascertaining its effects. Notwithstanding the proofs of its utility drawn from Jersey, and from its limited use in Delaware—although many of its former opponents are now its firmest advocates—while land has been evidently benefitted by its use, and has increased from 50 to 100 per cent. in value—it will scarcely be credited that there are still a large number of individuals in St. Georges hundred who either believe that it is not endowed with fertilising powers, or are persuaded that it is absolutely detrimental to the crops. To such may be pointed out the results obtained by their fellow-farmers, as exhibited in sec. 148 to sec. 152, we might say, look around you and observe what your neighbors are doing—try one, two or more experiments—and if you are not then satisfied, all that can be said is, desist and let your fellow-citizens grow more wealthy by the employment of marl, and resting in your antiquated systems, do you remain at a still-stand until you shall regret your delay.

§ 148. It may be deemed improper to withhold all the information which has been acquired relative to the effects of marl in various parts of St. Georges hundred, and yet as giving it in all its detail would swell the present memoir to a large volume, we must be content with a cursory notice of a few of the results obtained with the several kinds. The cretaceous green sand on the canal sec. 53 to sec. 56 has been longer known and tried, than any other, excepting in one instance on the Bohemia, but as all appear to be well satisfied of its good effects, we will dwell on it no longer than to refer to the enterprising and skilful farmers of its vicinity, who are rapidly restoring fertility and beauty to a soil that had been impoverished by the injudicious systems of their predecessors. The decomposed and indurated marl on the Bohemia secs. 57–59, is very variable in its character, and consequently produces different effects. A portion of that described sec. 57, which is indurated, but scarcely decomposed, was taken from a pit shortly after the close of the last war, and applied to a small square of ground on the land of H. Freeman, adjoining the

road to Murphy's mill, on the Bohemia, and although it has lain on the soil for upwards of 20 years, and been cultivated with the rest of the field, the quality of the crops in 1839 afforded a test of the quality and durability of the marl; so remarkable and satisfactory, that by tracing the outline of the square by the luxuriance of its vegetable productions, this was found to be the limit of the marl, as proved by the broken shells on the surface of the ground. Wm. Polk made use of the same marl in 1837 on a soil then not worthy of cultivation, and in 1839, the clover crop on it was unusually large and thrifty. That portion of the marl lying on or near the Mill-pond would at first sight appear to be too far decomposed to be useful had not J. Smith proved that it still contains sufficient green sand and calcareous matter to benefit his crops. The shelly variety of the calcareous marl, sec. 60, has been successfully tried. J. Whitby spread 400 bushels per acre, and the effect on oats was nearly equal to stable manure, on corn very striking, less so on grass. As remarked, sec. 144, these calcareous marls owe their effects both to lime and to green sand, and hence the less yellow sand they contain, the greater their value, but whether their effects are due more to the lime or to the green particles will not now be decided.

§ 149. The most striking effects have resulted from the use of the bluish green sand, secs. 62–63. Z. Glazier marled on wheat and rye, the latter of which was better than ever raised before. A field had been limed; a large portion of it was manured, and the remainder marled with 300 bushels per acre, excepting a single land between the two parts, which was only limed. The manured proved best, the marled but little inferior to it, and the intervening strip which had been limed, did not appear to produce more than one-half as much. J. Vandegrift's marled wheat appeared as well as the manured by more than doubling the crop. S. Townsend spread 300 to 500 bushels per acre, where the latter quantity, the crop was stronger; he manured in the same field and there it was generally, but not always better than the marled, but where marl and manure were together, the growth was very heavy; the effects of the marl and manure separately, were such that it was difficult to say where the one passed into the other, but where neither was placed, the crop fell off to less than half; in one part, the marled, and that without any kind of manure exhibited an estimated difference of 20 to 8 bushels of wheat; the effects were also striking on other crops. On the farm of Mrs. Sims the effects were equally remarkable, for according to the estimate of several individuals the produce of corn was doubled, and the extent of its application might be defined to a line from the increased luxuriance of the crop. The marl of G. Karsner has had the test of more lengthened experience than any other of the varieties of non-calcareous green sands, and the results of some of his experiments are detailed in the Farmer's Register for 1838. In 1839 the effect on oats was little if at all inferior to manure, and the superior growth of the crop might be seen at some distance. It was observed that the stalks had a yellowish color, which G. K. remarked was usually the case, and alarmed at such a result the first time, he measured the grain from a given piece of land and found it

greater in bulk, and that it had five pounds more in weight to the bushel. The effect on wheat was nearly equal to that produced by manure.

§ 150. The yellowish green sand has been well tested, and so well convinced were the enterprising holders of the land where it is found of its great value, that they had extracted up to the close of the survey more than had been employed in all the remainder of the hundred. The effect of J. Rogers' marl on oats was so striking, that the land not marled adjoining that which had received its covering of marl, was aptly compared to a road passing through the field. Indeed from all his experiments, he is so well satisfied of the benefits accruing from the employment of marl, that he has caused to be spread not less than 100,000 bushels. E. Croft was not satisfied of the result of his experiments for 18 months after the marl was spread, but finally became convinced that it had materially benefitted the soil. Wm. Polk had extracted largely, and covered his land in the vicinity of the pit, but with a success inadequate to his expectations, a circumstance which may be attributed to the already superior quality of the land attained by the use of other manures; for where it is improved, the increase of produce is far from being in direct proportion to the quantity or quality of manure applied to it, and even where the best materials are employed, the difference in the crops may not be perceptible to the eye, and only becomes evident by measuring the product of equal extents of land of similar quality, manured and unmanured. Dr. Uhler spread marl over poor land at the rate of 350 bushels per acre; one acre was left unmarled, and a stye or pen had been located in another part of the field. It was put in corn, and he estimated the marled corn at four times the amount of that unmarled on equal surfaces of soil, while no difference was observable between that portion where the pen had been, and the adjoining marled soil. Others have experimented with the marl in the vicinity of the bridge, some successfully, and others less so, but all will probably be soon convinced by the results daily observable around them.

§ 151. The opinions of those who have tested the black-colored sand, sec. 68, are more discordant than the preceding. S. Higgins had not obtained confidence in his own marl, although he believed that of G. Karsner did produce some benefit. Where the stratum crops out in his field, it has often been remarked that the crops were there most rapid in their growth early in the season, but that after the summer's heats began to be felt by vegetation they usually "burned up." What better proof can be required of the value of the marl, than that an excess of it, after producing luxuriance, should eventually destroy vegetable life?—J. Jefferson has made experiments on his land, and although successful, the result has fallen short of his expectations. J. Dale's experiments on different crops and applied in various ways, have proved eminently successful. The effects upon the corn might be traced to the exact limit of its application, and compared with that which had received a good dressing of stable manure evinced a trifling inferiority. On an impoverished sedge field it produced a good growth of white clover.———To the W. of Port Penn, J. Cleaver, sec. 69, has tried a few experiments with varying success, but on the whole, he was not satisfied of the value of the marl.———T. Stockton's marl, sec. 70, applied in various ways proved decidedly bene-

ficial, for where put on buckwheat in 1838, the difference between that marled, and that manured would strike an ordinary observer, and in 1839, on oats, it evinced equal service. The trials made by L. Vandegrift were sufficiently decisive to induce its extensive application.———C. Vandegrift was not satisfied in 1838, with the results he obtained by employing marl.—W. Bennet also drew unfavorable conclusions relative to its use, but the causes of this were pointed out in sec. 70.

§ 152. Experiments with the marl of § 72, are too recent to admit of their being detailed. J. Driver. § 73, has tried the marl with success, and attributed the unusual productiveness of his garden in 1829, to a very heavy dressing of marl which he had given to it the preceding year. J. Clayton has made numerous and well-directed experiments on marl by comparing it in its effects with other species of manure. Its effects on oats were not striking, while on the corn, it would be difficult to decide whether it does not equal the best manure in one experiment, and in another it is decidedly superior to manure from the stye (pen manure.) These and other trials, which it might be interesting to enumerate, if time and space allowed, were carefully conducted by J. Clayton, on ground of uniform quality, and to such an extent as to admit of observing the results at some distance. J. Mansfield's green sand submitted several years since to experiment, was found to be of utility and in some cases little inferior to ashes, but the result of later trials is not known. C. Haughey found some benefit on several crops, but the want of more striking effects must be attributed to the presence or formation of copperas, which will be determined by the result of two years application, when the operation of the latter, having ceased, the action of the marl will be more distinctly observed. The results of trials made by J. Rogers and A. Lewis, were not witnessed but are said to be favorable. H. Templeman's employment of the same marl on oats sufficiently prove its efficiency. It would be advisable to mingle a little lime with the marls noticed in the present paragraph for the reasons stated § 145. The *green* marl of H. Templeman also proved to be a useful source of fertility to the crops. J. Jones, not possessing an accessible bed of marl on his farm, has with highly creditable enterprise procured specimens from eight different marl pits, which he submitted to comparative experiment on adjacent squares in a field, and although the results were different from what might have been anticipated yet they were sufficiently favorable to induce him to commence the marling of his farm with activity, and at a considerable expense, being obliged to haul it from a distance of three miles.—In consequence of the large proportion of sulphuret of iron in the "blue tenacious sand" of the Deep cut, it is not likely to be employed as a fertiliser, even if it could be procured with facility, but should it be employed, it will be necessary to adopt the precautions pointed out, § 145, and make free use of lime.

§ 153. Since both favorable and adverse results have been adduced, unfairness cannot be attributed to the statements given above, and from these we discover, that out of 29 who have tried it, and the results of whose trials were witnessed by the geologist, 14 have produced very favorable results, 11 simply favorable, two doubtful, and two individuals believed their experiments decidedly unfavorable. Let every one draw his

own conclusions with fairness, and form his opinions accordingly, and we shall soon see every doubt vanish before conviction. It is difficult to state the precise amount of marl already extracted, (1839,) but from all the estimates we can gather, the amount does not fall short of one million of bushels. Now supposing this amount correct, and that a bushel is about equal to a cubic foot, for a cubic foot of the compact marl will make nearly double that bulk when taken out of the pit, then the above amount already used is equal to one million of cubic feet. But the seven millions of cubic yards supposed to be accessible in Delaware, § 79, are equal to one hundred and eighty-nine millions of cubic feet, so that there has been used the 1-189th part of the green marl, and the amount remaining will satisfy every one that there is a sufficient quantity for the consumption of the district in which it occurs and for exportation. In conclusion, it might be supposed that something should be said relative to the methods of searching for, and extracting the marl, or constructing and draining the pits, but as experience has already facilitated these operations more than could be done by advice, it is not deemed sufficiently important to demand a place in the present work.

SECTION V.

Marshy Soils.

§ 154. The richness of the marsh lands in the Western and Southern parts of Kent and on the ridge in Sussex has been a theme of admiration to all who have visited them. They are situated on the branches of the several streams, which having their sources in Delaware usually flow towards the Chesapeake, and which originating from rains and springs in the midst of extensive forests on a broad and very flat surface with an argillaceous substratum impervious to water, and becoming clogged and dammed up by fallen trees, leaves and brushwood, naturally expand into broad basins, termed marshes. The luxuriant growth of trees, shrubs, and smaller plants, and their constant dilapidation and decay, in the shallow waters of the sluggish streams during the lapse of ages has generated a black vegetable mould, averaging three feet in depth, being rarely less than six inches and sometimes exceeding six feet, composed throughout of the same materials. It was not until the close of the past or within the present century, that effectual means were resorted to for recovering this land from almost constant inundation, since which time nearly all the great marshes have been drained by the excavation of ditches or more properly canals in the natural bed of the stream, and a large amount of the most fertile soil in the State brought under cultivation. One of these great drains increases from 12 to 24 feet in width from its source to its mouth, a distance of nine miles, and throws off a sufficient quantity of water in spring freshets to float a moderately sized vessel. The Culbreth, Cow, Herrington and Tappahanna marshes in the West of Kent county are the main feeders of the Choptank, and Marshy Hope in the South

orms a main source of the North West Fork River. The principal and several minor branches of the Nanticoke have been also subjected to drainage, beside many smaller streams in Sussex. When all the water-courses shall have been confined in a similar manner within their proper channels, a very large amount of an inexhaustibly fertile soil will be brought under the plough, and the noxious exhalations of marshy lands will cease to produce diseases to which their inundated state renders them subject.

§ 155. When we examine the soil thus wrested from the waters, an unusual uniformity of composition appears to prevail in it; it is black, very unctuous to the touch in its moistened state, rarely so light and spongy as not to admit of grain after a little cultivation, becoming sufficiently compact on drying and consisting of decayed organic matter and argillaceous earth. The organic matter chiefly humus-coal, and humin sec. 111, a little of the humic and crenic acids, secs. 112, 113; and that it does not contain uncombined acids, such as the malic, acetic or phosphoric in quantity, is shown by its productiveness immediately after clearing sec. 119. The fertility of these soils is shown from the fact that some fields have been tilled in corn for 40 years in succession, without an apparent diminution of their productiveness; but nevertheless the idea, which seems to have become deeply rooted in the minds of the people of our western States, that such land can never be exhausted, cannot be too soon refuted and exploded in Delaware. No soil, however rich, can withstand excessive tillage, except it receive an adequate return of its richness; an assertion to which the experience of ages will bear witness, and which will be confirmed by the experience of the West, ere 50 years shall have elapsed. The quantity of organic matter in some of the marshes is so great that during a dry season, the soil which was accidentally fired, continued to burn like coal, and could only be extinguished by rain. The remains of such fires have been observed in several instances, where the carbonaceous matter having been burned out, left the earthy constituents converted into a substance resembling brick by the heat of the fire. It is said that lime applied to this land has sometimes been found injurious. It may admit of a doubt whether the experiments were judiciously made, but supposing that to be the case, it must arise from the existence of too much humin, or the organic acids, which the addition of lime would bring into a too rapid action. The proper course to pursue with it would be to give a very light dressing of lime, which has been exposed to air for some time in order to its combination with carbonic acid, in which state it guarantees a gradual decomposition of insoluble vegetable matters, as shown §§ 131, 132. There is one important use which these may receive and it is only surprising that so little attention has been paid to it; the adjoining lands, sometimes argillaceous, are usually light sands, and if a portion of the black marsh soil were spread upon them, it would render them both more productive and cohesive, and surely there is in nearly every place where occurs a superfluity which should not be suffered to lie unproductive.

§ 156. Similarly formed to the marshy soils and arising in part from them, are those black deposites in the creeks and branches, existing in

all parts of the State, but abounding in Sussex and Kent. They are largely composed of organic matter, but contain more earthy constituents than the preceding, and appear to be better elaborated, and prepared for use. In a majority of cases they may be directly applied to land without mixture, and will prove a very valuable substitute for manure of the organic kind, but if extracted where the tide flows, it will often be requisite to expose them to frost, or mingle them with lime, or submit them to both, prior to their employment. It is not merely in larger streams we are to look for this material, but in small branches, brooks and even in the courses of springs; it may be found on nearly every tract of land in the State, and more especialy to the south. It is a source of fertility within the grasp, and certainly within the means of every citizen, and it only needs to be tried, fairly tried to gain it a lasting, reputation as natural organic manure. Experiments have been made with it to a very limited extent, and although successful, it is surprising that its use has not extended; for in some instances, applied alone it has doubled a crop of corn in the first season, and exhibited good effects for many years; with lime it has produced similar results which will stand the test of a longer time. This vegetable soil is not always uniform in its composition, for although in creeks it is usually black, and earthy, yet in some small upland ponds or swamps it is brown, light and spongy. In the latter case in particular it should be employed in connection with lime in the caustic state, i. e. freshly slacked, to promote incipient decomposition, and to correct acidity, and even in all instances of its application, lime will benefit it and insure greater durability of action. Many farmers in Delaware, really desirous of improvement, know not where or how to commence, since they cannot raise one-fourth the quantity of manure requisite for restoring productiveness, and their farms are extensive. Here is a material, with which to make the first attempt; let them use it alone, and if it prove good, continue until means are obtained to employ lime in addition to it; if the result be not favorable alone, let it be carried to the barn-yard, to form a layer of it there, and when its surface has been covered by manure, let them bring in another layer, and in such a manner, the quantity of manure may be increased many fold, without deteriorating its quality.

§ 157. From the upper part of the State to its southern boundary the Delaware river and bay, and the sea-coast are skirted by flat lands of varying breadth sometimes exceeding a mile, subject at times to inundation, consisting of a flat, and dark colored vegetable mould, clothed with a luxuriant growth of reeds and grasses. Supposing them to average a mile and a half in width through the whole length of the State, we would have about 100;000 acres of Delaware marshes, a large extent of land, which if it were brought under cultivation, would prove to be the richest land in the State. Its depth and richness of soil, and the ready means of restoring it when exhausted, are ample proofs of the assertion, but it may be reasonably doubted whether so great an undertaking as reclaiming this land at the present time would meet with an adequate return, when we consider its expense, the comparative paucity of population, and the imperfect system of agriculture pursued in the State. The successful exe-

cution of a small portion of the task in the upper county is ample evidence that the work is practicable, and the experience, which Holland has attained on this subject during ages, could be wielded in Delaware. But since it is not at all likely to be brought into execution for a long period of time, why may we not derive some benefit from these lands at the present time? Independently of the embankment of small tracts along the shore, and without reference to the grazing of cattle on these natural grass lands, the soil of the marshes may, and should be applied extensively as a manure on the upland. The embankment of ditches where they are not otherwise required, may be employed; or the marsh may be dug expressly with the view of employing the soil as a fertiliser, and it is such a vegetable mould which is chiefly required in Delaware to render it more fertile. The marshy deposite to which allusion was made, sec. 101, is variously composed, or more properly speaking, it is in different states of decomposition; being sometimes a black, unctuous matter, both vegetable and mineral, containing no traces of vegetable fibre, again a similar soil with fibre, and lastly a formation consisting chiefly of fibre or the undecayed roots and leaves of plants. The first of these, is the most valuable, and may sometimes be directly applied to land without admixture, but it is advisable to adopt a uniform method of using it which may be done in two ways, by mingling it with lime, better after exposure to the air for some time, or by drawing it into the barn-yard to bring it into an incipient fermentation by contact with stable manure. In either case it will more than repay its expense, and if lime be employed on the land at the same time, a more powerful and durable influence will be derived from it. There is one kind of material bearing some connection with the preceding, a species of sea-weed, observed along the shore of the bay, but more remarkably constituted on the beach a few miles below Lewes, which will prove of great excellence, when brought to an incipient fermentation, as it contains much blue mud, and is penetrated, and inhabited by numberless shell-fish. It would become more useful if drawn into the barn-yard, and suffered to ferment in a slight degree, for the decomposing animal matter, will bring the weed rapidly into a similar state.

§ 158. There remains yet one other substance, which is easily obtained, and will repay the expense of its application to the soil. It is the "blue mud," sec. 101, which is constantly depositing from the river and bay, on the marsh lands under the circumstances pointed out in the paragraph referred to. The fertility of those lands of which it forms the upper surface, and its beneficial effects in the few instances in which it has been employed on the upland are a warrant of its fertilising powers, but it is a matter of some doubt to what substances its effects are mainly to be attributed. Its basis is a fat clay, both lead-colored and yellowish, with a quantity of organic matter, which appears to be chiefly in the state of crenic and apocrenic acids combined with the oxide of iron. There is no doubt that it would be advantageous if applied directly to the soil, but its tenacity is an objection to such a mode of using it, and hence it is more advisable either to draw it into the barn-yard, where it will be broken down and mingled with manure, or to mix it with lime, and expose it for

some time to the air, adding at the same time, the black marsh soil, which is generally to be obtained in its vicinity.

§ 159. In the present section our attention has been devoted to a fertilising ingredient of a high order, which we have denominated "*Marshy Soil*" in order to embrace the several varieties under one head; in agricultural works it might be termed a *peaty* soil, but the term would not include all those which have been described, for the "blue mud" is wholly unlike a peaty soil, but being deposited on the river-marshes, it soon becomes a marshy soil, and many of the creek and western marsh deposites are far from being peaty, although they contain much organic matter. From a careful perusal of the section, it will be observed that this source of fertility is every where abundant, and in the two lower counties may be said to lie within the grasp of every farmer; let it not, therefore, as is too often the case, be disregarded or undervalued, for its abundance and convenience, but applied judiciously, frequently, and profusely. Its value rests not on a mere theoretic assertion, but it has received the test and sanction of experience, and such experience both in Delaware and elsewhere, as may not be contradicted. As it would be a matter of nicety to discriminate between such varieties as are not sufficiently decomposed, and require some preparation prior to their application, and those which might be directly employed, it would be better to adopt a general rule relative to the mode of using it, viz., either to draw it into the barn-yard, or to form a compost with lime, or with ashes. In either case it will form an excellent manure, and with lime or ashes a durable one. It is indeed a fortunate circumstance that this valuable material is diffussed in such abundance over the State, and not less gratifying that it is more widely distributed in Sussex and Kent counties, where the soil chiefly requires the addition of organic matter to restore it to its former fertility or even to excel it, and where it is of such a peculiarly light character as to require the use of precisely such a substance to render it more compact and tenacious, and more capable of repaying the expenditure of time, labor and materials, liberally bestowed upon it by the hand of industry and enterprise.

CHAPTER II.

ARTS OF CONSTRUCTION.

SECTION I.

Architecture.

§ 160. *Gneiss*, §§ 25 to 30, being more abundant than any other rock in the northern part of the State, and of ready access, is more generally

employed in ordinary architecture, not often it is true in the construction of entire buildings without the assistance of other materials; but in laying the foundations, its indestructibility under ordinary circumstances renders it an almost indispensable material. Its regular stratification and the readiness with which it yields to force applied in the direction of its planes, together with the varying thickness of its laminæ afford great facilities in quarrying; nor are these advantages appreciably diminished by the presence of garnets § 27, nor by the quartzose and felspathic veins, § 29, which render the plane of stratification somewhat tortuous, for this effect is local, and limited to slight deviations, while the general direction of the planes remains the same, § 30. The slightly roughened surface of the rock offers another point of utility, by which it is enabled to hold mortar with greater firmness. Being softer in texture compared with the felspathean rocks, it is more readily bored for blasting, and very susceptible of receiving any required form under the chisel. The advantages of its employment, therefore, are its abundance and ease of access, of blasting, quarrying, and forming, and its firm retention of mortar. What are its disadvantages? The principal one lies in its destructibility, as shown § 25, but even this disappears upon closer inspection, for in the cases alluded to, it has been exposed to decomposing influences for an incalculable length of time, infinitely beyond that which can possibly be required for any architectural purposes, § 25; and farther, although there are places in which it has lain imbedded in walls for more than 100 years, it still presents no evidence of decay. That constituent most subject to decay is evidently the felspar which forms kaolin or china-clay, where it is sufficiently abundant, and undoubtedly assists in imparting richness to the soil. We have sufficient evidence of the great durability of mica from its diffusion in the soil, while other ingredients of rocks disappear, and from its constituting a part of secondary formations, but there are circumstances under which even this substance is subject to change, for the Danish chemist Forchammer has observed that if particles of mica be suspended in water, and sulphuretted hydrogen passed through the liquid, the mineral then becomes soluble in acids. On the other hand a highly micaceous gneiss is so little affected by fire, that it is often employed in the construction of furnaces. Considering then the circumstances under which gneiss is applied in architecture, it must be viewed as a very convenient, substantial, and therefore highly valuable species of rock. All its varieties however, are not equally good, for in some of them the felspar has already undergone a partial decomposition and become soft and friable, sec. 25, an observation that applies more particularly to the surface of the formation. Hence in searching for a good material for building, it will be advisable in nearly every instance to remove the surface, perhaps several feet in depth, before obtaining the rock in its undecomposed state, in which condition alone it should be employed in fine and ordinary architecture. It is not probable that rough or dressed blocks of this rock can ever constitute an article of export from Delaware, since the river is bordered by the *blue rock*, but altered gneiss, or the felspathic rocks which will be presently noticed, may hereafter constitute a source of revenue to the State.

§ 161. The situation of the felspathic rocks, § 31–37, on or near navigable waters, leads us naturally to inquire how far they may admit of application to the arts of construction. Both the fine and coarse-grained varieties possess hardness and toughness, which are important characters for the purposes designated, but at the same time may often prove a drawback on their utility from the increased difficulty of quarrying and dressing them. There is, however, a difference between them, for the coarse-grained, containing a large proportion of felspar, and relatively less quartz is softer and more yielding to steel, and hence one chief reason why it has been extensively employed for railroads, and is now being used for supports in the lower stories of large stores in Philadelphia. Its employment in the latter instance shows also that, notwithstanding its hardness, it may be chiseled and sculptured into ornamental forms. It possesses another advantage in being destitute of lamination, for which reason it may be split by wedging in any direction. This method of splitting consists in drilling holes in any given line, straight or curved, filling them with wooden wedges, and forcing iron wedges into the wood, until the block is severed from the mass. The fine-grained variety containing more quartz, is harder and more difficult of drilling, and although often laminated, is so compact that it may be split at any required angle to the laminæ. The cause of that remarkable tendency to disintegration in certain parts of the coarse-grained rock must be left unexplained, but the fact does not interfere in the least with its general character nor with its value, for such parts are easily known, and are very small relatively to the mass of the formation.

§ 162. Much of the blue rock of Delaware has been employed in the construction of a great national work, the Breakwater at the mouth of Delaware bay, and a question of no easy solution offered itself some years since, in regard to the relative values of gneiss and blue rock for this work. The importance of the undertaking considered in a national light, should certainly banish all attempts at State or local feelings or influences. The opinions of the author on the subject were embraced in part in a report of the Franklin Institute, nor has a closer observation since that period changed his views. As the question stood, "which rock was better adapted to the purpose," the answer was clearly pointed out in the superior gravity, hardness and toughness of the blue rock, which were conceived to be important characters. But it was urged that this rock was liable to decomposition, which is shown to be true of the coarse-grained variety in only a few instances observed at the quarry, sec. 34, and as may be seen at the Breakwater. The gneiss could, however, be obtained at a lower rate, from the greater ease with which it is wrought, and this circumstance was evidently greatly in its favor, where enormous quantities of stone have been, and will still be employed. There was another view which was adopted by the writer contrary to the opinions of those who favored the blue rock, that although that formation was superior to gneiss in point of hardness, toughness and gravity, yet that the latter can be, and is quarried out, possessing those characters to a sufficient extent to justify its employment. He deems it his duty to present this concise statement of views, since his appointment to the survey of Dela-

ware, necessarily called for an expression of his opinions, and before leaving the subject, he would point out the necessity of a strict inspection of the materials employed at the Breakwater, from whatever sources they may be derived, as inferior qualities of stone may be obtained at the quarries of blue rock in Delaware, as well as those of gneiss in Pennsylvania.

§ 163. The blue rock has been wrought for many years on the shores of the Delaware, and from its well ascertained characters, the unlimited supply which the formation can afford, and its proximity to tide water, it is highly probable that its consumption will continue to increase. If durable monuments be required in commemoration of events or individuals, this rock is well adapted to the purpose, while its color would equally suit the heavy gothic arch, or the ponderous Egyptian pile. It is not, however, confined to the shores of the river, for we find it holding a firm situation several miles up the Brandywine, and appearing at distant intervals in the midst of the gneiss, which it usually assimilates more or less to itself. This altered gneiss is better developed on the Brandywine near Gilpin's mills, § 36, and displays a light gray rock of a texture, hardness and toughness, intermediate between gneiss and the felspathic rocks, from which, and from its cleavage in the planes of stratification, it deserves a high rank among the formations of the northern part of the State. The extension of quarries in the blue rock, consequent upon a presumed increasing demand, will in all probability discover new varieties, which may even possess advantages superior to those described, by combining all the desiderata of materials for architecture.

§ 164. Limestone has ever been regarded as a valuable building material, and as it occurs presenting a variety of colors and of other external characters, is justly viewed as one of great beauty. In Delaware we have chiefly the white and gray, both of a crystalline structure, and in the lower part of Jeanes' quarry beyond the influence of atmospheric agents, it is massive and heavy bedded, and may be obtained in blocks of large dimensions, sec. 39: as the formation is limited, sec. 39–41, there is no probability that it will ever be extensively employed in architecture, particularly where the gneiss and blue rock are so abundant and easy of access.——Serpentine has been employed with success in building, as witnessed by specimens in, and near Westchester, Pa., and its shade of green unquestionably produces a novel and pleasing effect. It may be similarly applied in Delaware, but its small extent sec. 42-43, limits its utility. Although detached granitic veins are frequent, yet they are too small to admit of their application to architecture.

§ 165. The upper hundreds of New Castle county abounding in rock formations, may be conveniently distinguished from the remainder of the State by the appellation of the rocky region. It is not, however, exclusively so; for there are two other instances of rock formations among the sands and clays farther south. One of these noticed, sec. 61, may even now receive a partial application in building, and may be more extensively used when heavier beds of it are discovered. The other described in sec. 83, is a valuable material as far as regards its durability, hardness and toughness, but like the preceding requires extent to permit its classification with useful building stone.——The large number of small ferruginous

springs throughout the lower part of the State, and the abundance of oxide of iron in the sandy strata, are the frequent cause of the partial induration of the formations, as exhibited in numberless ferruginous crusts, or iron-stone, in which sand and pebbles are cemented by oxide of iron, but they are too unimportant to require more than a passing notice. Beside these formations lying in their natural beds, there are numerous boulders, or erratic blocks sparsely strewed over the surface, derived from the more northern rocky regions, and transported to their present isolated situations by currents of water, when the whole surface of the land was at a relatively lower level than it is at the present period of time.

§ 166. It might appear a useless proposition to offer clay as a material adapted to architecture, were it not that it has met with successful application in other countries, and received the stamp of success from the lapse of centuries. In Germany and other parts of Europe it has long been a custom among the less wealthy classes of society to employ clay largely in filling up the interstices of the frame work of their houses, which had been latticed by rough brushwood, and branches of trees, and it is worthy of observation that when the weather surface is properly washed with lime, it becomes so hard in process of time as to resist atmospheric agents, and even tends to preserve the wood-work of the building. In some of the departments of France, and in parts of South America, they construct dwellings wholly of clay, which becomes sufficiently hardened to stand alone as a durable wall. Dr. R. M. Bird first suggested to the author the practicability of making such constructions in Delaware, and although it appeared at the first view impracticable, yet a more mature consideration of the mode of operating with the clay, and the evidence offered by its employment abroad, led to the conclusion that it is deserving of especial notice among the materials used in the arts of construction. It is applied in a state approaching to dryness, the blocks of clay being rammed tightly into a form of wood which is raised in proportion as the wall advances in height. The conveniences of such a construction in Delaware arise from the abundance, diffusion, and qualities of the clay-deposites from the northern to the southern limit of the State, while its general advantages lie in the simplicity of the means by which any given design may be accomplished, and consequent economy of the operation. A coating of lime on the exterior is sufficient to protect it against the destructive influences of rain, frost and heat, and appears to act chemically by combining with the constituents of the clay, and forming a hard mineral compound. Dr. Bird ascertained during the course of numerous experiments, that ordinary linseed oil mingled with a small quantity of drying oil, and applied by a brush, formed a superior coating for clay walls, rendering the surface harder and more compact, capable of withstanding atmospheric agents, and adapting it to the reception of ordinary pigments. A building well constructed after this method might vie with the proudest mansions in the beauty and durability of its architecture.

SECTION II.

Construction of Roads.

§ 167. While the citizens of the United States are intently pursuing a course of public improvements in the construction of rail-roads and canals, they have been misled by their advantages in suitable locations to neglect the improvement of ordinary roads. Where the former are intended to bring distant places into a closer proximity, or to render the means of conveying large amounts of natural or artificial productions more convenient, expeditious and economical, our common roads, designed as the medium of intercourse for comparatively short distances and of conveying smaller bulks or products, are equally deserving of our attention. Although the increasing wealth and populousness of Britain originated those excellent roads which cover the United Kingdom like a net work, their number and excellence undoubtedly reacted by developing and diffusing the resources of the interior, and consequently by raising its wealth to a still more elevated point. Like causes must produce like effects in a nation derived from and similarly constituted to Britain; for which reason more care should be exercised in the improvement of our common roads. It is not presumed that every unimportant road should be converted into a turnpike, for the absence of a dense population forbids it, but the principal thoroughfares can and should be bettered by the application of such materials to them, as are found in their vicinity. Roads which are in constant use should receive a covering of a hard and durable material, such as broken stone and gravel, but those less frequented may be amended by the less expensive application of clay, sand or loam, according to the nature of the substratum or soil.

§ 168. The macadamised road is unquestionably that form which combines the greatest number of advantages, examples of which are the five turnpikes leading from Wilmington. But these are far from being good specimens of this kind of road, for the principles of their construction have not been adhered to, the principal objection to them being the large size of the pieces of stone, which will ever prevent the attainment of an even surface; another is the practice of covering the stone over with a layer of earth. Stone-pikes are sometimes carefully and properly constructed at first, but when they become rut-worn are often repaired by throwing heedlessly on them mingled earth and stone, dug at the side of the road or at the nearest possible point for convenience. The national road is a well-constructed macadamised road, in many places of perfectly even surface, but instances have been seen where, to obviate the destructive effects of a heavy rain, earth and stones of large size have been thrown on it, which rendered it about equal to a common turnpike road. There is an abundance of stone in the upper part of New Castle county of superior quality, possessing the desirable properties of extreme hardness and toughness, and breaking into sharp angular fragments. The best

rock for the purpose is the blue rock of every variety; the hard gneiss, although a good material, being rather inferior to it. An objection urged to felspathic rocks is the greater difficulty and expense of breaking them, but the coarse grained formation at Quarryville offers a material admirably adapted to roads, as it decomposes in some portions, sec. 34, crumbling into small angular pieces, which will be compacted and solid. The same kind of road may be constructed nearly as far south as the upper part of Kent county by employing erratic blocks and pebbles, which when fractured afford a superior and very durable material. Nearly all the fine roads in the northern part of Prussia, within fifty miles of the Baltic, are thus constructed, on a level country not unlike the two lower counties of Delaware.

§ 169. Instances of gravel roads are met with in the central parts of New Castle county, which are nearly equal in value to those constructed of broken stone, exhibiting an inferiority only in long-continued wet weather or during the thawing of the winter's frosts. Their superiority to ordinary roads should point out the propriety of transporting gravel to the latter, for although the expense of their construction may be greater at the first, yet their greater durability reduces the actual outlay nearly to the same amount. Gravel is found abundantly in the upper and middle sections of New Castle county, §§ 46, 50, 51, 52, in sufficient quantity in the lower part of the same, §§ 55, 56, 67, 69, 80, and in Kent, §§ 82, 84, and exists in several places in Sussex, § 89. Some attention should be paid to the character of the substratum, for if it be a light sand, the gravel will not produce a material improvement, while on clay or better on an argillaceous sand, it will become compact and durable. The remarks just made, §§ 167, 168, refer more particularly to the leading thoroughfares of the State, which should evidently be rendered more suitable for transportation and travel through as much of the year as is practicable. The advantages of such improvements would not merely affect the inhabitants of that particular section where they are made, but a large portion of the State.

§ 170. The local advantages derivable from the improvement of less frequented and smaller roads might be shown to be fully commensurate with the outlay which they ought to receive; nor will the expenses attending it be much greater than at present. The principle on which this improvement depends is founded on a change of the soil; when it is clay, sand should be added to it; when sandy, clay should be added, in order to attain a mixture of the two in which sand should predominate. Now by the usual method of digging or ploughing up the side of the road and throwing the earth on the centre the same kind of soil is added, and a sandy road only benefitted for a short time by the little clay which fresh soil contains, whereas if a little more expense were devoted to searching for clay or sand, in proportion as either is required, and applying it, a good medium will be attained, which after short use, will become hard and compact. A light sandy road is very good in the winter season, and moderately good after rain, which renders it more compact, but at other times it is very objectionable;—a clayey road is worn into deep ruts during the winter, which becoming frozen, renders it exceedingly uneven,

while after heavy rains and when not frozen in winter it is almost impassable. A suitably mingled sand and clay is in better condition during the summer than sand and during the winter than a road composed of clay alone; is not as easily rutted by rains and becomes sooner smooth after rain. In short, it is superior either to sand or clay by being useful through a much larger portion of the year. Where gravel can be obtained it ought to be employed in preference to sand. It is a fortunate circumstance in the deposition of the various strata, that both sand and clay accompany each other other throughout the State and are accessible in almost every place where a road is located; nor ought their application to be limited to ordinary roads, for they may be employed for improving the principal thoroughfares in the lower part of the State, in the absence of more valuable materials, stone and gravel.

CHAPTER III.

CHEMICAL ARTS.

SECTION I.

Manufacture of Pottery and Glass.

§ 171. The manufactures of pottery and glass, and particularly the former, are deserving our attention, since allusion has been made in the preceding pages to frequent localities of materials which are employed in them. The simplest but not the least important of these is the making of brick; the simplest, because it requires very little previous preparation of the materials, and is not attended by difficult processes in the progress of the manufacture; and important, because it obviates the necessity of drawing materials for ordinary and finer architecture from abroad. Happy is it therefore for the State that it possesses an abundant supply of these materials so extensively diffused, that a small district can scarcely be found destitute of them, and so conveniently situated, that a building may often be erected over the same spot from which was derived the substance employed in its construction. The substances used in making brick are clay and sand, mingled in due proportion. A very fat clay will not answer the purpose alone, as the contraction of the clay in drying produces fissures, nor will one containing a large proportion of sand, for in this case the brick is too soft and crumbling. A due proportion of sand and clay is therefore essential, which is best attained, where practicable, by mingling together fat and poor clays, or white and lead colored with yellowish and loamy clays. The former may or may not contain sand, the latter always fine sand, while their yellowish color is

derived from oxide of iron. The presence of the last named substance is essential, as it acts by cementing the clay and sand or alumina and silica. Hence the white clay, containing but little oxide of iron, can never form a strong brick, while the yellow alone containing too much ferruginous matter, is apt to enter into semi-fusion and become glazed. These effects can be ascertained practically by the *ring* of a brick; for if it produces very little sound on being struck, it is either not burned sufficiently or there is too little iron in its composition; if it produces a very sharp and quick tone, it is burned too much or there is an excess of oxide of iron in the clay. It follows from what has been said that the excess or deficiency of iron may be remedied by adding more white or yellow clay. Where the two clays are not found in juxtaposition or conveniently near together, if we have white or lead colored, a yellow loam is added; if a yellow clay alone, we add sand and use a less intense heat in the kiln. It is frequently advisable to try the mixtures on a small scale, preparatory to burning a kiln, on a smith's hearth or other convenient place, for even those skilled in the art cannot always judge of the fitness of a clay by its external characters. Of the geological formations many have been and are employed in this manufacture; the red clay of New Castle county, secs. 47, 52, and the yellow clay of Appoquinimink hundred, secs. 80, 81, the intermediate clays of Kent, secs. 87, 88, the lower clays of Sussex, secs. 89, 94, as at Causey's, sec. 89, and Parker's, sec. 90, the more recent argillaceous deposites near tide-water throughout the State, the clay of the ridge, as at Georgetown in Sussex, and numerous local clayey beds or loams scattered through the three counties. In all of these localities bricks are made of sufficiently good properties, in many of them of superior quality. The greatest difficulty in this manufacture is obtaining a good moulding sand, no localities of which have been found, excepting perhaps the stratum mentioned, sec. 85, which is probably too coarse for a fine quality of brick.

§ 172. There are deposites of clay in many parts of the State affording a sufficiently fine material for the manufacture of earthenware, stoneware and even fine pottery or English ware. For the former, several of those deposites now employed in the making of brick would be well adapted, if other purer clays were mingled with them; and indeed they may be employed alone, if previously and carefully subjected to the process of *washing over*, by which the coarser and finer portions are separated from each other, and the latter alone employed. As it is believed that this manufacture may be prosecuted in many parts of the State, the method of preparing clay for the purpose should be described. If clay be stirred up in water, and allowed to settle for a few moments, the gravel, sand and coarser matter will subside, and if the muddy liquid be poured off, the finest parts will finally settle down and may be obtained by pouring off the clear water, and partially drying the remainder. Carrying out the same operation on a large scale, we obtain a fine clay adapted to earthenware. By the old *blunging* process the clay was broken by picks, and worked up with water in a pit or tank by hand-paddles, suffered to settle, and run off through sieves into the drying tank. A far better, but somewhat more expensive method is the following. A cast iron cylinder of three feet

diameter, more or less, with wrought iron spokes attached to the interior sides at different distances, and projecting one-third towards the centre is placed in a horizontal position; a shaft passes through the cylinder with similar spokes attached to it in such a position that when it revolves they will not interfere with those attached to the cylinder; the lower half of each end of the cylinder is closed by iron plates, cast at the same time. Clay is introduced at one end of the cylinder through the open upper half, and the shaft turned while the stream of water enters at the same opening. The clay and water are thus thoroughly mixed, and pass out of the opening at the other end of the cylinder, which is slightly inclined, into the first trough, in the centre of which is a deep and narrow wooden vessel, to receive the gravel and coarse sand. The muddy fluid still passes on to a sieve, through which it empties itself into a second trough—it passes through a second, and sometimes a third sieve, each one being finer than the preceding, into the slip-reservoir. When the water becomes clear in the slip tank, it is drawn off by opening pegs on one side, and the slip collected for use. The same operation is equally well adapted to stone as to earthenware. For the finer pottery, (queensware, &c.,) the operation of blunging is best performed by throwing fine clay into a vertical cylinder or cone having knives attached to its inner surface and at right angles to it. An upright shaft has knives attached to it in such a manner that their edges pass close to those of the cylinder knives, in revolving, and cut or slice the clay between them, while by their blades lying in a spiral around the shaft, they force the clay downwards towards the bottom where it passes out at an opening. It is then put into the *large blunger*, where it is mingled with water by a vertical shaft with arms, and when the vat is full the liquid is allowed to stand for the coarser matter to subside, and then run off into the slip-reservoir. The former process for common earthenware, is successfully practised in Germany; the latter in England.—For earthen and stoneware, we have resources in the red clay of New Castle; the intermediate of Kent and the lower clay of Sussex. For fine pottery we might have recourse to the white clay on the Delaware below New Castle, and to the same wherever it may be found in the red clay formation of warrantable extent. Although this white clay is a source of revenue at present, from its exportation, yet were it to form the basis of finer clay manufactures within the State to which its quality adapts it, its benefit to individuals, and to the State would be increased an hundred fold. The mode of obtaining clay in a very fine state for earthenware has been more minutely described as the process appears preferable to those ordinarily adopted, and as that manufacture is more likely to be established than any of the others. But for this and other parts of the manufactnre, reference is made to establishments already in successful operation.

§ 173. Allied to the manufacture of fine pottery is that of porcelain or chinaware, one of the most useful and beautiful of the arts, for the establishment of which materials are presented by formations within and near the State. The necessary ingredients of porcelain are Kaolin, Quartz, and Felspar, the latter of which is furnished in abundance, and of good quality by the spar quarries, secs. 44–45, and was used by the porcelain

manufactory at Philadelphia, when that valuable establishment was in successful operation. The blocks of quartz from the same vein, sec. 45. were also employed, and should more be required, a fine quality is found, and may be obtained in large quantity near Columbia on the Susquehanna. Although beds of kaolin are frequent in Delaware, yet being too small in extent or too impure, it may be obtained a little beyond the State line near Mill creek hundred, which was the source of that employed in the Philadelphia manufactory. For making the seggurs in which porcelain is burned, and which is an important item in this manufacture, we may rely upon the red clay formation, the white variety and other parts of which are admirably suited to the purpose. Thus it appears that all the materials requisite for the manufacture of porcelain lie within the grasp of the upper part of the State, and should its establishment be attempted, it will prove a valuable acquisition not merely to Delaware, but to the artificial productions of the United States.

§ 174. The white clay below the town of New Castle, sec. 49, has been exported to various parts of the United States with a view to its employment in the manufacture of glass-pots, or crucibles in which glass is melted. It belongs to that variety of infusible clay, known as *plastic* or *pipe-clay*, being infusible in a powerful heat, merely caking together and becoming hard. Specimens of it are found nearly equal to the best German pipe-clay from Gross-almerode in Hessia, although in its general characters as a deposite, it yields place to the Hessian. Its unusual freedom from iron renders it of great value in the manufacture of glass-pots, for where the oxide of that metal is present, it communicates color to the glass, injures the texture of the pot, and renders that part liable to fusion; hence where these particles of iron are found, they are removed at the beds or more carefully at the glass works. Its freedom from siliceous sand or grit is another property of importance, as it enables the workmen to give a smoother surface to the interior of the pots, and gives the latter greater compactness. This white clay then possesses properties which adapt it to the manufacture of fine pottery, porcelain, pipes and crucibles, for the latter of which objects it has been excavated for more than 40 years. There is no reason why it cannot be equally well employed in the others, nor why the manufacture of glass may not be established within the State; for although good beds of a sufficiently pure white sand were not observed during the survey, they possibly and probably exist in Sussex, and even if they should not be found, a glass house on tide-water could draw from the deposite in New Jersey. Enterprise and skill would certainly render such an attempt successful.

SECTION II.

Minor Chemical Arts.

§ 175. Although the manufactures of iron are the most numerous, varied and important, of all others, yet as we are only contemplating those

which draw upon the natural resources of the State, and since the comparative paucity of the deposites of iron-ore in Delaware will ever be a drawback on the extension of iron manufactories, the nature of this memoir restricts us to a few words on the subject. The several deposites alluded to in §§ 87, 92, 98, 99, have been principally wrought for exportation, the remainder having been reduced to the metallic state in Delaware either by forges or a blast furnace. The latter yielded a good metal, at Millsborough in Sussex, but is now out of blast. The forges are conducted in a very simple and ancient style, by mingling the ores and charcoal together on an open forge-hearth and urging the fire by a bellows, and as the fire decreases, by adding more until a sufficient body is obtained to form a bloom, which is then wrought under the tilt-hammer into bars of the required dimensions. From the absence of flux, oxide of iron must supply its place, and hence the loss of a large amount of iron in the cinders; the quality of the bar iron obtained is nevertheless superior. The quantity of ore raised in the State may be estimated at 200,000 tons, which have introduced more than half a million of dollars revenue into Delaware, but had this large amount been converted into metal within the State, the revenue would have amounted to several millions for the metal alone, independently of other arts originating from the employment of iron, which would in all probability have arisen and been successfully conducted. As a subject of interest might be mentioned the employment of green sand as a partial flux for iron ores. Limestone is the flux ordinarily employed, but as the green sand contains potassa, it would be a matter of deep interest to ascertain how far it may be substituted for lime, while at the same time its frequently large per centage of iron would assist in an increase of the metal. It is well known that potassa will form a more fluid glass with silica than lime, and as one object of the iron-smelter is to obtain a fluid slag through which the melted particles of metal may readily pass to reunite at the bottom, it is highly probable that this material might render important assistance in his operations. The quantity of silica in the green sand is, perhaps, too great, to admit of its application alone as a fluxing medium, but it may be united profitably with lime, or in order to employ a single substance, the calcareous varieties §§ 53–56, and particularly the cretoidal might be used alone with advantage. It would also be a matter of some interest to ascertain what quantity of iron could be obtained from the pure green sand without the assistance of either ore or fluxing material.

§ 176. Sulphuret of iron occurs in numerous localities in the State, but in no place of sufficient extent to demand attention, excepting in that portion of the green sand formation traversed by the Deep cut; and even there, although masses of the sulphuret of considerable size are abundantly disseminated through the blue tenacious sand, §§ 77, 78, yet no one locality has yet been observed, which might be worked to advantage. By exposure to air and moisture, we have already seen §§ 73 to 75, and § 78, that the sulphuret is decomposed and converted into sulphate of iron or copperas, which sometimes detracts from the value of the green sand, § 143. A similar method pursued with the masses of sulphuret carelessly selected from the clay might be adopted on a large scale to

convert it into copperas, and the indications of the mineral in quantity are such as should induce those residing in the neighborhood to search for superior localities.

§ 177. Having devoted some attention to the construction of buildings from sources within the State, a *few* words should necessarily follow relative to the means of cementing building materials. More ample and satisfactory information on the subject of mortar may be attained by referring to a series of French essays, translated by Col. Totten, U. S. A., which appeared in the Journal of the Franklin Institute for 1839. The limestone found in the upper part of the State, yields an excellent mortar, when well burned and freshly slacked; and with proper care, one bushel of burnt lime will more than double its bulk. Beside the convenient proximity of the greater part of the State to navigable water, whence lime may be obtained from abroad, there are sources of the same valuable material in some of the strata of deposition. Thus, the large shells, chiefly Exogyra costata, and Gryphæa convexa and vomer in the cretaceous green sand, secs. 53, 56, in the indurated marl, secs. 57, 59, the smaller shells in the shelly green sand, sec. 60, may be profitably burned for lime, where stone-lime is not convenient. The indurated marl falls to pieces after a short exposure to the air, sec. 57, and this and the shelly varieties may be most economically used by sifting them in the same manner as gravel and sand are separated by a standing and inclined sieve, and then burning the coarser portions, which will contain as large a proportion of lime as many good limestones. Still farther south, advantage should be taken of the natural and artificial accumulation of shells which are often found of sufficient extent to justify their being collected for burning, and may be separated from the adhering earth in the manner just described, secs. 138, 139, 140. In the construction and burning of field kilns, which are ordinarily employed for shell-lime, no important improvement can be suggested, except it be the plentiful use of wood, in order that the shells may be thoroughly burned, for otherwise the lime will be of inferior quality. Even if it is intended for liming land, it should be brought to the finest possible powder, for reasons stated, sec. 135, which can only be done by a thorough burning and careful slacking. This caution is the more necessary, as some individuals are of opinion that a par-burning is decidedly preferable to one in which the lime becomes thoroughly pulverised.

On motion of Mr. du Pont,

The bill entitled "An act to amend the supplement, passed January 5, 1830, to 'An act for the establishment of free schools,'" was read a third time by paragraphs and

Passed the Senate.

Ordered that the bill be sent to the House for concurrence.

Mr. du Pont introduced a petition from the President and Directors of the Wilmington Fire Insurance Company praying for an amendment of their charter, which,

On his motion,

Was read and referred to a committee of two with leave to report by bill or otherwise.

Whereupon,
Messrs. du Pont and Tharp were appointed that committee.

On motion,
The House then adjourned until three o'clock this afternoon.

Eodem Die, 3 o'clock, P. M.

The Senate met pursuant to adjournment.

On motion of Mr. Maull,
The bill entitled "An act to divorce Elender M'Gee and Edward M'Gee from the bonds of matrimony," was taken up for consideration.

On motion of the same gentleman,
The said bill was read a third time by paragraphs in order to pass the Senate.

The first section of the bill being read, on the question,
"Shall this be the first section?"

The Senate being divided, Mr. Spruance called for the yeas and nays, which were as follows, to wit:—

Yeas—Messrs. Boys, du Pont, S. Jacobs, Maull and Speaker—5.

Nays—Messrs. T. Jacobs and Spruance—2.

So the question was decided in the affirmative.
The bill then,

Passed the Senate.

Ordered to the House for concurrence.

Mr. Black, member of the House, being admitted, presented an enrolled bill, entitled

"An Act directing the time, place and manner, of holding elections for Senators from this State in the Senate of the United States," signed by the Speaker of the House, for the signature of the Speaker of the Senate.
And he withdrew.

On motion of Mr. Maull,
A committee of enrolment was appointed.
Messrs. Spruance and T. Jacobs were appointed said committee.

On motion,
The Senate adjourned until 10 o'clock to-morrow morning.

THURSDAY, 10 *o'clock*, *A. M.*, *January* 14, 1841.

The Senate met pursuant to adjournment.

Mr. T. Jacobs, on the part of the committee to whom was referred the petition of John Watkins, introduced a bill entitled "An act to enable John Watkins to locate certain vacant land in North West Fork hundred in Sussex county, and to complete his title to the same," which,

On his motion,
Was read.

Mr. Tharp, on the part of the committee on elections, reported that all the members elect of the Senate were duly entitled to their seats.

On motion,
The Senate then adjourned until 3 o'clock this afternoon.

Eodem Die, 3 *o'clock*, *P. M.*

The Senate met pursuant to adjournment.

Mr. Spruance laid upon the table a petition from Robert Palmatary, guardian of Jane Green and Charles Green, minors, praying for the passage of an act to enable them to sell certain real estate, which,

On his motion,
Was read and referred to a committee of two, with leave to report by bill or otherwise.
Messrs. Spruance and T. Jacobs were appointed said committee.

On motion,
The Senate adjourned until 10 o'clock to-morrow morning.

FRIDAY, 10 *o'clock*, *A. M.*, *January* 15, 1841.

The Senate met pursuant to adjournment.

On motion of Mr. T. Jacobs,
The bill entitled "An act to enable John Watkins to locate certain vacant land in North West Fork hundred in Sussex county and to complete his title to the same," was read a second time.

Mr. Comegys, Clerk of the House being admitted, presented to the Senate for concurrence a bill entitled "An act to enable James Scott to locate cer-

tain vacant land in Broad Creek hundred, Sussex county, and to complete his title to the same."

On motion of Mr. Tharp,
The said bill was read.

On motion,
The Senate adjourned until 3 o'clock this afternoon.

Eodem Die, 3 o'clock, P. M.

The Senate met pursuant to adjournment.

Mr. Spruance, on the part of the committee to whom was referred the petition of Robert Palmatary, reported a bill entitled "A supplement to the act entitled 'An act to enable Amanda Green, Jane Green and Charles Green, minors, to sell and convey certain real estate therein mentioned,'" which,

On his motion,
Was read.

On motion,
The Senate adjourned until to-morrow morning at 10 o'clock.

SATURDAY, 10 *o'clock, A. M. January* 16, 1841.

The Senate met pursuant to adjournment.

On motion of Mr. T. Jacobs,
The bill entitled "An act to enable John Watkins to locate certain vacant lands in North West Fork hundred in Sussex county, and to complete his title to the same," was read a third time by paragraphs and

Passed the Senate.

Ordered to the House for concurrence.

Mr. Comegys, Clerk of the House of Representatives, being admitted, informed the Senate that the House had concurred in the bill entitled "An act to divorce Elender M'Gee and Edward M'Gee from the bonds of matrimony," had amended the same and requested the Senate to concur in the amendment.

And he withdrew.

On motion of Mr. T. Jacobs,
The amendment was taken up for consideration and read as follows, to wit:—

"HOUSE OF REPRESENTATIVES,
January 14, 1841.

Amend the bill by inserting in the enacting clause in the second line of the first section between the word "Representatives" and the word "in" the words "of the State of Delaware."

Extract from the Journal.
J. P. COMEGYS, *Clerk.*

For concurrence."

On motion of Mr. T. Jacobs,
The amendment was *Concurred in.*

Ordered that the House be informed that the Senate have concurred in the amendment.

Mr. Comegys, Clerk of the House, being again admitted, informed the Senate that the House had passed "An act to enable Josian Casey to locate certain vacant lands situate in Baltimore hundered, Sussex county and to complete his title to the same," and requested the concurrence of the Senate in said bill.

The Clerk also informed the Senate that the House had passed a bill entitled, "An additional supplement to the act entitled 'An act to extend the time for recording deeds,'" and requested the concurrence of the Senate in the same.

Also that the House had passed a bill entitled "An act to amend the act entitled 'An act providing for the recovery of small debts,'" and requested the concurrence of the Senate in the same.

The Clerk also informed the Senate that the House of Representatives had passed certain joint resolutions, and requested the concurrence of the Senate in the same.

And he withdrew.

On motion of Mr. Tharp,
The said resolutions were read and
Unanimously adopted
As follows, to wit:—

"HOUSE OF REPRESENTATIVES,
January 16, 1841.

In the General Assembly, January Session, 1841.

The committee to whom was referred so much of the Governor's Message as relates to the distribution of the proceeds of the sales of the public lands among the several States, &c.

Report, That the citizens of this State consider the public lands, as an inheritance purchased by the toil, sufferings, blood and treasure of our

revolutionary fathers, and bequeathed to their successors, in which the people of all the States have an equal right; and that their interests therein is of too much value and too highly appreciated by them to be relinquished without an adequate equivalent: that they view with deep solicitude the continual efforts in the National Legislature, to deprive the original States of their just and equitable rights in the public lands, by either ceding them to the new States or disposing of them at prices merely nominal: that the people of Delaware look forward with anxiety, but not without hope, to the time when the revenue arising from the sales of the public lands shall be distributed among the States generally according to their population, and applied to the purposes of education; thereby promoting the general welfare, by giving safety and permanence to our free institutions, the best security of which will always be found in the knowledge and intelligence of the people. Your committee therefore recommend the adoption of the following resolutions:—

Resolved by the Senate and House of Representatives of the State of Delaware in General Assembly met, That this Legislature views with a jealous eye, every attempt to make a partial distribution of the proceeds of the public lands of the Union among the States, whether by a direct grant to a State, or by sales at prices far below their value to the citizens thereof.

Resolved, That the proceeds of the sales of the public domain, should be entirely separated from the general revenue, and distributed among the several States according to their population, to be by them applied to the purposes of education.

Resolved, That we consider the public lands as the common property of all the States, and therefore solemnly protest against any partial distribution of the proceeds thereof.

Resolved, That our Senators in Congress be instructed and our Representative in Congress be requested, to make use of their best efforts to procure the passage of a law for the distribution of the proceeds of the public lands among the several States, to be appropriated by them, so as to promote the cause of general education.

Resolved, That the foregoing report and resolutions be signed by the Speaker of the Senate and by the Speaker of the House of Representatives, and that a copy be transmitted to each of our Senators and our Representative in Congress, to be laid before their respective Houses, and that the Executive of each State be furnished with a copy by the Governor of this State, and requested to lay the same before their respective Legislatures.

Extract from the Journal.

J. P. COMEGYS, *Clerk.*

For concurrence."

"HOUSE OF REPRESENTATIVES,
January 16, 1841.

Resolved by the Senate and House of Representatives of the State of Delaware in General Assembly met, That a committee of five mem-

bers, two on the part of the Senate and three on the part of the House of Representatives, be appointed to wait on the Governor elect, and inform him that the two Houses will assemble in the Court room on Tuesday the 19th inst., at 12 o'clock, M., and attend him while he takes the oaths of office as prescribed by the Constitution of this State and of the United States, and to request the attendance of the Governor.

Resolved further, that the Hon. Samuel M. Harrington be invited to attend for the purpose of administering the oaths of office to the Governor elect.

Extract from the Journal.

J. P. COMEGYS, *Clerk.*

For concurrence."

Ordered that the Clerk proceed to inform the House of the concurrence of the Senate in said resolutions.

And that the committee appointed on the part of the Senate to wait on the Governor elect are Messrs. Spruance and Tharp.

On motion of Mr. T. Jacobs,

The bill entitled "An Act to enable Josiah Carey to locate certain vacant lands situate in Baltimore hundred, Sussex county, and to complete his title to the same," was read.

On motion of Mr. Tharp,

The bill entitled "An additional supplement to the act entitled 'An act to extend the time for recording deeds" was read.

On motion of Mr. Spruance,

Resolved, That the Auditor of accounts be, and he is hereby directed to report to the Senate the amount of commissions allowed by him to the State Treasurer upon receipts into the treasury during the last year, specifying each item upon which commissions have been allowed.

Ordered that the Clerk notify the Auditor of accounts of the passage of the resolution.

On motion,

The Senate adjourned till 10 o'clock Monday morning.

MONDAY, 10 *o'clock A. M.*, *January* 18, 1841.

The Senate met pursuant to adjournment.

The Speaker laid before the Senate a communication received from the late Auditor of accounts, in reply to a resolution of the Senate directing

him to report concerning commissions allowed by him to the State Treasurer, which

On motion of Mr. Spruance,
Were read, as follow, viz:—

DOVER, JAN. 18, 1841.

To the Senate of the State of Delaware.

GENTLEMEN:—My functions as Auditor of Accounts ceased by the limitation of law, on the 12th instant, but as late Auditor, I hasten to reply to the resolution passed by the Senate on the 16th instant, a copy of which was delivered to me by the Clerk on the same day. In reply to the first branch of it, I have to state that the *amount* of commissions allowed by me to the State Treasurer upon receipts into the treasury during the last year, is, in the aggregate, $277 68, made up of the three several sums of $250 48, $16 32, and $10 88, as stated in my report of the finances, page 3. And in reply to the second branch of the resolution, I have to observe, that the books of accounts, containing the *items* upon which the above commissions were allowed, are in the possession of the State Treasurer, (the custody of which are given to him by law,) and consequently, I have no means in my power of specifying each *item*, upon which I have allowed such commissions.

I have written to the State Treasurer, desiring him as a matter of favor, to grant me the use of the books for the purposes required by the resolution, and on receiving them will, with the greatest pleasure, furnish the Senate with the information requested.

I am your obedient serv't.

J. L. HARPER.

N. B.—I may observe, that the allowance of commissions to the State Treasurer, was made under the laws of 1839, (9 vol. Del. Laws, p. 230 and 240.)

J. L. H.

Mr. Comegys, Clerk of the House of Representatives being admitted, informed the Senate that the House had passed the following resolutions and requested the concurrence of the Senate in the same.

"HOUSE OF REPRESENTATIVES,
January 18, 1841.

Whereas, it hath been represented to this General Assembly, that the tomb, heretofore erected by order of the Legislature of this State in the grave-yard of the First Presbyterian Church in the city of Philadelphia over the remains of Col. John Haslet, commander of the Delaware Regiment in the Revolutionary war, who fell in January, 1777, at the battle of Princeton, is now in a wretched and ruinous condition; and whereas, the General Assembly entertains in common with the citizens of this State, a great regard for the memory of a brave and patriotic citizen who died gallantly fighting under the banners of Washington in defence of the liber-

ties of his country, desire to preserve and cherish that memory, by procuring the removal of his remains to be deposited within the limits of this State: Therefore,

Be it resolved by the Senate and House of Representatives of the State of Delaware in General Assembly met, That a committee be appointed to consist of two on the part of the House, and one on the part of the Senate, whose duty it shall be to proceed forthwith to Philadelphia, and bring his remains from their present depository, and place them in some fitting and desirable spot within the limits of this State, as they or a majority of them shall determine; and to have a suitable monument with appropriate inscriptions and devices, prepared by a skilful artist, and erected under their superintendence and direction, over his remains when so deposited.

Resolved, That the committee appointed by the foregoing resolution, or a majority of them, are hereby authorised to draw their orders on the State Treasurer for any sum or sums not exceeding in the whole, the sum of one thousand dollars, for the purpose of carrying into effect the object of the resolutions aforesaid, and the State Treasurer be, and he is hereby authorised and directed to pay the orders of the said committee so drawn on him, out of any money in the treasury, not otherwise appropriated; and it shall be the duty of the said committee or a majority of them, to make report of their proceedings in the premises to the next biennial session of the Legislature, setting forth the expenditures consequent upon the execution of their duties under the provision of this resolution.

Extract from the Journal

J. P. COMEGYS, *Clerk.*

For concurrence."

The Clerk also informed the Senate that the committee appointed on the part of the House, in accordance with the above resolutions, were Messrs. Wright and Huffington.

And he withdrew.

On motion of Mr. T. Jacobs,

The bill entitled "An act to enable Josiah Carey to locate certain vacant lands situate in Baltimore hundred, Sussex county, State of Delaware, and to complete his title to the same," was read a second time.

On motion of the gentleman,

The bill entitled "An act to enable James Scott to locate certain vacant lands in Broad Creek hundred, Sussex county, and to complete his title to the same," was read a second time.

Mr. Comegys, Clerk of the House of Representatives being admitted, informed the Senate that the House had passed a bill entitled

"An Act to divorce Foster Donovan and his wife Avis Donovan, from the bonds of matrimony."

And he withdrew.

On motion of Mr. Tharp,

The said bill was read.

Mr. Comegys, Clerk of the House of Representatives being again admitted, informed the Senate that the House had passed a bill entitled

"A further supplement to the act entitled 'An Act providing for the punishment of certain crimes and misdemeanors," and requested the Senate to concur in the same.

And he withdrew,

On motion of Mr. Tharp,
The said bill was read.

On motion,
The Senate adjourned till 3 o'clock this afternoon.

Eodem Die, 3 o'clock. P. M.

The Senate met pursuant to adjournment.

On motion of Mr. Spruance,
The bill entitled "A supplement to the act entitled 'An act to enable Amanda Green, Jane Green and Charles Green, minors, to sell and convey certain real estate therein mentioned," was read a second time.

Mr. Comegys, Clerk of the House of Representatives being admitted, informed the Senate that the House had passed the following resolutions, and requested the concurrence of the Senate in the same.

And he withdrew.

On motion of Mr. Spruance,
The resolutions were read as follow, to wit:—

"HOUSE OF REPRESENTATIVES,
January 18, 1841.

In the Legislature, January Session, 1841.

The committee to whom was referred so much of the Governor's Message as relates to the controversy between the States of Virginia and New York, in relation to the refusal of the Governor of New York to deliver certain fugitives from justice upon the demand of the State of Virginia

Report, That they view with deep and anxious interest, every difficulty between sister States, calculated to disturb the harmony and good feeling which should ever exist between the members of the great national family of the Union. That whatever may be our individual opinions as to the abstract right to hold slaves, we cannot lose sight of the fact that this right is guaranteed to the slave holder by express provision in the Constitution of the United States, in the following words: "No person held

to service of labor in one State, under the laws thereof, escaping into another, shall in consequence of any law or regulation therein, be discharged from such service or labor, but shall be delivered up, on claim of the party to whom such service or labor may be due." Cons. U. S. Art. 4, Sec. 2. That in the language of the Constitution of the United States, that instrument was formed and adopted, for the purpose of forming a more perfect union, establishing justice, ensuring domestic tranquility, providing for the common defence, promoting the general welfare, and securing the blessings of liberty to ourselves and posterity; that to give full force and effect, to the ends thus proposed, it becomes not only the duty, but the interest of every State, to regard with scrupulous tenacity the provisions of the national constitution, even should they come in conflict with popular prejudice, or preconceived opinions. For these and other obvious reasons, your committee recommend the adoption of the following resolutions:—

Resolved by the Senate and House of Representatives of the State of Delaware in General Assembly met, That the reasons assigned by the Governor of New York for his refusal to surrender Peter Johnson, Edward Smith and Isaac Gansey, as fugitives from justice, upon the demand of the Executive of Virginia, are deemed by this Legislature unsatisfactory, and not in accordance with the letter and spirit of the Constitution of the United States, but in derogation thereto.

Resolved, That while we deprecate the resort by the State of Virginia to extreme measures for redress, such as are calculated to disturb the peace and harmony of the Union, we cannot but admit the justice of her appeal against the course pursued by the Governor of New York, and that this State joins in the request of Virginia to the Executive of New York, that he review his course and ultimately act in accordance with the rights secured to the slave holding States, under the wise and salutary provisions of our great national compact.

Resolved, That the Governor of Delaware, be requested to forward copies of these resolutions to the Executive of the States of Virginia and New York, with the request that they be laid before their respective Legislatures.

Extract from the Journal.

J. P. COMEGYS, *Clerk.*

For concurrence."

Mr. Comegys, Clerk of the House of Representatives being again admitted, informed the Senate that the House had passed a bill entitled

"A supplement to the act entitled 'An Act to enable the owners and possessors of the meadow, marsh and cripple, lying on both sides of the Northwest branch of Duck creek, emptying into the main branch of Duck creek below the Eagles' Nest Landing, effectually to embank and drain the same, and keep the banks, dams, sluices, canals and drains in repair, and to raise a fund to defray the expense thereof," and requested the concurrence of the Senate in the same.

And he withdrew.

On motion of Mr. Tharp,
The said bill was read.

Mr. Comegys, Clerk of the House of Representatives, being again admitted informed the Senate that the House had passed a bill entitled "An act to regulate the institution and drawing of lotteries, and the sale of lottery tickets within this State," and desired the concurrence of the Senato in the same.

And he withdrew.

On motion,
The Senate adjourned until 10 o'clock to-morrow morning.

TUESDAY, 10 *o'clock*, *A. M.*, *January* 19, 1841.

The Senate met pursuant to adjournment.

On motion of Mr. S. Jacobs,
The bill entitled "An act to regulate the institution and drawing of lotteries, and the sale of lottery tickets within this State," was read.

On motion of Mr. Tharp,
The bill entitled "An additional supplement to the act entitled 'An act to extend the time for recording deeds,'" was read a second time.

On motion of Mr. T. Jacobs,
The bill entitled "An act to enable James Scott to locate certain vacant land in Broad Creek hundred, Sussex county, and to complete his title to the same," was read a third time by paragraphs and
Passed the Senate.

Ordered to the House with the concurrence of the Senate endorsed upon it.

On motion of Mr. T. Jacobs,
The bill entitled "An act to enable Josiah Casey to locate certain vacant lands situate in Baltimore hundred, Sussex county and to complete his title to the same," was read a third time by paragraphs and
Passed the Senate.

Ordered that the Clerk inform the House of the concurrence of the Senate in said bill.

On motion of Mr. Spruance,
The bill entitled "A supplement to the act entitled 'An act to enable Amanda Green, Jane Green and Charles Green, minors, to sell and convey certain real estate therein mentioned,'" was read a third time by paragraphs and *Passed the Senate.*

Ordered to the House for concurrence.

Mr. Comegys, Clerk of the House of Representatives being again admitted, informed the Senate that the House had passed a bill entitled "An act in respect to insurance for lives for the benefit of married women," and requested the concurrence of the Senate in the same.

And he withdrew.

On motion of Mr. Boys,

The said bill was read.

Mr. Comegys, Clerk of the House being admitted, informed the Senate that the House was then ready to convene in the court room to receive the Governor elect, and to be present while he shall take the oaths of office.

Whereupon,

The two Houses jointly proceeded to the court room, and took the seats prepared for their reception. The General Assembly being thus convened, the Governor elect, attended by the joint committee, His Excellency the Governor, and the Hon. Samuel M. Harrington, entered the court room, and took the seats prepared for their accommodation.

On motion of Mr. Spruance,

The resolution for convening the two Houses was read.

Judge Harrington then administered the following oaths of office to the Governor elect, to wit:—I, William B. Cooper, do solemnly swear on the Holy Evangels of Almighty God, that I will support the Constitution of the United States of America. So help me God.

I, William B. Cooper, do solemnly swear on the Holy Evangels of Almighty God, that I will support the Constitution of the State of Delaware, and perform the duties of the office of Governor of the State of Delaware with fidelity. So held me God.

The Governor then delivered his inaugural address to both Houses of the General Assembly, as follows, to wit :—

Fellow-Citizens of the Senate,
and of the House of Representatives:—

Called by the free suffrages of the people to the dignified and important office of Chief Executive Magistrate of our beloved State, I enter upon the discharge of its duties, with a deep sense of the high responsibility which it imposes.

Let my first act in office be to acknowledge publicly, as I now most humbly do, that for the proper performance of these duties, my chief reliance is upon the assistance of that Almighty Being who rules the destinies of men. Conscious of my inexperience in the duties of Executive administration, it is my most fervent supplication and my greatest trust, that in all my actions as the chief servant of the people of this State, I may be enlightened and directed by His wisdom, and that my deficiencies may be supplied by His aid.

By the Constitution of the State of Delaware the duty is enjoined upon

the Governor of recommending from time to time for your consideration, such measures as he may deem expedient. In the discharge of this duty it may be profitable to review some of the leading features of that system of State policy, which our predecessors have established. One of the long cherished principles of this policy has been, never to put the State in the condition of a debtor, beyond her own available resources. We have never known what a State debt is, from any experience of our own. We have refused to embark in any scheme of internal improvement which should render it necessary to anticipate the resources of those who are to succeed us. We have an available surplus, amounting to more than half a million of dollars, and we owe not a dollar which we cannot pay on demand. We have collected but one small State tax since the adoption of our Amended Constitution; and it is probable, that with ordinary prudence we may never find it necessary to impose another, unless war should visit our country.

Within a few years past other States, influenced by the phrenzied excitement of the times, have incurred debts to a very large amount, the payment of which, must cause an oppressive draft for a long series of years, upon the productive industry and resources of the country. I recommend, Gentlemen, a steady adherence to our old fashioned policy. We may not obtain by it in the judgment of some, that high character for enterprise, which others have claimed as a great merit; but if we do not abandon it, we shall be free from debt, and have the satisfaction of knowing that the fruits of our labor will be all our own; and we shall enjoy our homes and their comforts the better, when we reflect that our children will be left unincumbered and as independent, as our fathers who adopted this policy have left us.

Another distinguishing characteristic in our State policy is, to avoid excess in the banking system. During the last eight years, many of our sister States have greatly exceeded the limits which prudence and reason would have prescribed in this respect. Fortunately for us, the men who have controlled in the councils of Delaware during that period, had learned wisdom from the history of the past. We have a banking capital of about a million and a half of dollars, which experience has shown to be sufficient for all the necessary purposes of State banking among us. Our Legislature has generally refused to follow the lead of others, who plunged into the worst excesses of banking, as soon as it was ascertained that the charter of the late National Bank had fallen under the Executive axe, in eighteen hundred and thirty-two.

By an official report of the Secretary of the Treasury of the 9th of April last; it appears, that on the first day of January, eighteen hundred and thirty, the aggregate number of State Banks was three hundred and thirty, with a capital of one hundred and forty-five millions, one hundred and ninety-two thousand two hundred and sixty-eight dollars; and that on the first day of January, eighteen hundred and forty, the number of State Banks and branches had increased to nine hundred and one, with a capital of three hundred and fifty-eight millions, four hundred and twelve thousand six hundred and ninety-two dollars. It is estimated that the

number of these banks and branches, now scarcely fall short of a thousand, with a capital of nearly four hundred millions of dollars.

The amount of bank capital in the United States on the first day of January, eighteeen hundred and twenty, was one hundred and thirty-seven millions, one hundred and ten thousand six hundred and eleven dollars; and in the next succeeding ten years it increased only eight millions, eighty-one thousand six hundred and fifty-seven dollars; while the increase in the eight years succeeding the bank veto of eighteen hundred and thirty-two, appears to have been more than one hundred and ninety millions of dollars, nearly twenty-five times the increase that was made during the corresponding period, immediately preceding that exercise of executive power. The bank discounts on the first day of January, one thousand eight hundred and thirty, was two hundred millions, four hundred and fifty-one thousand two hundred and eleven dollars, with a circulation of sixty-one millions, three hundred and twenty-three thousand eight hundred and eight dollars. In the ten years immediately succeeding that period, the bank discounts had increased two hundred and sixty-two millions, four hundred and forty-five thousand three hundred and twelve dollars, with an increase in the circulating medium of forty-five millions, six hundred and twenty-four thousand seven hundred and sixty-four dollars. It is unnecessary to attempt here to describe the overtrading and speculation, or the ultimate disaster and distress growing out of this state of things. This great increase of bank capital, and the unprecedented increase of their loans and discounts, was unquestionably made chiefly under the impression of a necessity to supply a supposed vacuum in the circulating medium, caused by the destruction of the National Bank. In the four years subsequent to the first day of January, eighteen hundred and thirty-six, the increase in the banking capital was one hundred and six millions, five hundred and forty thousand and four hundred dollars; exceeding the whole banking capital of the United States in eighteen hundred and sixteen, twenty-five millions, seven hundred and twenty-five thousand one hundred and seventy-eight dollars.

My purpose is not to criminate the authors of this evil, but I entreat you to study well the causes which led to it, and the melancholy consequences which have flowed, and are yet to flow from it. Though we have already suffered much from a disordered currency and distracted exchanges, the end is not yet. It is a proud and just reflection for us that we have in no way contributed to bring about this condition of affairs; our increase of bank capital has been small, and has not exceeded the increasing wants of the business of the people. Indeed, from the origin of our State Government to the present day, Delaware has never chartered a bank which failed in the end to redeem every dollar of its emissions of paper, and repay to its stockholdsrs the amount of their investments. In this respect, we have been more fortunate than many of our sister States. The experience of the past should admonish us all to be constantly on our guard against the never-ceasing temptation to increase the banking capital of the State.

When the first National Bank fell, in eighteen hundred and eleven, we were without the experience on this subject which we learned in sorrow,

during the next ten years. During the five years which elapsed between the fall of that National Bank charter and the incorporation of another National Bank, in eighteen hundred and sixteen, the States doubled their bank capital; and, at that time, we added our modicum to increase the general trouble. We suffered the consequences, and then curtailed the amount of our capital by declining to recharter two banks incorporated in eighteen hundred and twelve, and eighteen hundred and thirteen, since which, our policy has been steadily observed; and I am well persuaded that upon our future adherence to it, as a cardinal principle in the government of the State, our welfare eminently depends.

There is another principle now firmly engrafted upon our State policy, and which I earnestly hope may never be abandoned. It is to encourage and promote education among all classes of our citizens. Our system of free schools is in useful operation, but like every system of the same kind in other States, it has met with difficulties and embarrassments. My immediate predecessor in office, whose opportunities of information on this subject are much greater than my own, has considered it, and recommended to your consideration, such alterations and amendments as he deemed best calculated to improve and perfect the system; and therefore it is rendered unnecessary for me to make any other suggestions to you on that subject, further than to remark, that by the practical operation of the system its imperfections will be developed; for which, as they are made manifest, it will become the province of the Legislature, from time to time, by further enactments, to provide a suitable remedy.

It is and ought ever to be considered an essential principle in the policy of every well regulated State, steadily and impartially to execute the laws. Penal laws in a government like ours, when unnecessarily severe, defeat themselves. No penal code is wise and well considered, which goes greatly beyond public opinion in severity.

So much of our criminal law, as prescribes the punishment of death for the second offence of kidnapping, has been found by experience to defeat its own operation; the same is true of so much of that code as makes capital those burglaries, where the intent is not to perpetrate either murder, rape, or arson. In some cases also, less than capital, the punishment prescribed, defeats the law by its severity; and in general, wherever the laws have gone greatly beyond public opinion in the measure of punishment, juries have perhaps too often taken the law into their own hands, and refused to convict. Whether any, and to what extent, further alterations are now necessary in the existing code of our criminal laws, it will be for the wisdom of the Legislature to determine.

I make these suggestions because I wish it to be distinctly understood, that I deem it absolutely necessary to the proper government of the State, that the execution of the laws should be steady and impartial; and that the administration of justice in the courts should not be subverted by an improper exercise of the pardoning power vested in the Executive. Nothing can be more unwarrantable or injurious, than the exercise by the Executive, of a dispensing power over the laws. The Constitution does not appoint the Executive the judge of the expediency of the laws, when

it calls on him to execute them; it clothes him with no right to make a dead letter of a statute, because he does not approve it.

Finally, Gentlemen, let us never forget the duty of so administering our public affairs, that morality, virtue and religion, shall be protected and promoted within our borders. Let our municipal laws have this object constantly in view; for it was by these means that our ancestors laid the foundation of their success, in the experiment of republican government. By the observance of this principle, which guided the fathers of the republic in building up our institutions, we may expect the continuance to our people of the blessings of Him, without whose favor all the efforts of man, whether in public or private life to obtain security and happiness, are fruitless and vain.

I should be wanting, Gentlemen, both in sentiments of gratitude and respect, were I to omit this opportunity of returning you my thanks, for the very polite attentions which you have accorded to me on the present occasion. I therefore beg leave to tender to you, and through you, to my fellow-citizens of the State, my sincere acknowledgements for the partiality manifested towards me, and for the trust and confidence reposed in me.

Having thus communicated to you, Gentlemen, my sentiments, as they have been awakened by the occasion which brings us together, I take my present leave, but not without resorting once more to the Benign Parent of the human race, in humble supplication, that as he has been pleased to favor us with opportunities for deliberation, so his divine blessing may be equally conspicious in the enlarged views, the temperate consultations, and the wise measures that may be adopted by the Legislature: and that our labors may be always so directed as to advance the welfare and security of the State, and the individual happiness and prosperity of its citizens.

WILLIAM B. COOPER.

Dover, January 19, 1841.

On motion of Mr. Huffington,
The Journals of the joint meeting of both Houses were read and compared.

On motion of Mr. Higgins,
The two Houses then separated, and the members of the Senate returned to their chamber.

On motion,
The Senate adjourned until 3 o'clock this afternoon.

Eodem Die, 3 o'clock, P. M.

The Senate met pursuant to adjournment.

On motion of Mr. S. Jacobs,

The bill entitled "An act to divorce Foster Donovan and his wife Avis Donovan from the bonds of matrimony," was read a second time.

Mr. du Pont, on the part of the committee to whom was referred the petition of the Wilmington Fire Insurance Company, reported a bill entitled "A supplement to an act to incorporate the Wilmington Fire Insurance Company," which,

On his motion,

Was read.

Mr. du Pont laid on the table a petition from sundry citizens of Wilmington, praying for an amendment of their city charter, which

On his motion,

Was read and referred to a committee of two, with leave to report by bill or otherwise.

Messrs. du Pont and Spruance were appointed said committee.

On motion of Mr. Spruance,

Ordered, That 200 copies of the Governor's Inaugural Address be printed for the use of the Senate.

On motion,

The Senate adjourned till at 10 o'clock to-morrow morning.

WEDNESDAY, 10 *o'clock, A. M. January* 20, 1841.

The Senate met pursuant to adjournment.

On motion of Mr. Boys,

Resolved, That the members of this Senate will testify their respect for the memory of Thomas Deakyne, Esquire, by wearing crape on the left arm for thirty days.

Resolved further, That we do most sincerely sympathise with the widow and relatives of the deceased in their afflictions on that melancholy occasion.

Whereupon,

The Speaker of the Senate issued the following writ, viz:—

THE STATE OF DELAWARE,

To the Sheriff of New Castle County, Greeting:—

We command you that according to the constitution and laws of the State of Delaware, you hold an election in the county of New Castle, in the State aforesaid, for the purpose of electing a Senator from said coun-

ty, in the Senate of the State of Delaware, to fill the vacancy in the said Senate occasioned by the death of Thomas Deakyne.

Witness the honorable Charles Polk, Speaker of the Senate of the State of Delaware.

CHARLES POLK,
Speaker of the Senate of the State of Delaware.

Attest.
GEORGE P. FISHER,
Clerk of the Senate.

On motion of Mr. Tharp,

Resolved, That the Secretary of State be requested to furnish to the Senate a list of appointments to office made by the executive authority of this State from the first day of January eighteen hundred and thirty-nine, to the twentieth day of January eighteen hundred and forty-one, exhibiting the names of the persons or officers appointed, and in each case the time when appointed, the kind and term of office, the salary attached thereto when a salary office, and when not a salary office, the mode and probable amount of compensation; also the place of residence of each officer, so far as the said Secretary may have knowledge, specifying the county at least.

And further resolved, That the Secretary of State be requested to make out the list in tabular form, and inform the Senate of the earliest day upon which he will be able to comply with the above resolutions.

On motion of Mr. Tharp,

The bill entitled "An additional supplement to the act entitled 'An act to extend the time for recording of deeds," was read a third time by paragraphs and

Passed the Senate.

Ordered that the Clerk request the concurrence of the House in said bill.

On motion,

The Senate adjourned till 3 o'clock this afternoon.

Eodem Die, 3 *o'clock. P. M.*

The Senate met pursuant to adjournment.

On motion of Mr. du Pont,

The following resolution was adopted, to wit:—

Resolved by the Senate and House of Representatives of the State of Delaware in General Assembly met, That the Clerk of the Senate be

and he is hereby authorised to cause to be printed and distributed, one thousand copies of the report transmitted by the State Geologist and all maps which he may deem expedient to have appended to said report, and that the expenses of said printing shall be defrayed out of the balance remaining in the hands of the commissioners appointed under an act entitled "An act to provide for a Geological and Mineraological Survey of this State," and from such other funds as are not otherwise appropriated.

Ordered that the Clerk proceed to ask the concurrence of the House in the above resolution.

Mr. Comegys, Clerk of the House of Representatives being admitted, informed the Senate that the House had passed a bill entitled

"An act granting to William Cleaver, jr., of New Castle County a certain tract or parcel of waste and uncultivated land therein described."

The Clerk also informed the Senate that the House had passed the following resolution, and requested the Senate to concur in the same.

"HOUSE OF REPRESENTATIVES,
January 20, 1841.

Resolved by the House of Representatives of the State of Delaware, by and with the concurrence of the Senate, That William D. Waples be, and he is hereby appointed State Treasurer.

Extract from the Journal.

J. P. COMEGYS, *Clerk.*

For concurrence."

The Clerk also informed the Senate that the House had passed the following resolution and requested the concurrence of the Senate in the same.

"HOUSE OF REPRESENTATIVES,
January 20, 1841.

Resolved by the House of Representatives by and with the concurrence of the Senate, That Liston A. Houston be, and hereby is appointed Auditor of Accounts.

Extract from the Journal.

J. P. COMEGYS, *Clerk.*

For concurrence."

And he withdrew.

Mr. Comegys, Clerk of the House of Representatives being admitted, informed the Senate that the House had passed the following resolution, and requested the concurrence of the Senate in the same.

"HOUSE OF REPRESENTATIVES,
January 20, 1841.

Resolved by the Senate and House of Representatives of the State of Delaware in General Assembly met, That when the two Houses adjourn on Thursday next, they will adjourn over to Wednesday the 27th instant.

Extract from the Journal.

J. P. COMEGYS, *Clerk.*

For concurrence."

And he withdrew.

Mr. Comegys, Clerk of the House being again admitted, informed the Senate that the House had passed a bill entitled

"An additional supplement to the act entitled 'An act to amend the act entitled An act concerning the constitution of the Levy Court and Court of Appeal,'" and requested the Senate to concur in the same.

And he withdrew.

On motion of Mr. Spruance,
The above bill was read.

On motion,
The Senate adjourned until 10 o'clock to-morrow morning.

THURSDAY, 10 *o'clock, A. M., January* 21, 1841.

The Senate met pursuant to adjournment.

On motion of Mr. Spruance,
The resolution for the appointment of an Auditor of Accounts was taken up for consideration and read.

Mr. Spruance then moved,
That the name of Liston A. Houston be stricken out of said resolution.

On the question for striking out, the Senate being divided,

The Speaker demanded the yeas and nays, which were as follows, to wit:—

Yeas.—Messrs. Boys, du Pont, T. Jacobs and Spruance—4.

Nays.—Mr. Speaker.

So the motion to strike out *Prevailed.*

Mr. du Pont then moved,
That the blank be filled with the name of Simon Spearman.

Which motion *Prevailed.*

Ordered to the House for concurrence in the amendment.

Mr. Spruance, on the part of the committee appointed by the Senate to act jointly with the committee of the House, to examine the accounts of the State Treasurer &c., made the following report, to wit:—

The Committee appointed by the Senate to act jointly with the committee of the House of Representatives, to examine the accounts of the State Treasurer and Trustee of the School Fund, count the cash on hand and effect a settlement with that officer, beg leave to make the following

REPORT:

On the 16th day of December, 1840, the State Treasurer settled with the Auditor of Accounts at which time there was due from him to the State of Delaware, the sum of - - - $8,376 58
Since when he has received from Wm. Wallace - - 29 67
From David H. Stayton, late Sheriff of Kent county, 77 50
From Elihu Jefferson, late Sheriff of New Castle county, - - - - - 98 00

8,581 75

And that since then he has paid to Wm. A. Sutton,	14 85	
Wm. M. Gemmell for cocoons, - -	17 02	
Eliza J. Kennedy, do. - - -	6 00	
J. L. Harper 1 qrs. salary as Auditor of Accounts,	125 00	
Elijah Cannon State Treasurer 1 years' salary,	500 00	
Ditto for com's on $29 67 rec'vd of Wm. Wallace.	1 48	664 35

Balance due the State, - - - $7,917 40

On the 16th day of December, 1840, the Trustee of the School Fund settled with the Auditor of Accounts, at which time there was due the fund and school districts, - - - - $18,433 91

Since which time he has paid school district, No. 54 in Sussex county, - - -	63 14	
School district No. 7 New Castle county, -	121 47	
Ditto " 44 ditto - -	121 47	
Ditto " 67 ditto - -	121 47	
Ditto " 38 Kent county, - -	180 32	607 87

Balance due the school fund and districts, - $17,826 04

AGGREGATE.

Due from State Treasurer, - - - - 7,917 40
Due from Trustee of School Fund, - - - 17,826 04

25,743 44

The Committee find that the sum of $25,743 44 is deposited to the the credit of the State Treasurer in the Farmers' Bank at Dover and Georgetown.

The Committee find that there has been received by the State Treasurer for dividends and interest upon the investments and loan of the surplus money, directed by the act of 22nd February, 1837, to be apportioned among the several counties in equal proportions, to wit:

This sum received from the Philadelphia, Wilmington and Baltimore R. R. Company, for 6 months interest on $51,587 66 due in October 1838, - - - - - - - - -	1,547 63
Received of the Farmers' Bank for dividend on 5000 shares of increased capital stock, due in January, 1839 -	5,400 00
Received of the Philadelphia, Wilmington and Baltimore R. R. Co. for 6 months' interest on $29,206 17, due January, 1839 - - - - - -	876 17
Received of ditto for interest on $50,587 67, due April 1, 1839 - - - - - - -	1,331 38
Received of ditto for interest on $29,206 67, due April 1, 1839 - - - - - - -	384 07
Received of the Farmers' Bank for dividend on 5000 shares of stock, due in July, 1839 - - - -	5,400 00
Received of the Philadelphia, Wilmington and Baltimore R. R. Co. for 6 months' interest on $80,793 83, due in October, 1839 - - - - -	2,423 81
	$17,363 06

That the said sum of $17,363 06, has not been distributed as is directed by the said act, but has been applied to the expenditures of the State, so far as the same was required, except the sum of $3,186 50, which has been paid to the treasurer of Sussex county, and to the treasurer of the poor of said county. It appears, therefore, that there is due to New Castle county $5,787 68, distributable among the school districts of that county, to Kent county a like sum of $5,787 68, and to Sussex county $1,929 23, distributable among the school districts of that county, and to the treasurer of the poor of that county the sum of $671 95.

By the report of the Auditor of Accounts it appears, that the State Treasurer has paid to the treasurer of the poor of Sussex county $3,343 90 during the last year, out of the funds belonging to the State, instead of out of dividends and interest of last year arising from the investment and loan of the surplus money received by this State of the United States.

The committee are unable to discover from the report of the Auditor of Accounts, or from any showing of the treasurer, that the interest on $5000 which is directed by the act passed Feb. 17, 1837, to be loaned to Sussex county, has been charged to that county or any part of it credited to New Castle and Kent counties. The charge of interest upon the said sum of $5000 to Sussex county and credit to the other counties, which they are entitled to, will vary the amounts stated above as being due to each county, to the amount of such debit and credit.

The committee cannot discover from the report of the Auditor of Accounts for 1839 and 1840, that any thing has been received by the State

Treasurer and Trustee of the School Fund on account of the lottery authorised by the "Act authorising a lottery for the benefit of Delaware College and for other purposes therein mentioned," passed Feb. 11, 1835, since April, 1839, and that therefore, there is due and unpaid to the State and School Fund seven instalments, amounting to $9,076 03.

The Auditor of Accounts in his last settlement with the State Treasurer has allowed him $301 30 commissions. The committee are unable to discover whether the allowance is correct or not, as neither the State Treasurer nor Auditor have furnished the items upon which the allowance has been made.

January 8, 1841.

Mr. Comegys, Clerk of the House of Representatives being again admitted, informed the Senate that the House had refused to concur in the amendment of the Senate to the resolution concerning the appointment of an Auditor of Accounts.

And he withdrew.

Mr. du Pont laid before the Senate a petition from the sisters of charity of Wilmington, praying to be incorporated, together with several accompanying papers, which

On motion of Mr. du Pont,

Were read and referred to a committee of two, with leave to report by bill or othorwise.

Messrs. du Pont and Boys were appointed said committee.

Mr. Comegys, Clerk of the House of Representatives being admitted, informed the Senate that the House had passed the following resolution, and requested the concurrence of the Senate in the same.

"HOUSE OF REPRESENTATIVES,
January 21, 1841.

Resolved by the House of Representatives by and with the concurrence of the Senate, That Simon Spearman be, and hereby is appointed Auditor of Accounts.

Extract from the Journal.

J. P. COMEGYS, *Clerk.*

For concurrence."

And he withdrew.

On motion of Mr. Spruance,

The above resolution was *Concurred in.*

Ordered, to the House with the concurrence of the Senate endorsed upon it.

On motion of Mr. Spruance,

The resolution appointing a State Treasurer was taken up for consideration, and

On motion of said gentleman,
Was read and *Concurred in.*

On motion,
The Senate adjourned until 3 o'clock this afternoon.

Eodem Die, 3 o'clock, P. M.

The Senate met pursuant to adjournment.

The Speaker informed the Senate that he had just received a communication from his Honor, John W. Houston, Esq., Secretary of State, which,

On motion of Mr. Spruance,
Was read, as follow, viz:—

"SECRETARY'S OFFICE,
January 21st, 1841.

To the Speaker of the Senate of the State of Delaware,

SIR:—I have the honor to acknowledge the receipt of the resolutions of the Senate adopted on the 20th inst., calling upon the Secretary of State to furnish to the Senate a list of appointments to office, made by the Executive authority of this State, from the 1st day of January eighteen hundred and thirty-nine, to the twentieth day of January, eighteen hundred and forty-one, to be made out in the mode and manner therein specified; and requesting the Secretary of State to inform the Senate of the earliest day on which he will be able to comply with the said resolutions.

In answer to which for the present, I would respectfully inform the Senate that it will not be in my power to comply with the request contained in the said resolutions, by an earlier day than Monday, the 25th instant.

I have the honor to be,
Yours, &c.,
JOHN W. HOUSTON,
Sec'ry of State."

Mr. Comegys, Clerk of the House of Representatives, being admitted, informed the Senate that the House had concurred in the bill entitled, "A supplement to the act entitled 'An act to enable Amanda Green, Jane Green and Charles Green, minors, to sell and convey certain real estate therein mentioned,"

And he withdrew.

On motion of Mr. Spruance,
The joint resolution concerning a temporary adjournment of the two Houses was taken up for consideration, and,

On his motion,
Was read and *Concurred in.*

Ordered that the Clerk proceed to inform the House of the concurrence of the Senate in said resolution.

In pursuance of said resolution,

On motion of Mr. du Pont,
The Senate adjourned till Wednesday 27th instant, at 10 o'clock A. M.

WEDNESDAY, 10 *o'clock, A. M., January* 27, 1841.

The Senate met pursuant to adjournment.

Mr. Maull laid before the Senate a petition from Peter R. Jackson, praying for an act to enable him to locate certain vacant lands situate in Nanticoke hundred, Sussex county, and to secure his title to the same, which,

On motion of Mr. Maull,
Was read and referred to a committee of two, with leave to report by bill or otherwise.

The committee were Messrs. Maull and du Pont.

Mr. Comegys, Clerk of the House of Representatives, being admitted, informed the Senate that the House had passed a bill entitled "An act to amend the act entitled 'An act supplementary to the act entitled An act for the preservation of certain shell fisheries within this State,"' and requested the concurrence of the Senate in said bill.

And he withdrew.

On motion of Mr. T. Jacobs,
The said bill was read.

His Honor John W. Houston, Secretary of State, being admitted, informed the Senate that Simon Spearman who was elected Auditor of Accounts on Thursday last 21st (instant,) did on said day give bond to the State in the penal sum of two thousand dollars secured by two sufficient sureties, and that the same had been approved by the Governor.

On motion,
The Senate then adjourned until 3 o'clock this afternoon.

Eodem Die, 3 *o'clock, P. M.*

The Senate met pursuant to adjournment.

The Speaker laid before the Senate a communication from Mr. Harper the late Auditor of Accounts, which,

On motion of Mr. Spruance,
Was read as follows, to wit:

DOVER, January 27, 1841.

To the Hon. Charles Polk,
Speaker of the Senate.

Dear Sir,—You will oblige me by laying before the Senate the enclosed communication, as a continuation of my reply to their resolution of the 16th instant.

I am, Sir,
Very respectfully,
Your ob't servant,
J. L. HARPER,
late A. Accounts, State Delaware.

DOVER, JANUARY 27, 1841.

To the Senate
of the State of Delaware.

GENTLEMEN:—

I have the honor to state in continuation of my letter of the 18th instant, and for further answer to the resolution of the Senate of the 16th instant, that the following statement embraces the *items*, on which are based the allowance of commissioners to Elijah Cannon, Esq., late State Treasurer, as may be seen in my Report of the Finances, page 3.

J. L. HARPER,
late Auditor of Accounts.

Received by late State Treasurer from Constables and Sheriffs.

Constables.

From J. P. Jefferson	2	37½
" Moses Rash	1	12½
" William Gray	2	00
" Isaac Fooks	3	00
" H. K. Patrick	1	00
" John S. Waples	2	00
" Levin Vaughan	5	12
" Jos. Soward	15	81
" Moses K. Ford	8	12
" T. J. Downham	6	43
" Geo. C. Herring	1	26
" James G. Massey	1	37
" William Scotten	1	06
Amount carried forward,	$50	67

	Amount brought forward,	$50 67
From Samuel Herring, constable	- -	70
" Jona. S. Green	- - -	12 31
" Geo. A. Moore	- - -	2 89
" W. Dashiell	- - -	9 00
" Wm. McDowell and Jno. Ruth	- -	20 50
" John Rudolph	- - -	50
" Bayard Dawson	- - -	6 66
" Wm. P. Veach	- - -	10 25
" James Noble	- - -	75
" Jos. Smith	- - -	13 68
" J. P. Jefferson	- - -	50
" E. S. Cooper	- - -	50
" David M. Smith	- - -	4 25
" *Luke Lofland's con. com.	- -	10 00
" J. W. Moore	- - -	12 12
" Samuel Wises (admr.)	- -	31 31
" H. K. Patrick	- - -	50
" B. H. Dorsey	- - -	6 00
" Jno. Holston	- - -	4 00
" John Long	- - -	2 50
" Bayard Dawson	- - -	7 33
" W. S. Hubbard	- - -	8 10
" John J. Morgan	- - -	8 00
		227 02

Sheriffs.

From Nathaniel Wolfe, late Sheriff	- -	101 95
" Purnel Johnson do	- -	100 00
" do do	- - -	124 50
		$553 47

*Deduct amount of L. Lofland's commission $10, from aggregate, leaves $543 47, on which I allowed the State Treasurer commissions of 5 per cent., agreeably to law, amounting to $27 17, which is equal to $16 32 added to $10 88, as stated in my report, page 3, (within three cents.)

J. L. HARPER,
Auditor of Accounts.

Received by late State Treasurer from Clerks of the Peace, on old Secretary's book.

From Joshua S. Layton	- - -	$110 00
" Shepard P. Houston	- -	175 00
" do do	- - -	100 00
" do do	- - -	126 00
	Amount carried forward,	$511 00

	Amount brought forward,	$511 00
From	Shepard P. Houston	122 80
"	do do	162 00
"	do do	150 00
"	do do	211 00
"	Geo. M. Manlove	283 00
"	John Gordon	1,003 00
"	Joshua S. Layton	150 00
"	Thomas Stockton	3,006 94
		$5,599 74

On $5,009 74 of the above sum, I allowed commissions of 5 per cent. to the State Treasurer as stated in my report. The additional sum of $589 26 on which I conceived the State Treasurer to be entitled to commissions, is covered by an allowance I made to him of $23 62 for traveling expenses, and a bill of $2 40 paid to John N. Harker, for publishing notices of meeting of State Treasurer, (the latter of which was required by law to be done before he was authorised to institute suits against defaulting debtors to the State, by the laws of 1839, page 240.) The allowance for travelling expenses and the allowance for Harker's bill, are included under the head of *commissions* in the *summary* of the account of the State Treasurer, in my report of the finances.

All the sums stated in this account have been passed to the credit of the State and School Fund by the late State Treasurer and Trustee.

J. L. HARPER.
late Auditor Accounts,
State of Delaware.

Mr. Spruance introduced certain joint resolutions concerning a repeal of the sub-treasury law and the establishment of a national bank, which,

On his motion,

Were read as follow, to wit:—

Resolved by the Senate and House of Representatives of the State of Delaware in General Assembly met, That it is the constitutional duty of Congress to regulate the currency of the nation, and that experience has fully shown, that without the aid of a National Bank that duty cannot be discharged.

Resolved, That a National Bank is indispensably necessary to the proper management of the fiscal concerns of the nation; that the act of Congress commonly called the Sub-treasury, or Independent Treasury Act, is a departure from the line of policy adopted by Washington and Madison, and the other founders of the government—is at war with the whole spirit of our republican institutions—is odious, as establishing an unjust discrimination between the officers of the government and the people, and until repealed, must continue to distract the exchanges, disorder the currency, and prostrate the industry of the country.

Resolved, That our Senators in Congress be instructed, and our Re-

presentative requested, to use their best efforts to procure a repeal of the sub-treasury act, to establish a National Bank on the basis approved by Washington and Madison, and to bring back the government of the nation from the path of experiment to the principles of the fathers of the republic.

Mr. Tharp coming in after the reading of the above resolutions,

On motion of Mr. Spruance,
The resolutions were read a second time.

Mr. Spruance then moved,
That the resolutions be adopted. Pending which motion,

Mr. T. Jacobs moved,
That the further consideration of the resolutions be postponed till Thursday next.

Which motion *Was lost.*

The question as to the passage of the resolutions being called for and

On said motion,
The Senate being divided, Mr. Tharp called for the yeas and nays, which were as follow, to wit:—

Yeas—Messrs. du Pont, S. Jacobs, Maull, Spruance and Speaker—5.
Nays—Messrs. T. Jacobs and Tharp—2.

So the motion for the adoption *Prevailed.*

Message from the House by the Clerk.

Mr. Comegys, Clerk of the House, being admitted, requested the concurrence of the Senate in certain joint resolutions on the subject of the New Jersey question.

Also, the concurrence of the Senate in certain resolutions concerning the restriction of the eligibility of the Presidents of the United States to a single term of four years, and

Also the concurrence of the Senate in certain resolutions concerning the remonstrance of the citizens of the District of Columbia against certain acts of Congress relating to said District.
And he withdrew.

On motion of Mr. T. Jacobs,
The communications from the House were read as follow, to wit:—

"HOUSE OF REPRESENTATIVES,
January 27, 1841.

In the Legislature of the State of Delaware, January Session, 1841.

The Committee to whom was referred so much of the Governor's Message as relates to a communication from the Governor of the State of New Jersey, transmitting resolutions of the Legislature of the said State, pro-

testing against the exclusion by the House of Representatives of the United States, of five persons duly commissioned and returned as Representatives of that State in the twenty-second Congress of the United States, report for adoption, the following resolutions:—

Resolved by the Senate and House of Representatives of the State of Delaware in General Assembly met, That by the Constitution of the United States each State is entitled to a certain number of Senators and Representatives in the Congress of the United States, to be appointed and elected by the several States according to the Constitution and laws thereof; and that the only evidence which can properly be received by Congress of the right of Senators or Representatives to a seat in either branch of the National Legislature, in the first instance, is their certificates or commissions, duly authenticated according to the Constitution and laws of the respective States.

Resolved, That it appears manifest to this Legislature, that John B. Aycrigg, John P. B. Maxwell, William Halsted, Charles C. Stratton and Thomas Jones Yorke, were duly commissioned to represent the people of the State of New Jersey in the twenty-sixth Congress of the United States; that they appeared, produced their commissions and claimed their seats in the House of Representatives of the United States, and were prevented from exercising the right of forming and organising a House of Representatives, by a majority of members elect from other States who appeared, claimed, and obtained their seats, in virtue of exactly the same kind of evidence and authority, produced and insisted upon by the excluded members from the State of New Jersey; that said acts and doings of the majority of the members elect of the House of Representatives of the twenty-sixth Congress were unwarranted, unjust and unconstitutional, and ought to be protested against by the Legislature of every State, lest the said acts and doings should hereafter be claimed as a precedent, and made the excuse for disfranchising a sovereign State, whenever a majority of either House of Congress from caprice, or strong party feeling may choose so to do, regardless of right and in contempt of consequences which might produce open rebellion, and perhaps a dissolution of the Union.

Resolved, That a copy of these resolutions be transmitted to each of our Senators and Representative in Congress, with a request that they lay the same before their respective Houses, also to the Governor of the State of New Jersey, to be laid before the Legislature of said State.

Extract from the Journal.

J. P. COMEGYS, *Clerk.*

For concurrence."

"HOUSE OF REPRESENTATIVES,

January 27, 1841.

In the General Assembly of Delaware, January Session, 1841.

The Committee to whom was referred so much of the Governor's Message as relates to amendments to the Constitution, so as to restrict the

eligibility of the President of the United States to a single term, recommend the adoption of the following resolutions:

Resolved by the Senate and House of Representatives of the State of Delaware in General Assembly met, That the Senators in Congress from this State be instructed, and our Representative in Congress requested, to use their best efforts to procure such amendments to the Constitution of the United States, as will restrict the eligibility of the President of the United States to a single term.

Resolved, That the Governor be requested to forward a copy of the foregoing resolution to each of our Senators and to our Representative in Congress; also to the Executive of each State of the Union, that the same may be laid before their respective Legislatures for their co-operation in procuring said amendment.

Extract from the Journal.

J. P. COMEGYS, *Clerk.*

For concurrence."

"HOUSE OF REPRESENTATIVES,
January 27, 1841.

In the Legislature of Delaware, January Session, 1841.

The committee to whom was referred so much of the Governor's Message as relates to the remonstrance of the citizens of the District of Columbia, appealing to the people of the United States, and to the Legislatures of the several States, against the course of legislation adopted by Congress towards them injurious to their rights and interests

Report, That having maturely examined the remonstrance of the citizens of the District of Columbia, to the people of the United States and to the Legislatures of the several States, against certain acts of a majority of Congress, your committee are constrained to view with great surprise and deep regret, the course of legislation pursued by Congress towards the people of the said district, who in common with all the citizens of a free government, have a right to expect from their rulers, ample protection for their persons and property, and of such institutions established among them, as time and experience has proved convenient and necessary as the means whereby they may acquire support, independence and happiness.

The condition of the people residing within the District of Columbia is peculiar. They have no voice in the national councils, but are wholly dependent for their good or evil government, upon the Representatives of the several States; they have no political power; hence, when they suffer from unwise, partial or vindictive legislation, their only remedy lies in an appeal to the justice and magnanimity of the people, for a redress of grievances.

To enable Congress to carry into effect that part of the constitution which provides for the permanent establishment of a seat of government,

the States of Virginia and Maryland, about the year 1789, ceded and relinquished to the Congress and government of the Union forever, in full and absolute right, and exclusive jurisdiction, as well of soil, as of persons residing thereon, the territory since known as the District of Columbia, and in addition thereto, for the purpose of facilitating the erection of buildings for the accommodation of the President, Congress, and the several departments of government, and of fortifications for their defence and security, the State of Virginia voluntarily granted and paid to the United States, the sum of one hundred and twenty thousand dollars, and the State of Maryland the sum of seventy-two thousand dollars; and to render easy and practicable the intentions and wishes of the general government in laying out the plan of a federal city, now known as the city of Washington, the proprietors of the soil, in that part of the District of Columbia, generously conveyed, in trust to the United States, all the land within the limits of the said city; the streets, avenues and squares, to be solely the property of the United States, and the lots to be equally divided between the grantors and the United States. Such very liberal cessions, gifts and grants, ought to have secured to the inhabitants of the ceded district, all the blessings attending a fair and impartial government; to have induced Congress (when about to legislate on matters involving their rights, interests and happiness) to afford them the greatest security and protection which could be granted consistently with the constitution and laws of the Union, to have been careful to enact no laws calculated to impair their natural or acquired rights, or refuse to pass such as would promote their general welfare and prosperity. In no case should the condition of the citizens of the District of Columbia have been made worse in consequence of the change of jurisdiction, from that of the States of Maryland and Virginia, to the Uuited States.

The people of the District of Columbia previously to its cession to the United States, were generally, and still continue, a commercial and manufacturing community, and as such required, and yet require the common facilities universally resorted to by that class of citizens to enable them to prosecute with success their respective avocations. As auxiliary to their interests, they had established, previously to the acceptance and organisation of the district, under the United States, several banking institutions to which others have since been added by several acts of Congress, as the business and growing population required. The National Legislature, (without hesitation,) until within a few years past, when either of the banks of the district, called for a renewal of its charter, made the necessary laws for its continuance, and the utmost confidence existed in the minds of all, that the system would be continued, so long as the banks conducted themselves in a manner to subserve the public convenience and interests. Expecting no change in this particular the banks made liberal advances to individuals, who extended their business in proportion to their increase of capital, thereby greatly accelerating the growth and prosperity of the cities of the district.

While the citizens of the district were thus pursuing by the ordinary means, their course towards independence if not wealth, the majority of

Congress, regardless of consequences, and in the opinion of your committee, without any adequate or even probable cause, at their last session refused to recharter any of the Banks of the District of Columbia, only allowing to them for a very limited period a corporate existence, within which time they will be compelled to enforce payment of all debts due them and discharge all liabilities against them. A course of legislation calculated to impede the progress of improvement in the District and bring sudden and unlooked for ruin upon many who otherwise would have continued useful and independent members of the community. The citizens of the District in their remonstrance, charge that this harsh and unjustifiable act of oppression on the part of Congress, was occasioned by the vindictive spirit of party actuating a majority of the members of that body; and intended to punish them for their free expression of opinion in relation to the policy of the general administration. If the charge is true, and your committee are constrained unwillingly to admit that there appears good grounds for the belief in its truth, then indeed have we fallen upon evil times, requiring the utmost exertion of moral power to counteract and defeat the machinations of the fiend of party spirit, which if not properly rebuked, by a free expression of opinion, aided by the salutary influence of a proper exercise of the elective franchise, may one day tumble into ruins the fabric of our freedom. Let us therefore be wary, we cannot too constantly remember, that "the price of liberty is eternal vigilance."

The people of the District further complain of the injurious interference of Congress in their municipal regulations. In particular, the citizens of Washington alledge that a majority of Congress without cause or reason assigned, set aside an election held on the first of June last, for Mayor, Alderman and Council for the stated term of two years; which act we cannot but consider one of high-handed oppression, worthy the condemnation of all who would be free.

Independent of that feeling which should prompt us at all times to sympathise with the oppressed, and if in our power, aid in redressing their wrongs, the citizens of the District of Columbia, have additional claims to our serious consideration as descending from one common ancestry, and entitled as citizens of the same country, to the same rights and privileges secured to ourselves by the heroes of the revolution, and the sages who formed our happy Constitution. We, therefore, respectfully recommend the adoption of the following resolutions:—

Resolved by the Senate and House of Representatives of the State of Delaware in General Assembly met, That the cession by the States of Virginia and Maryland of the territory of the District of Columbia, their grants of money to facilitate the erection of suitable buildings and fortifications for the accommodation and security of the President, Congress, and the several departments of the government, and the generous donation of lands by the proprietors of the soil upon which the city of Washington was laid out, and its plan perfected to the United States was highly beneficial, and merited a kind, liberal and generous consideration in return.

Resolved, That in the opinion of this Legislature, the refusal by a ma-

jority of Congress to recharter the banks of the District of Columbia, was unwise and oppressive.

Resolved, That this Legislature are unwilling to believe with the citizens of Washington and Georgetown, that their only chance for good government and prosperity rests in a retrocession of the territory ceded to the United States, to the State of Maryland; but confidently hope the next, if not the present Congress will grant them ample redress of all their grievances.

Resolved, That the people of the District of Columbia ought to be represented in the Congress of the United States, and that measures should be taken as soon as conveniently may be, to bring about such a just and desirable end.

Resolved, That the foregoing resolutions be signed by the Speaker of the Senate and the Speaker of the House of Representatives, and transmitted to our Senators and Representative in Congress, to be laid before their respective Houses.

Extract from the Journal.

J. P. COMEGYS, *Clerk.*

For concurrence."

Mr. Comegys, Clerk of the House being again admitted, informed the Senate that the House of Representatives had passed a bill entitled "An act to repeal the act entitled 'An additional supplement to the act entitled 'An Act providing for the punishment of certain crimes and misdemeanors.'"

And he withdrew.

On motion of Mr. Maull,
The said bill was read.

On motion,
The Senate adjourned until 10 o'clock to-morrow morning.

THURSDAY, 10 *o'clock, A. M., January* 28, 1841.

The Senate met pursuant to adjournment.

The Speaker laid before the Senate a communication from the Secretary of State, accompanied with a list of executive appointments, which,

On motion of Mr. Tharp,
Was read as follows, to wit:—

"*Office of the Secretary of State,*
Dover, Jan. 28, 1841.

SIR—In compliance with the request contained in the resolutions of the Senate of the 20th inst., I have the honor herewith to transmit a tabular list of appointments to office, made by the Executive authority of this State between the periods mentioned in said resolutions, with all the information in relation to each appointment that has come within my knowledge.

It will be perceived upon an examination of the said list, that wherever the mode of compensation is otherwise than by a fixed salary, the amount annually received by the officer is not given: in such cases I have omitted this statement, for the obvious reason that the records in my possession afford no data by which that amount can be ascertained. It may also be observed in relation to those appointments, the terminations of which are not defined upon the list, that in consequence of the mode in which these offices must necessarily be filled by the Executive under the existing laws of the State, it is impossible to determine without much delay and expense, the precise period of their duration. So far, however, as it has been in my power to comply with the resolutions above referred to, full and explicit information has in all cases been rendered, and in such a manner, I trust, as will give general satisfaction to the Senate.

I have the honor to be,
Very respectfully,
Your obedient servant,
JOHN W. HOUSTON,
Sec'ry of State.

The Honorable the Speaker of the Senate of the State of Delaware.

A LIST of Appointments to Office made by the Executive Authority of the State of Delaware, from the first day of January, eighteen hundred and thirty-nine, to the twentieth day of January, eighteen hundred and forty-one, exhibiting the names of the officers appointed, and in each case the time when appointed, the kind and term of office, the salary attached thereto when a salary office, and when not a salary office the mode of compensation, and the place of residence of each officer, so far as the same is known.

CORNELIUS P. COMEGYS, Esq., Governor.

Names of Officers.	When appointed.	Kind of office.	Term of office.	Mode of compensation.	Amount.	Residence.
	1839.					
John Maberry	Jan. 1	Constable	Unknown	By fees	Unknown	Kent
Charles T. Flemming	" 3	Notary and Tab. Public	7 years	do	do	do
James Frazer	" 21	Justice of the Peace	do	do	do	New Castle
Zachariah Pitts	Feb. 6	" "	do	do	do	Sussex
William McCaulley	" 14	" "	do	do	do	New Castle
Jonas Pusey	" 22	Notary Public	do	do	do	do
William P. Veach	April 5	Constable	Unknown	do	do	do
John D. Bird	" "	Notary Public	7 years	do	do	do
John Wood	" 24	Justice of the Peace	do	do	do	do
Willard Hall	May 10	Superin'dent of free schools	1 year	Without e'm'nt	do	do
Simon Spearman	" "	" "	do	do do	do	Kent
Joshua G. Baker	" "	" "	do	do do	do	Sussex
Martin W. Bates	June 4	Judge ad litem	Pro tem.	Not fixed	Unestablished	Kent
Robert Frame	" 6	" "	do	do	do	do
Francis Brown	" 15	Constable	Unknown	By fees	Unknown	Sussex

	1839.						
Thomas McDowell	July	4	Justice of the Peace	7 years	By fees	Unknown	New Castle
Caleb M. Carter	"	31	Constable	Unknown	"	do	Kent
George Ralston	Aug.	28	"	"	"	do	do
Robert Rhodes	Sep.	9	Com. weights and measures	Unlimited	By Levy Court	do	New Castle
Charles T. Fleming	"	"	" " "	"	" "	do	Kent
William S. Vanstavoren	"	11	Constable	Unknown	By fees	do	do
William Ruth	"	14	Notary Public	7 years	"	do	do
Richard H. Bayard	"	19	Chief Justice	Unlimited	By salary	$1200 per annum	New Castle
John J. Milligan	"	"	Associate Judge	"	"	$1000 do	do
Ezekiel Blackiston	Oct.	9	Constable	Unknown	By fees	Unknown	do
Cornelius D. Blaney	"	28	Recorder of Deeds	Unlimited	"	do	do
William Ruth	Nov.	4	Justice of the Peace	7 years	"	do	Kent
David M. Smith	"	"	Constable	Unknown	"	do	do
Jacob C. Vandyke	"	14	"	"	"	do	New Castle
Thos. Robinson, of Wm.	"	27	Justice of the Peace	7 years	"	do	Sussex
James Robinson	Dec.	16	" "	" "	"	do	New Castle
Edward C. Dingle	"	"	" "	" "	"	do	Sussex
Henry D. Hunter	"	19	Aid-de-camp	Unlimited	Honorary	do	New Castle
	1840.						
James McClyment	Jan.	3	Justice of the Peace	7 years	By fees	Unknown	Kent
Manlove Hayes, Jr.	"	25	Com'er to take depositions	Unlimited	"	do	Tennessee
William R. Cahoon	"	29	Justice of the Peace	7 years	"	do	Kent
do do	"	"	Notary Public	" "	"	do	do
Cornelius D. Blaney	Feb.	11	Clerk of the Orphans' Court	5 years	"	do	New Castle
Edward W. Gilpin	"	12	Attorney-General	" "	By sal'y & fees	Salary, $350 50	do
John D. Anderson	March	9	Notary Public	7 years	By fees	Unknown	Kent
Hyland B. Pennington	do	28	Notary Public	7 years	do	do	New Castle
Curtis Tweede	April	8	Justice of the Peace	do	do	do	do

Names of officers.	When appointed.	Kind of office.	Term of office.	Mode of compensation.	Amount.	Residence.
	1840.					
Nathaniel Covington	April 16	Constable	Unknown	By fees	Unknown	New Castle
James Pettyjohn, of E.	May 11	Constable	do	do	do	Sussex
George B. Rodney	do 12	Judge ad litum	Pro tem.	Not fixed	Unestablished	New Castle
Jonathan Manlove	do 16	Constable	Unknown	By fees	Unknown	do
Isaac Price	do 21	do	do	do	do	do
Beniah Tharp	do 22	Escheator	5 years	do	do	Kent
Abraham Egbert	do 23	Notary Public	7 years	do	do	New Castle
Isaac Hunter	June 1	Captain of Rifle Company	Unlimited	Without e'm'nt	do	do
Charles C. Bigger	do 1	1st Lieut. of same	do	do	do	do
Thomas M. Ogle	do 1	2d do do	do	do	do	do
James Husten	do 1	3d do do	do	do	do	do
Charles H. Black	do 2	Clerk of the Peace	5 years	By fees	do	do
do do	do 2	Register in Chancery	do	do	do	do
James B. Hull	do 15	Constable	Unknown	do	do	do
John C. Voshell	do 24	do	do	do	do	do
Andrew P. Reading	July 3	Notary Public	7 years	do	do	do
William P. Veach	do 15	Justice of the Peace	do	do	do	do
Alexis du Pont	Sep. 10	Aid-de-camp	Unlimited	Honorary	do	do
John Caldwell	do 10	do	do	do	do	do
Lewis P. Bush	do 26	Port physician	do	By fee	$10 for each vessel	Wilmington
James C. Moon	do 28	Constable	Unknown	By fees	Unknown	New Castle
James Moon	Oct. 1	do	do	do	do	do
A. de Kalb Tarr	do 22	Com'r to take depositions	Unlimited	do	do	Philadelphia
Peter Parker	Nov. 12	Register of Wills, &c.	5 years	do	do	Sussex
William Hazzard	Dec. 2	Notary Public	7 years	do	do	do
do do	do. 2	Justice of the Peace	Unknown	do	do	do

	1840.						
George Frame	Dec.	2	Notary Public	7 years	By fees	Unknown	Sussex
Thomas Rust	do.	18	Constable	Unknown	do	do	do
	1841.						
James A. Sparks	Jan.	18	Com'r to take depositions	Unlimited	do	do	N. York St.
Samuel James	do	18	Justice of the Peace	7 years	do	do	New Castle

WILLIAM B. COOPER, Esq., GOVERNOR.

John W. Houston	Jan.	19	Secretary of State	4 years	By sal'y & fees	$400 per annum	Sussex

Respectfully submitted,
By JOHN W. HOUSTON,
Secretary of State.

To the Honorable the Senate of the State of Delaware.

Mr. Spruance, on the part of the committee of enrolment, reported the following bills and resolution to be duly and correctly enrolled:

The bill entitled "An act to divorce Elender M'Gee and Edward M'Gee from the bonds of matrimony."

A bill entitled "A supplement to the act entitled 'An act to enable Amanda Green, Jane Green and Charles Green, minors, to sell and convey certain real estate therein mentioned.'"

A resolution entitled "A joint resolution appointing directors of the Farmers' Bank of the State of Delaware."

Mr. Comegys, Clerk of the House of Representatives, being admitted, presented to the Speaker certain enrolled bills for his signature.

And he withdrew.

On motion of Mr. Tharp,

Ordered, That the Clerk have printed 500 copies of the tabular list of Executive appointments.

Mr. Tharp laid on the Clerk's table a petition from Samuel G. Smith praying for an act to enable him to locate certain vacant lands in North West Fork hundred, Sussex county, and to secure his title to the same, which,

On his motion,

Was read and referred to a committee of two, with leave to report by bill or otherwise.

Messrs. Tharp and T. Jacobs were appointed said committee.

On motion of Mr. du Pont,

The bill entitled "An act to amend the act entitled 'An act to incorporate the Wilmington Fire Insurance Company," was read a third time by paragraphs in order to pass the Senate.

The first section of the bill being read, the Speaker put the question,

"Shall this be the 1st section?"

On which question the Senate being divided, Mr. Boys called for the yeas and nays, which were as follow, to wit:—

Yeas—Messrs. du Pont, S. Jacobs, Spruance, Tharp and Speaker—5.

Nays—Messrs. Boys, T. Jacobs and Maull—3.

So the question was decided

In the affirmative.

On the question,

"Shall the bill as read now pass the Senate?"

The Senate being divided, Mr. T. Jacobs called for the yeas and nays, which were as follow, to wit:—

Yeas.—Messrs. du Pont, S. Jacobs, Spruance, Tharp and Speaker—5.

Nays.—Messrs. Boys, T. Jacobs and Maull—3.

So the question was decided

In the affirmative.

And the bill

Passed the Senate.

Ordered to the House for concurrence.

Mr. Comegys, Clerk of the House being admitted, informed the Senate that the House had concurred in the joint resolutions concerning the repeal of the Sub-treasury act and the establishment of a National Bank.

And he withdrew.

Mr. T. Jacobs presented a petition from William W. Delany, praying for the passage of a law to enable him to locate certain vacant lands in North West Fork hundred, Sussex county, and to secure his title to the same, which,

On his motion,

Was read and referred to a committee of two, with leave to report by bill or otherwise.

Messrs. T. Jacobs and Maull were appointed said committee.

On motion,

The Senate then adjourned until 3 o'clock this afternoon.

Eodem Die, 3 o'clock, P. M.

The Senate met pursuant to adjournment.

The Speaker laid on the table a communication from the Hon. Samuel M. Harrington, which,

On motion of Mr. Maull,

Was read as follows, to wit:—

To the Honorable the Senate
and House of Representatives:

In obedience to an act of the General Assembly entitled "An act to secure a report of cases adjudged in this State," passed Feb. 22, 1837, the subscriber has the honor to report to the Legislature.

That he has prepared for publication a second volume of reports of cases adjudged in the Superior Court, Court of Oyer and Terminer, and Court of Errors and Appeals, on such points as he considered important to be known and understood by the people of this State. This volume embraces the decisions from June Term, 1835, to the Fall Sessions, 1839, with references to many of the older cases, and will make a book of 600 closely printed pages. The volume has been printed, and is in the hands

of the binder. It will be ready for delivery before the end of the session.

The State subscribed for 100 copies of the 1st volume of these reports which was necessary to save the publisher from loss, the edition being so small as to require a sale of nearly the whole to defray expenses. These copies were distributed by law to certain public officers in the State; and one copy was sent to the Executive of each State and Territory of the United States; in return for which we have received from many of those States and Territories three copies of similar reports of their judicial decisions, thus bringing within our reach the adjudged cases as well as the statute laws of the several States of this Union, and forming the basis of a useful State library. It is believed also that the principles of our jurisprudence and the character of our judicial tribunals, have been made more generally (it is hoped more favorably) known beyond the limits of our own State, through the medium of these reports than could have been done by any other means. In reference to their usefulness at home scarcely any one who has been in the habit of attending the sessions of our courts can have failed to observe the time saved, the litigation suppressed, and the uniformity and certainty of decision produced by this record of previous decisions. But there is one means of their usefulness originally contemplated by the Legislature that has not been fully realised. It appears from the report of the committee on whose recommendation these reports were commenced (House Journal 1835, p. 151,) that they considered "if a copy were furnished to each Justice of the Peace in the State to be retained in his office and transmitted to his successor, it would perhaps be the means of making such a work more immediately useful to the public than any other that could be devised." On this suggestion the subscriber has taken pains to report certiorari cases in such manner as to point out to this inferior, but very important tribunal, the defects in its mode of proceeding, and the causes of the reversal of its judgments. In some instances he has prescribed forms of entry, and precedents for such legal documents as indentures of apprenticeship and other papers in frequent use by magistrates. But he is satisfied that very few of these officers have ever possessed themselves of this means of information. It is not his privilege to make any recommendation to the Legislature, but he calls attention to this subject as a matter connected with his duty as reporter of legal decisions. There are a number of copies of the 1st volume still remaining in the State's library.

It will be observed that the present volume only brings the cases down to the time when Chief Justice Bayard came upon the bench. Its publication has been delayed by the fact that the act of Assembly requires the volume to be reported to the next General Assembly after its completion. The subsequent cases are reported and will hereafter be published. Delay in this respect would be avoided, and the publication keep pace more closely with the decisions if the reporter were at liberty to publish a volume whenever it reached a suitable size. The committee of 1835 thought that from 400 to 500 pages would make a volume sufficiently large, but both the 1st and 2nd volumes have reached 600 pages. The occurrence of several cases of great magnitude and importance will make

an earlier publication of the next volume necessary, but as the reports progress, it is probable that longer time will be required to form a volume than the four years embrace of the others, as it will be unnecessary to report cases similar in principle to those already reported.

Very respectfully submitted,
S. M. HARRINGTON.

Dover, January 27, 1841.

Mr. Tharp, on the part of the committee to whom was refered the petition of Samuel G. Smith, reported a bill entitled

"An act to enable Samuel G. Smith to, locate certain vacant lands in North West Fork hundred, in Sussex county, and to complete his title to the same," which,

On his motion,
Was read.

On motion,
The Senate adjourned until 10 o'clock to-morrow morning.

FRIDAY, 10 *o'clock A. M., January* 29, 1841.

The Senate met pursuant to adjournment.

The Speaker laid on the table a certificate of the election of Andrew Snow Naudain to the office of Senator to supply the place of Thomas Deakyne, deceased, which,

On motion of Mr. Spruance,
Was read.

Mr. Naudain appearing, was qualified and took his seat.

Mr. Boys laid on the table a petition from sundry citizens of Wilmington, praying for an amendment of their city charter, which,

On his motion,
Was read and referred to the committee heretofore appointed on this subject.

Mr. Comegys, Clerk of the House of Representatives being admitted, informed the Senate that the House had concurred in the bill entitled

"An act to enable John Watkins to locate certain vacant lands in North West Fork hundred in Sussex county, and to complete his title to the same."

Also, that the House had concurred in the joint resolution concerning he printing of the Geological Report.

The Clerk also requested the concurrence of the Senate in the bill entitled

"An act to amend the act entitled 'An act concerning the Levy Court, Clerk of the Peace, Assessors, Collectors and County Treasurers.' "

Also, the concurrence of the Senate in the bill entitled

"An act to amend the act entitled 'An act concerning the keeping of the papers belonging to the Executive department, and the acts of the General Assembly, and the printing and disposal of the laws and journals.' "

The Clerk also requested the concurrence of the Senate in certain joint resolutions.

And he withdrew.

On motion of Mr. S. Jacobs,

The resolutions were read as follow, to wit:—

"HOUSE OF REPRESENTATIVES,
January 28, 1841.

Whereas, prior to the month of September 1800, numerous captures of American vessels with their cargoes, were made by French vessels of war, whereby the French government became liable to a claim of indemnity for such captures on the part of American citizens who had been thus despoiled of their property:

And whereas, the government of the United States, in the month of September 1800, concluded a treaty with the French Republic, in which they released the said Republic from all claims on the part of the citizens of the United States, on account of the above spoliations, in consideration of a release on the part of the said Republic, of a claim of indemnity against the said United States, for the non-performauce of certain stipulations contained in the treaty between France and the United States, concluded in the year 1778. Therefore

Resolved by the Senate and House of Representatives of the State of Delaware in General Assembly met, That the government of the United States, by releasing France from its obligation to indemnify our citizens for the property plundered by its cruizers, in consideration of the release granted by France from the guarantees contained in the treaty of 1778, must be regarded as having assumed the debt, and as having voluntarily placed itself under a solemn obligation to satisfy all the claims thus released for a valuable consideration.

Resolved, That the Senators and Representative of this State in Congress, be and they are hereby requested to use all fair means to procure the passage of a law to compensate our citizens for spoliations committed by France prior to 1800.

Extract from the Journal.

J. P. COMEGYS, *Clerk.*

For concurrence."

"HOUSE OF REPRESENTATIVES,
January 28, 1841.

Resolved by the Senate and House of Representatives of the State of Delaware in General Assembly met, That the Senators from this State in the Congress of the United States be instructed, and the Representative from this State in the Congress of the United States be requested, to use their exertions to procure this State's quota of the last instalment, due under the act of Congress of 1838, providing for the deposite of the surplus revenue with the several States, as soon as the embarrassed condition of the treasury of the United States will admit of the payment of the said instalment.

Resolved, That the foregoing resolution be signed by the Speaker of the Senate and the Speaker of the House of Representatives, and transmitted to our Senators and Representative elect in Congress, with a request that they lay the same before their respective Houses, at the first session of the twenty-seventh Congress.

Extract from the Journal.

J. P. COMEGYS, *Clerk.*

For concurrence."

"HOUSE OF REPRESENTATIVES,
January 28, 1841.

Resolved by the Senate and House of Representatives of the State of Delaware in General Assembly met, That the State Treasurer be, and he is hereby authorised and directed to pay to Martin W. Bates Esq., the sum of one hundred and fifty dollars for his services as Judge ad litem, under the appointment of the Governor of this State. To Robert Frame, Esq., the sum of one hundred and fifty dollars for like services rendered; and to George B. Rodney, the sum of two hundred dollars for like services rendered.

Extract from the Journal.

J. P. COMEGYS, *Clerk.*

For concurrence."

"HOUSE OF REPRESENTATIVES,
January 28, 1841.

Resolved by the Senate and House of Representatives of the State of Delaware in General Assembly met, That the Secretary of State be, and he is hereby authorised and requested, to transmit to the Librarian of Congress, to be placed in the Congressional Library, the sixth, seventh and eighth volumes of the Delaware Laws.

Extract from the Journal.

J. P. COMEGYS, *Clerk.*

For concurrence."

Mr. Comegys, Clerk of the House of Representatives, being again admitted, requested the concurrence of the Senate in a bill entitled "An Act for the relief of Esther Coverdale."

And he withdrew.

On motion of Mr. T. Jacobs,

The said bill was read.

John W. Houston, Esq., Secretary of State, being admitted, informed the Senate that William D. Waples, who on Thursday, the 22d inst., was elected State Treasurer, had given bond as required by law.

On motion of Mr. T. Jacobs,

The bill entitled "An Act to amend the act entitled 'An Act concerning the keeping of the papers belonging to the Executive department, and the acts of the General Assembly, and the printing and the disposal of the laws and journals,"

Was read.

On motion of the same gentleman,

The bill entitled "An Act for the relief of Esther Coverdale,"

Was read.

On motion of the same gentleman,

The bill entitled "An act to amend the act entitled 'An act concerning the Levy Court, Clerk of the Peace, Assessors, Collectors, and County Treasurers,' "

Was read.

On motion of Mr. Spruance,

The bill entitled "A supplement to the act entitled 'An Act to enable the owners and possessors of the meadow, marsh and cripple, lying on both sides of the Northwest branch of Duck creek, emptying into the main branch of Duck creek below the Eagles' Nest Landing, effectually to embank and drain the same, and keep the banks, dams, sluices, canals and drains in repair, and to raise a fund to defray the expense thereof,"

Was read.

Mr. du Pont, on the part of the committee to whom was referred the petition of the "Sisters of Charity of St. Peters," reported a bill entitled "An Act to incorporate the Sisters of Charity of St. Peter's and to grant to said corporation certain lands in Mill creek hundred," which,

On his motion,

Was read.

Mr. T. Jacobs, on the part of the committee to whom was referred the petition of William W. Delany, reported a bill entitled "An Act to enable William W. Delany, of Sussex county, to survey and locate certain vacant lands, and to complete his title to the same," which,

On his motion,

Was read.

On motion of Mr. Maull,

The bill entitled "An Act to amend the act entitled 'An Act supplementary to the act entitled 'An Act for the preservation of certain shell fisheries within this State,'"

Was read a second time and amended as follows, to wit:—

"Amend the bill by striking out the whole of the second and third sections."

On motion of Mr. Tharp,

The bill entitled "An Act to enable Samuel G. Smith to locate certain vacant lands in Northwest Fork hundred in Sussex county, and to complete his title to the same,"

Was read a second time.

On motion,

The Senate adjourned till 3 o'clock this afternoon.

Eodem Die, 3 *o'clock. P. M.*

The Senate met pursuant to adjournment.

Mr. Comegys, Clerk of the House of Representatives, being admitted, informed the Senate that the House had concurred in the bill entitled "An Act to amend the supplement passed January 25, 1830, to the act for the establishment of free schools," and had amended the same, and requested the concurrence of the Senate in the amendment.

And he withdrew.

On motion of Mr. Spruance,

The bill as amended was taken up for consideration and the amendments read as follows:—

"HOUSE OF REPRESENTATIVES,

January 29, 1841.

Amendment 1st.—Strike out the words "to be" occurring on the fourth line of the 1st section of the printed bill.

Amendment 2nd.—Add to the bill the following section, to wit:

SECTION 6. *And be it further enacted*, That if the secretary of a meeting of school voters, stated or occasional, in any school district, shall refuse or neglect to prepare two true certificates of the proceedings of said meeting, or to duly sign the same, or if the chairman of such meeting shall refuse or neglect to sign such certificates when so prepared, or to cause the same to be delivered, when signed, one to the clerk of the district, and the other to the clerk of the peace of the county, within thirty

days from the day of holding such meeting, the said secretary or chairman so refusing or neglecting, shall be guilty of a misdemeanor, and on conviction shall pay to the State a fine not exceeding fifty dollars with costs.

And if a certificate properly signed of a meeting of school voters, shall not be delivered, either to the clerk of the district, or clerk of the peace of the county, within the time above specified from the day of holding such meeting, the proceedings of such meeting shall be void, and the clerk and commissioners in office immediately previous to the meeting shall continue in office so far as to call another meeting, and the said clerk and commissioners or either of them shall proceed to call another meeting by advertisements, specifying the day, hour and place thereof, posted in five or more of the most public places of the school district at least five days before the day of meeting—which day and hour the persons or person calling the meeting shall appoint: it shall be sufficient to state in the advertisements, that the certificate of the proceedings of the last meeting have not been returned according to law: and at such meeting so called, the school voters shall have power to do all the acts and things that they could do at the preceding meeting—and the meeting shall be regulated by the law applicable to the preceding meeting, and be a substitute therefor.

Extract from the Journal

J. P. COMEGYS, *Clerk.*

For concurrence."

On motion of Mr. Spruance,

The amendment of the House was amended as follows, to wit:—

Amend the bill in 13th line of the 6th section, by striking out the words "from the day of holding such meeting."

Mr Comegys, Clerk of the House of Representatives being again admitted, returned certain enrolled bills as having received the signature of the Speaker of the House.

Mr. du Pont, on the part of the committee to whom was referred the petition of sundry citizens of Wilmington praying for an amendment of their city charter, reported a bill entitled "A further supplement to the act entitled 'An Act to alter and re-establish the borough of Wilmington,'" which,

On his motion,

Was read.

On motion of Mr. Tharp,

The bill entitled "An additional supplement to the act entitled 'An Act to amend the act entitled 'An Act concerning the constitution of the Levy Court and Court of Appeal,'"

Was read a third time by paragraphs, and

Passed the Senate.

Ordered to the House with the concurrence of the Senate endorsed upon it.

On motion of Mr. Tharp,
The bill entitled "An Act for the relief of Esther Coverdale," was taken up for consideration and read a second time by its title.

On motion of the same gentleman,
The said bill was read a third time by paragraphs by special order and
Passed the Senate.

Ordered to the House with the concurrencc of the Senate endorsed upon it.

On motion,
The Senate adjourned till 10 o'clock to-morrow morning.

SATURDAY, 10 *o'clock, A. M. January* 30, 1841.

The Senate met pursuant to adjournment.

The Speaker laid on the table a communication from the city council of Wilmington, which,

On motion of Mr. Spruance,
Was read, as follows, to wit:—

"At a meeting of the city council of Wilmington, held at the City Hall, on Tuesday, January 26, A. D., 1841,

On motion of Mr. Thomson,
It was unanimously resolved, As the sense of the city council of the city of Wilmington, that no amendment or alteration made in the charter of the city by the Legislature of the State should go into effect without the assent of a majority of the citizens being first had and obtained to such amendments or alterations.
The above is a true extract from the minutes.

W. R. SELLARS,
Pres't of the City Council.

Attest, T. Booth Roberts,
Clerk of the City Council of Wilmington.

Wilmington, January 28, 1841.

Hon. Charles Polk, Speaker of the Senate—

Sir—I have been directed by the city council of Wilmington to transmit to you the above resolution, with the request that you lay it before the body over which you preside.

Respectfully yours,
W. R. SELLARS.
Pres't City Council."

On motion of Mr. T. Jacobs,

The bill entitled "An act to enable William W. Delany to survey and locate certain vacant land and to complete his title to the same," was read a second time.

Mr. T. Jacobs, on the part of the committee on unfinished business, reported a bill entitled "An act to repeal an act entitled 'An act to incorporate the White Marsh Company for the purpose of draining and reclaiming certain marshes, low grounds and cripple, in Murderkill and Mispillion hundreds, in Kent county,'" to have been left on the files of last session, which,

On his motion,

Was read.

On motion of Mr. Maull,

The bill entitled "An act to regulate the institution and drawing of lotteries, and the sale of lottery tickets within this State," was taken up for consideration, and

On his motion,

Indefinitely postponed.

Message from the House by the Clerk.

Mr. Comegys, Clerk of the House being admitted, informed the Senate that the House had concurred in the amendment of the Senate to the amendment of the House to the bill entitled "An act to amend the supplement passed January 25, 1830, to the act for the establishment of free schools."

The Clerk also requested the concurrence of the Senate in a bill entitled "An act for the relief of Alexander Johnson."

Also in an act entitled "An additional supplement to the act entitled 'An act for regulating inn-holders, tavern-keepers and other public housekeepers within this government, and empowering the justices to settle the rates of liquor."

And he withdrew.

On motion of Mr. Tharp,

The bill entitled "An act for the relief of Alexander Johnson" was read.

On motion of Mr. Tharp,

The joint resolution directing the transmission of certain volumes of the laws to the library of Congress were taken up for consideration, and

On his motion,

Read and *Concurred in.*

Ordered to the House with the concurrence of the Senate endorsed upon them.

On motion of Mr. Spruance,

The resolution concerning the printing of the 8th volume of Delaware laws was taken up for consideration, and

On his motion,

Adopted.

Ordered to the House for concurrence.

On motion of Mr. Tharp,

The bill entitled "An act to enable Samuel G. Smith to locate certain vacant lands in North West Fork hundred in Sussex county, and to complete his title to the same," was read a third time by paragraphs and

Passed the Senate.

Ordered to the House for concurrence.

On motion of Mr. du Pont,

The bill entitled "An act to incorporate the Sisters of Charity of St. Peter's, and to grant to said corporation certain lands in Mill Creek hundred," was read a second time and amended, as follows, to wit:—

Amend the bill by inserting in the enacting clause "two-thirds of each branch of the Legislature concurring."

On motion of Mr. S. Jacobs,

The bill entitled "An Act to divorce Foster Donovan and Avis Donovan, his wife from the bonds of matrimony," was read a third time by paragraphs and

Passed the Senate.

Ordered to the House with the concurrence of the Senate endorsed upon it.

O motion of Mr. Maull,

The bill entitled "An Act to amend the act entitled 'An act supplementary to the act entitled an Act for the preservation of certain shell fisheries within this State,'" was read a third time by paragraphs, as amended, and

Passed the Senate.

Ordered to the House for concurrence in the amendment.

On motion of Mr. Boys,

Ordered, That the Clerk of the Senate have printed fifty copies of the bill entitled "A further supplement to the act entitled 'An act to alter and re-establish the charter of the Borough of Wilmington.'"

Mr. Maull presented a petition from sundry citizens of Sussex county, praying for a repeal of the "Act for the preservation of the fisheries on Broadkiln creek" passed at Dover, February 2, 1839, which,

On his motion,

Was read and referred to a committee of two, with leave to report by bill or otherwise.

The committee appointed were Messrs. Maull and du Pont.

On motion,

The Senate adjourned till 10 o'clock on Monday morning.

MONDAY, 10 *o'clock A. M., February* 1, 1841.

The Senate met pursuant to adjournment.

Mr. Comegys, Clerk of the House of Representatives being admitted, informed the Senate that the House had concurred in the "Resolution to print 200 copies of the 8th volume of the laws of this State."

The Clerk also requested the concurrence of the Senate in the bill entitled "A supplement to the act entitled 'An act authorising a lottery for the benefit of Delaware College, and for other purposes therein mentioned.'"

Also, in a bill entitled "An act to amend the act to establish a college at Newark."

Also, in a bill entitled "An act to renew the act entitled 'An act to incorporate the Washington Beneficial Society of Wilmington, Delaware, for the relief of the members thereof, their widows and orphan children.'"

And he withdrew.

On motion of Mr. Tharp,

The above bills were read.

On motion of Mr. du Pont,

The bill entitled "An act to incorporate the 'Sisters of Charity of St. Peter's," and to grant to said corporation certain lands in Mill Creek hundred."

Was read a third time by paragraphs and

Passed the Senate.

Ordered to the House for concurrence.

On motion of Mr. Tharp,

The bill entitled "An act for the relief of Alexander Johnson."

Was read a second time.

On motion of Mr. Naudain,

The bill entitled "An act granting to William Cleaver, jr., of New Castle county a certain tract or a parcel of waste aud uncultivated land therein described."

Was taken up for consideration, and read.

Message from the House by the Clerk.

Mr. Comegys, Clerk of the House of Representatives, being admitted, requested the concurrence of the Senate in the following bills, to wit:—

A bill entitled "An act to incorporate the Wesleyan Female Collegiate Institute."

A bill entitled "An act to continue the report of adjudged cases and for other purposes."

And he withdrew.

On motion of Mr. T. Jacobs,

The above bills were read.

On motion of Mr. Spruance,
The bill entitled "An act to continue the report of adjudged cases and for other purposes,"
Was referred to a committee of three.

The committee appointed were Messrs. Spruance, du Pont and Naudain.

Message from the House by the Clerk.

Mr. Comegys, Clerk of the House of Representatives, being admitted, requested the concurrence of the Senate in a bill entitled "A supplement to the act entitled 'An act to incorporate the Union Bank of Delaware."

Also in a bill entitled "An act to enable the owners and possessors of marsh, meadow and cripple on both sides of Swan creek, in Milford hundred, Kent county, to repair and raise above the rise of tide water, an old causeway over the mouth of said creek, and for other purposes therein mentioned."
And he withdrew.

On motion of Mr. S. Jacobs,
The above bill was read.

Mr. Comegys, Clerk of the House being again admitted, requested the concurrence of the Senate in a bill entitled "An act to incorporate the members of the Fame Hose Company of the city of Wilmington."
And he withdrew.

On motion of Mr. S. Jacobs,
The said bill was read.

On motion,
The Senate adjourned until 3 o'clock this afternoon.

Eodem Die, 3 o'clock, P. M.

The Senate met pursuant to adjournment.

Mr. Maull, on the part of the committee to whom was referred the petition of sundry citizens of Milton, praying for a repeal of the act for the protection of the fisheries in Broadkiln creek, passed at Dover, February 2, 1837, reported a bill entitled "An act to repeal the 'Act for the protection of the fisheries on Broadkiln creek, passed at Dover, February 2, 1837, which' "

On his motion,
Was read.

On motion of Mr. T. Jacobs,
The bill entitled "An act to enable William W. Delany, of Sussex coun-

ty, to survey and locate certain vacant land, and to complete his title to the same," was read a third time by paragraphs, and

Passed the Senate.

Ordered to the House for concurrence.

Mr. Maull presented a petition from sundry citizens of Sussex county, praying for a division of school district No. 65, in Sussex county, into two districts, which,

On his motion,

Was read and referred to a committee of three, with leave to report by bill or otherwise.

The committee appointed were Messrs. Maull, du Pont and Spruance.

Mr. du Pont presented a petition from sundry citizens of New Castle county, praying for a division of school districts Nos. 1 and 2 in said county into three districts, which,

On his motion,

Was referred to the same committee to whom was referred the petition of sundry citizens of Sussex county on a similar subject.

On motion of Mr. Spruance,

The bill entitled "A supplement to the act entitled 'An Act to enable the owners and possessors of the meadow, marsh and cripple, lying on both sides of the Northwest branch of Duck creek, emptying into the main branch of Duck creek below the Eagles' Nest Landing, effectually to embank and drain the same, and keep the banks, dams, sluices, canals and drains in repair, and to raise a fund to defray the expense thereof," was read a third time by paragraphs, and

Passed the Senate.

Ordered to the House with the concurrence of the Senate endorsed upon it.

On motion of Mr. Maull,

The bill entiled "An act to repeal the act entitled 'An additional supplement to the act providing for the punishment of certain crimes and misdemeanors," was read a third time by paragraphs and

Passed the Senate.

Ordered to the House with the concurrence of the Senate endorsed upon it.

On motion,

The Senate adjourned until 10 o'clock to-morrow morning.

TUESDAY, 10 *o'clock A. M., February* 2, 1841.

The Senate met pursuant to adjournment.

Mr. Spruance, on the part of the committee of enrolment, reported that the following bills and resolutions were duly and correctly enrolled.

A bill entitled "An act to enable John Watkins to locate certain vacant lands in North West Fork hundred in Sussex county, and to complete his title to the same."

A bill entitled "An act to amend the supplement, passed January 25, 1830, to the 'Act for the establishment of free schools.'"

A bill entitled "An act to enable James Scott to locate certain vacant lands in Broadkiln hundred, Sussex county, and to complete his title to the same."

A bill entitled "An act to enable Josiah Casey to locate certain vacant lands situate in Baltimore hundred, Sussex county and to complete his title to the same."

A bill entitled "An additional supplement to the act entitled 'An act to extend the time for recording deeds.'"

A "Resolution concerning the printing of the Geological Report."

"Resolution to print 200 copies of the 8th volume of the Laws of this State."

"Joint resolutions concerning the repeal of the sub-treasury act, and the establishment of a national bank."

"Joint resolution appointing a State Treasurer."

"Joint resolution appointing an Auditor of Accounts."

"Report and resolutions on the subject of the public lands."

On motion of Mr. Tharp,

The bill entitled "An act for the relief of Alexander Johnson," was read a third time by paragraphs and

Passed the Senate.

Ordered to the House with the concurrence of the Senate endorsed upon it.

On motion of Mr. Boys,

The bill entitled "An act to renew the act entitled 'An act to incorporate the Washington Beneficial Society of Wilmington, Delaware, for the relief of the members thereof, their widows and orphan children," was read a second time.

Message from the House by the Clerk.

Mr. Comegys, Clerk of the House of Representatives, being admitted, informed the Senate that the House had passed and requested the concurrence of the Senate in the following joint resolution:

"HOUSE OF REPRESENTATIVES,
February 2, 1841.

Resolved by the Senate and House of Representatives of the State of Delaware in General Assembly met, That the present Auditor of Accounts of this State be, and he is hereby authorised, empowered and required to adjust and settle the accounts of Elijah Cannon, as State Treasurer of the State of Delaware, and as trustee of the fund for establishing schools in the State of Delaware, throughout his late official term as such treasurer and trustee aforesaid; and that the said auditor make report thereof to the Legislature.

Extract from the Journal.

J. P. COMEGYS, *Clerk.*

For concurrence."

And he withdrew.

On motion of Mr. Maull,

The bill entitled "An act to incorporate the Wesleyan Female Collegiate Institute," was read a second time.

Mr. Comegys, Clerk of the House of Representatives being admitted, informed the Senate that the House had passed, and requested the concurrence of the Senate in the following bills, to wit:—

A bill entitled "A further supplement to the act entitled 'An act regulating the General Election.'"

A bill entitled "An act to amend the act entitled 'An act for ascertaining the salaries of the Governor, the Chancellor, the Judges and the Secretary, and for making allowances to the members of the General Assembly, and for other purposee.'"

A bill entitled "A supplement to the act entitled 'An act empowering the Orphans' Court to direct the sale of the real estate of minors.'"

The Clerk also requested the concurrence of the Senate in the following joint resolution:—

"HOUSE OF REPRESENTATIVES,
Feb. 1, 1841.

Resolved by the Senate and House of Representatives of the State of Delaware in General Assembly met, That Bayard Dawson, one of the constable's in and for the county of Sussex, be and he is hereby released and discharged from the payment of the sum of sixty dollars and sixty-six cents, improperly charged against him, it being the amount of a fine imposed upon a certain Capt. Jeremiah Eskridge by Zachariah Pitts, one of the justices of the peace in and for the county aforesaid, for intoxication and profane swearing, the same having been remitted by His Excellency, the Governor, and consequently not collected by the said Bayard

Dawson; but erroneously and improperly charged against him in favor of the said State of Delaware.

Extract from the Journal.

J. P. COMEGYS, *Clerk.*

For concurrence."

The Clerk also presented to the Senate for consideration the "Report of Hon. Willard Hall, as superintendent of the Free Schools of New Castle county."

And he withdrew.

On motion of Mr. Maull,

The communications from the House were read in the order named above.

On motion of Mr. Spruance,

Ordered that the Clerk have printed 1000 copies of the report of the Superintendent of the Free Schools of New Castle county.

On motion of Mr. Tharp,

The first resolution to refer to the present Auditor of Accounts the late State Treasurer's account for adjustment, was

Concurred in.

On motion,

The Senate adjourned until 3 o'clock this afternoon.

Eodem Die, 3 o'clock, P. M.

The Senate met pursuant to adjournment.

On motion of Mr. Maull,

The bill entitled "An act to incorporate the Wesleyan Female Collegiate Institute," was read a third time by special order, by paragraphs, and

Passed the Senate.

Ordered, That the said bill be returned to the House with the concurrence of the Senate endorsed upon it.

Mr. Spruance, on the part of the committee to whom was referred the bill entitled "An act to continue the report of adjudged cases and for other purposes," reported an amendment to said bill, which,

On his motion,

Was read as follows, to wit:—

"Amend the bill by striking out the second section, and substituting the following:—

Sec. 2. *And be it enacted*, That while he continues to discharge this duty, the said judge shall continue to receive the same increase of his salary as was made by the act of 22nd Feb. 1837: namely, the annual sum of two hundred dollars in addition to the amount of salary as fixed by the act to carry into effect the amended constitution and for other purposes, passed January 17, 1832, to be paid in the same manner."

On motion of Mr. Spruance,
The bill as thus amended, was read a second time.

On motion of the same gentleman,
The said bill was read a third time by special order, by paragraphs, and

Passed the Senate.

Ordered, That the bill be returned to the House with the concurrence of the Senate endorsed upon it, and with a request to concur in the amendment of the Senate.

On motion of Mr. Naudain,
The bill entitled "An act granting to William Cleaver, junior., of New Castle county, a certain tract or parcel of waste and uncultivated land therein described," was read a second time.

On motion of Mr. Maull,
The resolutions upon the subject of the removal of the remains of Col. Haslet were taken up for consideration and read.

Whereupon,
Mr. Maull moved,
That the resolutions be indefinitely postponed.

On the question,
"Shall the resolutions be indefinitely postponed?"
The Senate being divided,
Mr. dn Pont called for the yeas and nays,
Which were as follow, to wit:—

Yeas.—Messrs. Boys, T. Jacobs, Maull and Tharp—4.

Nays.—Messrs. du Pont, S. Jacobs, Naudain, Spruance and Speaker—5.

So the motion for indefinite postponement

Was lost.

On motion of Mr. du Pont,
The bill entitled "An act to amend the act to establish a college at Newark," was read a second time.

Message from the House by a member.

Mr. Clement, member of the House being admitted, presented for the signature of the Speaker of the Senate an enrolled bill.
And he withdrew.

Message from the House by the Clerk.

Mr. Comegys, Clerk of the House of Representatives, being admitted, informed the Senate that the House had passed a bill entitled "An act to incorporate the Washington Fire Company of the City of Wilmington," and requested the concurrence of the Senate in the same.

Also the concurrence of the Senate in a bill entitled "An act to revoke the Charter of Elk and Christiana Turnpike Company."

And he withdrew.

On motion of Mr. Boys,

The above bills were read.

Mr. Comegys, Clerk of the House, being again admitted, requested the concurrence of the Senate in a joint resolution to print 300 copies of the act passed this session for the amendment of the "Supplement to the act for the establishment of Free Schools."

And he withdrew.

On motion of Mr. Maull,

The joint resolutions on the subject of French spoliations were taken up for consideration and read.

Whereupon,

Mr. Maull moved,

The said resolutions be indefinitely postponed.

On which question,

The Senate being divided,

Mr. du Pont called for the yeas and nays,

Which were as follow, to wit:

Yeas—Messrs, Boys, T. Jacobs, Maull and Tharp—4.

Nays—Messrs. du Pont, S. Jacobs, Naudain, Spruance and Speaker—5.

So the motion for postponement

Was lost.

Mr. Comegys, Clerk of the House of Representatives, being admitted, informed the Senate that the House had concurred in the amendment of the Senate to the bill entitled "An act to amend the act entitled 'An act supplementary to the act entitled An act for the preservation of certain shell fisheries within this State.'"

And he withdrew.

On motion of Mr. Maull,

The "Joint resolutions on the subject of the fourth instalment of the surplus revenue," were taken up for consideration and read.

Whereupon,

Mr. Maull moved,

That the said resolutions be concurred in.

On the question,

"Shall the resolutions be concurred in,

The Senate being divided,

Mr. T. Jacobs called for the yeas and nays.
Which were as follow, to wit:

Yeas—Messrs. Boys, S. Jacobs, T. Jacobs and Maull—4.

Nays—Messrs. du Pont, Naudain, Spruance, Tharp and Speaker—5.

So the resolutions were

Non-concurred in.

On motion,
The Senate adjourned until 10 o'clock to-morrow morning.

WEDNESDAY, 10 *o'clock, A. M., February* 3, 1841.

The Senate met pursuant to adjournment.

On motion of Mr. Tharp,

The bill entitled "An act to enable the owners and possessors of marsh, meadow and cripple on both sides of Swan creek, in Milford hundred, Kent county, to repair and raise above the rise of tide water, an old causeway over the mouth of said creek, and for other purposes therein mentioned," was read a second time.

Mr. Maull asked and obtained leave to introduce this afternoon a bill entitled "An act to amend the act entitled 'An act to enable Solomon Boston to erect a mill-dam across Herring Creek, North West hundred in Sussex county, at the place therein mentioned and to construct a grist mill and saw-mill and other machinery thereon.'"

Mr. Comegys, Clerk of the House of Representatives, being admitted, informed the Senate that the House had passed and requested the concurrence of the Senate in a bill entitled "An act authorising the Register for the Probate of Wills and granting letters of administration in and for Kent county to procure a new seal of office and press."

The Clerk also presented an enrolled bill for the signature of the Speaker of the Senate.

And he withdrew.

On motions of Mr. Boys,

The bill entitled "An act authorising the Register for the Probate of Wills and granting Letters of Administration in and for Kent county, to procure a new seal of office and press," was read.

On motion of Mr. Naudain,

The bill entitled "An act granting to William Cleaver, jr., of New Castle county a certain tract or a parcel of waste and uncultivated land therein described," was taken up for consideration.

Whereupon,

Mr. Naudain moved,

That the said bill be read a third time by paragraphs in order to pass the Senate.

Pending which motion,

Mr. Spruance moved,

That said bill be indefinitely postponed,

Which motion *Prevailed.*

On motion of Mr. du Pont,

The bill entitled "An act to amend the act to establish Newark College," was read a third time by paragraphs and

Passed the Senate.

Ordered to the House with the concurrence of the Senate endorsed upon it.

On motion of Mr. Naudain,

The bill entitled "A further supplement to the act entitled 'An Act to alter and re-establish the charter of the borough of Wilmington,'" was read a second time.

Message from the House by the Clerk.

Mr. Comegys, Clerk of the House of Representatives, being admitted, informed the Senate that the House had passed and requested the concurrence of the Senate in the bill entitled "A supplement to the act entitled 'An act authorising a lottery for the benefit of Delaware College, and for other purposes therein mentioned.'"

And he withdrew.

On motion of Mr. Naudain,

The said bill was read.

On motion,

The Senate adjourned till 3 o'clock this afternoon.

Eodem Die, 3 *o'clock. P. M.*

The Senate met pursuant to adjournment.

On motion of Mr. Boys,

The bill entitled "An act to revoke the charter of the Elk and Christiana Turnpike Company," was read a second time.

On motion of Mr. du Pont,

The bill entitled "A supplement to the act entitled 'An act to incorporate the Union Bank of Delaware,'" was read a second time.

On motion of Mr. Naudain,

The resolution to print 300 copies of the act passed at this session for the amendment of the supplement to the "Act for the establishment of free schools," was

Concurred in.

Agreeable to notice given and leave obtained, Mr. Maull introduced

A bill entitled "An act to amend the act entitled 'An act to enable Solomon Boston to erect a mill-dam across Herring creek in North West Fork hundred in Sussex county, at the place therein mentioned, and to construct a grist-mill and saw-mill and other machinery thereon," which

On his motion,

Was read.

Message from the House by the Clerk.

Mr. Comegys, Clerk of the House of Representatives, being admitted, informed the Senate that the House had passed a bill entitled "An act to incorporate the Temperance Beneficial Association of Wilmington and Brandywine," and requested the concurrence of the Senate in the same.

Also a bill entitled "An act to amend the act entitled 'An act concerning certain crimes and offences committed by slaves, and for the security of slaves properly demeaning themselves.'"

And he withdrew.

On motion of Mr. Boys,

The above bills were read.

On motion of Mr. Naudain,

The joint resolutions concerning the removal of the remains of Colonel Haslet were taken up for consideration, and

On his motion,

Non-concurred in.

Mr. Naudain then introduced the following preamble and resolutions:—

Whereas, The General Assembly entertain in common with the citizens of this State, a great regard for the memory of those of her brave and patriotic sons who died gallantly fighting under the banners of Washington in defence of the liberties of their country, and it being their desire to cherish and preserve their memory by procuring the removal of their remains whenever they can be obtained, and depositing them within the limits of their own State. *And whereas*, the remains of Col. John Haslet, Commander of the Delaware Regiment in the Revolutionary War, who fell in January 1777, at the battle of Princeton, are now deposited in the city of Philadelphia, therefore,

Be it resolved, by the Senate and House of Representatives of the State of Delaware in General Assembly met, That a committee be ap-

pointed to consist of two on the part of the House and one on the part of the Senate, whose duty it shall be to proceed to Philadelphia on or about the fourth of July next, and bring his remains from their present depository and place them in the burial ground of the presbyterian church in the town of Dover, and to have a suitable monument with appropriate inscriptions and devices, prepared by a skilful artist and erected under their superintendence and direction, over his remains when so deposited.

Resolved, That the committee appointed by the foregoing resolution or a majority of them are hereby authorised to draw their orders on the State Treasurer for any sum or sums not exceeding in the whole the sum of five hundred dollars for the purpose of carrying into effect the object of the resolution aforesaid; and the State Treasurer be, and he is hereby authorised and directed to pay the orders of the said committee so drawn on him out of any money in the treasury not otherwise appropriated, and it shall be the duty of the said committee or a majority of them to make report of their proceedings in the premises to the next biennial session of the Legislature, setting forth the expenditures consequent upon the execution of their duties under the provisions of this resolution.

On motion of Mr. Spruance,
The resolutions were amended as follow, to wit:
Amend the resolution by striking out in the 2nd resolution, 5th line the words "one thousand" and inserting the words "five hundred."

On motion of Mr. Naudain,
The resolutions as amended,

Were adopted.

Ordered to the House for concurrence.

Message from the House by the Clerk.
Mr. Comegys, Clerk of the House, being admitted, presented to the Senate the "Constitution and By-laws of the Temperance Beneficial Association," which had been communicated to the House in company with the petition of that association.

Mr. du Pont asked and obtained leave to introduce a bill entitled a "An act to incorporate the Roseville Manufacturing Company."

On motion of Mr. du Pont,
The said bill was read.

On motion of Mr. Spruance,
The bill entitled "An act in respect to insurance for lives, for the benefit of married women,"

Was read a second time.

Whereupon,

On motion of Mr. Spruance,
The said bill was amended as follows, to wit:

Amend the bill by striking out in the first section, 19th line the word "three" and inserting in lieu thereof the word "one."

On motion,

The Senate adjourned till 10 o'clock to-morrow morning.

THURSRDAY, 10 *o'clock*, *A. M. February* 4, 1841.

The Senate met pursuant to adjournment.

On motion of Mr. Tharp,

The bill entitled "An act to enable the owners and possessors of marsh meadow and cripple, on both sides of Swan Creek in Milford hundred, Kent county, to repair and raise above the rise of tide-water, an old causeway over the mouth of said creek and for other purposes therein mentioned."

Was read a third time by paragraphs and

Passed the Senate.

Ordered to the House with the concurrence of the Senate endorsed upon it.

Mr. Comegys, Clerk of the House of Representatives, being admitted, informed the Senate that the House had concurred in the bill entitled "A supplement to an act entitled 'An act to incorporate the Wilmington Fire Insurance Company."

Also the Clerk requested the concurrence of the Senate in the bill entitled "An act to amend the act entitled 'An act for the preservation of mill property."

The Clerk also presented for concurrence the following resolutions, to wit:—

"HOUSE OF REPRESENTATIVES,
February 3, 1841.

Resolved by the Senate and House of Representatives of the State of Delaware in General Assembly met, That the Secretary of State be, and he is hereby instructed to collect carefully all the old Revolutionary rolls and papers, label them and box them up, and preserve them in the best possible manner for future reference.

Extract from the Journal.

J. P. COMEGYS, *Clerk.*

For concurrence."

"HOUSE OF REPRESENTATIVES,
February 2, 1841.

Resolved by the Senate and House of Representatives of the State of Delaware in General Assembly met, That Joseph Buckmaster be, and he is hereby appointed librarian, whose duty it shall be to take charge of the library of this State; to arrange and put in proper order all the books and papers deposited therein; to stamp all the books, that in the opinion of Judge Harrington should be stamped, and he shall hold himself in readiness to accompany any person at convenient times to the said library, for the purposes of examining books and papers.

Resolved further, That the State Treasurer be, and he is hereby directed to pay, on or before the first day of January of each year, that the said librarian shall faithfully discharge his duty aforesaid, the sum of fifty dollars.

And be it further resolved by the authority aforesaid, That the said Joseph Buckmaster be, and he is hereby appointed to take charge of the Representative chamber, to take care of the furniture and books, and pay all necessary attention at all times to airing and keeping the chamber in a proper condition, and the State Treasurer is hereby authorised to pay to the said Joseph Buckmaster the sum of thirty dollars at the time aforesaid.

And be it further resolved by the authority aforesaid, That Joseph Buckmaster be, and he is hereby appointed to take charge of the Senate chamber, and pay all necessary attention to the furniture and books therein deposited. And the State Treasurer be and he is hereby authorized and required to pay to the said Joseph Buckmaster the sum of twenty dollars, at the time aforesaid.

Extract from the Journal.

J. P. COMEGYS, *Clerk.*

For concurrence."

And he withdrew.

Mr. Comegys, Clerk of the House of Representatives, being again admitted, informed the Senate that the House had concurred in the joint resolution for the removal of the remains of Col. John Haslet, and had amended the same, and requested the concurrence of the Senate in said amendment.

On motion of Mr. Spruance,

The said amendment was read as follows, to wit:—

"HOUSE OF REPRESENTATIVES,
Feb. 1, 1841.

Amend the resolution by striking out the first resolution and inserting in lieu thereof the following:—

Resolved by the Senate and House of Representatives of the State of Delaware in General Assembly met, That William Huffington, Gard-

ner H. Wright and Charles I. due Pont be, and they are hereby appointed a committee, whose duty it shall be to proceed to the city of Philadelphia, before the fourth day of July next, and bring his remains from their present depository, and place them in the burial ground of the Presbyterian church in the town of Dover, and have a suitable monument, with appropriate inscriptions and devices, prepared by a skilful artist and erected under their superintendence, over his remains when so deposited.

Extract from the Journal

J. P. COMEGYS, *Clerk.*

For concurrence."

On motion of Mr. Spruance,

The said amendment was *Non-concurred in.*

On motion of said gentleman,

Ordered that the Clerk proceed to inform the House of the non-concurrence of the Senate in said amendment, and to request that a committee of conference on the subject of disagreement be appointed, to confer with a like committee on the part of the Senate.

On motions of Mr. Boys,

The bill entitled "An act to revoke the charter of the Elk and Christiana Turnkipe Company," was read a third time by paragraphs and

On the question,

"Shall the bill pass Senate?"

The Senate being divided,

Mr. Maull called for the yeas and nays, which were as follow, to wit:

Yeas—Messrs. Boys, du Pont, S. Jacobs, Naudain, Spruance, Tharp and Speaker—7.

Nays—Msssrs. T. Jacobs and Maull—2.

So the bill

Passed the Senate.

Ordered to the House with the concurrence of the Senate endorsed upon it.

Mr. Maull moved,

That the resolution concerning the appointment of a Librarian, &c., be read and adopted.

Pending which motion,

On motion of Mr. Spruance,

The said resolution was postponed for further consideration.

Mr. du Pont presented a petition from sundry citizens of Wilmington, praying for an amendment of their city charter, which

On his motion,

Was read and referred to the committee to whom petitions on the same subject were referred.

On motion of Mr. du Pont,

The bill entitled "A supplement to the act entitled 'An act to incorporate the Union Bank of Delaware,'" was read a third time by paragraphs and *Passed the Senate.*

Ordered to the House with the concurrence of the Senate endorsed upon it.

On motion of Mr. Naudain,

The resolution on the subject of the restriction of the eligibility of Presidents of the United States to a single term of four years," were taken up for consideration and read a third time by resolves.

The question being put by the Speaker,

"Shall the resolutions be concurred in."

Mr. T. Jacobs called for the yeas and nays, which were as follow, to wit:—

Yeas—Messrs. Boys, du Pont, S. Jacobs, Naudain, Spruance and Speaker—6.

Nays—Messrs. T. Jacobs and Maull—2.

Mr. S. Jacobs moved,

That the bill entitled "An act to amend the act entitled 'An act to enable Solomon Boston to erect a mill-dam across Herring Creek in North West Fork hundred in Sussex county, at the place therein mentioned, and to construct a grist-mill and saw-mill and other machinery thereon," be read a second time.

Pending which motion,

On motion of Mr. du Pont,

The said bill was referred to a committee of three.

The committee appointed were Messrs. S. Jacobs, Boys and Spruance.

On motion,

The Senate adjourned until 3 o'clock this afternoon.

Eodem Die, 3 o'clock, P. M.

The Senate met pursuant to adjournment.

Message from the House by a member.

Mr. Barr, member of the House, being admitted, informed the Senate that the House had complied with the request of the Senate to appoint a committee of conference upon the subject of the removal of the remains of Col. John Haslet, and that Messrs. Barr, Dale and Wright had been appointed said committee.

And he withdrew.

Mr. Spruance asked, and

On motion of Mr. T. Jacobs,
Obtained leave to introduce a bill entitled "A supplement to the act entitled 'An act regulating marriage,'" which,

On motion of Mr. Spruance,
Was read.

On motion of Mr. Naudain,
The bill entitled "An act to incorporate the Temperance Beneficial Association of Wilmington and Brandywine,"
Was read a second time.

Message from the House by the Clerk.

Mr. Comegys, Clerk of the House of Representatives, being admitted, requested the concurrence of the Senate in a bill entitled "An act to vacate part of an alley and lane in the village of Georgetown, Sussex county."

Also in a bill entitled "A supplement to the act entitled 'An act to erect and keep in good repair a bridge over Broadkiln creek where the State road crosses the said creek at a place called Paynter's Landing."

On motion of Mr. Maull,
The bill entitled "An act to amend the act entitled 'An act for the preservation of mill property,'" was taken up for consideration and read, and

On motion of said gentleman,
The said bill was

Indefinitely postponed.

On motion of Mr. Spruance,
The bill entitled "An act to amend the act entitled 'An act concerning certain crimes and offences committed by slaves, and for the security of slaves properly demeaning themselves,'" was read a second time and amended as follows, to wit:—

Amend the bill by striking out in the 1st section all after the enacting clause, and making the 2d section, the 1st section, and the 3d section, the 2d section.

Message from the House by the Clerk.

Mr. Comegys, Clerk of the House, being admitted, requested the concurrence of the Senate in the bill entitled "An act to prevent unnecesary imprisonment for the execution of judgments in civil cases."

Message from the House by a member.

Mr. Johnson, member of the House, being admitted, returned an enrolled bill entitled "An act to enable John Watkins to locate certain vacant lands in Northwest Fork hundred, in Sussex county, and to complete his title to the same."

On motion of Mr. Maull,
The bill entitled "An act to prevent unnecessary imprisonment for the

execution of judgments in civil cases," was taken up for consideration and

On his motion,
The said bill was postponed until Tuesday the 9th instant.

On motion,
The Senate adjourned until 10 o'clock to-morrow morning.

FRIDAY, 10 *o'clock, A. M., February* 5, 1841.

The Senate met pursuant to adjournment.

On motion of Mr. Boys,
The bill entitled "An act to renew the act entitled 'An act to incorporate the Washington Beneficial Society of Wilmington, Delaware, for the relief of the members thereof, their widows and orphan children,'" was read a third time by paragraphs and

Passed the Senate.

Ordered to the House with the concurrence of the Senate endorsed upon it.

Mr. Comegys, Clerk of the House of Representatives, being admitted, informed the Senate that the House had passed and requested the concurrence of the Senate in a bill entitled "An act to enable Nathan Fleming to locate certain vacant land, situuted in Mispillion hundred, Kent county, and to complete his title to the same."

Also a bill entitled "An act to divorce Mary Griffith and her husband Samuel Griffith, from the bonds of Matrimony."

Also a bill entitled "An act to enable the owners of the marshes, cripple and low grounds, situate upon and contiguous te Jamisons Branch, in Little Creek and Duck Creek hundreds, to drain and improve the same."
And he withdrew.

On motion of Mr. Naudain,
The bill entitled "An act to incorporate the Temperance Beneficial Association of Wilmington and Brandywine," was read a third time by paragraphs with a view to its final passage.
On the question,
"Shall the bill now pass Senate?"
The Senate being divided,
Mr. T. Jacobs called for the yeas and nays,
Which were as follow, to wit:—

Yeas.—Messrs. Boys, du Pont, S. Jacobs, Naudain, Spruance and Speaker—6.

Nays.—Messrs.T. Jacobs,and Tharp—2.

So the the question was decided in the *Affirmative.*

And the bill

Passed the Senate.

Ordered to the House for concurrence.

Mr. S. Jacobs, on the part of the committee to whom was committed the bill entitled "An act to amend the act entitled 'An act to enable Solomon Boston to erect a mill-dam across Herring Creek, North West hundred in Sussex county, at the place therein mentioned and to construct a grist-mill and saw-mill and other machinery thereon," reported the bill without amendment.

Whereupon,

Mr. Spruance moved,

That the said bill be postponed until 1st August, 1841.

And on the question,

Shall the bill be postponed till the first of August next,

The Senate being divided,

Mr. Speaker called for the yeas and nays.

Which were as follow, to wit:

Yeas—Messrs. Boys, du Pont, T. Jacobs, Naudain, Spruance and Tharp—6

Nays—Messrs. S. Jacobs and Speaker—2.

So the motion for postponement *Prevailed.*

And the bill was postponed till 1st of August, 1841.

On motion of Mr. Tharp,

The resolutions appointing a librarian, &c., were taken up for consideration and read, and

On his motion,

The resolutions were amended as follows, to wit:

Amend the resolutions by striking out the name of "Joseph Buckmaster," wherever it occurs, and inserting in lieu thereof the name of "Henry Eubanks."

Ordered that the resolutions be returned to the House with a request to concur in said amendment.

On motion of Mr. Spruance,

The bill entitled "A supplement to the act entitled 'An act regulating marriage." was read a second time.

On motion of Mr. Tharp,

The bill entitled "An act to enable Nathan Fleming to locate certain vacant land situate in Mispilion hundred, Kent county, and to complete his title to the same," was read.

On motion of the same gentleman,

The bill entitled "An act to enable the owners of the marshes, cripple

and low grounds, situate upon and contiguous to Jamison's Branch in Little Creek and Duck Creek hundreds, to drain and improve the same," was read.

On motion of the same gentleman,

The bill entitled "An act to divorce Mary Griffith and her husband, Samuel Griffith, from the bonds of matrimony," was read.

On motion of Mr. du Pont,

The bill entitled "A further supplement to the act entitled 'An Act to alter and re-establish the charter of the borough of Wilmington,'" was taken up for consideration, and

On his motion,

The said bill was amended as follows, to wit:—

Amend the bill in the 2d section, 1st line of the printed copy, by striking out the word "city," and inserting in lieu thereof the words "said city of Wilmington."

On motion of the same gentleman,

The above bill as thus amended was read a third time by a paragraphs and

Passed the Senate.

Ordered to the House for concurrence.

Mr. Comegys, Clerk of the House of Representatives, being admitted, informed the Senate that the House had concurred in the passage of a bill entitled "An act to incorporate the Sisters of Charity of St. Peters, and to grant to said corporation certain lands in Mill Creek hundred."

The Clerk also requested the concurrence of the Senate in the bill entitled "An act to authorise the Register for the Probate of Wills and granting letters of administration in and for Sussex county, to procure a new seal of office."

Also, the concurrence of the Senate in a bill entitled "An act to incorporate "The Black Swamp Ditch Company."

The Clerk also informed the Senate that the House had concurred in the amendment of the Senate to the resolution appointing a librarian, &c.

On motion of Mr. Naudain,

The XIX rule of the Senate was suspended in order that a communication from the Senate might be borne to the House of Representatives by a member.

Whereupon,

The Speaker placed in the hands of Mr. du Pont certain enrolled bills, with a request that the same should be delivered to the Speaker of the House for his signature.

On motion of Mr. S. Jacobs,

The resolutions concerning the controversy between the States of New York and Virginia.

Were taken up for consideration, and

On motion of Mr. Naudain,
The said resolutions were postponed for further consideration till this afternoon.
Mr. du Pont asked, and

On motion of Mr. Spruance,
Obtained leave to introduce a bill entitled "An additional supplement to the act entitled 'An act concerning the New Castle and Frenchtown Turupike and Rail road Company," which,

On motion of Mr. du Pont,
Was read.

On motion,
The Senate adjourned until 3 o'clock this afternoon.

Eodem Die, 3 o'clock, P. M.

The Senate met pursuant to adjournment.

On motion of Mr. S. Jacobs,
The consideration of the resolutions concerning the controversy between the States of New York and Virginia, was resumed.

On motion of Mr Spruance,
The said resolutions were made the order of the day for Wednesday next.

On motion of Mr. Boys,
The bill entitled "An act authorising the Register for the Probate of Wills and granting Letters of Administration in and for Kent county; to procure a new seal of office and press," was read a second time.

On motion of Mr. Naudain,
The bill entitled "An act to incorporate the members of the Fame Hose Company of the city of Wilmington."
Was read a second time.

The Speaker announced to the Senate that Messrs. Spruance and Naudain were appointed the committee of conference on the part of the Senate to confer with a like committee on the part of the House, on the subject of the removal of the remains of Col. John Haslet.

Ordered that the Clerk inform the House of the appointment of said committee.