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published for the committer ar
THE KINGSTON NEWS,
KINGSTON, CANADA.

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## Vol. VII.

OCTOLBER, 1809.
No. 2



## PHILO AND THE NEW TESTAMENT.

(Concluded from last number.)
IN attempting to estimate the possible influence of Philo on the New Testament, it is especially necessary to have a clear conception of his doctrine of the Logos, because here, if anywhere, we may expect to find the main point of contact between his philosophy and the formulation of Christian ideas.

The term 2 oro:, in its ordinary use, means either thought or specch. This double meaning is made use of by Philo to explain the relation subsisting between the intelligible or ideal world, which exists only in the divine mind, and the sensible universe which is its visible embodiment and image. "The $\mathrm{in}^{\prime} \mathrm{yos}_{0}$," says Philo,, "is two-fold in the universe and in the nature of man. In the universe there is, on the one hand, the jiros which has to do with the incorporeal and archetypal ideas constituting the intelligible cosmos, and, on the other hand, the doros which is concerned with visible things, these being copies and imitations of the ideas from which this sensible cosmos has been fashioned. In man, again, there is, on the one hand, the doros eviedeceos, and, on the other hand, the diros apocopexio. The former is like a fountain, the latter-the expressed $\mathrm{a}_{\mathrm{i}}^{\mathrm{ros}}$-like the stream which flows forth from it; the seat of the one is in the ruling
 pressed-is in the tongue and mouth and all the other organs of speech.......Two virtues have been assigned to it, expression
 expressive of all things, and the $\lambda \dot{0} \boldsymbol{o}^{\circ}$ : of the wise man, imitating
the kóros of nature, ought therefore to be absolutely incapable of falsehood; it ought to honour truth, and obscure nothing from envy, the knowledge of which can benefit those who have been instructed by it. Not but what there have been assigned to the two forms of $\lambda \dot{\sigma} \gamma \sigma_{5}$ in us two appropriate virtues-to the $\lambda \dot{\partial} \gamma 05$ $\pi \rho o \varphi v \rho<\times \dot{o}_{\varsigma}$ the virtue of expression, ( $\partial \dot{\gamma} \lambda \omega \sigma \epsilon \varsigma$ ), and to the $\lambda \dot{\sigma} \sigma \sigma$ in the mind the virtue of truth ( $\alpha$ $\lambda \dot{r} \theta \varepsilon \varepsilon \alpha$, ; for it is not fitting that the mind should accept anything false, or that declaration ( $\left(\rho \rho \mu \eta \nu s^{\prime} a\right)$ should be a hindrance to the most precise expression of truth."

In this passage Philo draws a parallel between the microcosm and the macrocosm. Thought and speech in man are related to each other, as the intelligible cosmos is related to the sensible cosmos. As in man the inner source is the intelligence, which is revealed outwardly in speech; so the archetypal ideas, which exist only in the divine intelligence, are expressed in the sensible cosmos, an imitation or copy of these ideas. The dóyos of the intelligible world constitutes its order and harmony, and from this same $\lambda \dot{o}^{\prime} \gamma o s$ proceeds the order and harmony which is found in the visible universe in an outward form. Thus the intelligible and the sensible universe correspond as perfectly as truth and its outward expression in language. Hence man in grasping by his intelligence the order and harmony of the visible universe will attain to truth, and this truth he will adequately express when his language precisely and accurately expresses his thought.

In this instructive passage we see how Philo sought to preserve the absolute inscrutability of God, and yet to explain how it is possible for man to have in a certain sense a knowledge of God. Though in His inner essence incomprehensible by any but Himself, God has created the intelligible cosmos by his selfactivity. From this intelligible cosmos, which constitutes the divine ${ }^{2}$ ros, is to be distinguished the visible cosmos, which is its outward expression. Thus the $\lambda \dot{0}$ ros is, on its inner side, the Thought of God, and on its outer side the Word of God. The Word is therefore in Philo the rational order manifested in the visible cosmos; in modern language it is the system of laws constituting the permanent and abiding element in all the changes of phenomena. To comprehend this system is therefore to grasp the outward expression of the divine intelligence.

Since he holds that God always remains in absolute unity with Himself, Philo naturally represents the diros as the instrument of creation, while God is the ultimate cause. "God is the cause," he says, " not instrument. Whatever comes into being is produced by means of an instrument, but by the cause of all things. In the production of anything there must co-operate (I) that by which it is made; (2) that from which it is made; (3) that through which it is made ; (4) that on account of which it is made; in other words, (1) the cause, (2) the matter, (3) the instrument, (4) the reason or purpose (aitix). Thus, in the production of a house or a whole city there must co-operate, (I) the architect, (2) the stones and timber, (3) the instruments. Now, the architect is the cause by which the house is made, the stones and timber are the 'matter' from which the building is made, the instruments are the things through which it is made, and the reason of its being made is to afford shelter and protection. Passing from particular things, look at the production of that greatest of all buildings or cities, the world, and you will-find that God is the cause, by whom it has been produced, that the matter is the four elements from which it is put together, and the instrument is the $\lambda 0$ ofos of God through which it has been formed, and the reason of its existence is the goodness of the Creator." (I. 161 §35).

The $\lambda$ doros is here distinguished from God, as the instrument from the cause. Following the analogy of a human architect, and adopting the Aristotelian distinction of the efficient cause, the matter, the instrument and the end, Philo represents the visible universe as a vast temple or city, the orderly arrangement of which is due to the $\lambda 0 \gamma 0=$, i.e., the outer expression of the divine word. The diros or Word is therefore the instrument employed by God in the creation of the world. The Word is not the cause of the world-the primal energy from which it has proceeded-but the means by which the world has received its order and system.

As the $\lambda \dot{O} \gamma o$ s is the instrument by means of which God made the world, it is in its nature intermediate between God and man. It is therefore "neither unbegotten as God, nor begotten as man" (I. 502), but is eternally begotten ; in other words, the dijos has not come into being in time, but is eternal; while, on the other
hand, it is not self-creative, but is dependent upon the original creative energy of God. Philo's view may therefore be summed up in the phrase: the $\lambda 0$ ros is eternally begotten, not made.

Again, when the $\lambda \dot{d} \gamma 05$ is viewed as the expressed thought or Word, and therefore as the rational principle of the visible cosmos, it is called the "oldest" or "first-born Son" of God
 Philo saying that "the eldest $\lambda \dot{o}$ ros of the self-existent Being puts on the cosmos as a garment, for it arrays itself in earth and water and air and fire and their products, as the individual soul is clothed with the body, and the mind of the wise man with the virtues." "The diros of the self-existent Being," he adds, "is the bond ( $\bar{\delta} \sigma \mu j^{\prime}$ ) of all things, which holds together and closely unites all the parts, preventing them from being loosened and separated." (I, 562.) By the 'first-born Son of God,' we are therefore to understand that ideal bond or law which determines the order and harmony of the visible universe. Philo, however, conceives of the Word not merely as the law of nature, but as the law which determines the course of human life, and especially the destiny of states and nations. "Once Greece flourished," he says, "but the Macedonians deprived it of its power. Then Macedonia had its period of bloom, but it was gradually dismembered, and finally its authority entirely perished. Prior to the Macedonians the Persians were prosperous, but in a single day its vast and mighty kingdom was overthrown. And now the Parthians are more powerful than the Persians, who but the other day were their masters. Egypt once had a long and glorious career, but like a cloud its great dominion has passed away. Where are the Ethiopians, where are Carthage and Libya? Where are the kings of the Pontus? What has befallen Europe and Asia, and, in a word, the whole habitable world? Is it not tossed up and down and agitated like a ship at sea-at one time sailing under prosperous winds and again struggling with contrary gales? For the divine hiros, which most men call fortune (riyg) moves in a circle. Ever flowing on it acts upon cities and nations, assigning the possessions of one to another, exchanging the possessions of each by periods, but ever making for the conversion of the whole habitable world into one city, with that highest form of polity, democracy, (I. 298)."

The $\lambda \cdot \sigma 0$ s is also called " the man of God." As such he is called the 'father' of all noble men, " a father not mortal, but



The $\lambda \cdot{ }^{\circ} \%$; is also called the 'second God.' "Why docs Moses say," he asks, "that God 'made man in the image of God', as if he were speaking of another God, and not of Himself? This mode of expression is beautifully and wisely chosen. For no mortal could be made in the image of the most high God, the Father of the universe, but only in the image of the second God (osurspos $\theta \varepsilon \varepsilon_{5}$ ), who is the $\dot{o b}_{\boldsymbol{\gamma}} \mathrm{o}_{\mathrm{s}}$ of the other. For it was fitting that the rational (iorexos) impression on the soul of man should be engraved by the divine $\lambda 6 r^{\circ} \mathrm{s}$, since the God prior to the horos is higher than every rational nature; and it was not lawful for any created being to be made like Him who is above reason."

Philo's whole system of thought compels him to interpose the $\lambda$ doros between the incomprehensible and self-contained God and man, and hence man as a rational being is the image of the 2.oron, which is itself an image of God. It was therefore natural for Philo to represent the $\dot{\alpha} \dot{O} \sigma$, as the mediator between God and man. "The Father" he says, "the creator of the universe, has given to the $\lambda \dot{0}$ ros the privilege of standing as the mediator between the Creator and that which He has madc. And this same $\lambda .0$ oros is an intercessor (ikery) to the immortal God in behalf of the afflicted race of mankind." As the eternal Word of God, the $20 \% 0$ maintains the universe in perpetuity, and secures the permanence and order of human society. As an "intercessor," the $\lambda \dot{2}$ gos is naturally called the 'high priest.'

So far the $\lambda \dot{0}^{\circ} 0$ S has been characterised as ( 1 ) the Word, (2) the instrument of creation, (3) eternally begotten, (4) the eldest or first-born Son of God, (5) the 'man of God', (1) the 'heavenly man', (7) the 'second God', (8) the Mediator, (9) the Intercessor, (Io) the High Priest. All these ways of characterising the dóros find their parallel in the New Testament. To them we may add (II) the Logos as the manna, the bread that came down from heaven, (I2) the living stream, (13) the sword that turned every way, or the 'cutter' (rous'is)-conceived as at once the divider of the genus into its species and of the sacrifice
into its parts, (14) the cloud at the Red Sea, that divided the Egyptians and Israelites, (15) the rock in the wilderness; all of which appear in another way in the New Testament.

It may be asked whether Philo conceived the Aóros as a person. That he personifies it is implied in his calling it the Son of God, the man of God, the heavenly man, the second God, the Mediator, the High Priest ; but it is one thing to represent the $\lambda \dot{o}$ yos under these figures, and another to maintain that it is a person. The answer seems to be that the Logos is never conceived by Philo as a distinct person, but always as the Thought of God, constituting the divine Mind, which is expressed in the rational order of the visible universe. It is true that Philo finds in the angelic or divine appearances mentioned in Scripture a reference to the horos, but he invariably explains these as allegorical modes of expressing the nature of the divine reason. We must, however, admit, I think, that Philo also accepted these divine appearances as actual embodiments of the doros, as when he speaks of it as the guide to the Patriarchs, the angel who appeared to Hagar, the avenging angel who destroyed Sodom and Gomorrah, the God who appeared to Jacob, the Divine form who changed the name of Jacob to Israel, the angel of the Lord in the burning bush, the angel who appeared to Balaam, the guide of the Israelites in the wilderness. If it seems strange that Philo should accept the accounts of these divine appearances literally, while yet he found in them a mystical signification, we must remember that his whole mode of thought is an illogical combination of traditional Judaism with Greek conceptions. It is no more surprising that Philo should have accepted with implicit faith the Jewish belief in angels and divine appearances, while holding a philosophical theory inconsistent with that belief, than that he should have held tenaciously by the Jewish ritual, while yet he found in every feature of it an allegory of the divine nature in its relation to man.

Besides the parallels with the New Testament already mentioned, there are one or two very striking resemblances in his treatment of the kindred notion of the law. "In Gen. xxvi. 5 we are told that 'Abraham kept all the law of God.' Now, the Law ( $\nu \dot{\prime} \mu \circ \varsigma$ ) is nothing but the divine Word ( $\lambda \dot{0} \gamma \circ \varsigma$ ), which commands what ought to be done, and forbids what ought not to be
done, as scripture bears witness when it is said, 'he received the
 then the Word ( $\lambda \dot{0} \gamma \sigma s$ ) of God is the Law (עо́лоз) of God, and the righteous man keeps the Law, he also entirely keeps the Word, so that, as scripture says, the actions of the wise man are the words of God, (I. 456.)"

We have in this passage a curious interblending of the traditional faith in the Torah, which is characteristic of the Palestinian Schools, and the Greek conception of law as the order and harmony of the universe. The Law is the Word of God, because it is directly inspired by God, but it is also the Word, because it is an expression of the rational system which is embodied in the visible cosmos. Thus the Law as contained in the Mosaic writings is the word of God, containing the commands and prohibitions binding upon men, but these commands and prohibitions are an expression of the Word as the law of things, and more particularly of the moral law. Thus the Mosaic Law, the Stoical law of nature, and the Aristotelian conception of reason are brought into a sort of harmony.

Closely connected with this identification of the Word and the Law, is Philo's doctrine that in obedience to the law is freedom, while subjection to passion is slavery. "Men who are under the dominion of anger or desire or any other passion, or of intentional wickedness, are complete slaves, while those who love the law are free. For the Law is unerring, right reason ( $\dot{o} \delta \rho \theta \dot{o} \leq \lambda \dot{O} \gamma o s$ ) ; it is not made by this or that man; it is no transitory law of mortals, written on parchments, or engraved on columns, the lifeless on the lifeless, but an eternal law stamped by the immortal nature on the immortal mind, (II. 452)." We can hardly fail to see here the beginning of that wide conception of law, which is found in the Pauline epistles; a law written on the 'fleshy tables of the heart,' such as those had who, ' not having the law, were a law unto themselves.' Thus Philo, while holding by the letter of the Mosaic law, is under the domination of a higher conception of law, as having its seat in the conscience of the spiritual man.

But perhaps the most striking parallel to St. Paul is found in the conception of the $\lambda \dot{O} \gamma=$ as the condition of moral guilt, reminding us of St. Paul's saying, 'the law entered in that sin
 vincer of guilt. "The š $\bar{\varepsilon} \gamma \chi^{\circ} 5$, which dwells in and is inseparable from each soul, refusing to accept what is wrong, always preserves its nature as a hater of evil and lover of virtue, being itself at once accuser and judge (II. 195)." Here the conception of the Mosaic law has fallen into the background, and the reason or conscience is the convincer of $\sin$, just because man contains within himself or is conscious of the divine dóros.

Philo holds that the soul existed prior to its union with the body and will survive the decay of the latter. "Every man in his reason is connected with the divine hóros, being an ectype
 blessed nature, while in the structure of his body he is connected with the rest of the world, (I. 35)." Hence the wise manAbraham, Jacob, Moses-confesses that while on earth he is a stranger in the Egypt of sense.

Closely connected with this conception of the soul as a stranger dwelling in an alien world, is the idea that the body is the source of evil. "A thousand things escape from and elude the human mind, because it is entangled in so great a crowd of impressions, which seduce and deceive it by false opinions. Thus the soul may be said to be buried in a mortal body, which may be called its tomb (II. 367)." "It is possible for the divine spirit to dwell in the soul, but not to take up its permanent abode there. And why should we wonder at this? For there is nothing in this world the possession of which is stable and lasting, but mortal affairs are continually wavering in the balance, now inclining to one side and then to the other, and liable to continual alternations. And the greatest cause of our ignorance is the flesh ( $\sigma d_{p} \rho \xi$ ) and our connection with the flesh. With this agrees the saying of Moses; Because 'they are flesh, the divine spirit' is not able to abide in them. And indeed marriage and the rearing of children, provision for the necessary wants, and meanness, and avarice, and occupation are apt to wither wisdom, ere it come into bloom. Nor does anything so impede the growth of
 and main foundation of ignorance and want of understanding, and upon it, each of the things spoken of is built (I. 266)." Hence Philo speaks of the life of the wicked as 'working and

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 xai $\mu s \theta o d s \dot{\prime} s(\nu)$. "There is an original sin in the flesh, and in man as a created being, against which the divine spirit is ever striving. There is a strife in the camp, says Moses; that is, the Spirit within us cries out. Not that the bodily substance of the flesh is to be regarded as the source of evil, but the flesh comprehends in itself the ideal evil will, ever seeking to satisfy the lusts of the flesh."
"Hence Philo is led to make a new division of the soul into two parts: the one in alliance with the flesh, the other separate from it. There are two kinds of men, he says-those who live in the flesh, and those who live in the Spirit. And there is an outer soul, $\phi^{\prime} \chi \dot{\eta} \sigma \alpha \beta x \times x \dot{\eta}$, the essence of which is blood, corresponding to the first of these two classes; and an inner soul, $\xi^{\prime \prime} \chi \dot{\eta}$ 2or(xín, which answers to the latter, into which God puts his Spirit. That is the true soul ; the soul of souls, as it were--the apple of the eye (II. 241, 356). In like manner he seems disposed to confine immortality to the souls of the good."*

The end of human life is to become like God, and virtue is the means to this end. Man is by nature corrupt, and therefore lies under the condemnation of God; but God gives men grace by which they are enabled to serve Him , and without this grace even virtue is of no avail. By the power of the diros God will raise the just man, and bring him near to Himself in heaven.
 Those who follow the first way are engaged in a perpetual strife and struggle; the second is that of instruction, which Philo finds in the ordinary elements of Greek education-grammar, music, geometry, rhetoric and dialectic. These two ways are described, in terms suggestive of St. Paul, as respectively 'milk for babes' and 'strong meat.' He who follows the highest way-that of 'nature' ( $\varphi$ jocs) experiences peace, and the joy of resignation, and being pure in heart he enjoys the beatific vision of God, though he
 also uses such terms as 'hungering and thirsting after the good and noble,' 'hungering after the noble life,' 'being a slave of
 and says that there be 'few who find' the true way of life, (I. 488 165; II. 198. 425).
-Jowett's Epistlcs of St. Palll, II. 413.

Besides the four virtues of Plato and the Stoics, Philo mentions the three graces of hope, repentance, and righteousness ; and he has also a second triad of faith, hope and love, which are the fairest graces of the pious soul, the greatest being love. But though Philo warns his readers against lip-service and superstition, calling faith 'the most beautiful and blameless sacrifice,' he never surrenders his belief in the pepetual obligation of the Jewish ceremonial law, and he accepts the popular belief in ransom and sacrifice.

The parallels between Philo and the New Testament which have just been cited are too striking to be accidental. Similar parallels could easily be multiplied. As Siegfried has shown in his Philo von Alexandria ( fena: Hermann Duff, 1875), there are striking resemblances beteen Philo and many of the New Testament writers, both in method and in matter. Time forbids us to follow these out in detail, but a summary of the results of such a comparison may be given.

In his epistles St. Paul employs some of the canons of interpretation accepted by Philo. One of these canons was, that Scripture is not to be taken in a literal sense, when it expresses something that is unworthy of the perfection of God's nature. Applying this principle to Exod. xxii $26, *$ Philo says that by the 'raiment' there referred to is to be understood the doros as the protector and guardian of man. Unless we so interpret the command, he argues, we suppose Moses to be laying down a law about a very trivial matter. Does the Creator and Ruler of the universe concern himself about such trifles? The same sort of objection and the same kind of interpretation is applied by St. Paul in explanation of Deut. $x x v, 4$. "Thou shalt not muzzle the ox when he treadeth out the corn." This cannot mean, argues the Apostle, that God is careful of the ox, and hence we must understand it as a command to the Christian churches to support their teachers.

Again, in the allegorical method special significance was attached to the use of the singular number. In Gen. xvii, 16, a promise is made to Abraham that he should have a son by Sarah.
"'If thou at all take thy neighbour's raiment to pledge, thou shalt deliver it to him by that the sun goeth down : For that is his covering only, it is his raiment for his skin : wherein shall he sleep? and it shall come to pass, when he crieth unto
me, that I will hear; for I am gracious."

Why is only one child promised? To indicate the truth, answers Philo, that ' the good' is not in number, but in power. St. Paul employs similar reasoning in Gal. iii; 16. In Gen. xxii, 18, Abraham is told : "In thy seed ( $\left.\sigma \pi \varepsilon_{\rho}^{\prime} \rho \mu \alpha\right)$ shall all the nations of the earth be blessed." The Apostle's comment is: "He saith not, And to thy seeds, as of many, but as of one, And to thy sced, which is Christ."

So, speaking of the 'rock' that followed the Israelites in the wilderness, Philo says: "That 'rock,' employing elsewhere a name signifying the same thing, he calls 'manna,' the eldest díros of all things." Similarly, St. Paul in I Cor. x. 2; "They drank of that spiritual rock that followed them; and that 'rock' was Christ." As Philo interprets the 'raiment,' the 'rock' and the 'manna' to be metaphors for the $\lambda$ doros, so St. Paul explains the 'seed ' and the 'rock' to be Christ. There is therefore no doubt that the Apostle employs the same method as Philo.

It is generally additted that the author of the Epistle to the Hebrews has come under the influence of Alexandrian culture, and therefore, as we should expect, he freely employs the alleg. orical method. Thus he sets aside the literal meaning when it contains something contradictory; like Philo he draws an inference from the silence of scripture; he bases conclusions upon the meaning of a word, and upon its etymological signification.

Besides this agrement in method, there are many similarities between Philo and New Testament writers in metaphors, yeneral modes of expression and in ideas. Are we, then, to conclude that the New Testament writers have borrowed from Philo? That would be a very rash inference. The truth rather is, that both were under the influence of widely diffused modes of thought and expression. As to the excgetical canons common to both, we have to remember that these were not peculiar to Alexandrian writers. Orthodox Jewish writers to a certain extent practised the same method of interpretation, and, in the case of St. Paul, this is sufficient to explain his use of that method. We have further to remember that "in the Pharisaic theology there are already Hellenic elements. Orthodox Judaism could not escape from the influences which arose from the victory of the Greeks over the East. The peoples who inhabited the eastern shores of the Mediterrancan had a common history from the $4^{\text {th }}$ century B.C.,
and acquired similar convictions."* When, therefore, Judaism and Hellenism are contrasted, we have to remember that Judaism already to a certain extent lives in the atmosphere of Greek modes of thought and expression. "There is not," as Harnack says, "a single New Testament writing, which does not betray the influence of the mode of thought and general culture which resulted from the Hellenizing of the East. Indeed, this is shown by the use of the Greek translation of the Old Testament. We may even say, that the Gospel itself is historically unintelligible, so long as we regard it as an exclusive product of Judaism which is no way affected by any foreign spirit. But, on the other hand, $i_{t}$ is just as evident, that specific Greek ideas neither form the presupposition of the Gospel nor of the principal New Testament writings. The writers of the New Testament breathe the spiritual atmosphere created by Greek culture, . . . but the religious ideas in which they live and move come to them from the Old Testament, and especially from the Psalms and the Prophets." $\dagger$

Now, as we have seen, the main ideas of Philo, and his whole mode of thought, are determined by Greek philosophy. We may therefore be certain that, whatever superficial resemblances there are between him and the New Testament writersand these are neither few nor indefinite-the whole spirit and view of life is fundamentally different. The distinction is not due merely to the acceptance by the Christian writers of Jesus as the Messiah, but it extends to the whole of the conceptions which made Christianity a new power in the world. There is only one New Testament writer who was certainly acquainted with the writings of Philo, or at least with the main ideas which those writings express-the writer of the Fourth Gospel; and in him the antagonism is more fundamental than in any other writer. Whether the Fourth Gospel was written by the Apostle John, or by a disciple of his-and modern criticism has shown that there is no conclusive evidence against the authorship-it is certain that it was a conscious rejection of the Philonic conception of the $\lambda \dot{0} \gamma \sigma 5$. But, in other writings, as e.g. the epistles of St. Paul and St. James and the epistle to the Hebrews, the antagonism is none the less marked because it is less conscious. The really important result

[^0]tIbid I. 47.

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of a comparison of Philo and the New Testament is therefore that it enables us to see more clearly the unique character of Christianity, and to separate from it the accidents of its expression, whether these were due to modes of thought predominantly Jewish or predominantly Greek. The spirit of Christianity is certainly not dependent upon the earthen vessel in which it was contained. On the other hand, it would be a grave mistake to assume that we can remove from Christianity all the elements which may be called theological, and narrow it down to simple faith in the Lord Jesus. Simple faith in the Lord Jesus is no doubt all that is essential to individual salvation ; but it is not all that is essential to the regeneration of the world. The teaching of our Lord contained implicitly a complete system of theology; and when St. Paul and the New Testament writers sought to set forth this system explicitly, they were only seeking to supply a fundamental need of the human spirit. The question rather is, whether the first form in which the system of ideas which the Master expressed in all their freshness and living force was not unduly narrowed by the want of categories adequate to express it. There is, indeed, no opposition between the New Testament writers and the Master, but there is undoubtedly a difference in the mode of statement ; and it is a very narrow and indefensible view which would insist that we are bound by the form of the disciples and may neglect the larger truth of the Master. Let us, then, begin by a comparison of St. Paul and Philo.

The centre of all St. Paul's life and thought was his absolute faith that Christ had revealed himself to hin, that the Gospel was the revelation of the crucified and risen Christ, and that God had called him to proclaim this gospel to the world. Those three ideas were in the consciousness of the Apostle absolutely inseparable from one another. If Christ had not revealed himself to him, there was no foundation for lis faith; if the gospel was not the revelation of the crucified and risen Christ, there was no new revelation; and if he had not himself become the medium of this new revelation he had no call to proclaim the gospel to others. In this new consciousness consisted his conversion and his whole life was determined by it. In this faith he was conscious of having undergone a complete revolution in his whole being. His attitude towards others was there-
fore completely changed. He was no longer a Jew, but a ' new man in Christ Jesus,' and therefore all men, Jews and Gentiles alike, were related to one another and to God in an identical way. That being so, his mission was to lead the Jew beyond the limits of Judaism, and to bring the Gentile to a consciousness of his true relation to God and his fellow-men. The crucified and risen Christ was not only the central principle of his theology, but the ruling principle in his life and thought. The Christ was not the man, Jesus of Nazareth, who had been exalted by God to a position beyond that of ordinary humanity, bnt the mighty personal spiritual being, who had humiliated himself for a time, and had destroyed the world of the law, of $\sin$ and of death, and who as spirit worked in the souls of believers. Hence for him theology was the doctrine of the liberating power of the spirit of Christ, operative in all the concrete relations of human life and of human need. Christ who has overcome the law, sin and death, lives as spirit and through his spirit in believers, who therefore do not know him according to the flesh. He is a creative power of life for those who from faith in his saving death on the cross allow him to work in their souls, i.e. to be justified. Life in the spirit, which is the result of union with Christ, will at last reveal itself also in the body, not in the flesh. Looking back at the past, St. Paul regarded theology as the doctrine of the abolition of the Law. He therefore, views the old in the light of the Gospel, maintaining that it has been done away by Christ. Hence the proofs from scripture are merely introduced in support of his inner convictions. These revolve around the idea, that the true meaning of the Law, of sin and of death is only revealed in their abolition. By the law the law is destroyed, in sinful flesh $\sin$ is overcome, through death death is conquered.

The historical view of St. Paul is set forth in the relation of Christ to Adam and Abraham, and to the Law of Moses; it looks forward to the time, when God shall be all in all, after Christ has 'put all things under his feet'; and to a time when the prophecies given to the Jewish people shall be fulfilled in the salvation of all Israel. The doctrine of Christ in St. Paul starts from the confession of the primitive church, that Christ as a heavenly being and as Lord of the living and the dead is with

Christ, but upon the pre-existent Christ, the 'man from heaven,' who in self denying love made himself flesh, in order to destroy the power of nature and death; but he refers to the works and the life of the historical Christ as the pattern for all men of life in the spirit.

In controverting Christian opponents, who sought to combine the gospel of the crucified Christ with the 'righteousness by works,' St. Paul makes use of arguments and even of ideas borrowed from the Pharisaic theology ; and he employs the exegetical method practised by Pharisaic theologians, as well as by Alexandrian writers. But the dialectic in regard to the law, circumcision and sacrifice does not form the central source of his inspiration, but is merely the outer body of his doctrine. St. Paul is the highest product of the Jewish spirit as transformed by the creative power of the spirit of Christ. Pharisaism had fulfilled its mission in producing a man of this type, and was henceforth dead. In a measure St. Paul shares the Hellenic spirit, but this spirit he imbibed, not from the direct influence of Hellenic writers, but from his Pharisaic training. In his mission to the Gentiles he had the advantage of an intimate acquaintance with the Greek translation of the Old Testament, considerable skill in handling the Greek tongue, and an insight into the spiritual life of the Greeks. His great power, however, lay in his gospel of the spiritual Christ. This gospel he could express in modes of thought comprehensible to the Greek mind. In his Apologetics he even turns to his purposes the philosophical doctrines of the Greeks, though it cannot be shown that he had a direct acquaintance with Greek literature and philosophy. Thus he prepares the way for the diffusion of the gospel in the Greek and Roman world. But this in no way affects his central doctrine of salvation, which was neither Jewish nor Gentile, but universal.

Now, when we consider that the centre of all St. Paul's ideas is faith in the crucified and risen Christ, we see at once that his whole conception of life differs from that of Philo. Both, indeed, speak of the 'heavenly man,' but their point of view is diametrically opposite. The 'heavenly man' of Philo is not a person, but an abstract archetype: it is the divine pattern in the divine mind after which individual men are formed. But this archetype
could never possibly be realised in any individual man. St. Paul, on the other hand, finds in the crucified and risen Christ, the manifestation of the Son of God. Whereas Philo's 'Son of God' is merely the divine mind in operation, St. Paul finds in Christ the true Son of God, who humbled himself by appearing in the flesh, and who thereby revealed the innermost nature of God. Whereas in Philo God remains in his own nature absolutely inscrutable, St. Paul sees in the crucified and risen Christ the manifestation of the infinite love of God. This is no mere superficial distinction: it is the fundamental note of Christianity, which distinguishes it from all other religions.-And as St. Paul's conception of the Son of God differs toto caelo from Philo's, so his conception of salvation is fundamentally different. The salvation of man for Philo was conceived to lie in the illumination of the mind by a philosophical conception of God, and obedience to the law of reason. Thus, it was the narrow way open only to the cultured few. St. Paul's way of salvation was open to all. No distinction of Jew or Gentile, cultured or uncultured, free man or slave, could separate a man from union with God through the indwelling of the Spirit of Christ in him. Philo no doubt liberated himself from the prepossession that only the Jew was capable of salvation, but he only got rid of this national limit to fall into the Greek idea of a limit in human nature arising from an intellectual defect. And further, while Philo conceives of all men as capable of goodness, he also regards the law of Moses as binding upon all men. Thus he is limited in two ways: on the one hand, the man of culture alone is capable of salvation, and, on the other hand, the Jewish ceremonial law is not temporary but eternal. St. Paul, on the other hand, as he bases his doctrine upon a faith of which all men are capable, so he sweeps away the whole ceremonial law, viewing it as merely temporary. The universalism of Philo was no true universalism; that of Paul was based upon the fundamental sinfulness of all men, and the possibility of salvation through faith in the love of God. We can thus understand how Philo's doctrine had no influence beyond the schools, while Christianity turned the world upside down. The more we reflect upon the doctrine of Philo, the more clearly we see that it was impotent to regenerate the race. And even as an abstract creed, it was merely a combination of discrepant
ideas. There is, in his theory, no real manifestation of God. The inscrutable Being, who cannot be in any way defined, is little better than the deification of Nothing. His dóros, viewed on its higher side, is but the hypostatizing of abstract ideas; and, on its ower side, it does not take us beyond the idea of an abstract law which operates beyond, but not in, the spirit of man. Thus, from either point of view, it has no more potency than an abstract law of nature. St. Paul, on the other hand, has grasped the principle of the self-manifestation of God, and the possibility of the regenerated man living in the spirit of the Son of God. Thus, in his doctrine, we are dealing with the actual manifestation of God, and with the living principle operative in the souls of men.

When we compare Philo with the writer of the fourth gospel we find the same superficial resemblance, and the same fundamental opposition.
(I) We have seen how Philo affirms the absolute incomprehensibility of God. "Though God is by nature visible, no man has seen Him." This language naturally suggests the similar statement in the fourth gospel (i, 18), "No man hath seen God at any time." By the false method of assuming that similarity of statement is a proof of borrowing, it may be argued that St. John was indebted to Philo for his conception of the invisibility of God. Now, not to mention that Philo's conception of the incomprehensibility and invisibility of God had taken a firm hold both of Palestinian and Alexandrian writers before Philo, it is easy to see that, in words which are almost identical, the two writers are expressing a tolally different idea. In the passage where Philo speaks of the invisibility of God, he goes on to say that "the cause lies in the weakness of the creature," i.e. in the 'imbecility of the human intellect,' to use the phraseology of Sir William Hamilton. It is thus a limit in the human intelligence which, in' Philo's view, prevents us from comprehending the nature of God; and he adds that "we must become God-which is impossible-before we can comprehend God." But no such doctrine is suggested by the gospel writer. After saying that "no man hath seen God at any time," he adds: "the only begotten Son, which is in the bosom of the Father, he hath declared him." What the writer has in his mind is that prior to the revelation of God by Jesus Christ, the Father was in his full nature un-
known to man, but is now revealed as He truly is. That this is his meaning is evident from the words immediately preceding; "For the Law was given by Moses, but grace and truth came by Jesus Christ." The contrast is therefore between the Law and the Gospel ; and the fundamental thought is, that God, whose true nature had been hidden, is now revealed as a God of love. No doubt the gospel writer holds by the thought of the spirituality of God, but in his view God is not hidden but revealed. There is, in truth, nothing in the New Testament to countenance the doctrine of the absolute incomprehensibility of God, and theologians who interpret such passages in an agnostic sense do violence to its whole spirit. "Blessed are the pure in heart, for they shall see God" is the utterance of the living Christian consciousness, not a dogmatic proposition; but it is incompatible with any theology which sets up an impassable barrier between God and man. If theology is to remain Christian, it must discard this fiction of an absolutely incomprehensible God. It may, in fact, be doubted whether we have yet had a theology which has been able to provide a completely reasoned basis for the Christian consciousness of a self-manifesting God. Nothing is more melancholy than the present tendency of theological speculation to fall back upon the self-contradictory doctrine of an unknowable God.

Philo then, as we see, so far from anticipating the Christian idea of God, merely expresses the conception current in his day among his countrymen. And it is significant that, in defending his preconception of the inscrutability of God, he employs the dualistic modes of thought which he had learned from his Greek teachers. The false abstraction of an incomprehensible God on the one side, has as its complement the equally false abstraction of formless matter on the other side; so that God is not the creative source of all things, but merely the Architect who fashions the world. Thus the very writer who imagines that he exalts God by declaring Him to be incomprehensible, falls back upon the analogy of a human artist when he attempts to explain the creation of the world. This defect also still infects much of our current speculation. It is still supposed that the relation of God to the world may be conceived after the manner of an external artificer; a view which rests upon the blasphemaus nation of the independent existence of the material world.
(2) The $\dot{0} \dot{o} \gamma o$ s is conceived by Philo as, on the one hand, the Thought of God, and, on the other hand, the expression of this Thought in the visible universe; and this Word is represented as the 'instrument' by which the cosmos is formed. When we turn to the fourth gospel we read: "In the beginning was the
 same was in the beginning with God. All things were by Him ( $\hat{\partial} e^{\prime} a^{\prime} \sigma^{0} \tilde{y}$ ), and without Him was not anything made that hath been made." The two modes of statement have undoubtedly the strongest resemblance. But there are fundamental differences. According to Philo the $\mathrm{K} \dot{\mathrm{o}} \mathrm{ros}$ is not identical with God, but is a product of his self-activity. Thus the doros is not a complete counterpart of the infinite energy of God ; nor, strictly speaking, is it an expression of what God in His inner nature is, but only an effect, distinct and separate from Him. Philo, in short, applies the conception of external causation to express the relation between God and the $\lambda \mathrm{o}_{\boldsymbol{\gamma}} \mathrm{o}_{\mathrm{S}}$. On the basis of his dualism, the $\lambda \cdot{ }_{0}$ os cannot be identical with God, because God is absolutely self-contained and therefore cannot be expressed. Now, St. John gives us a very different view. Holding that God is essentially self-manifesting, he employs the current term $\overline{i n} \boldsymbol{r}^{\circ} \mathrm{s}$ to express this idea. The $\lambda \dot{d}$ yos is said to be at once ' with God' and to ' be God.' Thus the absolute identity of God and the $\lambda \boldsymbol{i} \boldsymbol{r}^{\prime}$ os is affirmed, while yet the $\dot{0} \dot{O}$ yos is distinguished from God. This can only mean that God manifests himself as $H c$ is in the dioros. It is, then, in this sense that he speaks of the diros or Word. There can be no doubt that he makes use of the current Hellenistic metaphor implied in the double meaning of the term dions, but he adapts it to the expression of the new conception of God as self-manifesting. Thus his conception of the diros has an entirely different meaning from that of Philo. God's inner nature is fully manifested in the $\lambda$ oros, who is not the product of God, but is God himself. The mechanical conception of God as a cause distinct from the $2 \dot{0}$ yos is set aside, and for it is substituted the conception of God as the eternal self-manifesting God, or, in a word, of God as spirit.

Philo holds that the $\lambda$ dros was the 'instrument' by which the visible world was created; and he expressly compares the world to a vast temple or city, explaining that the 20 ;os was the instru-
ment by which the four elements and their various compounds have been formed. St. John also speaks of the $\lambda$ oroc as that through which the world has been made, and so far he seems to be expressing the same idea as Philo. But there is this important difference; that as the doros is identical with God, it is God as the doros who has 'made the world.' Further, the world is not 'made' in the sense of being 'formed' out of a 'matter' already existing, but is brought into being absolutely.
(3) In Philo, the dóros conceived as the Thought of God is
 harmony of creation and providence. There is no such distinction in St. John. For him the Word is the expression of God himself, and it is to the direct agency of God as the doros that all created things owe their existence. Thus, from whatever point of view we compare them, we find that Philo and St. John, while using the same term, give it an entirely different meaning. At the same time, it is obvious that the metaphor of the Word is only a metaphor, and that the fundamental idea which it is employed to express is that God has revealed himself as He is in the knowable universe, or rather in his Son.

John Watson.

## PLANT SOCIOLOGY.

ANOTHER CHAPTER IN ECOLOGY.

THERE can be little doubt that the first botanist was the first man. His interest in plants was largely gastronomic ; but in his discussions with his offspring, and with the other fauna of his neighborhood, he was fortunate if he had a weapon with many spiral ducts in its vascular bundles. When botanical knowledge had been enriched by the decease of those who ate " not wisely but too well" of the wrong plant, we find that a
ew species were set aside as useful, wholesome, and to be encouraged. The great mass of outsiders were considered with a view to their effect on ailing friends or too vigorous enemies. Later came the laudable attempt to classify all sorts, and so pigeonhole them for ready reference. In connection with this object we find the collecting mania to have developed, until for many years one aim of the botanists seems to have been to reduce to the condition of more or less libellous mummies, a large num. ber of specimens of every plant beneath the sun.

Then the increased perfection of the microscope gave the laboratory botanist his opportunity, and for the last twenty years we have been trying to get at the true inwardness of every part of every kind of plant. The life processes are also being investigated in the physiological laboratories of all well-equipped colleges, so that we may reasonably hope soon to know the conditions best fitted for the wellbeing of the silent toilers, which so patiently manufacture our food. In connection with this branch of botany there is yet much to be done by all of us who are so fortunate as to have taste and opportunity for walks afield.

We may with profit ask ourselves the following questions :
What are the characteristic plants of each well defined plant society;-of the shore, of the marsh, of the swamp, of the meadow, of the forest, of the rocky ridge, of the sand dune?

What are the conditions to be met and conquered in each environment ?

What peculiarities in structure or habit have placed each plant in one of the above societies?
These are but leaders of an army of questions that suggest themselves, and we may have no fear that our answers will exhaust the subject. This paper will be a brief attempt to suggest a few of the conditions met with in ordinary country districts, and to note a few answers that may be tentatively put forward to meet the innumerable "Why's" with which the subject bristles.

All that we can undertake is to study the characteristic plants of an area with respect to their adaptations. These adaptations are:-for and against light ; for protection ; for reproduc-tion,-in connection with the chief factors of environment, which are light, heat, water, soil, wind, animals, other plants, and
topography or drainage. We shall refer to the plants growing under a similar set of the above conditions as a plant society. For convenience, those forming the marsh and swamp society are called hydrophytes; the society of medium or meadow conditions, mesophytes; the dry sand dune or rocky desert group, xerophytes ; and the forest plants, hylophytes.

If we visit a small body of open water with muddy bottom, such as a bay or stream, we shall find, first, submerged rooting plants, typical aquatics, for example, Hornwort, Myriophyllum, Water Crowfoots, Beggar Ticks, etc. The conditions which threaten their existence are :--small exposure to light and carbon dioxide, and great liability to destruction from the motion of the water in waves or currents. The dissection of the leaves into cylindrical threads offers the greatest surface possible for exposure to the weak light which penetrates the water, and for the absorption of gaseous food. In connection with the long, flexible, buoyant stems, such leaves also present the condition least likely to offer resistance to water movements. In the second place are the floating plants. Among these will be usually Spirogyra, Cladophora, and Spirodela. Like the rooted plants, these offer little resistance to the movements of the water, and by their thinness afford all parts sufficient light exposure. Thirdly, we find rooted weeds, partly above and partly under water. They may include Pond Weeds, Wild Celery, Bullrushes, Cat-tail, Arrowleaf, Mud Plantain, etc. When these bear submerged leaves they are of the small, or dissected, or very thin types above noted, while the floating leaves are broad and entire. The latter serve to float the blossom for insect pollination.

The genus Potamogeton illustrates excellently the truth that in classification we must attach most importance to the structure of the flower, and little to the structure of other organs. All other organs are subservient to the support of the flower, and change with the endless variations of condition, with a tendency, however, to become similar in all kinds of plants under similar conditions. The flower being independent of the struggle for food, may remain constant in structure, except as modified for fertilization; and such modification will probably be somewhat uniform within similar latitudes and similar regions of insect distribution. There is a remarkable tendency among plants that are partly
submerged, to modify the vegetative organs into either broad, entire, floating structures, or into narrow, cylindrical, erect leaves or leafstems. When Arrowleaf grows on land or in shallow water, with the leaves completely emerging, these leaves are broad and halberd-shaped ; but when growing in deep water with leaves largely submerged, they are narrow; and a perfect gradation exists-coinciding with the extent of leaf emergence,-between this cylindrical petiole-like structure, and the widely expanded leaf.

No one can have looked long at a large growth of water plants without having been impressed with their erectness and narrowness. Rushes, Cat-tails, Blue Flag, Wild Rice and Sweet Flag are all characterized by a similar habit. And this habit persists throughout that most successful and useful family,-the grasses. The Rusl occupies a place in two plant societies-the wettest and the dryest-ponds and sand-dunes. Has the habit of growth anything to do with this strange distribution? We may notice that all these erect plants above mentioned are of social growth, reproducing vegetatively, and a good light supply is best secured, in crowded clusters, by narrowness and erectness of members. But protection from extreme heat and light are often required by this style of plant. The cylinder is the plant form which, next to the sphere, gives greatest mass with least surface for evaporation. The same result is obtained by the grasses, which possess to a marked degree the power of reducing their surface in time of great heat by rolling their leaves into cylinders. Again, the conditions surrounding a plant rising above the surface of water are not unlike those endured by the plants of the sand dune. We know that from direct and reflected light and heat, and from the sweep of the wind, the transpiration from such a position must be excessive, hence a thick epidermis and a cylindrical shape may best serve both locations. This same windforce may have also, to some extent, fashioned the narrow ribbon-like foliage.

The zonal arrangement of the plants in and on the margin of ponds is noteworthy. In the deeper water we have White and Yellow Water Lilies, then a circle of the rushes, next Cat-tail and Pickerel weed. A pond of stagnant water will show many of the same characteristics, with the addition of many more floating
plants, as Bladderwort and Riccia. They are here because of protection from water currents and strong wind movements. Although true aquatics, they must float in stagnant water because of the lack of oxygen which is more readily absorbed by moving water, and which would here be used up by the decaying organic matter always present. The Charas, however, remain at the bottom. Are they able to do with little oxygen, and why? We should also note the great plasticity that is shown in the fact of many of the above plants developing entire leaves above water, and dissected leaves below. This is decided just at the time of leaf development, and depends, not on heredity, but on the temporary depth of the water.

Our glance at this extremely interesting society has been directed only toward a few of the conspicuous forms and problems. We must always remember that innumerable company which we estimate per cubic yard of water,-the Diatomaceae, Desmidiaceae, and microscopic algae generally, which form such an attractive background, and whose simpler forms may aid us greatly in the study of adaptations. We have also ignored that huge group of lithophytes,-the Seaweeds. Why are the more deeply submerged Seaweeds red, and those of shallower water yellow or brown? Why is the under side of the foliage leaves of Nympheae purplish, and the same with the little Spirodela? Why do not Arrowleaf, Pickerel Weed, Water Lilies and Water Plantain develop narrow leaves?

The aid of the microscope is essential to the study of very many of the adaptations, and we find that external conditions produce deep-seated changes. The thin-walled epidermis of submerged plants, lacking stomata, but allowing absorption through all the parts, will be accompanied by corresponding reduction in vascular tissues and in root development. Support by the water will result in small amount of supporting tissue, and often in the development of air cavities. The reduced light results also in a comparatively feeble development of green tissue.

These hydrophytes are the most cosmopolitan of plants, being practically the same on all the different continents. They are of few families, but many in numbers, probably because water gives the most uniform conditions and the greatest chance for dissemination.

We find that monocotyledons predominate among hydrophytes. The Engler-Prantl classification of plants places Screw Pines, Cat-tail and Bur-reed in the lowest class of monocotyledons. Next come the pondweeds, Water Plantain, etc.; and in the third group, the grasses and sedges. We cannot avoid the decision that our hydrophytes are largely made up of the lowest classes of monocotyledons. Geology seems to show that the primitive plant conditions were decidedly hydrophytic. It is possible that we are here studying persisting types of the first families, whose more progressive members,-the grasses, lilies and orchids, -have climbed out and become somewhat mesophytic.

A study of the same hydrophytic district year after year will show us that a slow migration is going on among the reed-like hydrophytes. Their body habit is such that they must root firmly in uncertain soil. As a result secondary roots are sent out in great numbers. Their erect, wand-like forms allow close social growth, so we find them rising from a mat of interlaced roots. Upon the dead and decaying roots new plants spring up, so here among the reeds and sedges we find the great turf-builders. The roots hold the silt from the land, and thus produce a soil in which true hydrophytes will not flourish, but which is peculiarly suitable to what may be called hydro-mesophytes, producing a swampmeadow. Here grow Cat-tails, Sedges, Spike-rush, Cut-grass, Barnyard Grass, Water Crowfoot, Smartweeds, Nasturtium, etc. By these the shore line is gradually pushed forward, and shallow lakes and ponds become swamp meadows, and, in time, swamp thickets, and even forests. The swamp meadow plants are vege$t$ able amphibians, from the fact that in the dry season their relationship to water is very greatly changed. Among them we may well look for plastic forms and wonderful adaptations. The characteristic mosses of the rich soil of the swamp meadow are the Hypnums.

The thought of the mosses of swamp moors at once calls up that very claracteristic form known as Sphagnum bog. Why have we great extents covered by this moss, often with scattered tamaracks and black spruce, but with a class of plants altogether different from those of the ordinary swamp meadow? The Cot-ton-grass on the margin, the Bog Orchids,-Microstylis, Arethusa, Calopogon and Pogonia; the Sundews, the Pitcher-plant
and the Heaths make a group well known and beloved by all field botanists. But why do these plants always occur together, and why, with apparently similar water content, does this soil exclude the ordinary swamp flora? Probably because of the lack of drainage. The peaty soil is found to be extremely poor in potash salts and nitrates. No nitrifying bacteria are found, and practically none of the bacteria of decay. The peat is antiseptic, and animal and plant forms are here embalmed. The supply of nitrogen must be obtained by other than ordinary means, and, as a result, this is the home of many of the carnivorous plants. The heaths and orchids are found to be largely saprophytic, and many of the remainder are nourished by root fungi. These plants, while standing in either visible or invisible water, are subject to xerophytic conditions, in so far as aerial parts are concerned, and with the usual result of narrow thickened leaves with very dense epidermis, and hairy, scaly or woolly protection. But our explanations do not explain. Why are these, rather than others, the plants for these conditions, and have we considered all the important features of the environment ? The question is with you.

Let us now leave conditions of excessive moisture, and consider a forest growing in a river valley. We have the optimum condition of plenty of humus, sufficiency of water and protection, and good drainage. As a result we find the climax of our flora, the giant expression of the plants which we find elsewhere under different conditions. The only disadvantage is lack of light, which would encourage a luxuriant undergrowth. This undergrowth is absent, so far as perennials are concerned, except the lianas. Poison Ivy here becomes a very vigorous climber, as do Wild Grape and Cat Briar, often reaching fifty feet from the soil in their efforts to get light. The herbs which can succeed here are those which rise very quickly from tubers, corms or bulbs, and complete most of their vegetative work before the trees reach full leafage. The trees themselves develop large leaves in order to bring all possible chlorophyll to the best position for light.

Assuming that herbaceous monocotyledons were the primitive forms of plants, the question rises as to what set of conditions would produce a forest. The height may be the result of
luxuriant growth, due to excellent conditions of humus, water, and protection, such as are found in a river valley. Each plant would require to rise high to compete for light on equal terms with its neighbour. With the rapid vegetative growth, and lack of threatening conditions, there would be associated retarded seed production, and the plants would tend to become biennials and perennials. The increasing height would demand mechanical structure equal to the task of supporting it; so the woody trunk would be evolved. Reasoning in this way, the river valley would seem to be the cradle of forests. One objection may be urged,-that lignification is usually the result of trying con-ditions,-excessive heat and exposure to high winds. The whole question is on the table.

Leaving the forest shades we find a new army of plants ready for inspection on the level prairie. Typical forms are the Rosin Weeds, the Sunflowers, the Golden Rods, the Lead Plant, the Bush Clovers, the Prairie Clovers, the Spurges, the Asters, the Prairie Rose, the Green Milkweeds, the Grasses, the Wild Onion, the Low Willow and Grey Willow, Spiderwort, Tumble Weed, and hundreds of others at other seasons.

The ecological conditions to be met by the prairie flora are :
(1) Absence of trees and shade ; (2) Dryness of soil from scanty rainfall ; (3) Small quantity of humus; (4) Strong winds; (5) Strong sunlight ; (6) Extremes of heat and cold.

To meet these conditions we find that the above mentioned plants have developed various characteristics. Rosin Weeds, Sunflowers, Golden Rods and Asters are protected by strong, coarse texture, with thick epidermis, and have, as also has the Tumbleweed, very adequate means of seed dispersion by wind. The Leguminosae-Lead Plant, Bush Clovers, Prairie Cloversare not only pubescent, but in addition possess a remarkable power of leaf movement. These characteristics have doubtless much influence in making this family one of the most successful in all conditions throughout the world. An interesting question is the value of the latex of Milkweed and Spurges in enabling these plants, with thin epidermis and no pubescence, to resist the tendency to excessive transpiration. The narrow erect leaves of the grasses, cuticularized and curling, have been mentioned before. The water condition is so delicately balanced on
the prairie that a lowering or elevation of a few inches will introduce a different flora. We find the lower levels inhabited by the succulent Spiderwort and Wild Onion, while the margins of the hollows will be thickly covered with Rosin Weed.

The long-debated question-the reason for absence of trees on prairies-still calls for investigation. It appears probable that a forest is the last society of plants to appear on a piece of soil. The absence of trees may then be both a cause and a result. If a region be so open and exposed as to afford a great sweep to drying winds, trees could scarcely get started, and if they did so, would be destroyed by the annual fires.

An extremely interesting study of rapid adaptation to changing conditions may be found by visiting the sand dunes, such as occur in Prince Edward county and along the east shore of Lake Huron, in Lambton and Huron counties.

Dunes are always caused by the prevailing wind sweeping over water or level land. The sand is usually picked up from the beach, having been separated from the soil by the action of water. As the wind sweeps inland loaded with sand, it loses its energy and velocity, and drops its burden. Obstacles, such as plants or rocks, may cause the sand to drop at first, then the pile of sand itself becomes an obstacle, and the dune grows and advances. It becomes a moving body of sand-not moving in mass, but with a surface flow. The side of the dune facing the prevailing wind has a gentle slope, up which the sand is urged. The advancing side, or lee side, is a slope as steep as sand will lie-between 30 and 35 degrees.

Approaching the dunes from the water side, we note first the submerged plants anchored to rock,-the lithophytic algae Cladophora, Draparnaldia, Ulothrix, etc. Besides there are Elodea and many Pond-weeds. Just above the edge of the water we find a zone entirely devoid of plant life. The conditions are too severe for even the most hardy vegetable adventurers. Alternate submergence and emergence, buffetings by wind and wave, exposure to extremes of light and heat and cold, -all these conditions combined have blighted the hopes of the many waifs-spores or buds or seeds constantly cast up by the waves. Occasionally, in favourable weather, an alga may grow luxuriantly for several days, but the next storm purges this play-
ground of the waves of all such interlopers. Just beyond the reach of summer storms we find Sea Rocket, which is everywhere the first to root in the beach sand. Closely associated with it are Bug Seed, Spurge and Tumble Weed, with an occasional Cnicus Pitcheri, and the Russian Thistle just coming in. No biennial or perennial can survive the winter storms which reach this zone, but we shall find theni constantly venturing upon it in the forms of Wormwood, Winter Scouring Rush, Sand Cherry and Cottonwood Seedlings.

Beyond this we reach the ground upon which dunes grow, and we find them of all sizes, from a few inches in height and length to those stretching inland for miles, and reaching sixty to eighty feet high at the crest. In order that a plant may present a persistent obstacle to moving sand, and survive the successive layers which will sweep over it, and will also hold together the sand, so that it may not be drifted, the plant must have the following peculiarities:
(I) It must be of rapid growth.
(2) It must be of social growth. No single plant, without vegetable reproduction, could successfully form a dune.
(3) It must be adapted to xerophytic conditions:--heat, cold, dryness and high winds.
(4) It must be of indefinite growth upward, with any part of the stem able to put out root hairs and function as a root, and any part of the root able to do duty as a stem.

The following plants seem best adapted to the above conditions :-
(I) Sea Sand-Reed,-perhaps the best of all dune formers, and used by the Danish Government for this purpose.
(2) Calamagrostis longifolia and Elymus mollis. These grasses can hold dunes to quite a height, but there seems to be a limit beyond which they cannot obtain the necessary moisture ; then they die, and the dune travels.
(3) Prunus pumila. The Sand Cherry is able to hold dunes to the height of fifteen to twenty feet.
(4) Salix glaucophylla and S. adenophylla. The former the Glossy Willow, must be considered very plastic, as it is often a swamp plant. Its roots are sometimes seen extending from twenty to forty feet on the eroded surface of the dune, and whenever buried will send up leaves.
(5) Populus monilifera. The Cottonwood survives in surprising situations. We have found it with thirty feet or more of trunk and branches submerged in sand, and yet the emerging parts were healthy and growing. In another instance the sand had swept from about the base of the tree until ten feet of the roots were laid bare, and still the tree seemed to thrive.

Being slow growers, the pines can scarcely act as dune formers, but if planted and established, they might be able to hold dunes in place better than any of the above mentioned plants. Pines have great power of withstanding trying conditions. Their continuous coat of strongly protected leaves permits them to begin chlorophyll work as soon as the growing season begins, and to continue it in spite of late frosts, which would destroy tender, immature leaves. Their needle shape, sunken stomata, and very thick epidermis afford the pine leaves protection also from strong and drying winds.

Even the moving surface of the dune is not so arid or uncertain as to discourage all plants. Bugseed is found scattered plentifully over many parts. This is an annual, and must therefore have been carried here as seeds. These seeds are very light, and can germinate in about thirty hours. In spring and winter the surface of the dune is wet or covered with ice. If, in the spring, these seeds are allowed favorable conditions for the short time necessary to get their cotyledons above the sand, the plant can defy later storms. As sand drifts over it the stem elongates; while a recession of sand is met by a double bending of the stem, so that the tip rises erect.

At the foot of the advancing slope we can observe what occurs to the plants advanced upon. 'Here is dynamic evolution. In connection with ordinary adaptations to circumstances we mentally allow the plants ages in which to produce the modifications. Here the change must take place almost before our eyes. If a plant in the path of the sand can make the necessary changes within one season it may survive, otherwise it is doomed.

When a dune advances on a swamp we find, of course, that the great majority of the plants die out at once. As the sand surrounds them, they become a paler green, showing the difticulty with which they do their chlorophyll work. They also seem to blossom most profusely, as if in a despairing attempt to pro-
vide for a continuation of the species. The Buttonbush manages to endure the dune conditions a few years, as also do the Red Osier and Wild Grape. As before mentioned, the Glossy Willow and Glandular Willow take kindly to the dunes. We find that the leaves of the plants are smaller and thicker and much firmer on the dunes than when growing in swamps. All others die and are buried.

On the fixed dunes we notice that the pines succeed the cottonwoods. The latter require mesophytic conditions for germination, but when well started can endure well the dune conditions. They are, however, short-lived, and on the older dunes we find them replaced by pines which germinate in their protection. As the conditions of the older dunes become more mesophytic, the pines are replaced by oaks. When in favorable conditions the oaks can crowd out the pines, owing to their more rapid germination, better spreading power, and less danger of extermination by fire. Within a certain range of conditions, the oak is the stronger, but its range is not nearly that of the pine.

The flora of the fixed dune is a link between that of the moving dune and that of the sand ridge and prairie. The oaks are the Black Oak, the Bur Oak and the White Oak; of the sumachs, the Aromatic Sumach and Poison Ivy; of conifers, the Northern Scrub Pine, Red Cedar and Common Juniper ; of heaths, Bearberry and Winter Green; and of grasses, Andropogon and Calamogrostis. Among the old dunes we find undrained sloughs, and in connection with them, the ordinary hydrophytic and prairie flora.

Nothing has been said with regard to the mesophytic flora except as it is modified for prairie conditions. From our point of view the mesophytic is the normal flora, and as such will not present modifications. Whether this is the correct point of view is a debatable question.

A field that offers many attractions is the study of our weeds as they gradually re-possess themselves of land allowed to become waste. Many other ecological questions of great importance, such as the colour problem connected with flowers, veins, bud scales, spring leaves and autumn leaves, still await scientific observers. Such a paper as this can merely suggest a few points of attack.

The literature of the subject is not yet largely available. We have :-

Kerner, in English, but not altogether reliable.
Pound \& Clements' Phytogeography of Nebraska-useful, but local.

Warming, in Danish and German, interesting and reliable in the fields covered.

Schimper, in German, a very recent work, and said to be most excellent.

The Armour Institute,
W. T. McClement.

## THE PROPHET JEREMIAH.

## THE MAN.

THE book of Jeremiah presents a sharp contrast to an orderly systematic treatise such as we find in the writings of the prophet Ezekiel, or the studied climaxes and brilliant aloofness of the book of Amos. Jeremiah's prophecies have come down to us in great confusion, and with numberless repetitions. They bear the marks of many hands. The outward form of the book unintentionally reflects the long and stormy career, the unwearying devotion to duty, and all the chequered experiences of the prophet, whose ministry extended over forty years. When you have read his book through, and re-read it, with an historical clue to the many different situations which it presupposes, what remains with you is certainly not the plain and unpretentious style of the prophet,* not the convulsive history of his times, not the obstinacy of the infatuated citizens of Jerusalem, not even by

[^1]themselves the revolutionary and sublimely spiritual doctrines of the book,-not any of these, but the man himself, and the human interest which he possesses for us. That remains. He was the lover of his kind, and that is where his book grips us. His personality looks up from every page of his prophecies. He camot be hid. In the old story we read that when Joseph was about to make himself known to his brethren, he conld not refrain himself. He wept aloud, and said, "Come near unto me I pray you." No more could Jeremiah hold his erring countrymen at a distance, and pound them with the flail of doom, like Amos, the sternly ethical preacher of righteonsness, but still the "man without a country." Neither had he the royal carriage, the majestic style, the dominating spinit of Isaiah of Jerusalem. Although he was Isaiah's successor, he wats cast in an entirely different mould. He was a man of feeling and action, and his affinity must be sought in the thoughtul, emotional Hosea, whose influence is plainly perceptible in many passages of Jereaman's prophecies. It has atso been noticed that the historical junctures at which they prophesied were similar. For years llosea felt the sharp sorrow of unanswered appeals to his wayward countrymen, and finally saw Northern Istael carried away on the flood of Assyrian invasion. Jeremiah had a similar heart-breaking experience. For a very much longer period, he pleaded with his people in vain, and finally he was a personal sufferer in the last terrible siege and downfall of Jerusalem. Still Jeremiah's was the harder lot, for when Samaria fell in 722, Hosea could console himself with the knowledge that Jubah was spared, but when Jerusalem was reduced to ashes, and the IIoly People carried into exile, Jeremiah was thrown upon the spiritual and unseen for support. In that dreadful hour when every eathly prop was removed, he sang of merey as well as of judgment, and that constitutes his greatness. Boh prophets had the same predominantly religions temper, and the same "elegiac bent of mind." Both have the same habit of describing apostacy from the strict righteonsuess of Javeh as adultery, and both evidently drank in with their mother's milk the ancient traditions and aspirations of Isracl.

As has been already remaked, Jeremiah takes us into his confidence with the utmost simplicity of tust. He keeps back
nothing-not a word. His personal confessions begin in the opening paragraph of the book. He was born at Anathoth, a little village, about an hour's walk north-east of Jerusalem, and of priestly ancestry. The word of the Lord, announcing his prophetic appointment, came to him in 626 , while he was still a very young man, but instead of finding an eager and immediate response, it filled him with alarm. (i, 4 f.) The problem was not solved in a day. His timidity was not conquered with a rush. There must have been a long and strenuous battle in his soul before he was able to say "Amen, O Lord," as he did a few years later, when it became his duty to proclaim the newly-found Book of the Law through the cities of Judah. (c. xi.) How could his retiring nature live in the glare of public life? Where would he get courage and strength to pluck up kingdoms? How could he steel his heart against those whom he loved, and become a column of iron and a wall of brass against the kings and priests and all the people of his native land? In after years, when he was beset by mocking unbelievers, who said "Where is the word of the L.ord, let it come now," he recalled the hesitation with which he accepted the prophetic office: "As for me, I have not hastened from being a shepherd after thee." (xvii, 16.) It was the beginning of that life-long fierce contention between his own shrinking tender nature and the inspiration of God, which burned in his bones like fire. This is one of the main interests, perhaps the main interest, in Jeremiah's personality. In the end the great debate was concluded, and he went forward to his duty with this high promise of protection ringing in his ears, " And they shall fight against thee, but they shall not prevail against thee; for I am with thee, saith the Lord, to deliver thee." (i, 19.) Reminding one of St. Paul's victorious challenge, "If God be for us, who is against us?"

It will not be possible to follow the young prophet through his strenuous and pathetic career, except in barest outline. We must imagine him taking his stand at the court of the temple, at the city gates on fast days, entering into the royal chamber, and always with some intense call to king and people alike to amend their ways and their doings. In the first year of Jehoiakim's reign he seized the occasion of some sacred day, when the city was crowded with worshippers from the surrounding cities, and
in words of rebuke that burn to this hour and make us moderns search our hearts with trembling, he exposed the sins that went hand in hand with the most unctuous professions of loyalty to Javeh (vii and xxvi.) Jeremiah was an intensely spiritual teacher and pierced to the root of evil in the heart, "I, the Lord, search the heart, I try the reins." (c. xii, (9.) Like Christ, he tore the mask of hypocrisy away without counting the cost. But even when he had to whip the abominable vices of the professedly religious with the lash of his wath, and to announce that the temple would be made like Shiloh, and city a byword to all the nations of the earth, and the fate of Eplraim would become the fate of Judah; even then he was not utterly without hope that the disaster might be averted. (c. xxvi, 3.) He spoke his message, but instead of starting a tide of repentant feeling, it was a challenge to their most sectarian and murderous passions. He had spoken a terrible word that day. It was not merely the scalding reproofs that made the religious people wither. They might have stood that. But it was the word of heresy which goaded them to fury. That class hatred for one who himself steps ont of the ranks and rebukes its dead formulas, or denounces its sins by the light of a larger vision, was instantly aroused in the lying prophets and priests when he warned them that every external institution associated with their religion would be leveled to the ground. The mob followed their lead, and the priests and prophets and all the people laid hold on him, saying "Thou shalt surely die." (xxvi.) It was a perilous moment, but the appearance of the soberer secular authority on the scene saved him from violence. He was permitted to speak for himself. At that critical moment there was no cringing, no sophistry, no retraction. He reiterated his words of judgment. He stood there fronting death as calmly as ever St. Panl did in similar circumstances six humdred years afterwards, and said in conclusion, "But as for me, behold, I am in your hand. Do with me as is good and right in your eyes. Only know ye for certain that if ye put me to death ye shall bring innocent blood upon yourselves and upon this city, and upon the inhabitants thereof: for of a truth the J ond hath sent me unto you to speak all these words in your ears." An appeal by some of the moderate party to the precedent of Micah, who had uttered
similar prophecies in Hezekiah's reign and was not put to death, saved Jeremiah. This is only one incident out of many in his tumultuous career which serves to show the faithfulness and fortitude of a weak, gentle, shrinking man in the most trying circumstances in which a human being is placed-when he is on trial for his life. One is struck with the calm identification of his doctrine and life with the purpose of God. "He conceives his own personality as absorbed in God." At this juncture the prophet evidently had friends who rallied to his support, but as the edge of his message became keener, and finally lost every glint of hope, many of them forsook him and took sides with the passionate king, who was now drawing down ruin on their heads. During the reign of the spineless Zedekiah Jeremiah appears on the scene almost alone, breaking every hope of a quick return of the first captives, in perpetual struggle with the professional prophets whose personal immorality, visionless hearts, cant and shallow optimism Hattered the self-complacency of the people and fed their basest passions. (xxiii, xxviii, xxix.) He entered neither the house of feasting, nor the house of mourning. He formed no domestic ties. "His stern and cheerless life of isolation must express the burden of his message and figure the doom of his people." The companious of his youth at Anathoth conspired against him. Other plots were set on foot in the city. His own relatives gave their voices against him, and when the last darkness settled down on the devoted city which he loved, he was seized as a deserter, branded as a traitor, and finally thrown into a miry cistern to starve. It has been said of him by Stanley that he was through all this the "one grand, immovable figure which alone redeems the miserable downfall of his countrymen from triviality and shame." Israel seemed to be narrowed to himself.
"Among the faithless, faithful only he;
Among innumeralle false, ummoved,
Unshaken, unseduced, unterrified,
His lovalty he kept, his love, his zeal;
Nor number nor example with him wrought
To swerve from truth, or change his constant mind, Though single."
One thing more. As already hinted, no estimate of Jeremiah's character would be complete which failed to draw attention
to his patriotism as well as to his religion. These two expressions of life were never far separated in the Hebrew conscionsness, and in Jeremiah they ran together in the current of his thought. As we have seen, his was a very introspective nature. He looked into his own breast, and analyzed his motives. He knew better than any other prophet before him, how God can single out the individual heart, and speak peace and hope to it apart altogether from its citizenship, or priesthood. He knew that he bore his own burden, and stood alone before God, no matter what reckless path the fated nation may pursue, the nation that despised and rejected him, and made him its laughing stock. What was the temptation of Jeremiah under these circumstances: What would be your temptation and mine? Would it not be " Leet these accursed people go. I have done my duty towards them. I will leave them and save my own soul out of the wreck." The prophet tells us that he felt that temptation, and felt it strongly. "Oh that I had in the widerness a lodging place of wayfaring men, that I might leave my people and go from them, for they be all adulterers, an assembly of treacherous men" (ix, 2). But you know by the way Jeremiah lingers over the personal pronom, that he will never desert them. Why not? Becanse they are "my people." That man will go through the last extremities for the sake of his people, and it may be will die under their blows on the hated soil of ligypt, but he will never give them up.

By a grim irony Jeremiah was compelled to oppose the narrow forms of patriotism which were rampant in his day. He had to oppose even the stationary disciples of the great I saiah, who regardless of changed conditions reiterated his watchword that Zion was inviolable. The temporary form of Isaiah's faith hardened into a permanent creed under the hands of his purblind followers. Jeremiah was consequently denounced as a traitor. To all proposals for revodutions, and new alliances with Eigyt, he had only one word to utter-fidelity to the oath of allegiance to Babylon (xxvii: If, 12). But if any one wishes to know what the prophet's patriotism really meant to him, he most read c. xiv and $x y$ of his book. His bursts of despondency, and even his passionate invocations of vengeance upon his enemies need no explanation. They lay bare the prophet's torn heart. What sympathy he had even for the lowest classes in Jerusalem is shown
by the fact that when he could not find righteousness amongst them, he sought to excuse them, and said, "Surely they are poor! they are foolish; for they know not the way of the Lord, nor the judgment of their God. I will get me unto the great men, for they know the way of the Lord and the judgment of their God" (v:4). In these two chapters (xiv and xv) his love for his erring countrymen is inexpressibly touching. Like the agony of watching a beloved one flung up on the beach for a brief moment, and then sucked back by the retreating waves, and carried far out to sea, such was the agony of the prophet, as the possibility of national rescue faded from his mind. Stanley and Cheyne have both qucted in this connection the appropriate lines of Keble.

> " He had to steel his melting heart, To act the martyr's sternest part; To watch with firm, unshrinking eye, His darling visions as they die."

But it is very hard for Jeremiah to reconcile his heart with the destiny of his country. He feels the solidarity of his people. He is one with them. He cannot abandon them. He presses his intercession for his people upon the Lord, and is refused. He seeks to palliate their sins. He gives voice to their repentance. Again and again he steps forward in their behalf, and "holds his fellow countrymen lovingly in his heart, and endeavors to arrest the arm of God already uplifted to deal on them the destructive blow."* One fears that the human spirit will break under the strain of intercession, but to his final appeal the stern answer is, "though Moses and Samuel stood before me, yet my mind could not be turned toward this people. Cast them out of my sight and let them go forth."

Jeremiah has been called by some the "citizen" prophet. It is surely an appropriate title to give him, and a far more comprehensive interpretation of his life than the petty description of him as the "weeping" prophet. If we all had Jeremiah's style of citizenship, if we all labored and prayed in his spirit for the common good, we would need no theological crutch like premillenarianism to support our sinking faith, and no economic panacea like single-tax to redeem our own nation, and cleanse the world from sin, for love would be all, and in all.
*Cornill: Probhets of Israch.

Outwardly, of course the prophet's life was a failure-the greatest failure in Hebrew prophecy. But if there is any value in fidelity to duty, in self sacrifice, in the contribution to the world of inspirations and ideas which enrich the race, and by which men live and die with greater hope, then Jeremiah's main account is one of the largest known to human history. We may say, if we will, that it should have been different, but that is to forget the doctrine of Jesus, that life is more than meat or raiment. Its highest value lies not in its external accretions, but in itself. The loftiest spirits both in the field of action, and in that of thought, have been guided by the essentially spiritual character of human life, and have known that it was not loss, to love whatsoever things are pure and holy and divine, even unto death. "King Lear" closes with the pathetic scene of Cordelia's death, but her love has dared everything, and has redeemed the king from his boundless imperiousness. His heart was no longer haughty, nor his eyes lofty; his soul was stilled and quieted like a weaned child with his mother. Jeremiah had his compensation. God himself became his comforter. He wiped away his tears. Even as he sat amidst the ruins of his beloved city, when all about him was famine, bloodshed, and unnatural cruclty, the shouts of the besiegers and the thunder of their battering rams against the walls, the shrieks of the dying, fanaticism, all the horrors of war, and all the certainty of destruction and captivityin the midst of it all he looked up into heaven, and he saw the face of the divine lit up with a glorious purpose for the future of his people Israel. Down the long vista of years he peered, and, Oh, the sight that met his eyes, the sounds that fell upon his ear! The appalling misery, the $\sin$ of his people and the roar of the siege were forgotten; the tumult and the shouting died, and in their place he saw waving ficlds of grain, saw men buying land again in Judah and Jerusalem; heard the voice of the bridegroom and the voice of the bride, the song of thanksgiving and the peal of the maiden's laughter. He saw a chastened, redeemed and forgiven people, and above the wreck and fierce despair of the siege, he heard the gracious words of the Lord. "Behold I will gather them out of all the countries whither 1 have driven them in mine anger, and in my fury, and in great wrath; and I will bring them again anto this place, and I will cause them to dwell
safely ; and they shall be my people, and I will be their God : and I will give them one heart and one way that they may fear me forever for the good of them, and of their children after them, ...yea I will rejoice over them to do them good" (xxxii : 37-44). The prophet's reward was not an earthly one, but it was spiritual and real. He rejoiced in the presence of God as manifested in the history of his race. He was sure that the Lord was watching over Israel still to build and to plant. Nay more, he knew that the nations would come from the ends of the earth to worship Javeh; that not only was there hope for Israel, but the whole world was compassed about with songs of deliverance ( $\mathrm{xvi}, \mathrm{I} 9$ ). That was the faith which preserved him from cynicism and despair, and brought peace to his heart through the long days of his suffering career.

John Millar.

## "THE BEST SEA STORY EVER WRITTEN."

ANYONE who undertakes to reverse some judgment in history or criticis:m, or to set the public right regarding some neglected man or work, becomes at once an object of suspicion. Nine times out of ten he is called a literary snob for his pains, or a prig who presumes to teach his betters, or a "phrase-monger," or a "young Osric," or something equally soul-subduing. Besides, the burden of proof lies heavy upon him. He preaches to a sleeping congregation. The good public has returned its verdict upon the case, and is slow to review the evidence in favour of the accused, or, having done so, to confess itself in the wrong. Still, difficult as the work of rehabilitation always is, there are cheering instances of its complete success; notably, the rescue of the Elizabethan dramatists by Lamb and Hazlitt and Leigh Hunt. Nor in such a matter is the will always free. As Heine says, ideas take possession of us and force us into the arena, there to fight for them. There is also the possibility of triumph
to stecl the raw recruit against all dangers. Though the world at large may not care, the judicious few may be glad of new light, and may feel satisfaction in seeing even tardy justice meted out to real merit. In my poor opinion much less than justice has been done to an American writer, whose achicvement is so considerable that it is hard to account for the neglect into which he has fallen.

This writer is Herman Melville, who died in New York in the autumn of 189 r , aged eighty-three. That his death excited little attention is in consonance with the popular apathy towards him and his work. The civil war marks a dividing line in his literary production as well as in his life. His best work belongs to the ante-bellum days, and is cut off in taste and sympathy from the distinctive literary fashions of the present time. To find how complete neglect is, one has only to put guestion to the most cultivated and patriotic Americans north or sonth, cast or west, even professed specialists in the nativist literature, and it will be long before the Melville enthusiast meets either sympathy or understanding. The present writer made his first acguaintance with Moby Dick in the dim, dusty Mechanics Institute Libary (opened once a week by the old doctor) of an obsente Canadian village, nearly twenty years ago; and since that time he has seen only one copy of the book exposed for sale, and met only one person (and that not an American) who had read it. Though Kingsley has a good word for Melville, the only place where real appreciation of him is to be found of recent years is in one of Mr. Clark Russell's dedications. There occurs the phrase which gives this paper its title. Whoever takes the trouble to read this unigue and original book will concede that Mr. Russell knows whereof he affirms.

Melville is a man of one book, and this fact accounts possibly for much of his unpopularity. The marked inferiorty of his work after the war, as well as changes in literary fashion, would drag the rest down with it. Nor are lis earliest works, embodying personal experience like Rodhum and Whitc facket, quite worthy of the pen which wrote Moly Dick. Omon and Typec are little more than sketches, legitimately idealized, of his own adventures in the Marquesas. They are notable works in that they are the first to reveal to civilized people the charm of life in the
islands of the Pacific, the charm which is so potent in Vailima Letters and The Beach of Falesì. Again, the boundless archipelagos of Oceanica furnish the scenes of Mardi, his curious political satire. This contains a prophecy of the war, and a fine example of obsolete oratory in the speech of the great chief Alanno from Hio-Hio. The prologue in a whale-ship and the voyage in an open boat are, perhaps, the most interesting parts. None of his books are without distinct and peculiar excellences, but nearly all have some fatal fault. Melville's seems a case of arrested literary development. The power and promise of power in his best work are almost unbounded; but he either did not care to follow them up or he had worked out all his rifts of ore. The last years of his life he spent as a recluse.

His life fitted him to write his one book. The representative of a good old Scottish name, his portrait shows distinctively Scottish traits. The head is the sort that goes naturally with a tall, powerful figure. The forehead is broad and square; the hair is abundant; the full beard masks the mouth and chin ; the general aspect is of great but disciplined strength. The eyes are level and determined; they have speculation in them. Nor does his work belie his blood. It shows the natural bent of the Scot towards metaphysics; and this thoughtfulness is one pervading quality of Melville's books. In the second place, his family had been so long established in the country (his grandfather was a member of the "Boston tea-party") that he secured the benefits of education and inherited culture : and this enlightenment was indispensable in enabling him to perceive the literary "values" of the strange men, strange scenes and strange events amongst which he was thrown. And then, he had the love of adventure which drove him forth to gather his material at the ends of the earth. He made two voyages; first as a green hand of eighteen in one of the old clipper packets to Liverpool and back; and next, as a young man of twenty-three, in a whaler. The latter was sufficiently adventurous. Wearying of sea-life, he deserted on one of the Marquesas Islands, and came near being killed and eaten by cannibal natives who kept him prisoner for four months. At last he escaped, and worked his way home on a U.S. man-o'war. This adventure lasted four years and he went no more to sea.

After his marriage, he lived at Pittsfield for thirteen years, in close intimacy with Hawthorne, to whom he dedicated his chief work. My copy shows that it was written as early as 1851 , but the title page is dated exactly twenty years later. It shows as its three chief elements this Scottish thoughtfulness, the love of literature and the love of adventure.

When Mr. Clark Russell singles out Moby Dick for such high praise as he bestows upon it, we think at once of other seastories, -his own, Marryatt's, Smollet's perhaps, and such books as Dana's Two Years before the Mast. But the last is a plain record of fact; in Smollet's tales, sea-life is only part of one great round of adventure ; in Mr. Russell's mercantile marine, there is generally the romantic interest of the way of a man with a maid; and in Marryatt's the rise of a naval officer througl various ranks plus a love-story or plenty of fun, fighting and prizemoney. From all these advantages Melville not only cuts himself off, but seems to heap all sorts of obstacles in his self appointed path. Great are the prejudices to be overcome; but he triumphs overall. Whalers are commonly regarded as a sort of sea-scavengers. He convinces you that their business is poetic; and that they are finest fellows afloat. He dispenses with a love-story altogether; there is hardly a flutter of a petticoat from chapter first to last. The book is not a record of fact; but of fact idealized, which supplies the frame for a terrible duel to the death between a mad whaling-captain and a miraculous white sperm whale. It is not a love-story but a story of undying hate.

In no other tale is one so completely detached from the land, even from the very suggestion of land. Though Nantucket and New Bedford must be mentioned, only their nautical aspects are touched on; they are but the steps of the saddle-block from which the mariner vaults upon the back of his sea-horse. The strange ship "Pequod" is the theatre of all the strange adventures. For ever off soundings, she shows but as a central speck in a wide circle of blue or stormy sea; and yet a speck crammed full of human passions, the world itself in little. Comparison brings out only more strongly the unique character of the book. Whaling is the most peculiar business done by man upon the deep waters. A war-ship is but a mobile fort or battery; a merchantman is but a floating shop or warehouse : fishing is devoid of any
but the ordinary perils of navigation; but sperm-whaling, according to Melville, is the most exciting and dangerous kind of big game hunting. One part of the author's triumph consists in having made the complicated operations of this strange pursuit perfectly familiar to the reader; and that not in any dull, pedantic fashion, but touched with the imagination, the humor, the fancy, the reflection of a poet. His intimate knowledge of his subject and his intense interest in it make the whaler's life in all its details not only comprehensible but fascinating.

A bare outline of the story, though it cannot suggest its peculiar charm, may arouse a desire to know more about it. The book takes its name from a monstrous, invincible, sperm whale of diabolical strength and malice. In an encounter with this leviathan, Ahab, the captain of a Nantucket whaler, has had his leg torn off. The long illness which ensues drives him mad; and his one thought upon recovery is vengeance upon the creature that has mutilated him. He gets command of the "Pequod," concealing his purpose with the cunning of insanity until the fitting moment comes: then he swears the whole crew into his fatal vendetta. From this point on, the mad captain bears down all opposition, imposes his own iron will upon the ship's company, and affects them with like heat, until they are as one keen. weapon fitted to his hand and to his purpose. In spite of all difficulties, in spite of all sigus and portents and warnings, human and divine, he drives on to certain destruction. Everything conduces to one end, a three day's battle with the monster, which staves and sinks the ship, like the ill-fated "Essex."

For a tale of such length, Moby Dick is undoubtedly well constructed. Possibly the "Town-Ho's Story," interesting as it is, somewhat checks the progress of the plot; but by the time the reader reaches this point, he is infected with the leisurely, trade-wind, whaling atmosphere, and has no desire to proceed faster than at the "Pequod's" own cruising rate. Possibly the book might be shottened by excision, but when one looks over the chapters it is hard to decide which to sacrifice. The interest begins with the quaint words of the opening sentence: "Call me Ishmael"; and never slackens for at least a hundred pages. Ishmael's reasons for going to sea, his sudden friendship with Queequeg, the Fijian harpooncer, Father Mapple's sermon on

Jonah, in the seamen's bethel, Queequeg's rescue of the country bumpkin on the way to Nantucket, Vueequeg's lamadan, the description of the ship " Pequod" and her two ownets, lilijah's warning, getting under way and dropping the pilot, make up an introduction of great variety and picturesqueness. The second part deals with all the particulars of the various operations in whaling from manning the mast-heads and lowering the boats to trying ont the blubber and cleaning up the ship, when all the oil is barrelled. In this part Ahab, who has been invisible in the retirement of his cabin, comes on deck and in various scenes different sides of his vehement, iron-willed, yet pathetic nature, are made intelligible. Here also is much leaminer to be fonnd, and here, if anywhere, the story dawdes. The last part deals with the fatal three days' chase, the death of Ahab, and the escape of the White Whale.

One striking peculiarity of the book is its Americanism-a word which needs definition. The theme and stgle are pecular to this country. Nowhere but in America could such a theme have been treated in such a style. Whaling is peculialy an American industry; and of all whale-men, the Nantucketers were the keenest, the most daring, and the most successful. Now, thourh there are still whalers to be found in the New liedford slips, and interesting as it to clamber about them and hear the unconscious confirmation of all Melville's details from the lips of some old harpooneer or boat-header, the industry is almost extinct. The discovery of petrolemm did for it. Perhaps Melville went to sea for no other purpose than to construct the monument of whaling in this unique book. Not in his subject alone, but in his style is Melville distinctly American. It is large in idea, expansive; it has an Elizabethan force and freshness and swing, and is, perhaps, more rich in figures than any style but Emerson's. It has the picturesqueness of the new world, and, above all, a free-flowing lumour, which is the distinct cathat of American literature. No one would contend that it is a perfect style; some nannerisms become tedous, like the constant moral turn, and the curiously coined adverbs placed before the verb. Occasionally there is more than a hint of bombast, as indeed might be expected; but, upon the whole, it is an extaordinary style, rich, clear, vivid, oricrinal. It shows reading and is full of
thought and allusion ; but its chief charm is its freedom from all scholastic rules and conventions. Melville is a Walt Whitman of prose.

Like Browning he has a dialect of his own. The poet of The Ring and the Book translates the-different emotions and thoughts and possible words of pope, jurist, murderer, victim, into one level uniform Browningese; reduces them to a common denominator, in a way of speaking, and Melville gives us not the actual words of American whalemen, but what they would say under the imagined conditions, translated into one consistent, though various Melvillesque manner of speech. The life he deals with belongs already to the legendary past, and he has us completely at his mercy. He is completely successful in creating his "atmosphere." Granted the conditions, the men and their words, emotions and actions, are all consistent. One powerful scene takes place on the quarter-deck of the " Pequod" one evening, when, all hands mustered aft, the Captain Ahab tells of the White Whale, and offers a doubloon to the first man who "raises" him:
"' Captain Ahab,' said Tashtego, 'that White Whale must be the same that some call Moby Dick.'
' Moby Dick ?' shouted Ahab. 'Do ye know the white whale then, Tash?'
' Does he fan-tail a little curious, sir, before he goes down?' said the Gay-Header, deliberately.
'And has he a curious spout, too,' said Daggoo, 'very bushy, even for a parmacetty, and mighty quick, Captain Ahab?'
'And he have one, two, tree-oh good many iron in him hide, too, Captain,' cried Queequeg, disjointedly, 'all twisktee be-twisk, like him-him-' faltering hard for a word, and screwing his hand round and round as though uncorking a bottle-c' like him-him-'
‘Corkscrew!' cried Ahab, 'aye, Queequeg, the harpoons lie all twisted and wrenched in him; aye, Daggoo, his spout is a big one, like a whole shock of wheat, and white as a pile of our Nantucket wool after the great annual sheep-shearing; aye, Tashtego, and he fan-tails like a split jib in a squall.'

The first mate, Starbuck, asks him, 'it was not Moby Dick that took off thy leg ?'
'Who told thee that ?' cried Ahab; then pausing, 'Ayc, Starbuck; ayc, my hearties all round, it was Moby Dick that dismasted me

Moby Dick that brought me to this dead stump land on now. Aye, aye,' he shouted with a terrific, loud, animal sob, hike that of a heart-striken moose; 'Aye, aye! it was that accursed white whale that razeed me; made a poor pegging lubber of me for ever and a day!'

Starbuck alone attempts to withstand him.
'Vengeance on a dumb brute!' cried Starbuck, 'that simply smote thee from the blindest instinct! Madness; to be enraged with a dumb thing, Captain Ahab, seems blasphemous.'
'Hark ye, yet again,-the little lower layer. All visible objects, man, are but as pasteboard masks. But in each event-in the living act, the undoubted deed-there, some unknown but still reasoning thing puts forth the mouldings of its features from behind the unreasoning mask. If man will strike, strike through the mask!" "

Then follows the wild ceremony of drinking round the cap-stan-head from the harpoon-sockets to confirm Ahab's curse. " Death to Moby Dick. God hunt us all, if we do not hunt Moby Dick to the death!" The intermezzo of the vatious sailors on the forecastle which follows until the squall strikes the ship is one of the most suggestive passages in all the literature of the sea. Under the influence of Ahab's can, the men are dancing on the forecastle. The old Manx sailor says :
"I wonder whether those jolly lads bethink them of what they are dancing over. I'll dance over your grave, I will-that's the bitterest threat of your night-women, that heat head-winds round corners. O, Christ! to think of the green navies and the green-skulled crews."

Where every page, almost every paragraph, has its quaint or telling phrase, or thought, or suggested picture, it is hard to make a selection; and even the choicest morsels give you no idea of the richness of the feast. Melville's humour has been mentioned; it is a constant quantity. Perhaps the statement of his determination after the adventure of the first lowering is as good an example as any :
"Here, then, from three impartial witnesses, I had a deliberate statement of the case. Considering, therefore, that spualls and capsizings in the water, and conseguent bivouacks in the deep, were matters of common occurrence in this kind of life; considering that at the superlatively critical moment of going on to the whale 1 must resign my life into the hands of him who steered the boat oftentimes a fellow who at that very moment is in his impetuousurss upon the point of scuttling the craft with his own frantic stampings :
considering that the particular disaster to our own particular boat was chiefly to be imputed to Starbuck's driving on to his whale, almost in the teeth of a squall, and considering that Starbuck, notwithstanding, was famous for his great heedfulness in the fishery; considering that $I$ belonged to this uncommonly prudent Starbuck's boat; and finally considering in what a devil's chase I was implicated, touching the White Whale : taking all things together, I say, I thought I might as well go below and make a rough draft of my will.
' Queequeg,' said I, 'come along and you shall be my lawyer, executor and legatee.' '"

The humour has the usual tinge of Northern melancholy, and sometimes a touch of Rabelais. The exhortations of Stubb to his boat's crew, on different occasions, or such chapters as "Queen Mab," "The Cassock," "Leg and Arm," "Stubb's Supper," are good examples of his peculiar style.

But, after all, his chief excellence is bringing to the landsman the very salt of the sea breeze, while to one who has long known the ocean, he is as one praising to the lover the chiefest beauties of the Beloved. The magic of the ship and the mystery of the sea are put into words that form pictures for the dullest eyes. The chapter, "The Spirit Spout," contains these two aquarelles of the moonlit sea and the speeding ship side by side :
"It was while gliding through these latter waters that one serene and moonlight night, when all the waves rolled by like scrolls of silver; and by their soft, sulfusing seethings all things made what seemed a silvery silence, not a solitude; on such a silent night a silvery jet was seen far in advance of the white bubbles at the bow. Lit up by the moon it looked celestial; seemed some plumed and glittering god uprising from the sea.

Walking the deck, with quick, side lunging strides, Ahab commanded the t'gallant sails and royals to be set, and every stunsail spread. The best man in the ship must take the helm. Then, with every mast-head manned, the piled-up craft rolled down before the wind. The strange, upheaving, lifting tendency of the taffrail breeze filling the hollows of so many sails made the buoyant, hovering deck to feel like air bencath the feet."

In the chapter called "The Needle," ship and sea and sky are blended in one unforgettable whole :
"Next morning the not-yet-subsided sea rolled in long, slow bitlows of mighty bulk, and striving in the "l'equod's" gurgling track,
pushed her on like giants' palms outspread. The strong, mustaggering breeze abounded so, that sky and air seemed vast outhellying sails; the whole world boomed before the wind. Mutfled in the full morning light, the invisible sum was only known by the spread intensity of his place; where his bayonet rays moved on in stacks. $1: m$. blazonings, as of crowned Babylonian kines and queens, reigned over everything. The sea was a crucible of molten gold, that bub. blingly leaps with light and heat."

It would be hard to find five consecntive sentences any* where containing such pictures and such vivid, pregnant, bold imagery: but this book is made up of such things.

The hero of the book is, after all, not Captain Ahab, but his trimmphant antagonist, the mystic white monster of the sea, and it is only fitting that he should come for a moment at least into the saga. A complete scientific memoir of the Sperm Whale as known to man might be quanted from this book, for Melville has described the creature from his birth to his death, and even burial in the oil casks and the ocean. He has described him living, dead and anatomized. At least one such desciption is in place here. The appearance of the whate on the second day of the fatal chase is by "breaching," and nothing can be clearer than Melville's account of it :
"The triumphant halloo of thirty buckskir huns was heard, as -much nearer to the ship than the place of the imarimary jet, less than a mile ahead-Mohy lick bodily burst into view! For not hy any calm and indolent spoutings; not by the peaceable: whsh of that mystic fountain in his head, did the White Whate now reveal his vicinity; but by the far more wondrous phenomenon of beaching. Rising with his utmost velocity from the furthest depths, the Surm Whate thus booms his entire bulk into the pure element of air, and piling up a mountain of dazoling foam, shows his place to the distance of seven miles and more. In those moments the torn, enraged waves he shakes off seem his manc: in some cases this breaching is his act of defiance.
"There she breaches! there she hreaches!" was the cry, as in his immeasurable bravadoes the White Whate tossed himself satmon-like to heaven. So suddenly seen in the blue plam of the sea, and releved against the still huer matrin of the sky, the spay that he:
 and stood there gradually father and fading away from its first sparkling intensity to the dim mistiness of an advancing shower in a vale."

This book is at once the epic and the encyclopaedia of whaling. It is a monument to the honour of an extinct race of daring seamen ; but it is a monument overgrown with the lichen of neglect. Those who will care to scrape away the moss may be few, but they will have their reward. To the class of gentlemanadventurer, to those who love both books and free life under the wide and open sky, it must always appeal. Melville takes rank with Borrow, and Jefferies, and Thoreau, and Sir Richard Burton; and his place in this brotherhood of notables is not the lowest. Those who feel the salt in their blood that draws them time and again out of the city to the wharves and the ships, almost without their knowledge or their will; those who feel the irresistible lure of the spring, away from the cramped and noisy town, up the long road to the peaceful companionship of the awaking earth and the untainted sky; all those-and they are many-will find in Melville's great book an ever fresh and constant charm.

Dalhousie College, Halifax, N.S.
Archibald Macmechan.

## LIGHTNING RODS.

LIGHTNING being known to be a manifestation of electricity, the protection of objects from its effects became a problem in the application of the laws of electricity. The history of lightning rods might therefore have been expected to resemble, or at least run parallel with the history of other branches of electricity; but such has not been the case. The fact is that Franklin, two years before his famous kite experiment had demonstrated the nature of lightning, devised a method of protection which has been pronounced perfect by experts within the last few years. Franklin's experiment and his interpretation of it deserve description in his own language* :-
"Take a pair of large brass scales, of two or more feet beam, the cords of the scales being silk. Suspend the beam by a thread from the ceiling, so the bottom of the scales may be about a foot from *Condensed from an account sent to I'eter Collinson, July 29, 1750 .
the floor; the scales will move round in a circle by the untwisting of the thread. Set an iron punch on the end upon the floor, in such a place as that the scales may pass over it in making their circle; then electrify one scale. As they move round, you see that sale draw nigher to the floor, and dip more when it comes over the punch; and if that be placed at a proper distance, the scale will snap and discharge its fire into it. But if a needle be placed upon the fluor near the punch, its point upwards, the scale, instead of drawing nigh to the punch and snapping, discharges its fire silently through the point, and rises higher from the punch.

Now if the fire of electricity and that of lightning be the same, these scales may represent electrified clouds. The horizontal motion of the scales over the floor may represent the motion of the clonds over the earth; and the crect iron punch, a hill or high buidding; and then we see how electrified clonds passing over hills or high buildings at too great a height to strike may be attracted lower till within their striking distance. And lastly, if a needle fixed on the punch with its point upright, or even on the floor below the punch will draw the fire from the scale silently at a much greater than the striking distance, and the punch is thereby secured from the stroke; may not the knowledge of this power of points be of use to mankind. in preserving houses, churches, ships, etc., from the stroke of lightning, by directing us to fix on the highest parts of those edifices upright rods of iron, made sharp as a needle, and gilt to prevent rust. ing, and from the foot of those rods a wire down the outside of the building into the ground."

Over the details of this protective system controversies have been numerous. Should the conductor be iron or copper, wire, rod, ribbon or cable? Should it terminate in a point or a ball? (In England points, because favoured by Franklin, were supposed to " savour of republicanism.") How high should the rod rise above the roof of the building it protects and over what area does its protection extend? Some of these questions ate now regarded as unimportant, others are still under discussion, while others again have been completely answered by experience. The answers may be found in the reports of various committees of the French Academy of Sciences, Lightning Rod Conferences and other bodies where minute directions are given regarding the size and construction of each part of the conductor. But regarding the principle of Franklin's method of protection there has been, until very recently, but one opinion-that it is perfect.
"The testimony of electrical engineers who have had large experience with lightning conductors seems almost unanimous that a lightning conductor erected and maintained in accordance with the conditions prescribed by the Lightning Rod Conference gives perfect protection."

This should surely be sufficient answer to the question so often asked : Are lightning rods of any use? For the question is obviously one which cannot be answered by a reference to a few cases. The opinion of men of long experience is that the value of conductors in preventing damage from lightning can scarcely be over-estimated, and this opinion is endorsed by scientists who have made a systematic study of thousands of recorded facts.

A lightning rod protects the object upon which it is erected in two ways. The point by promoting silent discharge relieves the cloud of its charge without the destructive effects of a flash. The quantity of electricity thus drawn from clouds by a point may be very considerable. Beccaria by breaking a conductor leading from one of the seven roofs of the Valentino Palace at Turin and watching the sparks cross the gap estimated that during one thunderstorm that conductor drew from the clouds in an hour enough electricity to kill 360 men. This is of course very indefinite, but it means that he obtained across the spark-gap what to the eye and ear seemed a continuous series of powerful sparks, each of which would have given a painful shock. It cannot be doubted that during that hour the conductors on those seven roofs drew from the clouds enough electricity to prevent many destructive flashes. Numerous observations of the behaviour of thunderclouds before and after passing over villages or castles well equipped with pointed lightning rods strengthen this opinion.

In the second place, if a lightning flash does occur, it is expected to strike the point of the conductor and pass quietly to earth through the metal. This it generally does, so generally indeed that at the meeting of the British Association in 1888, so emincut an authority as Mr. Preece endorsed the statement of the Lightning Rod Conference of 1882 that "there is no authentic case on record where a properly constructed conductor failed to do its work." This statement however is too strong, as carefully constructed conductors sometimes fail. When they do, the
dogmatic assertion that there must have been some undiscovered flaw in their construction is thoroughly unscientific. Unfortunately such assertions have frequently been made. The truism that "lightning always follows the path of least resistance," has been taken to mean that "lightning always follows the path whose resistance to ordinary electric currents is least." The resistance, in this sense, of a stout metal rod rumning down from the top of a building and making good connection with the earth is necessarily less than that of any other path from the top of that building to the ground. Therefore, if lightning strikes the conductor of that building, and, after following it some distance, leaves it to jump through a brick wall and run along some bell wires, or do other damage, it is held that there must have been some fault in the construction of the rod or in its connection with the earth. The earth-connection being out of sight is generally blamed. Now this conception of the action of a conductor is wrong, and this method of accounting for damage to protected buildings has done much to retard scientific knowledge of lightning by fixing attention upon imaginary faults in the rod, or dryness of the ground when the phenomenon was really due to an unsuspected property of lightning. Thus it was not antil Professor Oliver Lodge showed by experiment* the effects of selfinduction upon a discharge passing along a wire in the laboratory that attention was directed to any other property of a lightning conductor than its resistance.

The history of the Washington monument furnishes a good illustration of the occasional failure of lightning to strike the highest point of a conductor. The apex of the pyramidal top of this monument is a block of aluminium, which is connected by large wires to the steel columns of the elevator shaft, which are in turn well connected with the earth. The whole forms an ideal lightning rod 555 feet high. Most of the discharges which orcurred near the monument no doubt struck the aluminium point, and were carried away unnoticed, but one struck the monument several feet from the point and made its way through the stonework to the elevator shaft, doing much damage.

The following quotationt illustrates the failure of lightning to follow a conductor even after it has reached it:-
follow a conductor even alter limhening (imerds to which this articl. is in.
See his Lightning
debted at many points Lighning, Thunder and Lightning Comductors.
+Gerald Molloy:
"In the month of May, 1879, the Church of Laughton-en-le Morthen, in England, though provided with a conductor, was struck by lightning and sustained considerable damage. On examination it was found that the lightning followed the conductor down along the spire as far as the roof; then changing its course, it forced its way through a buttress of massive mason work, dislodging about two cartloads of stones, and leaped over to the leads of the roof, about six feet distant. It now followed the leads until it came to the castiron down-pipes intended to discharge the rain-water, and through these it descended to the earth.'

These are two out of very many such cases, all of which have been held to be explained by saying that there was some defect in the earth connection. But any explanation based upon an assumed defect in the earth connection is insufficient, for in both the cases mentioned and in most of the others, even if the conductor merely touched the surface of the ground, it formed a path of smaller electrical resistance than that chosen by the lightning. It must then be admitted that even the best constructed lightning rods occasionally fail. The lightning may not strike the point, or a part of the discharge may leave the conductor after following it for some distance. Both of these phenomena are capable of scientific explanation.

The effect of a rod cannot extend to a distance many times its own dimensions. It is idle therefore to suppose that in determining the path of a flash a mile long, a rod of a few yards length can exercise a controlling influence. In comparison with the magnitude of the flash the building or tower bears a closer resemblance to the needle-point which receives a spark in the laboratory than the pointed conductor which it carries. More than that, the same causes which so frequently divide a flash in the air must operate in the same way to prevent the whole of a heavy flash from striking the slender point of a conductor. The idea of an " area of protection," i.e. of a certain region round a rod within which it is impossible for lightning to strike, is therefore absolutely wrong. It is, in fact, quite possible for lightning to strike the top and bottom of a rod at the same time.

The object to be sought in protecting a large building is not to erect so large a rod that the lightning will be sure to strike it, but to place conductors over all prominent parts so that wherever
the discharge falls some part of the conductor may be near to receive it. Nothing is to be gained by making the points large and high, the effective height is the height above the ground and a few feet more makes little difference. It is much more desirable that the points be numerous, as the discharging power of a single point is not very great. Hence it has been suggested that a plentiful supply of barbed fence-wire along all the ridges, gables and eaves would make an admirable sky terminal. In repairing the Washington monument after the damage referred to, metal bands with numerous projecting points were placed round the top every few feet and connected at many points with the elevator shaft.

When the flash has reached the conductor it must be carried to the ground with as little disturbance as possible. This does not mean that the conductor must be a very large copper wire or rod as was taken for granted when it was believed that great electrical resistance was the only condition which could cause a flash to leave a conductor after once reaching it. The passage of a sudden current like that of lightning is opposed by something much less easily eliminated than resistance. In fact experiments show that in some cases a side-flash occurs more readily from a stout copper rod than from a thin iron wire whose resistance is many times as great. The same property of electricity, self-induction, which causes a flash to divide while passing through the air tends to prevent the passage of a whole flash through a single conductor. In preventing side-flashes then a large rod has no advantage over a smaller one, and copper is no better than iron. The one effective method is to provide several paths to earth as widely separated as possible. At least let there be one wire down each corner of the building. It need not be very large; provided it is of sufficient size not to be melted by any ordinary flash, durability is the only consideration.

Under the ground no trouble should be spared to terminate the conductor in earth which is always moist. The emphasis which has always been laid on this point is none too great. Where possible several earths should be provided, some near the surface and others at greater depth, all being at some little distance from the foundations of the building.

There is another system of protection against lightning which was suggested by Maxivell. It depends upon the fact that with.
in a metal shell no discharge can take place, and everything is screened from the effect of discharges without. A building encased in sheet-iron would therefore be completely protected against lightning whether the casing was connected to earth or not. Any metal net-work surrounding an object even if not closed, as a bird-gage, affords comparative protection. Wires along the ridges and across the roof of a house, connected with a wire around the eaves and wires down each corner and the middle of each side connecting with one round the foundation, would enclose the house in a metal protector of this kind. But this is nearly the same construction as that required by the other system. The two may therefore be combined by arming the conductor which runs along the ridge with points (barbed wire), doing away with the wire around the foundation, and in its stead prolonging the wires down the corners well into the ground.

There are some cases, however, where not comparative but absolute security is desired, as in powder magazines. There Maxwell's method must be employed in its completeness. The whole building must be encased in sheet iron ; for it is not sutticient that the charge be carried to earth without doing much damage; no part of it can be allowed to enter the building, as the smallest spark there might cause an explosion.

As a rule all considerable masses of metal which enter into the construction of a building should be connected with the lightning conductors at both ends. This applies especially to eave-troughs and water-pipes on the outside of a building; it does not apply to gas-pipes. A most minute spark may set fire to gas at some unsuspected leak, or a gas-bracket may be close to some person's head. It is well to remember that, during the violent electrical disturbance accompanying a flash of lightning, sparks may be given off by pieces of metal not connected with the lightning conductor. Or the flash itself may use other pieces of metal as parts of its path (although the danger of this is slight if a number of paths have been provided for it), and in leaping to them it may do great damage.

It is possible, then, at small cost to protect a building so that the danger of damage by lightning is extremely slight. But theory and observation both condemn the confidence which utters such reckless statements as the following by the Lightning Rod Conference of 1882 : "A man may with perfect impunity clasp a copper rod an inch in diameter, the bottom of which is weil connected with moist earth, while the top of it receives a violent flash of lightning." Until much more is known of lightning than at present the true scientist will prefer to use the much-ridiculed language of Voltaire: "There are some great lords whom one should only approach with extreme precaution; lightning is such a one."
N. R. Carmichael.

## EARLY RECORDS OF ONTARIO.

(Continued from July number.)
Quarter Sessions held at Kingston, by adournment iqth day of Jan's.
tuesday, 13 the day of april, 1790.
Prescnt:-Richard Cartwright, Neil McLean, Arch'd McDonell, Esqs.
wednesday, 14 th april, 1790 .
Charles Justin McCarty appears upon his recognisance taken upon information that he is a vagabond, imposture, and disturber of the peace.

Witness for the pro. sworn, Benj'n Clapp.
For defendant, John Ratton, Wm. Williams, Eman'l Elderbec, Alexr. Laughlan, David Lent, Eliz. VanSickler, Florence Donavan.

The Court having heard the evidence for the prosecution, likewise the evidence for the defendant, will deliberate on the merits of the information against the defendant.

The Court having consulted with the Grand Jury, the Court, with the approbation of the Grand Jury, do order that the said Charles Justin McCarty shall, within the space of one month, leave this district and not return, and that the sheriff of the district shall see this order duly executed.

The King on the prosecution, Conraad Sills vs. Fred'k Peper for feloniously stealing and carrying away a Plongh Shear, Coulter and Bolt of the value of Ten Shill's.

The Grand Jury delivered into Court a True Bill.
The prisoner being called to the bar was charged upon his Indict't: to which Indict't he pleads Not Guilty and puts himself upon God and his Country.

Witness for the prosecution Conraad Sills, John Dingman. For the defendant, -

The Jury retired to consider of their verdict, and having returned into Court, by their Foreman Gilbert Harris say that the defendant is Guilty.

The Court having considered the verdict of the Jury do order that the prisoner shall receive thirty-nine lashes on his bare
back at the public whipping post. Suffer one month's imprisonment, and shall be set in the stocks one day in each week of that month with the label of Thief.

## tuesday, 13 Th day of july, 1790.

Present:-Richard Cartwright, Neil McLean, Arch'd McDonell, Dan'l Wright, Robert Clark, Nich's Hagerman, Stephen Gilbert.

The Grand Jury sworn as per pannel annexed to the precept. Constables sworn for the Town of Kingston for the ensuing year, Rich'd Campbell, Philip Pember.

Henry Bird appeared to answer on the complaint of Katherine Brown, to perform his part towards the maintenance of a Bastard Child by her. The Court having heard the parties, the said Bird does acknowledge the said child and is ready to do what the Court may order. It is ordered that the said Henry Bird shall pay the mother K. Brown the sum of ten shillings per month from the birth until the child shall be twelve months old, and that the said Bird shall give sufficient security for his sure performance of the same.

Charles Justin McCarty having been apprehended and committed by the Sheriff for having returned to this district after having left it, in consequence of an order of the last Court of Quarter Sessions held the $13^{\text {th }}$ day of April last,-The Court do order that the said Charles Justin McCarty shall remain in gaol until the Sheriff shall find a proper conveyance for sending him to Oswego. The court adjourned till to-morrow morning at nine o'clock.

> WEDNESDAY, I4TH JULY.

The Court met pursuant to adjournment.
The Foreman of the Grand Jury informs the Court that Owen Ritcly, one of the Jury, is no longer able to attend from lameness. The Court order that the Grand Jury may be cancelled and a new panel made, leaving out the name of Owen Ritchy-previous to their proceeding to business.

The King on pro-Archibald McDonell, Esq. vs James McTagart and George Finkle, for Misdemeanor in refusing to obey the summons of the said Archibald McDonell Esq., one of the Justices assigned to keep the peace in said district.

The Grand Jury delivered into Court a True Bill.
The defendants being charged upon their Indictment pleaded not guilty, and for their trial hath put themselves on God and their Country.

Witness for pro. sworn,-Arch'd McDonell, Esq., Timothy Thomson, William McGraw.

The Jury retired to consider of their verdict, and having returned into Court, by their Foreman, John Ham, say that the defendants are Not Guilty. The Court having considered the verdict of the Jury do order the defendants to be discharged.
thursday, $\mathrm{I}_{5}$ th july.
Upon the representation of Frederick Cromer of the ill treatment that he has received from John A. Dingman. The Court are unanimously of the opinion, that the said Frederick Cromer can or ought to live with the said Dingman.'
Court of Quarter Sessions held at anobphus Town fyth
Present:--Richard Cartwright, Jun'r, Neil Mclean, Hector McLean, John Walden Myers, Hazelton Spencer, Alexander Chisholm, Bryan Crawford, Alexander Fisher, Nicholas Hagerman, Caleb Gilbert, Samuel Sherwood.

The Commission of the Peace was openly read.
The Sheriff returned the Precept.
The Grand Jury was called and sworn.
Richard Ferguson, foreman, Alex'r Vanalstine, Arch. Chisholm, Mathias Marsh, John Chisholm, Tobias IV. Myers, Paul Trompour, Peter Rattan, Sen., Reuben Beedle, Benj.
${ }^{1}$ Cromer was probably an indentured servant or bound apprentice to Dingman. It was permitted by law to bind out children until they were twenty one years of age.
${ }^{2}$ The records for the years 179 t-2-3 are wanting. During that time the Constitutional Act of 1791 , had come into force, and the first two sessions of the new legislature of Upper Canada had passed. Englishlaw, asted: 32nd Geo, Ill. Cap. 1 . civil as well as criminal matters, had been formalisy $3^{2 n d}$ Geo. III. Cap. 11. However Trial by jury had also been made comply been general in the Western settements. English law and trial by jury had alreaty bed, the District of Mecklemburg becoming The names of the Districts had been changed, VI, the Court of Ourter Sessions the Midland District. L3y 33rd Geo. Ill. Cap. to be held at Adolphus Town on for the Midand District is thenceforth requa at Kingston on the second Tucsday the second Tuesday of January and July, and of April and October.

The first bitl introduced in the first session of the first partiament of Upper Canada, was intended to provide for representative municipal institutions similar to

Clap, Abram Mabee, Paul Huff, John Caniff, Wm. Bell, Wm. Moon, Ruloff Orhim, Michael Haat, I. Howel, Samuel B. Gilbert, Joshua Goldsmith, David McGregor Roger, Owen Richards.

Constables were sworn to attend the Grand Jury.
The Court gave the Grand Jury the charge ${ }^{1}$.
The Court adjourned till to-morrow at ten o'clock.
WEDNESDAY, THE I5 JANUARY, I794.
The magistrates in session assembled agree to the sureties proposed by the Treasurer, a Bond entered into of $£ 300$ with Neil McLean and Hector McLean, Esquires, sureties".

John Croisdell appeared at the.session and entered into recognisance, himself in $£ 40$ and Peter Vanalstine in $£ 40$, that
those in the adjoining United States, by authorizing town meetings for the purpose of appointing various town officers. This system seems to have been already in operation, in several localities, among the Loyalists. The Adolphus Town town meeting record has lately been brought to light and published in an "Appendix to the Report of the Ontario Bureau of Industries 1897 ." Simcoe, however, and his imported Executive Council, being frankly opposed to anything that savored of American democracy, did what they could to discourage any such measure. A counter bill was introduced, authorizing the Justices of the Peace to appoint annually divers public officers. Neither bill matured, however. (See Simcoe's despatches to Dundas, and the Journals of the first session of the Upper Canada Legislature. Canadian Archives, Q. 279.) The following year, r793, a compromise act was passed, 33 rd Geo III. Cap. II. providing for the nomination and appointment of parish and town officers. This merely permitted the ratepayers to elect certain executive town officers, whose duties were either prescribed by the act, or left to be regulated by the Justices in Quarter Sessions. Beyond the permission to fix the height of fences, the town meeting had not legally any legislative function, the town officers were independent of each other and responsible. not to those who elected them, but to the Magistrates. By 34 Geo . III. Cap. VIII. the following year, a slight additional legislative power was given to the town meetings, permitting them to fix the limits of times and seasons for certain animals running at large, but even this power was afterwards curtailed. This act, therefore, while authorizing town meetings, effectively strangled all interest in them except where, as in Adolphus and neighbouring townships, the limitations of the act were to a certain extent disregarded. Hence for years to come the Court of Quarter Sessions remained the only living centre of municipal affairs.
${ }^{1}$ 'The charge to the jury was usually delivered by the Hon. Richard Cartwright, chairman of the Sessions Some portions of these charges have been preserved, and they indicate that, as was necessary in a new Province but lately provided with a constitution, where there were few educatonal facilities, little means of communication and almost no books, the addresses were of a very comprehensive character. Speaking from personal knowledge. Bishop Strachan said of them "His addresses to the grand juriess at the Quarter Sessions will long be remembered for their sound principles, liberal views and tempered dignity.'
${ }^{2}$ I3y 33 rd Geo. III. Cap. III. provision was made for the assessment and levying of District taxes. The funds were to be administered by the Quarter Sessions for local purposes, such as building a court house and goal, building and maintaining bridges, and for the payment of various local officers. Section 25 of this act provided for the appointment of a District treasurer who should give such security as might be approved by the Magistrates. The treasurer was allowed three per cent. of all moneys received.

## EARLY RECORDS OF ONTARIO.

the said John Croisdell shall appear at the $Q$ 'r Sessions in April at Kingston, in the meantime keep the peace, and in particular to Jack his Negro Boy. ${ }^{1}$

Caleb Gilbert and Joshua Goldsmith are each and separately bound in $£$ ro penalty to appear and give evidence on part of our Sovereign Lord the King at April Sessions, to be holden at Kingston.

Solomon Orser prays he may be discharged from his recognisances. Was accordingly discharged by proclamation.

COURT OF gUARTER SESSIONS, HELD AT KINGSTON, STH AIRH., $179+$.
Prescht:-Richard Cartwright, Jr., Neil Mclean, Hector McLean, Hazelton Spencer, Alex'r Chisholm, T. Thomson, Samuel Sherwood, Richard Cartwright, Sen'r, Thomas Markland, Richard Porter, Thomas Dorland, Robert Clarke, William Atkinson.

The Commission of the Peace was openly reas.
The Sheriff returned the Precept.
The Grand Jury were called and sworn.
Wm. Johnson, Foreman; Wm. Crawford, Jas. Parrot, Nicholas Herkimer, Alex. Clarke, Guisbard Sharp, David Embury, Donald McDonell, Isaac Briscoe, Elisha Phillips, Gilbert Harris, Jas. Carscallion, Daniel Fraser, Benjamin Seymour, John Embury, Mathew Clarke, Andrew Embury, Du'l Carr.

Constable sworn to attend the Grand Jury, John Mower.
The Court gave the Grand Jury their charge.
All persons bound on Recognizance were called and continued on their Recognizances.
tuesday afternoon.
On application to the Magistrates in open sessions of Mr. James Russel, of the Town of Kingston, of his having been assessed in two different Townships, the Court do order that the
${ }^{1}$ Quite a number of Negro slaves had been brought into this listrict from the United States. But an act had been passed the previons year, 793 . 3 ard dieo. 111. Cap. VII. to prevent the further importation of slaves. of the slaves then held it provided that their children born the age of twenty five act, should not be retained in involuntary servituposition in the legishature. (See years. This bill. Simcoe says, me
Canadian Archives (). 279 p. $33^{6}$.)
name of Mr. Russel be struck out from the assessment of Fredericksburg, having already paid his assessment in the Town of Kingston, having been assessed for his whole property in the Town of Kingston. ${ }^{1}$

THURSDAY, THE IOTH OF APRIL.
The following persons were named and appointed to serve as constables for the space of one year for the Townships hereafter specified :"

Mr. John McLeod, High Constable.
James Beaman, Samuel Merrill, for the Town of Kingston.
John McLaughlin, Jr., Pittsburgh.
John Yerks, George Harpel, Township of Kingston.
Nathaniel Olger, Thomas Fraser, Earnest Town.
J. Hawley, George Sills, Harman Laraway, John Finkle, Fredericksburg.

Michael Slott, Andrew Hufuel, Adolphus Town.
Samuel Rosebush, Sidney.
John Reid, Thurlow.
Daniel Robertson, John Carnard, Marysburgh.
Caleb Alesworth, Peter Cole, Sophiasburgh.
Henry Bowen, Richmond.
Amos Martin, Amherst Island.
It is ordered by the Magistrates in open sessions assembled that the sum of nine pence shall be paid to the Pound Keeper for every Horse or head of Horned Cattle pounded and the sum of fourpence for every Sheep, Hog or Goat. ${ }^{3}$

It is likewise ordered that the Town shall receive from the owner the sum of one shilling for Registering the marks of any horse or other head of Horned Cattle.

The following arrangement is ordered by the Magistrates assembled in Sessions, that the Magistrates composing the Court

[^2]of Requests will be held in the different Townships as follows, by the hereafter named Magistrates: :

Mr. Markland, Mr. Atkinson, Mr. Cartwright, Senr., for Kingston and Fittsburgh.

Mr. Clarke, Mr. Booth, Mr. Ducinbury, for Ernest Town, Campden and-Amherst Island.

Mr. Spencer, Mr. B. Crawford, Mr. T. Thomson, for Fredericksburgh and Richmond.

Mr. T. Dorland, Mr. Hagerman, Mr. P. Vamalstine, Mr. Fisher, for Adolphus Town and that part of Sophiasburgh comprehended between the Carrying Place and Green Point.

Mr. Myers, Mr. Chisholm, Mr. Caleb Gilbert, Mr. Stephen Gilbert, Mr. Samuel Sherwood, for Ameliasburgh, Sidney and Thurlow.

It is considered by the Magistrates in open Sessions that the Gaoler, John Cannon, shall in future be allowed Ten Pounds per Annum for his salary and that he shall receive Ten Pounds for his past services to be paid out of the Public Stock of the District ${ }^{3}$.

Likewise the sum of Seven Pounds Seventeen Shillings and Threepence to the Town Wardens of Kingston for the support and maintenance of Mr. Wooding, out of the Public Stock of the

## District.

Likewise the sum of Fifteen Pounds to Mr. A. McI.ean for opening the Road to the Gananoque River, out of the P'ublic Stock of the District.

Likewise the sum of Three Pounds and threepence to Mr. A. McLean for his Disbursements, from the Public Stock of the District.

Likewise the sum of Eighteen Pounds Eight Shillings and Ninepence farthing to Mr. Richard Cartwright, Jr., for his Disbursements, out of the Public Stock of the District.

Likewise the sum of Fourteen Pounds Seven Shillings and
1 This is in accordance with 32 nd Geo. Ill. Cap. VI. which provide:i for the establishing of Courts of Requests, for the speedy recovery of small delits. The Court was to consist of two or more Justices of the Peace, appulled phis was the divisions of the District by the General Court of guarter Sessions. Whis was the beginning of the present Division Court.
a The goaler was appointed by the Sheriff, but his remumeration was lixed by the Guarter Sessions, in accordance with $3^{2 n d}$ Geo. III. Cap. VIll. Sections $t^{4}$ and 17 .

Sixpence be paid to Mr. John Howard, Coroner of the District, out of the Public Stock.

Likewise the sum of Fitteen Pounds to Mr. A. McLean, Clerk of the Peace, being his salary for one year, out of the Public Stock of the District.

The whole amounting to Eighty six pounds six shillings and five pence Halifax Currency, which shall be sufficient authority for the Treasurer to pay the aforesaid sums.

Special sessions-SAturday, the 26th day of april, 1794.
Present:-Richard Cartwright, Jun, Neil McLean, William Atkinson, Thomas Markland, Esqs.

Mr. Burnet, Road Master, to superintend the Road to be opened in the Second Concession and to have under his direction the People residing in the rear of the First Concession as well as those of the Second Concession.

Mr. Ferris, Road Master, to superintend the road in Front, from the Township line to the Bridge over Collins Creek, and to have the assistance of three days labour of the Inhabitants of the Town of Kingston, not to pass the Bridge of Cataroque Creek.

Mr. Brass, Road Master, to superintend the road from King's Mills to join Mr. Ferris at the Township Line and to work the Road from the Town to the Second Concession.

Mr. Brewer, Road Master, to superintend the Road from the Third Concession to the New Township and from Capt'n Atkinson's farm to Powlys and from thence to join Mr. Ferris's Road towards Collins' Bridge and from Powlys house to the limits of the Township ${ }^{1}$.

SPECIAL SESSIONS-SATURDAY, THE 3RD MAY, 1794.
Present:-Richard Cartwright, Jun., Neil McLean, Hector McLean, Thomas Markland.

It is ordered that the Assize of Bread for the four pound

[^3]white loaf of Wheaten Flour marked with the initials of the Baker's name, be five pence currency.

QUARTER SESSIONS HELD AT ADOLDHUS TOWN STH JUH, J 7 4 \&
Present:-Neil McLean, Hector McLean, Arch. McDonell, Alex'r Fisher, Nicholas Hagerman, Daniel Wright, T. W. Myers, Caleb Gilbert, Alex. Chishoim, John Peters, Thomas Dorland, Richard Ferguson.

The Commission of the Peace was openly read.
The Sheriff returned the Precept.
The Grand Jury was called and sworn.
Alex. Chisholm, Foreman; Vm. R. Bowen, Ino. Huyck, Cornelius Vanhorn, Arch. Campbell, Solomon Huff, Jno. Dingman, Mat. Hale, Elisha Miller, Hy. Young, Jr., Jno. Richards, B. Dyer, John Stinsen, Sen., Barnabas IVimp, Jas. Wright, Win. Harrison, Robt. Thomson, Peter Collier, Wm. Carson, Giliam Demorel, F. Ferguson, John Allen, John Moon.

Constables swom to attend the Grand Jury-John sills, Peter Cole.
[Unimportant cases tried.]
THE COURT OF gUARTER SESSIONS, HELD AT KINGSTON, ( 1 .
I4, 1794.
Present:-Richard Cartwright, Neil Mclean, Hector Mc. Lean, Richard Ferguson, Richard Cartwright, Senr., Win. Atkinson, Thomas Markland, Richard Porter, Hazelton Spencer. The Commission of the Peace was openly read.
The Sheriff returned the Precept.
The Grand Jury were called and sworn.
Jos. Forsyth, Robt. McCawly, Jacob Miller, Vm. Crawford, Donald McDonell, Peter Grass, Vm. Bell. Peter Detlor, Wm. Smith, Duncan Bell, Geo. Murdoff, Jno. Dennison, Luke Carscallion, Wm. Hunter, Davis Hawley, Francis Prime, Wm. Ramhoch, Abraham Dáfoe, James Colter, Jr., Jno. Sharpe, Joshua Booth.

A petition from Peter Irish and other Inhabitants of the District having been presented to the Grand Jury. The Grand Jury present to the Court that they will take into consideration the Report of the said Petition.

The magistrates in sessions assembled will give directions to the magistrates in the different Townships.
[Four cases of assault and battery.]
COURT OF QUARTER SESSIONS HELD AT ADOLPHUS TOWN TUESDAY, I3TH JAN., I795.
[Nothing of importance.]
special sessions holden at kingston, 7 th February, 1795.
Neil McLean, Wm. Atkinson, Thomas Markland.
Aron Brewer's division to commence at the west extremity of the Township in the third concession, and to continue down the forty-foot road to the second concession; also to open a road from the forty foot road to Arthur Orser's in the third concession.

Nicholas Whitesell's division to be the forty-foot road from the third concession to the fourth, the fourth concession line as far as he may find it necessary for the inhabitants settled there, and also the road from the fourth concession to join the mill road from Kingston.

David Brass's Division to comprehend all that part of the Town from the north side of the Market Square and the forty foot road to the Kingston Mills, also the road from the Town to the second concession.

Thomas Smith's Division to commence at the west end of the Township in the second concession and continue down to the creek. The forty foot road from the second concession to the third at Buck's.

Micajah Purdy's Division from the west end of the Township to the Cataraqui Creek in the front concession, all the forty foot road between lots No. 9 \& io from the first concession to the third.

John Roushorn's Division from the Cataraqui Creek to the east end of the Township in the second concession, and from the Cataraqui Creek to the North side of the Market Square in the first concession, and the forty foot road between No. 17 and 18 from the first concession to the second.

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COURT OF gUARTER SESSIONS, HEld AT KINGSTON, IATH
    APRIL, I795.
Present :-Richard Cartwright, Neil McLean, Robert Clarke,
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Wm. Atkinson, Timothy Thomson, John Dusenbury, Thomas Markland.

The Grand Jury called and sworn.
Wm. Johnson, Foreman; And. Thomson, Alex. Clarke, John Carscallion, Benj. Seymour, Jas. Richardson, Mat. Clarke, Dan'l Carr, Jno. Sharpe, Jeptha Hawley, Jonathan Miller, Nicholas Harkimer, Dan'l Fraser, Jos. Blunt, Wm. Fairfield, Jacob Ferguson, Sheldon Hawley, Jno. Williams, David Embury, Jno. Embury, Hy. Finkle.
wednesday, the 15 th april. 1795.
The following persons are appointed Constables for the Midland District for the year ensuing, to serve until the end of the sessions in April, 1796.

Township of Kingston, Barnabas Day, Jno. Ferris.
Town of Kingston, Emmerson Busby, Titus Fitch.
Township of Pittsburg, Jno. Grant.
Township of Ernest Town \& Amherst Island, Nath'l Alger, David Shory, Alex. McMullen.

Fredericksburgh, Sol'n Bush, Alphus Cadman, Jonas Vanalstine.

Adolphus Town, James Huff, Jonas Smith.
County of Hastings, Sam'l Rosebush.
Township of Richmond, Adam Segar.
Sophiasburgh, Peter Cole, Stephen Conger.
James Robertson, Cooper, of Kingston is nominated by the Magistrates in sessions to stamp measures'.

It is ordered by the Magistrates assembled in Sessions that the Magistrates of the Township of Fredericksburg and the Township of Adolphus be appointed to form a Court of Requests, from there being only two Magistrates in the Township of Fredericksburgh.
Court of guarter sessions, adoliphes town, iqtif july, $1795 \cdot$
Magistrates present: Alex. Fisher, Thomas Dorland, Francis Pruyn, Caleb Gilbert, John Peters, Esqrs.
[Several cases assault and battery.]
${ }^{1}$ The $3^{2 n d}$ Geo. III. Cap. III. establishes the English standards for weights and measures, and the Magistrates in Sessions are required to appoint an inspector who shall stamp the various measures in commercial use.

QUARTER SESSIONS, KINGSTON, I3TH OCTOBER, I795.
Present: Richard Cartwright, Alex'r Fisher, Peter Vanalstine, Wm. Atkinson, Thomas Markland.

It is ordered by the Magistrates assembled in open sessions that the sum of Twenty Eight Pounds be levied from Adolphus Town and the County of Prince Edward for Member's Wages, agreeably to an Act of Province, for the year 1793 for P. Vanalstine, Esq., Member for the said Counties.

It is ordered by the Magistrates assembled in open sessions, that the sum of Twenty Six Pounds be levied by assessment from the County of Prince Edward and Adolphus Town, for Member's Wages, agreeably to an Act of the Province, for the year 1794 for Major Vanalstine for the said counties.

It is ordered by the Magistrates assembled in open Sessions, that the sum of Twenty Six Pounds be levied by assessment from the County of Prince Edward and Adolphus Town for Member's Wages, agreeably to an Act of the Province, for the year 1795 for Major Vanalstine, for the said counties.

It is ordered by the Magistrates assembled in open session, that the sum of Twenty Eight Pounds be levied by assessment from the Counties of Addington and Ontario, for Member's wages, agreeably to an Act of the Legislature, for the year 1793, for J. Booth, Esq., for the said Counties.

It is ordered by the Magistrates in open Sessions assembled, that the sum of Twenty Eight Pounds be levied from the Counties of Lenox, Hastings and Northumberland, for Member's wages, agreeably to an Act of the Province, 1793 for H. Spencer, Esq., for said Counties.

It is ordered by the Magistrates in open Sessions assembled that the sum of Twenty Seven Pounds be levied by assessment from the Counties of Lenox, Hastings and Northumberland for Member's Wages, agreeably to an Act of the Province, for the year 1794, for H. Spencer, Esq., for said counties.

It is ordered by the Magistrates in open Sessions assembled that the sum of Twenty Six Pounds be levied by assessment from the Counties of Lenox Hastings and Northumberland for Members Wages, agrecably to an act of the Province, for the year 1795, for H. Spencer, Esq., for said Counties. ${ }^{1}$
${ }^{1}$ The Provincial act, in accordance with which these assessments were made, was the 33 rd Geo. WII. Cap. HI. Section 30 , which professes to follow in this mat-

## EARLY RECORDS OF ONTARIO.

The Magistrates in open Sessions assembled ainthorize and appoint Richard Cartwright, Wm. Atkinson and Thomas Markland, Esqs., as a Committee to contract for and superintend building a Gaol and Court House agreeably to a plan approved by the Magistrates ${ }^{1}$.

AT A GENERAL QUARTER SESSIONS OF TIIE PEACE FOR THE MIILAND DISTRICT HELD AT ADOLPHUS TOWN ON TUESDAY

THE I2TH DAY OF JANUARY 1796.
Fustices present:-Alex. Fisher, Thomas Dorland, Mryan Crawford, Peter Vanalstine, Esqrs. Grand fury sworn:-Wm. R. Bowen, Alex. Vanalstine, Paulus Trompour, Abrm. Maby, Wm . Carey, Comelius Van Horn, Wm. More, Peter Ruttan, Paulus Huff, Reuben Beedle, Sam'l Gilbert, John Canniff, Benj. Clap, Michael Slote, John Embury, John Huyck, Peter Vallowe.
[One case of assailt \& battery disposed of.]
Ordered that the Court be adjourned to Friday, the athth ot January Instant. Then to meet at Daniel Cole's in Adolphus Town aforesaid.

TUESDAY, 26 TH JAN'Y, 1796.
The Court met pursuant to adjournment.
Present:-Yeter Van Alstine, Alex. Fisher, Nicholas Hagerman, Thos. Dorland, Timothy Thompson, Thomas Markland, Richard Cartwright.

Mr. Markland and Mr. Cartwright, two of the members of the Committee appointed by the Session in October last to contract for and superintend the building of a Court House and Gaol for the District, produced a plan which was approved of. The expense is estimated at from nine hundred to one thousand er the ancient usage of England. Each member was to receive from the Spraker a warrant specifying the number of days during which he had attended the Assombly. On presentation of this, the member might demand from die Magistrates in Sessions, a remuneration at the rate of ten shillings per day. For ail rate on the section Magistrates were authorized to levy, for this purpes pave rise at fist to a gool deal represented by the member. As these special members did not at once apply for of grombling on the part of the people, several members applications for back pay. the allowance authorized, which accounts for
${ }^{1}$ The act 32 nd Geo. Ill. Cap. VIIt. provided for fhe Midland listrict they court house in each district, specifying the guarter Sessions were to obtain and ap were to be in Kingston. The Justices and court house and were to let the contract prove plans for the erection of the grat be borme by the district for their erection. The expense was to be borme by the district.
pounds and the committee are requested to proceed to have the same executed.

As the late Treasurer A. McLean, Esq. hath vacated his office by removing out of the District, it is agreed unanimously that Thomas Markland, Esq. should be appointed Treasurer.

Thomas Markland and Alexander Fisher enter into a joint bond for the said T- Markland's due performance of the office of Treasurer, in the penal sum of five hundred pounds.

$$
\text { MARCH } 26 \mathrm{Th}, 1796 .
$$

## at a special session held by the commissioners of the highways for the county of frontenac.

Present : R. Cartwright, Win. Atkinson, Thos. Markland.
Received the accounts and lists of the tollowing overseers: Aaron Brewer, John Roushorn, Micajah Purdy, Thomas Smith.

Ordered, That Mr. Nicholas Herkimer take the same division and work the same road that were under the direction of Micajah Purdy the last session.

That Hugh Campbell should employ the people of his Division in opening and improving the road from the third to the fourth concession and along the first line of the fourth concession.

That Mr. Jolin Roushorn, Mr. Thomas Smith and Mr. Aaron Brewer employ the inhabitants of their respective Divisions, which are comprised within the same limits as they were last year, in improving the same roads, and that the composition money, ${ }^{1}$ as far as it will go, be applied towards finishing the bridges over the little River of Cataraqui in the second and first concessions.

Adjourned to Saturday, and April.
Prescnt, the same Commissioners.
Received the accounts of Nicholas Whitesil and David Brass.

It is ordered that Mr. David Brass retain the same division and employ the Inhabitants on the same roads as last session.

That Thomas Howland of Pittsburg shall have within his

[^4]
## EARLY RECORDS OF ONTARIO.

division all the Inhabitants from Mr D McDonell's farm incla. sive, to the lower extremity of the said Township, and shall employ them in improving the roads from his own house to the ex. tremity of the Township adjoining the Township of Leeds.

That John Grant shall have within his Division the remainder of the Inhabitants of the said Township and employ them in improving the roads from his own house to $\mathrm{Mr} . \mathrm{T}$. Howland's.

COURT OF QUARTER sEssions held at kingston the i2th
Present:-Rich'd Cartwright, Alex. Fisher, Timothy Thomson, Joshua Booth, Thomas Markland, Wm. Atkinson, Peter VanAlstine, John Embury.

The Commission of the Peace was openly read.
The Sheriff returned the Precept.
The Grand Jury was called and sworn.
Geo. Forsyth, Foreman, Robt McAuley, John Carscallan, Donald McDonell, Peter Smith, Joseph Anderson, Jeptha Hawley, James Robins, Alex. Clarke, Michael Grass, John leveritt, Benj'n Seymour, Henry Finkle, James Parrot, Francis Prime, Sam'l McLay, Jacob Miller, Matthew Clarke.

Titus Fitch \& C. Burley, Constables, were sworn to attend the Grand Jury.

The Court gave the charge to the Grand Jury.
All persons bound on recognizance were called.
It is ordered by the Magistrates in open session that an en. tire rate be continued to be levied for the ensuing year.'

[^5]
## APRIL I3TH, I796.

[One case of petty larceny and two of assault and battery were disposed of.]

$$
\text { APRIL } 14 \mathrm{TH}, 1796 .
$$

John Carscallen and Alex. Clark were bound under recognizance in open sessions, of ten pounds each, to prosecute Wm . Rambach and Peter Detlor at the ensuing Quarter Sessions at Adolphus Town next July.

A Bench Warrant was granted (directed to the sheriff) by the magistrates in open sessions assembled, to apprehend Wm. Rambach and Peter Detlor to answer an Indictment at the ensuing Quarter Sessions of the Peace.
[Various accounts are ordered to be paid.]
The whole amounting to sixty four pounds sixteen shillings and ten pence Halifax currency, which shall be sufficient authority to the Treasurer to pay the above sums out of the public stock of the District.

The following persons were nominated and appointed constables for the term of one year for the Townships hereafter specified.

Mr. John McLeod, High Constable.
Thurlow, Philip Swich.
Adolphus Town, Garrat Benson, Samuel Brook.
Ernest Town, Richard Knight, Robinson Irish.
Amherst Isle, Colin McKenzie.
Marysburgh, James Gerolomy, Robt. Thomson.
Iredericksburgh, John Kemp, Jacob Finkle.
Richmond, Lambert Vanalstine.
Town of Kingston, Wm. Good, Henry Cassidy.
Township of Kingston, John Moss, Michael Diderich.
Sophiasburg, Abraham Cronch, Peter D. Sidney Conger.
Pittsburg, Samuel Howland.

$$
\text { [Jul. } 1796 \text {, adolphus town.] }
$$

It is ordered by the Magistrates in open sessions assembled that the sum of twenty five pounds currency be levied upon the inhabitants of the County of Lenox and part of Pıince Edward County, for Member's wages, agreeable to an act of the Province for the year 1796.

## BOOK REVIEWS.

University Sermons. By Jonn Cairn, D.D., LL.D. . late Principal and Vice-Chancellor of the University of Glasgow. Glasgow: James Machehose $\mathbb{\&}$ Sons. Toronto: Upper Canada Tract Society, 1898.
These noble sermons ought to be in the hands of every preacher. The late Principal Caird was, perhaps, the greatest master of pulpit oratory of our day, and it is of the first importance that all who are engaged in the work of the ministry should try to discover, and as far as possible to master, the secret of his power. No doubt this is only partially practicable. In a sense the preacher, like the poet, "is born, not made "; but it is not the less true that preaching is one of the higher arts, which may be acquired by any one who labours diligently in the mastery of it. It would be too much to expect that every preacher should possess such a combination of qualities as made Dr. Caird's influence a potent and irresistible spell. Not only had he undergone the severest intellectual discipline; not only did he unite imaginative power with intellectual depth and clearness, but he had at command an elocutionary excellence hardly inferior to that of a first-rate actor. It was this extraordinary union of qualities, combined with spiritual enthusiasm, that resulted in such potency and charm as is not likely to be soon exhibited in the same degree. The master's power cannot be attained by the disciple, but the disciple may learn much from the master.

A careful reading of these sermons will to some extent explain the extraordinary effect they invariably produced in the mind of the listener. It will be observed that it is no cheap road to popularity which Principal Caird seeks. Each of these sermons will bear the closest scrutiny, and the solidity of their content will be only the more apparent the more carefully they are studied. No man ever had a greater power of making unfaniliar ideas obvious. Take, for example, the sermon on "livil working through Good." At first sight no topic would seem less likely to be popular, or to be capable of simple and forcible statement ; and yet Dr. Caird has made it glow with the fervour of intellectual and spiritual enthusiasm. Starting, as he often did, from one of the paradoxical sayings in which Scripture abounds"Sin, that it might appear sin, working death in me by that which is good"-the preacher goes on to show that it is the natural expression of a profound spiritual truth. "The revelation of a law of truth and righteousness and goodness, the natural and inherent tendency of which is to awaken the conscience and kindle the spiritual aspirations, to cultivate and perfect the higher life of the soul, may be turned into the means of the deeper moral ruin......Sin, that it may appear $\sin$, that it may
betray to the full extent its disastrous and detached nature, may work death in us by that which is good." For the further working out of this truth we must refer the reader to the weighty words of the preacher.

In another discourse the problem is discussed: "Is Unbelief a Sin?" This perplexing question is here answered in a highly suggestive way. But, indeed, the reader will find in every page of this volume something worthy of his most careful reflexion. The volume, as a whole, may be regarded as a partial and successful attempt to express the essence of Christianity in a form to bring its truth home to those for whom traditional modes of speech have become unmeaning, without employing the abstract language of philosophy, which to the untrained mind is almost unintelligibie. Dr. Caird's conception of the preacher's function seems to be the true one, viz., to mediate between the highest results of speculative thought and the ordinary life, by giving to permanent truths the concrete life and breadth, which are revealed only to those who have the highest spiritual experience and can give an account of what it is.

> John Watson.

The Studio of London (Eng.), for September, has no lack of good things for its readers, whether learned or unlearned in the ways of art. It covers a wide range of subjects interesting in themselves and rendered doubly attractive by the illustrations accompanying each article.

The opening paper on the portrait painting of the American artist, Cecilia Beaux, is of special value to those who are interested in watching the progress of this branch of art in America, where the old conventional traditions of portrait painting have been superseded by the simplicity and directness of the modern school of Sargent and others. The examples of Miss Beaux' work are particularly well chosen and reproduced, and those in the excellent paper on Modern German Lithography are also well worthy of notice, particularly some striking reproductions in colour of the works of Thoma, Kampf and Eitner. Considerable space is given to the National Competition at South Kensington, and here again are very beautiful examples of the work done in so many and so varied branches of Art. The result must, we think be encouraging to those desiring to see the increase of applied art in new directions. It is difficult to believe that the exquisite and artistic productions of the needle here illustrated bear even the remotest connection with the equally striking if less harmonious creations of our grandmothers. The larger part of the competitors appear to be women, who in designing, metal work, and other departments can fully hold their own. The ex-
cellent reproductions from E. Borough Johnson's Sketch Book are especially charming and worthy of notice. The Studio is entirely devoted to the state of modern art, both fine and applied, and the careful and artistic illustrations in every department do much to give the reader an intelligent appreciation of what is being done in the various departments of Art. This is a matter of no small importance to those whose interest in these matters can only be satisfied through the medium of paper and ink.

## CURRENT EVENTS.

## MR. CHAMBERLAIN'S CAREER.

WHEN Mr. Gladstone astonished the people of Great Britain in 1886 by announcing his measure of Home Rule for Ireland as the first and foremost thing on the The Liberal Ruberal programme, it was well known that the bulk of Unlonist Revolt. the Liberal party doubted and disapproved. Even in Scotland, where the name of Gladstone operated like a talisman on the middle and working classes, there was no enthusiasm for the measure. In the higher places of the party there were evident signs of consternation and dismay. Amongst the local leaders throughout the country the recusants were many and amongst the most eminent in point of intellect and influence. But on the whole the working men, the basis of the Liberal party, were inert on the subject, and not inclined to desert their famous leader on a question which did not seem to affect them directly. The power, too, of the party organisation, of the caucus, was great, especially over the average member of Parliament and the small local politician whose position and power depend much more on the resources of the party than on his own. And the party organisation was tied to the great name of Mr. Gladstone. So the Liberal associations after a moment of doubt and hesitation grew consenting, and even, as the battle went on, outwardly fervent on behalf of Home Rule. The associations were successful in keeping the bulk of the party together, and after a little time in whipping in many of the recusants, the most notable cąse being that of Sir George Trevelyan, who had his reward when the turn of the Liberal party came, in the secretaryship for Scotland, but sank irretrievably in public estimation, and finally abandoned the sphere of politics.

The position of the Liberal Unionist member seemed indeed a precarious one. As a rule he could be elected only by the
help of Conservative votes and by reason of an excitement on the subject of Home Rule, which he knew could hardly be maintained at its full heat till another election. He might win for once, but what was to become of him in after years without the backing of either of the two great party organisations, with no patronage to bestow, and small prospect of influence whichever party was in power. You cannot found a party on a negation. It may safely be said that below the exultation which every Liberal Unionist member expressed over his victory at the polls of 1886, there lay a feeling of discouragement and doubt of the future. Nobody comprehended how it could continue to exist as a party, and the Liberal organs freely prophesied its speedy extinction after the excitement of the time had passed ; they reminded its leaders that the British public has the historic reputation of disliking 'caves,' coalitions, and all deviations from the grand party lines, and warned them that they were making a foolish sacrifice of their reputation and prospects.

To lead this forlorn hope, to guide this small party wisely amongst the strong currents and intrigues of party politics, to justify its delicate and ambiguous position in the constant conflict of Conservative and Liberal principles, to keep the Conservative policy on a path in which it was possible for men of professed Liberal opinions to work, to control Conservatives without irritating them, to oppose Liberal statesmen while generally maintaining Liberal principles, and through all this to keep its line of action clear, consistent and intelligible in the eyes of the British public, this was a work which could not have been done except by leaders for whose character and ability their Conservative allies and the country in general had a profound respect.

Yet this is the work which Mr. Chamberlain has performed during all these years with consummate skill and success. In the early stage of the contest the Duke of Devonshire, then Lord Hartington, stood also conspicuously in the front. The calm and candid judgment of that head of the great house of Cavendish is still a power in the country, of a less public and popular kind than Mr. Chamberlain's, but hardly less weighty. No men had such splendid prospects in connection with the Liberal party to sacrifice as these two had. Under Mr. Gladstone always, they were the chiefs of the two great sections of the Liberal party, the Moderates and the Radicals. Had they remained in it, Lord Roseberry would not have won his place so easily, and there would have been no question of Sir William Harcourt or Mr. Campbell- Bannerman for the headship of the party. There could hardly be a clearer case of the sacrifice of great prospects to a sense of duty, or at least of the choice for conscience sake of a hard and almost impracticable road instead of an easy and beaten one. No doubt it is some deep sense of this that has
kept Mr. Chamberlain right with the nation in spite of an obvious change in his political tone, and one grave mistake at least in his management of colonial affairs. Nothing but the respect which the nation gencrally felt for his conduct at a great crisis could have enabled him to maintain himself for so many years in a delicate and ambiguous position, and not only to maintain himself, but markedly to increase his power and reputation. Dear as he was to the Radical heart in his early days, I doubt if he would ever as a Radical leader have touched the imagination of the English people as he did by the pluck and patriotism he showed in the Home Rule contest. At the head of a mamerically insignificant party, his personality and intluence are dominant things to day in the govermment of the Empire.

No doubt in accounting for the stability of this alliance between a powerful Conservative party and the small boty of Liberal Unionists, something must be credited to the grood sense and the magnanimity of the Conservative leaders. Indulgence in small jealousies or rivalries, a narrow view of what their claims and rights were, would have been fatal. But unless he possessed in some eminent derree the respect of the country at large, Mr. Chamberlain in a Conservative ministry would only have been an embarrassment and a source of weakness to that party. Without that public respect, without the certainty that the occasion was highly honourable to both sides, any coalition between the Marguis of Salisbury and Mr. Chamberlain wouldhave fallen as that of Lord North and Fox fell, amidst the jeers and contempt of all parties. For Fox and North were not more opposed by their principles, not more separated from each other by their political history, their past uttenances and the sharpness of their personal conflict, than the leader of the Conservatives and the leader of the Liberal Unionists were. But it was in vain that the Radical newspapers imitated the moral indinnation of Pitt and "forbade the banns" in this " monoly alliance." The English people discerned that, strange as the alliance was, it was founded on honour and probity; they made it victorious at the polls of 1886 and, again, at those of itig5; they are support. ing it to this day. The different fate of the two coalitions is an admirable lesson given by the English mation to its political leaders.

Yet the career of Mr. Chamberlain, like that of most eminent men, seems to owe something to fortane as well servatives, the sympathy of skill as a tactician, all these wonlontry for his position, his own Mr. Chamberlain in his equivocal position unless something in
the nature of a fundamental change in the political atmosphere had taken place, something that made it possible for men of Liberal tendencies to work harmoniously and honestly with men of Conservative tendencies. Two things have made this possible. The first is the rise of the new Conservatism, of which Mr. Balfour perhaps, rather than the Marquis of Salisbury, is the exponent. This type of Conservative sees clearly that a wise conservatism will never oppose itself blindly and impulsively to reform and reconstruction, but that on the contrary the only possible life for conservatism lies in its being ready to assist in every readjustment of the constitution or laws which is really needed to accommodate them to the growth of democratic forces. To distinguish such required adjustment from mere aspirations of the advanced Radicals which are not shared by the people generally has now become its task. And in this task the Liberal Unionist party, representing as it always did the moderate section of the Liberals, can very heartily co-operate. The alliance is natural and workable, and Mr. Chamberlain becomes in the new aspect of politics an educative influence in the councils of the Conservative party, and not a mere element of opposition and difference to which sacrifice must be grudgingly made.

But of recent years another new and even stronger bond of The Policy of union has arisen between the Liberal Unionist and the Imperialism. Conservative. The policy of Imperialism, as it is called, has furnished the alliance of Liberal Unionists and Conservatives with a clear and assured ground for common action. At bottom the Imperialistic instinct is the instinct of a nation to make provision for the expansion of its race. Other instincts, it is true, both higher and lower, may cooperate with this. The instinct, strong in every great nation, to extend its type of civilisation, the moral ideals and discipline which it represents over barbarous and rude communities where nothing valuable to humanity is displaced; to put order instead of disorder-what Kipling has called "taking up the white man's burden," this has its due place in the great movement of Imperial expansion. The instinct to rule, to administer and discipline, the instinct of the old Roman, is but a cruder and at its best unconscious form of this. Lower forms of the instinct are not less active, the desire of the trader to open up new sources of traffic, of the artisan to possess new fields of industry, better chances in life, the greed of the capitalist to secure and control new markets; a variety of commercial interests, in short, legitimate and illegitimate, good, bad and indifferent, combine to swell this movement. No other movement of our times has been so universal and contagious
amongst the nations that feel themselves capable of pursuing it ; for no other movement appeals with equal power alike to the instincts of the statesman, the aristocrat, the financier, the trader and the artisan. Amongst these, no doubt, the instinct of the statesman is the fundamental and commanding one. A modern demorratic empire like that of Great Britain requires to secure a wide field for its expansion, for the energies and ever growing aspirations of its democracy, which would otherwise become restless and a menace to social stability at home. No doubt at times this seems to be nothing else than a movement in which the British statesman and soldier are engaged in securing new and tempting fields of exploitation for the capitalist ; sometimes, I suppose, it is nothing else, and in other cases it may be difficult to separate this from the wider aims of Imperialism. For the statesman must often put forward the lower instinct to serve the higher cause.

The policy of Imperialism thus comes to be a bond of union between many classes who were previously more apt to find difference and opposition than identity in their interests. It is an instinct which has equal sway, as we see, over aristocracies and democracies, over Russia and Germany, over France and the United States. Adopted by the Conservative party as its special policy, it has given that party fresh vitality and a touch with the new democratic masses which of late it has rarely possessed, except when the British lion was in a rampant mood and the big drum beating defiance to Russia or some other traditional foe to British interests. Indeed to the angry Radical, Imperialism seems to be nothing but Jingoism under another name. Well, we do admit some attinity, perhaps even such a connection as exists between a disreputable parent and a well conducted son. For Imperialism is Jingoism reduced to reason, proceeding on a strict basis of economical facts and necessities, aware of the nature of its mission, and therefore able to see what is not included therein.

It is by a curious but still natural process of transformation that Mr. Chamberlain, nursed in the school of Cobden and the Manchester politicians, has become the chief exponent of Imperialism. The change is one which is very general in the class of great manufacturers to which he primatily belongs; and the germ of Imperialism was already evident in his strong opposition to Home Rule. No doubt, had he remained in the Liberal party, a larger share of his energies would have been given to social reforms; but as an ally of the Conservative party he has found a safer and perhaps a more important field of action in colonial affairs.

It is evident indeed that as a social legislator his

His Social Lepislation. popularity, if not his work, is gone. Legislation, like the Workmen's Compensation Bill, may be honest and well designed, but it cannot be carried out by a Conservative Government with the same brilliant effect upon the minds of the working classes as by a Radical government. For one thing it is not heralded in the party organs with fine phrases about the claims of the working men, and hints that it is only a foretaste of what they are to obtain, all that at present it is safe to ask from a nation still imbued with prepossessions in favour of property and capital. It is not and it cannot be loudly proclaimed by its imitators as a great victory over long-standing injustice and prejudice. No trumpets are blown or flags waved over it, either by the Conservative government that introduces it or by the Liberal party that dare not do otherwise than accept it. It is coolly accepted by the working-man as a dole. It excites no enthusiasm in his class, and it excites more or less irritation amongst the mass of employers who support the Unionist government. There is a certain weakness here in Mr. Chamberlain's position. What he said in his famous Hackney speech of 1885 against " the Tories," that " a democratic revolution is not to be accomplished by aristocratic perverts," now applies by the irony of fate to his own position. He may do and indeed has done good work in social legislation; he may even do it in a better spirit, a judicial and impartial spirit, not the exasperated spirit of party strife, but it has no longer quite the same effect upon the masses. With them, at least, his popularity must find some other means of support.

The chief features of Mr. Chamberlain's Imperial policy are the encouragement he has given to Imperial federation, his manner of dealing with the United States on Canadian questions, and his policy in the Transvaal. Some of these things are still dark to the outside public, and some have yet to be judged in their ultimate development. Perhaps even now we may give him at least the credit of a discretion and candour in these matters which have given no handle to the enemies of Great Britain. But the case of the Transvaal Republic is more open to public judgment. There he has had comparatively a free hand, and has decided to bring up for solution a difficulty which has long disturbed the South $\Lambda$ frican portion of our empire. If that difficulty should prove insoluble except by war. he has certainly chosen the time well. Russia has her hands full in China. France is in no position to give trouble, and an understanding has evidently been arrived at with Germany that Great Britain is to settle the Transval difficulty without interference from that quarter.

The question of the South African Boer dates a hundred years back. We owe our South African empire, like many The Tiansvaal other things of that kind, to the war-policy of the he was adding Holland to the map of France, the Dutch colong at the Cape, left masterless, fell into the hands of Great Britain. In ordinary circumstances there is no reason why the Boers should not have continued to live under the agis of the British empire as quietly and in the same independent manner as Frenchmen do in the province of Quebec. No doubt the situation is more trying, the two races being mingled and nearly balanced in the same areas. But, on the other hand, there is no conflict of faiths or churches, no high type of civilisation such as that of France to suffer displacement or diminution: no historic struggle of races, centuries old, to keep the Englishman and the Boer apart in their new home. As a matter of fact the greater number of South African Dutch have settled down quietly under the British empire and live along with their British fellow-citizens in freedom and a fair amount of harmony. What is it, then, that makes a South African question at all? What is it that every now and then disturbs the whole of our South African empire and obstructs its natural growth and consolidation, under the ordinary influences of trade and population? Apparently it is this, that a certain number of the Boers hating civilisation, partly, it may be, for some of the vices which accompany it, but also because civilisation as represented by the British government interfered with their vices, their practice of enslaving the native, their disdain of arts and industries, their nomadic and half savage habits, resolved to escape from it. Hundreds of miles north they trekked, a party of them finally crossing the Vaal in 1836 , dispossessing the natives there, and laying the foundation of the Transvaal or South African republic. It is from these Transvaal Boers, numbering in all about $\$ 5,000$, that all the troubles of South Africa come. Civilisation has again overtaken them. The influx of British settlers threatens to absorb their peculiar type of civilisation and to overthrow their supremacy. They seek to defend themselves by refusing the British settlers political status and rights of representation, and by a social legislation against them which is nothing short of persecution. Nowhere in the world do men of white race live under more unequal and oppressive laws. Although they outnumber the Boers by 2 to I they have no real vote. They are at the mercy of law courts, which are mere agents of the Boer oligarchy. Although they contribute ${ }^{3}$ this of the public revenue, they have nothing to say in the spending of it. Their language - A policy much jeered at by Fox. Jrougham, and the Whigs of those days as a going in search of sugar plantations and cocoa-nuts. instead of tighting Napoleon.
is proscribed in the schools and the law courts. Their industries are harassed by absurd tariffs and monopolies and charges. Politically and legally they are in a condition of serfdom.

The advocates of the Boer cause do not deny these grievan-

Britain's right of interference. ces; they only deny Britain's right to interfere with this small community of autocrats established in the midst of her South African empire. On this subject they make subtle legal arguments, as if the Transvaal were an independent power, like Russia or the United States, instead of being, as it is, a half-civilized state saved probably from extinction at the hands of the Zulus by the intervention of Britain in 1875, and placed clearly in the position of a dependent state even by the Convention of 1884 , a convention made under a promise from the Boers that they would give the British settler just and equitable treatment. They argue as if the matter concerned a state which lay a thousand miles off in the ocean, instead of being planted right in the midst of British South Africa, obstructing the natural growth of the colonies, able at any time to threaten the great commercial routes to the north, and constantly engaged in stirring up every mutinous element in that quarter of the empire. We do not mean to say that these things alone make out a case for the interference of the British government, but we say it is idle to argue as if these things did not exist and were not important facts in Britain's claims. To neglect them is to do as much injustice to the British nation as the maddest Jingo would be ready to do to the Boers. Under whose strong protecting liand has this South African Empire, including the communities of Boers, grown up into prosperity and with all the advantages of internal freedom and self-government? Who saved them from the grasp of Napoleon and the tyranny of that autocratic rule that was felt in St. Domingo? Who protected them when they could not have protected themselves, against all possible hazards, against the bureaucratic tyranny of a French master, or very possibly, nearer our own times, from the autocratic severity of a German one, for a master they would certainly have had. Holland, which since 1796 has been the plaything of Congresses and diplomatists, could hardly have preserved so tempting a possession on what was once the great sea route to the East, and is now the grand basis for South African trade and colonisation. It has fallen to the lot of Great Britain to nurse this once feeble colony into the dimensions of a great state; she has trained and disciplined it, spent British lives and British money freely on its behalf, helped it to put down the native savagery around it, and taught it to do that work as humanely as possible ; she has aided it to plant industries, to open up routes, and develop itself commercially. She has contributed almost all the
capital and energy, and nearly half the population which has made the South African empire. She has carried it safely through all hazards of native warfare and internal dissensions to this hour. In spite of its dangerous mixture of races, nearly balanced in power, it enjoys a substantial tranquility which nothing but British authority, the pax anglicana, could give it.

We should like to know what Mr. Morley would consider a good foundation or origin for a claim of suzerainty in such a case ; or, to speak in plain terms, for a right to interfere in the affairs of the Transvaal. We think we can confidently put the foundation we have stated against that of any other suzerainty or paramountcy, or right of interference, French, German or Russian, which we know of at this day. To deny Great Britain's right to press the claims of British settlers for representation in the Transvaal, and to put an end to a dangerous and unsettling condition of affairs in her South African empire, is to see things under the light of a narrow legalism, which has never contributed anything effectual to solve such questions.

We have not space here to do more than mark the essential points in Mr. Chamberlain's management of this difficult question.

First, he has chosen his time prudently, as we have already explained. Second, he has reduced the demands of the British government to the lowest possible point by the concession that British subjects receiving the franchise in the Transvaal should cease to be under the immediate protection of British law. The Boer and the Outlander are to be left to regulate their own house. Third, after wisely asserting Great Britain's suzerainty or right of interference as a right not to be discussed, he has as wisely refrained from insisting on a formal recognition of it. If the Boers accord a genuine exercise of the franchise to British settlers, the formal question of suzerainty is not likely to be revived. But if the Boers attempt to nullify that concession of the franchise, as they have done in times past by disingenuous restrictions, then the claim of suzerainty or right of interference will naturally reappear as the embodiment of Great Britain's right to see that the future of British South Africa is decided by the free growth of its population, and not compromised by the machinations of the Transvaal Boers with some foreign power.

Unfortunately for the Transvaal Boers, the Transvaal ques-
Really an cconomic, not an international. question.
to defy the industrial democries of Europe failed to do, it brings with it, and to live in a kind of rude aris.
tocracy of the seventeenth century with their subject whites and natives? Is it their rudeness that gives them such peculiar rights in the eyes of Mr. Morley and Mr. Stead ; is it the fact that they are half-civilized and wholly ignorant, and do not call themselves counts and marquises, that entitles them to say to advancing civilisation, "Thus far and no farther ?" Personally I have the same kind of sympathy, though not the same degree of it, with the cause of the Boers, as I have for the decayed prestige and power of the valorous Piedmontese aristocracy, or the gentry of the Scottish Highlands and the patriarchal system of the clans. They, too, with their shepherds and mountaineers, could and would have held their own except for "outside interference" and an "alien" civilisation which broke in upon them. But Mr . Stead would regard the latter as a strange sentimental weakness.

The change which threatens the Transvaal Boers is an economic one, and not one created by the intervention of the soldier or diplomatist. Economic changes of this kind are so evidently irresistible, wherever Western civilisation has established itself, that it is reasonable to think President Kruger's determined opposition has a graver meaning than merely to preserve ten or twenty years longer the rude isolation of the Transvaal Boer. If that were all, the Scotch skippers of 40 years ago, whose little brigs and brigantines used to ply a thriving trade between the Baltic ports and the east coast of Scotland, might as well have taken up arms and posted themselves in the Sound of Elsinore to keep the new steamships that ruined their trade out of Dantzic and Pernau. Their small traffic was inevitably destroyed, and with it their independent status as a class of shipowners; but from another point of view they, or their sons, were merely transformed into smart captains of S.S. with gold lace on their caps, and occasionally R.N.R. after their names, and in some cases even into opulent line owners. So, we hope, will it be with the Boers. There is always, of course, something to regret in such changes, but they are, as Oom Paul must by this time know, the law of the times in which we live.

As to the dangers of an Afrikander revolt and the racial war, with which Mr. Bryden and others threaten us, will

Thurats of ant Atikathet Revolt. Mr . Bryden guarantee us that they will be removed, or even made less, by concession to the Transval State? Will they not rather be increased and made inevitable? If this is the state of the case the Empire is either equal to its responsibilities, or it is not. If it is, 30,000 Dutch Boers, were they even, in Mr. Bryden's figures, 90,000 , need not drive it from its path. But unless the Dutch in Africa form one grand conspiracy to overthrow British authority, we can see no reason for
such a revolt. The British government is not seeking to impose a foreign system or an arbitrary law on the Boers of the Transvaal. It is contending for constitutional principles of representation which are recognized in the whole of the South African empire with the exception of the Boer State. The great principles of modern democracy, the right of self-government, the rights of representation, and of the majority are with her here, and not against her. Is it credible that the Afrikanders of Cape Colony should, as a mass, put their lives and their fortunes to a desperate hazard, in order to oppose democratic principles of government under which they themselves enjoy as a race their political liberty? We are quite aware of the power of racial sentiment, when supported by solid grievances. But when the indulgence of it could not really add an iota to their political and social freedom, or to their security, or to the purity of their administration and laws, when it would rather diminish all these as well as their trade and prosperity, then mere racial sentiment, though it may help to stir up the Transvaal Boers to defend their oligarchy, is not likely to plunge some 30,000 male Afrikanders of Cape Colony into war with a great state.

However it may end, we think that Mr. Chamberlain is to be commended for bringing this grave question before the country, instead of allowing it to slumber and perhaps some day to wake up threateningly at a critical juncture in foreign affairs. It is clearly a case of 'the longer, the worse.' If the absolute rule of the Boer oligarchy is not only an injustice to the British setlers, but also gives a dangerous point of vantage for the intrigues of foreign states, then the blood to be spilt and the risk to be run are certainly less now than they will be hereafter.

That Mr. Chamberlain's manner of handling the affair has been moderate and well calculated to bring the facts of the situation before the country is evident, and may atone for any mistaken indulgence which he may have shown to the illadvised affair of the Jameson raid.

The virulence with which foreign enemies of the British Empire attack Mr. Chamberlain, in preference even to Iord Salisbury, is a significant fact. Like some of our home critics they will even admit merit in Salisbury that they may damn Mr. Chamberlain more judicially. A Russian agent like Mr. Vladimir Holmstrem, writing in fierce hate of England (see

A Russian critic of Mr. Chamberlain. the July number of the North American Novicio', article Ex Oriente Lux, will observe some measure in his language when speaking of I,ord Salisbury or I.ord Curzon, but he loses his temper when he mentions Mr. Chamberlain and breaks out in opprobrious epithets. That gentleman he calls a "renowned conjuror." Mr. Holm.
strem assures Americans that the friendly feeling Mr. Chamberlain freely expressed for them during the late war was a pretence which is not likely to be kept up now that Great Britain has obtained an understanding with Germany; and the probability that England in her desire to prevent German interference in the Transvaal has conceded something to Germany in the Samoan affair is ingeniously used in proof of the writer's view. It is insinuated that Great Britain would have opposed the Americans in their occupation of the Philippines but for "a hostile Europe at their backs."* It is also suggested in the curiously indirect language which characterizes Mr. Holmstrem's statements that Mr. Chamberlain having secured the friendship of Germany, is now pressing the Alaskan question in an unfriendly spirit "against the United States." But the language in which he suggests this would almost defy contradiction, not because it is true; but because it is so vague and elliptical. "Matters (he "writes), have changed since then; the cousins of the Americans " have sought and all but gained the friendship of Germany, and "that renowned conjurer, Mr. Chamberlain, once so enthusi" astic about an Anglo-American alliance, now attempts to swal"low two swords at once: one, Canada, on the Western con"tinent; the other Germany, in Europe. Both are directed " against the United States." As if a friendly conference to put an end to disputes between Canadian and American miners were an act of hostility on Mr. Chamberlain's part! The truth is, that Mr. Chamberlain, has shown the greatest sincerity and steadiness in his American sympathies. Of all the members of the present government he is the most 'American' in his temperament and methods, the quickest to understand the feeling of that great but susceptible democracy, the likeliest to maintain our diplomatic relations with them on the cordial footing which the British nation desires. Lord Salisbury, indeed, permitted
-The style of Mr. Holmstrem is psychologically interesting as a studied expression of deception : the clearest specimen indeed we have ever seen of the natural language of tergiversation. Let our readers consider this sentence : "It is " now universally admitted that the friendship exhibited toward the Americans by "their 'cousins across the water' during the Hispano-American war and the " Philippine difficulties, was due to the fact that the English realized the danger "they would run in defying the great American Republic, with a hostile Europe at "their backs to emphasize their isolation." What is the impression the writer means to leave on the mind of the reader by this sentence? It is that the British would have opposed the occupation of the Philippines except for the existence of a hostile Europe, hostile, inferentially, to such an act; a statement which, of course, conveys a double talsehood. I3ut almost all that the strict logical meaning of the sentence. when carefully examined, amounts to, is that the friendship shown by the English to the Americans during their war with Spain was owing to their sense of their isolated position in Europe ; a statement which it is difficult to deny, far as it is from representing the whole truth.

II mean that he knows when to drop the dignified reserve of the old school and take the people into his confidence, to lift the diplomatic veil and clear his position from misrepresentation. That is the only safe way now.
himself one useless remark about the seriousness of the American advent in the Philippines; but in Mr. Chamberlain's utterances there was never any shadow of doubt, and in this respect he truly represents the mind of the British people in general.

The peculiar contempt, therefore, which the author of Ex Oriente Lurx affects in speaking of Mr. Chamberlain may be taken, in a writer of that stamp, as a pretty accurate though inverted expression of the importance of Mr. Chamberlain's work in promoting a good understanding between the States and the British Empire. Mr. David Mills, our Canadian Minister of Justice, may console himself with a similar reflection when he is accused of "ignorant and uncultured Russophobia" by Mr. Holmstrem. There must have been something in his article exceedingly damaging to that gentleman's views. Yet let us say that we do not mean in all this to confound the character of the Russian nation and its mission in the East with the character of the Russian political agent. To Prince Ookhtomsky (who writes an introduction to the article) and to Mr. Holmstrem the whole thing is simply a professional game. If there are a hundred readers of the North American Review who are likely from their prejudices against creat Britain to believe such assertions, then Prince Oohktomsky will make them, or cause them to be made, as a matter of business. It costs little or nothing, he no doubt thinks, and it will always help. If there were a hundred more who could be made to believe that Mr . Chamberlain was aiming at the subversion of the republican institutions of America and setting up a regal throne in that land of freedom as Joseph the First, with his eldest son as the Prince Royal of Massachusetts and Crand Duke of the Wabash, then we are convinced that Prince Oohktomsky would equally feel it to be his daty to give currency to those assertions.

The latter part of Mr. Holmstrem's article calls in the aid The Light of of a mystical philosophy in which the far East figures the East. as the centre of spiritual enlightenment for the world, khanates and advance on China are a part. We have nothing to say against any reasonable view of Russia's mission in the East ; we wish it all success. But what kind of an audience, we cannot help asking ourselves, does this Russian gentleman think worth while addressing in such language? Ex Oricntc Lux: Light out of the East! Yes, but it has been a light shining but feebly there, in the midst of darkness, and despotism, and the profound debasement of millions bending under the yoke of the taskmaster. Ex Oriente Lux! Yes, but also, as all men know, an unrivalled mendacity! There is a certain type of theosophy-
loving American who is not unsusceptible to the kind of mysticism with which Mr. Holmstrem's article concludes. Perhaps it is meant mainly for the disciples of Madame Blavatsky.

Mr. Holmstrem's article has led me further than I intended. I introduced the subject as an illustration of the manner in which the declared enemies of the British Empire single out Mr. Chamberlain for abuse. Against him particularly the criticism of the Radical partisan, of the doctrinaire, of the Irish member, and of every mutinous element within our widespread empire, and of every hostile element without it is directed with a unanimity which was the honourable distinction of William Pitt in other days, when the struggle was fiercer and the odds far greater against us than they are now.

But with all his abilities what the future of Mr. Chamberlain

Mr. Chambertain's Future. can be is far from clear. Recent events have almost undermined the foundation of the Liberal Unionist party. Mr. Chamberlain's personality is nearly all that holds it together and gives it standing in the eyes of the nation. Home Rule has been excluded from the Liberal programme; a strong section of the Liberal party under Lord Roseberry and Mr. Asquith professes a policy of Imperialism as fervid as his own; Sir William Harcourt, and Mr. Morley, and the Radicals have been put under the curb, to satisfy the moderate Liberal. Where is Mr. Chamberlain to look for his following? Only to a few Liberal constituences where his personal influence and that of the Duke of Devonshire are great, and a few more whose distrust of Mr. Morley and Mr. Labouchere is greater than their dislike of Salisbury and Conservatism. Even as it is now, all the help of the Conservatives cannot make his position a comfortable one. Amongst Conservatives he is like Samson amongst the Philistines, shorn of his strength. His social legislation is inevitably still-born. He has none of the liberties which a great leader can take naturally with his party, without giving offence. He must be always on the watch; he can afford few blunders and no tactical mistakes. He has a host of enemies with a particular grudge against him. Irish Home Rulers who will never forgive that great disappointment of 1886 , Gladstonian Radicals who will always remember, not that he saved his country from great evils, but that he rent his party; and all those besides who either openly or under cover of economic and political theories are foes of the British empire, all these are bitter enemies of the Secretary for the Colonies. Nor is there any shelter for him in the Conservative camp as a Conservative. The English people will pardon a youthful renegade like Mr . Giladstone or Disraeli, but they will have nothing to do with a chief who changes his party colours. They have respected Mr.

Chamberlain's position hitherto, they remember its honourable origin, but a Liberal he must remain, even if it should be a Liberal fighting like Hal o' the Wynd 'for his own hand.'

Mr. Chamberlain is a novus homo, the first of the industrial middle class who ever obtained a commanding position a "novus in Imperial affairs. He was educated for a commercial homo." life, and was nearly forty before he retired from business and entered upon his parliamentary career. When he was elected for Birmingham in 1876, his reputation as a Radical was such that aristocratic members of the House pretended surprise to see him appear in a well cut coat and speak excellent English. This is a period of Mr. Chamberlain's career of which I have not spoken, that early period when he condemned the annexation of the Transvaal, denounced the policy of a "scientific frontier," and delighted to point the contrast between the House of Lords and the American Senate. But we have all learned something since these days. There has been a great reaction against the Manchester criticism of institutions and its Little England policy in external affairs. It is true there is nothing fundamentally inconsistent in his present position with his utterances in those early days. The Conservative party has changed as much at least as he has. That ideal of "the reign of the democracy" which used to figure in his speeches may be his ideal still; but doubtless he has now a wider conception of its meaning and other ideas as to the spirit and manner in which it should be brought about. His early speeches have the tone of a somewhat acrid, exultant Radicalism, confident in its future and seeing no real difficulties anywhere in its programme; there is nothing but a vista of popular successes before him then, with the whole strength of the Liberal party and the favour of the masses at his back; and a vision at the end of it all of Mr. Chamberlain as Prime Minister of Great Britian. But there was a harder road before him than he thought, with a less dazzling prospect at the end; it is highly honourable to him that he did not flinch from entering upon it.

But the political instinct of the British people is on the of courage, or magnanimity, or sincerity, at proper occasions, a suspicion of personal interests rather than party or national ones will ruin him, however clever he may be, for a first place. The imputation of a boodling affair, or a financial 'transaction,' or an unlucky connection with an unsubstantial stock company,
ruins him for any place and for ever, though he has toiled for years with credit, in the service of the country. On the other hand they will reward honesty and courage in a politician even if they do not quite believe in his policy. They listen with great respect to Mr. Morley when he tells them they are a "pirate empire," and ought to be ashamed of themselves; but though they give him an eminent position, they take care not to put the control of foreign affairs into his hands. "Natural hypocrisy!" cries the foreign critic. Well, perhaps it doesn't much matter what he calls it, as long as it acts with admirable prudence in maintaining a certain balance of things, in maintaining a William Pitt in power and supporting a Fox to keep him within limits; in securing for a Wilkes or a Bradlaugh full justice and even a fitting reward, but firmly reserving the control of affairs for another kind of man. It is possible that so discriminating a public may continue to maintain Mr . Chamberlain as a power in the country, and make it worth while for the Conservatives to give him a place in their Cabinets, although his following should be reduced to a baker's dozen. But the position would be unique for our time.

James Cappon.

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[^0]:    *Harnack's Dogmengeschichte: I, 55.

[^1]:    'The prophet's description of the drought in c. 14, is a powerful bit of realism' and the Ode of triumph to Nebuchadnezzar, and the Doom of Babylon in c. 50 and $5 I$ (exilic) show a high degree of literary imagination.

[^2]:    1 This is in accordance with 33 rd Geo. III. Cap. III. Section II which provided for the hearing of assessment appeals by the Magistrates in Quarter Sessions.
    ${ }^{1}$ By 33 rd Geo. III. Cap. II. Section ro, the Justices of the Peace at the April Sessions were to appoint each year a high constable for the District, and a number of constables to serve in each parish, or township.
    ${ }^{3}$ Section ${ }^{1} 3$ of 33 rd Geo, III. Cap. II requires the Magistrates to fix the fees to be taken by the town clerk and the pound keepers.

[^3]:    ${ }^{1}$ This is in accordance with 33 rd Geo. III. Cap. IV. which provides, with great detail, for the laying out, amending and keeping in repair whe public highways and roads in the grovince. The Justices of the Peace in their various divisions, were declared to be commissioners to carry out the reguirements of this act. The overseers, or road masters, were among the officers to be elected at the town meetings, but. as will be seen from this record, the Magistrates entirely prescribed and controlled their duties, under the conditions laid down in the act.

[^4]:    1 Section 13 of the road act allowed those subject to statute labor to compound for it by paying, to the overseer, six shillings per day for each team and driver, or three shillings per day in lieu of personal labor.

[^5]:    By the assessment acts $33^{\text {rd }}$ Geo. III. Cap. III. and $34^{\text {th }}$ (ieo III. Cap. Vi. he inh the assessmeholders of the various parishes or townships were ho be arrang ed by the assessors in ten classes according to the amoum from $/ .500$ to $f 55^{\circ}$ in the property, being from $£ 50$ to $£ 100$ in the first challed the ratc, to be pail by each tenth. The act prescribed a specific amount, and for the tenth $255^{\text {. }}$. There were class, the rate for the first class being 2s. Ga, classes, the former rated at 2 s . only, also a Lower and an Upper List, beyond thesed property. These amounts were to and the latter at 5 s. on every $f$ roo of assessed prop, for the first two years 179495 . constitute a full rate which was fixed by the ach, fere to determine, after making Thenceforth the Magistrates in the April Sessons whoportion of the rate: should be: an estimate of the expenditure for the year, what pron for 179 f. but varying proporlevied. As stated above, the full rate was continuedes were made in the assessmemt tions were aftervards appointed. Numerous clanges were made in thins. act before 18 I 2 .

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