Mr. J.D. Barnes, O. L.S., sent in this article, with the following comment "The other day I came across a paper by James Dickson, P. L.S., which I believe will be of interest to fellow surveyors. I enclose excerpts from this paper, which was taken from the Sixth Annual Meeting of the Association of paper, which was taken from the Sixth Annual Meeting of the
Provincial Land Surveyors, held in Toronto in March, 1891. In studying the report, one cannot help, but feel that an Examiner of Surveys, such as the position now in Land Titles, was and always will be a necessity for examination of plans of survey throughout the Province of Ontario."

The subject upon which I have been requested to write a paper, vis, "Crown Surveys," is a somewhat delicate one for an Inspector of Surveys to take up, as it will be necessary not only to remark on the manner in which such surveys ought to be made, but also to mention a few of the inaccuracies and errors I have met with in the field.

It is not my intention to make this paper a long one, but confine my self to a few examples of how some members of our profession do their work, and then, very briefly, point out the manner in which Crown Surveye ought to be made.

I think you will all agree with me that the firas opject a suryeyo should have in yiew is to keep up the standard of his profession. And no matter whether the commission he may have on hand is great or small, wop matter whether the survey is of tittle or much importance, it should be his ambition to do it as accurately as possible. It should be his ambition to show the public that accuracy is within the compass of possibidity. And leave everything behind him done in such a manner that there could be no room for either doubt or trouble in the future. Were this abject always helf in view there would be no necessity for any goyernment to appoint an inspector of Surveyb.

I believe every person will agree with me that if there is any survey which should be made with perfect accuracy it is that of a new township, for to inaccuracy and ambiguity in original surveys are to be traced the beginning of most of those long and expensive lawsuits touching the ownership of lots and parts of lots which are almost constantiy before our Superior Courts. During my own practice I have been engaged in a good many such cases, and I cannot recall a single instance in which there would have been room for either doubt or dispute had the original survey been correctly made.

Of course it is not to be expected that any surveyor, no matter how careful he may be, or how accurate his instruments, for as much depends on the integrity of his chainmen as on himself, and those he cannot have always under his eye, can cut up a township into 1,000 acre or 640 acre blocks, and have all his lines intersect at the exact spot, but it is expected that every line will run straight from one intersection to another, and that the dimension of the lots and bearing of the lines in the field will be the same as those returned on the plan and field notes.

Perfect accuracy is neither expected nor looked for, but perfect truthfulness is.

Some will say, Oh, the land is so poor there is no use in being too particular. To such I would simply reply, the quality of the land is something they have nothing whatever to do with in making the survey. Their duty is to carry out their instructions; that, and that alone, should be the only object in view. They should not lose sight of the fact that, although in many places the land is utterly worthless for agriculture, the recent discovery of valuable minerals has made it more than ever necessary that the surveys should be accurately made. In some of what seemed the most worthless townships has been found the most valuable nickel and copper mines perhaps in the world; and the surveys of some of the townships where those minerals have been discovered - but which were made before the inauguration of the present system of inspection - have been performed in such a loose manner that I predict, at no distant day, to hear of some of our legal friends reaping a rich harvest.

While discharging the duty of Inspector of Surveys I have been over a good many townships, and it has been my unpleasant duty to report a considerable percentage of bad work. It has been a matter of no small astonishment to me that some surveyors should leave so many errors, both of omission and commission, behind them, when they have been duly warned that their surveys would be inspected after they left the field before their accounts would be closed. While I find the greater part of the work now well done, there are still some who seem to think the Inspector will only go over the lines as a matter of form, and either not see, or wink at, irregularities, or, in other words, that he is either a knave or a fool. Such men should bear in mind the Inspector has a reputation to maintain; that he has been sent out at considerable expense, the Department having confidence in his integrity to report everything exactly as he finds it; that he must be no respecter of persons; that, while it may be in the interest of the contractor to slight
his work, or leave some of his lines not run at all, to the Inspector it makes not the slightest difference whether the work is well or ill done, his pay and thanks are the same.

I shall now give a few apecimens of what I have met with in the field, which were not laid down either in the field notes or in the plan.

1 have found lines run straight to within a short distance of those they were intended to intersect, then suddenly bend either to the right or left, sometimes in the form of a bow, in order to strike the post.

I have found the whole four posts at an intersection made of trees. A man could stand at any one of them, pay out forty links of the chain, and touch the other three. Some posts standing at almost any angle with the line except the correct one, others tossed off the line, not even set up; bearing trees sketched in the notes for every post, whole blocks without a single bearing tree marked in the field, numbers of the lots not even posted; one linerun up to another, end there, and start off on the opposite side at from a few links to several chains to one side, only one of them posted; a post instead of standing at an intersection planted on the concession line as much as two chains from it; in numerous instances, lines only partly run, others not even started; a block, which contained five lots on the plan, with six posted in the field; a side line start at lots 20 and 21 and strike the next concession line, 100 chains distant, at lots 25 and 26 ; lines start from each end of a block, and miss each other at an intermediate point by from a few links to six chains; beautifully proportioned triangles across and offsets around lakes, in the notes, where it was simply impossible to have got any such in the field at all; lines run from other lines on either side of a lake to the water, which, instead of striking at opposite points, would miss each other by as much as seven chains, and the water assumed to contain whatever the two added together lacked of marking the full block; some lots which were returned twenty chains not eight chains, others as much too large. Streams in the field not on the plan, others on the plan but none in the field; and as many as seven streams all crossing the line at right angles in a distance of half a mile, which turned out to be only one small creek. I have found posts made of poplar, with cedar and spruce trees of the proper size standing as near as the tree from which they had been cut. In some cases not a lake traversed in a whole township, their outlets not even shown; in others, while there had been a rough traverse made of the largest, the smaller not even sketched, no attempt whatever made to show either their size of shape.

I have found a whole township of 50,000 acres divided into 100 acre lots, each lot returned exactly twenty chains by fifty, and not three trees the size of a man's thigh cut in the whole township; where one could only follow the lines by keeping his cye constantly fixed on the blazes, and those small, few, and far between, the hands almost constantly occupied in separating the brush in order to force the body through. Need I ask any practical surveyor if such a survey could be even approximately correct? What chainmen could make correct measurements under such circumstances? Am I using too strong language when I say that a man who does his work in this manner is a disgrace to the profession?

In most cases where I have found angles in the lines they were poorly opened, while in others there had been a good deal of work done. In the latter case, I attribute the errors to placing too much dependence on the magnetic needle, and not being sufficiently careful in taking back-sights, especially in thick swamps and going over knolls. In others which have been run by theodolite, to the instrument not being standing solid while crossing soft ground. In every case where the instrument cannot be made solid, posts should be driven into the ground, and the instrument set on them, then the ourveyor can move around it without any danger of throwing it out of line. In still other instances the errors are undoubtedly traceable to unskilled assistants and insufficient instruments. Some men even go so far as to use a small compass without a ball and socket attachment.

I would now briefly point out a few of the most important points to be observed by a surveyor in making a Crown Survey. His instruments should be of the very best to be had, and both them and the chain kept in proper adjustment. If at all possible an astronomical observation should be taken before commencing the survey, and check observations taken as frequently as circumstances will permit during its progress.

He should not hang his work on any other man's, assuming it correct, but should depend entirely on himself. By doing this, each man's work is a check on the other; if they are both correct they must agree, if not, and he knows he has done his correctly, he will then be in a position to not, and he knows he has done his correctly, he will then
by James Dickson, P. L. S., as published in Report of Annual Meeting, Association of Provincial Land Surveyors, Toronto, March, 1891.

## THE EFFECT ONRETRACEMENTS

OF LAND TITLES \& REGISTRY SYSTEMS
by W. Marsh Magwood, Q.C.

The basic difference between the two prevailing systems of land registration, (Land Titles and the Registry System), has given rise over the years to two dissimilar and frequently opposing methods of retracement of boundaries of property.

This variance is disclosed in many instances when an owner desires to bring his land under the Land Titles Act and submits in support of his application a survey or surveys of his property made at some earlier date.

The outstanding differences in the two modes of retracement may be expressed in general terms as follows:-
(a) Under the Registry Act, many surveyors show the fencelines or other lines of occupation as the boundaries without sufficient inveatigation for aur vey monuments, and often without sufficient regard for whether or not title has always accompanied occupation.
(b) Under the Land Titles Act, many surveyors adhere strictly to the measurements and bearings on the register without sufficient investigation for survey monuments and with complete disregard for occupational evidence. Both concepts are entirely erroneous and in fact the differing systems of registration have no bearing or should have no bearing whatsoever on the
duties of a surveyor in retracement work.

Perhaps a brief outline of the Registry and Land Titles systems, and some comment on the Limitations of Titles Act in relation thereto, will serve both in showing how these conceptions came about and why they are erroneous.

The Ontario Registry Act first passed in 1795, orginally provided for the registration of memorials of instruments, not the originals, by means of an alphabetical index. To search title therefore one must have the owner's name. Unfortunately in many areas these indexes were inadequately maintained.

In 1865, therefore, the Ontario Registry system was changed by the introduction of the "abstract index". By this innovation, registration books were opened and kept with a page reserved for the recording of registered instruments affecting each original township lot; or where a plan of subdivision has been registered each lot shown on the plan.. With the introduc tion then of the "abstract index" it is no longer necessary to know the owner's name in order to search title.

The Registry office system therefore, as its name implies, is simply a registry of deeds, and whereas the actual instrument registered is required by the Act to be properly executed legally speaking, there is no requirement

EFFECT ON RETRACEMENTS - Continued
as to the accuracy, standards or even validity of the deacription or plan or both which may be part of that instrument.

The only measure of guarantee available to afoner under the Registry Act, is the personal guarantee of the conveyancer and that ib only. to the extent that would be assessed against him by a cqurt of law. Moreover obtaining judgement is one thing, recovery another,

The advent in 1929 of the Investigation of Tittes Act has the effect of limiting the investigation of title to 40 yearsitn order to pbtain a good gqof of title. Although 40 years barck represents a I Ot of deapching and whereas one need not go beyond that time for a root of title. Fannot fee that this limite in any way the period that a surveyor mast go back in fis search for evidence of the extent or the boundaries of a title. This search, frequently, must go back to the original grant, because the original grant may contain refereaces to evidence of boundaries which taday might still exist on the graurd.

The Land Titles, or Torrens Syatern was deviseg in 1857 ip South Australia, by one Robert Torrens, later longhted for his efforts. Many Commonwealth countries adopted the system shortly thereaftez afd Optazia in 1885.

The three essential principles of this Act may. すe stated as followe; 1. The Mirror Principle. This involves the propositiof that the tegister of title is a mirror which reflecta accurately and completely and beyond 411 argument the current facts that are material co \& man's title.
2. The Curtain Priaciple., Thismeans that the regtstere, is the gole giurce of information for proposed purchasers, who need not, and indeed musk ngh, concern themselves with trugts and equities which He fohind thid curtain of information.
3. The Insurance Principle. Thia means the the mifrot (register) is deemed to give the absolutely correct reflection of titlet, but if though auman frailty (as was brought to light id the Turta case in Albstal a faw appears, anyone who suffers loss must be put in the same pogition, so far as money can do, that he would have been in had the reflectipn been a true one.

There are many advantages accruing under thet eytem, to the owper the surveyor and the lawyer. Those which effect the surveyor particularly, are as follows:-

1. It is a registry of title, not of deeds. Hence the searcher need not search through a long list of documents.
2. The register contains the certified title and the deeds (fransfers) are mere evidence of $i t$.
3. The registers are conclusive as to state of ownership. Thus, (a) it is not necessary for a person searching the title to a parcel of land, to enquire
further than the register for that parcel; (b) a person shown in the parcel register as the registered owner is conclusively the owner of that parcel and he is the only person who may deal with that parcel; (c) no right, title, or interest in or to the land can be acquired by any length of adverse possession in derogation of that of the registered owner.
4. The titles of registered owners are guaranteed and compensation to persons wrongfully deprived of an interest in land may be awarded out of the Assurance Fund. This is one of the main features of the Act.
itern 3 (c) above, nullifying any claims of posseasion which might be made against an owner, has recently been fortified by an amendment to the Act, specifically excluding any application that the Limitation of Titles Act might be said to have had with regard to length of adverse possession,

The fact that no right, title or interest in or to land can be acquired by any length of adverse possession in derogation of that of the registered owner, has led frequently to surveyors ignoring evidence of monuments and accupation on the ground, and caused them to follow exactly the measuremente and bearings on the register. Such procedure of course is contrary to the ancient laws of retracement and leads to the perpetuation of error and all manner of infringements of property rights.

Conversely, in retracements made under the Registry Act, the adheronce of many surveyors to the belief that the Limitations of Titles Act confers a new title every ten years, and that such title is bounded by the existing fence, has led to serious lapses in the duty of a surveyor to search for the original monuments. Then too, once possession is shown (and to do so, the original line must be proven as well as the possessory line), that flome does not confer title on the claimant. He must get title either by transfer or under the Quieting of Titles Act.

What the claimant, if he can show open, notorious and undisturbed possession for ten years or more, does in fact have is a better right to that land than the original owner who may not do anything to disturb the occupation of the man in possession.

This fact of possession may be looked upon as title to land, even though unregistered, but the surveyor should beware, because what may aten be claimed as a good possessory title by an owner, because a fence existed for ten years or more, may turn out on further investigation, not to meet all the lawful requirements of open, notorious, undisturbed possession. In effect whether retracing Registry Office deeds or Land Titles land, the surveyor should allow nothing to deviate him from his duties of
aearching for evidence, and this concept of surveying will be discussed in searching for evidence, and this concept of surveying will be discussed in great detail under the Judic al Function of a Surveyor, which follows later in this series of lectures.

## PROCEEDINGS OF COUNCIL

The following is a summary of the proceedinge of the Council of Management at the April, May and June Meetings.
REGIONAL GROUPS - At the May meeting a committee of Council under the chairmanship of Vice-Predident Hewett was named to prepare a plan for the organization and operation of regional groups. This committee reported at the June meeting. The plan, as prepared, was adopted, in principle, by Council. The Secretary was instructed to refer the matter to the Solicitor Council. The Secretary was instructed to refer the matter to the Solicitor
with a request that he draft a by-law which would incorporate the recommenations of the committee.
TARIFF - At the April meeting the Secretary was authorized to send out a questionnaire to members in private practice asking them if they used Item 2 (c) of the Provincial Tariff, and if not, if they favoured its removal from the tariff schedule. Replies were received from 75 surveyors in private practice. Approximately one half of those replying were in favour of its removal, but most of these qualified their answer by suggesting that a substitute be provided. It was resolved that the matter be left in abeyance until the next general revision of the tariff.
RETRACEMENT SURVEYS - A resolution was passed at the Annual Meeting adopting a recommendation that the Association approach the Government urging increased activity in retracement surveys. A letter addressed to the Minister of Lands and Forests was prepared embodying the ideas adopted at the Annual Meeting. This letter was submitted to the Minister by a delegation representing the Association, composed of our President and Chairman of Council. The matter was discussed with the Minister by our representatives. His reaction was favourable and he promised to make a request to the Treasury Board for funds that would permit a larger programme of retracement surveys.
SUB-COMMITTEE OF SURVEYS - COMMERCIAL LAW SECTION, BAR ASSOCIATION - A meeting attended by five of our members, (each a chaix man of one of committees), and two representatives of the Commercial man of one of our committees), and two representatives of the Commer
Law Section, was held 2nd May. The following topics were discussed: Law Section, was held 2nd May. The following topics were discussed:
Geodetic Surveys, Mortgage Certificates, Legal Descriptions, DisseminaGeodetic Surveys, Mortgage Certificates, Legal Descriptions, Dissemina-
tion of Court Rulings affecting title, Advisability of exchange of information in periodicals, Legal Knowledge for Surveyors and Survey Knowledge for Solicitors, Role of Surveyors in checking title and issuing Survey Plans; Requirement of Plan of Survey prior to Certification of Title, Advisability of Surveyors' Field Notes being made public records, Inspection of Subdivision Plans prior to registration under the Registry Act, This preliminary meeting was of a general and exploratory nature. More detailed dis cussion and action will follow at later meetings.
SALARIED SURVE YORS CQMMITTER - Mr. C, W, Llod, last year's Chairman, is no longer eligible for membership on this committee. Mr. N. W. Robinson has been asked to act as chairman in his stead, Mr. Robinson was unable to accept the appointment, so Mr. W, D. Ratz was asked to accept the office, which he agreed to do.
DESTRUCTION OF SURVEY MONUMENTS - It was decided at the April meeting that Messrs. Currie and McBain should cqnsult mith the Asgociation of Suburban Developers with regard to action that would lessen the destruc. tion of monuments by the construction activities of the public utilities, At the May meeting Mr. McBain reported that Mr. R. A, Smith, chairman of a sub-committee of the Publicity Committee, had been in touch with the Metro Joint Services Commission, which had expressed a willingness to support efforts to reduce the destruction of survey montments.
APPRENTICESHIP - The resolutions adopted at the Annual Meeting favour ing (a) restricting the number of students that could be apprenticed to one ing (a) restricting the number of students that could be apprenticed to one
surveyor, (b) requiring that a surveyor should have a certain number of years experience before being permitted to article of student, fand (c) giving the Board of Examiners greater authority over the apprenticew, were passed to the Solicitor for his opinion as to how they could be implemented. His :
opinion was that this would have to be done by amendments to the Land Sur veyors Act. The chairmen of the committees on Education and Legislation were so advised.
REPORT OF DISCIPLINE COMMITTEE - The Discipline Committee had been directed to investigate a complaint against a practising surveyor. The Committee presented its report to Council at its June meeting. The Committee found that the surveyor had been guilty of acts of misconduct. The Council accepted the report of the Discipline Committee and directed that the surveyor be reprimanded and charged with the costs of the inquiry. CHECKING OF PLANS - REGISTRY OFFICES - Mr. McBain, Chairman of the Committee investigating this matter, made an interim report at the June meeting. It was decided that each member of Council should record his opinion and send it to Mr. McBain; the matter to be again discussed at the next Council Meeting.
CODE OF ETHICS - Mr. McAlpine was named a committee of one to consult with the mover and seconder of the motion presented at the Annual Meeting for the revision of the code. His report is to be circulated among the Council members, and is to be brought forward for discussion. COMPLAINTS - So much of the time of Council at each meeting is taken up with the hearing and review of complaints, it was decided that a sub-committee should be formed, composed of two members and the Secretary, which would make investigation of complaints and charges, and only pass on to Council those that involved matters of discipline. It was resolved that the committee should be composed for 1960 of Messrs. Currie and McBain and the Secretary. Among the complaints made in the period under review were (a) One disciplinary case above referred to,
(b) Two complaints by clients against surveyors alleging undue delay in completion of surveys.
(c) A complaint by a client against a surveyor alleging overcharging,
(d) A complaint by a client against a surveyor alleging overcharging, and a counter claim by the surveyor for fees charged.
Some of the above are still undecided, but it appears that some complaints of overcharging and delays could be avoided if the surveyors would make more effort to keep in touch with their clients and explain to them the reason for the charges and the delays. One complaint was received from a surveyor regarding the conductof an apprentice. This matter was referred to the Solicitor who gave as his opinion that a student, under the terms of the articles of agreement, could not work for another person for hire while articled, even at times outside the normal working day, unless the surveyor agreed to such an arrangement. Another complaint concerned the use of a firm name on plans, when one member of the firm was not a surveyor. This too was referred to the Solicitor who stated that in the particular case refer red to him, there had been no illegal action as the certificates on the plan had been signed by the surveyor personally. He drew attention to the fact that this case raises another and very much broader question, namely, to what extent a surveyor can practise with someone who is not a surveyor. The following are quotations from the Solicitor's letter:- "There is no prohibition of such a partnership in the Land Surveyors Act, and there is no prohibition of such a partnerhip in the By-laws of the Association." "It Heems to me that it lies with Council to make up its mind and formulate the types of partnership which an Ontario Land Surveyor may enter into." "In my view, the provisions of Section 8 (1) (a) of the Land Surveyors act, which gives the Association power to pass By-laws for the government, discipline and honour of its members, are sufficiently wide to enable the Association to embody the formulation above referred to in a By-law.'
The Council discussed this matter at the May and June meetings. It was fesplved to refer the question to a aub-committee of Council composed of Massrs. Peters and Pierce for further consideration. Accounts totalling the amounts listed below were passed for payment in the three months under review.

