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THE TRADER.

TORONTO, ONTARIO, APRIL, 1882.

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Editorial.

EXTRADITION.

We have several times pointed out the great advantage it would be for Canada to have an extradition treaty with the United States, comprehensive enough to embrace every offence punishable by imprisonment, excepting of course political offences. It seems however that Canada being only a Colony cannot of her own will, make such a treaty, and that it is problematical whether such an arrangement would be ratified by the home Government. We think most of our readers will agree with us in saying that the sooner we give the British Government a chance to confirm or disannul such a treaty the better for us. Situated as Canada and the United States are, with nearly three thousand miles of an imaginary division only between them, it is the easiest thing in the world for a criminal in our country to skip out into the other and thus evade the just punishment of the laws of his own country. As the very ease with which they can thus evade arrest, in many cases forms an incentive of the strongest kind to persons whose moral nature is not sufficiently strong to keep them from breaking the law, it follows as a matter of course that if this legal "country of refuge" were to refuse to harbor them they would think twice before committing themselves.

In the present state of affairs Canada has very much the worst of the bargain, we give the United States the criminal offscourings of four millions of people, while we receive in return the criminal refugees of forty millions. In other words, if the proportion of crime keeps pace with

the population, we receive *ten* criminals from the United States for every *one* we send them.

Mr. Blake put the case in a nutshell when he said, in speaking of the extradition laws that exist between Canada and other countries, that if the proposals made by Canada to the mother country in regard to extradition were not to be agreed to, Parliament might proceed legislatively in order that if we are unable to obtain from other countries the rascals that fly from us to them, we may at least return to other countries the rascals that fly from them to us. There is no reason in the world why Canada should harbour fugitives from justice other than political offenders. If the Act passed by the Canadian Parliament in regard to the extradition of criminals be prevented from going into force by the Imperial authorities it will be quite in order for the Canadian Parliament to enact that every fugitive offender shall be delivered up when a warrant is presented for his arrest, under the seal of the governor of the State from which he fled. In local matters of this kind there can be no good ground for England refusing to allow Acts of the Canadian Parliament to go into effect. The list of offences for which persons may be extradited should be made as large as possible. It might well embrace all offences for which the law provides penalties by imprisonment, and offenders should be just as liable to arrest on one side of the imaginary boundary line as on the other. If the extradition treaty between Canada and the United States is not to be allowed to go into force by the Imperial authorities, we can at least get rid of half the evil by delivering up fugitive offenders who take refuge within our borders, whether we get our own criminals back or not.

JEWELRY TARIFF CHANGES.

We have had occasion several times of late to express our views upon the absurdity of the high rate of duty at present levied upon the fine gold jewelry imported into this country, and we only recur to the subject again in order to show the absurdity of the late changes in the tariff made by the Finance Minister, and the undoubted necessity for a genuine reform in the way of collecting duties from this branch of our imports.

To anyone at all conversant with the jewelry trade it is apparent that the practice of smuggling is very materially in-

creased since a higher rate of duty has been levied, for the simple reason that smuggling pays better than it formerly did. We believe we are safe in saying that more than twice as many goods are smuggled into Canada to-day as was smuggled a few years ago when the duty was only fifteen per cent. This fact is well known by every manufacturer and wholesale dealer in the country, from the simple reason that they meet the competition of these contraband goods at every turn, and this competition is the most formidable one they have to encounter. If this duty could be collected we would be the last to cry out against it, for we are quite willing to see our manufacturers get the full benefit of this protection to its utmost extent, being fully convinced from experience that internal competition will keep the prices down to a proper figure. But this duty, as everybody knows, is not always collected, and thus while its abnormally high rate is a direct incentive to the smuggler, it acts as a clog to the honest wholesale importer, without materially benefitting the manufacturer.

We have before enunciated the principle that goods such as jewelry and watches, which are valuable and small of bulk, should be taxed as lightly as possible, and that any loss of revenue from this source should be made up by an increased rate upon the more bulky and less valuable goods, which are so difficult to smuggle, as to put all importers on an equality as regards their lay down cost. We have all along contended that if this principle were put into practice by the Government, the revenue would suffer but little, if any depletion, while the manufacturer and honest importer would be very much benefitted, the former by having a certain though small amount of protection; the latter by being placed on an equality with the smugglers who seem for the past few years to have been the especial pets of our Government, so tenderly have their interests been catered for.

The present Government cannot plead ignorance of the wishes of the bulk of the Canadian trade as regards this matter of a reduced rate on jewelry. They have had the matter brought to their attention in almost every conceivable shape during the past two years, and for that length of time they have been giving it their usual "serious consideration.

No doubt the matter has weighed

eriously on the Finance Minister's heart, and has more than once engaged the attention of the Cabinet, and had the benefit of its united wisdom. The result of all this thought, inquiry and deliberation has at length been given to the world, and the mountain, after a protracted and painful labour, has at length brought forth its mouse. In other words, the Minister of Finance has, in his recent masterly and convincing speech, made public the decision of the Government upon the desirability of a change of tariff upon articles of jewelry imported into this country. The changes are neither so radical nor sweeping as to occupy much space, and may be briefly summarized as follows: "Duty on clock springs reduced from 35 to ten per cent.," only this, and nothing more. Well, absurd as it is, we, like dutiful children, must accept it with a thankful spirit; it is at least the thin end of the "reduction policy" wedge, and we do not for a moment suppose that it will rest there. But, thankful as we are for small mercies, we cannot help inquiring, how on earth the Government came to the conclusion that the panacea for all the present ills of the jewelry trade lay in the reduction of the duty on clock springs. We are aware that the duty on clock springs is perhaps a very important consideration to the only clock factory we can boast of, but we cannot for the life of us see why the Government in their wisdom should have stopped at clock springs. Why did they not include watch springs, which are as much raw material to every watchmaker in the country as the clock springs are to the factory above mentioned. Clock springs are never smuggled that we know of, whether they come in as part of a finished clock, or separately as material they paid the same duty of thirty-five per cent., and this being the case, we cannot see how the clock factory was at any disadvantage regarding this part of their imports. A more absurd bungle in the way of tariff reform we never heard of, and the only wonder is that the Minister of Finance had the courage to present this orphaned baunting to the trade without some suitable companion to bear it company. Perhaps the powers that be thought that if they reduced the duty on watch and clock springs at the same time, the shock might prove fatal to the trade, therefore it was deemed wise to give them tariff reform in homeopathic doses.

But joking aside, we think we can safely say that while none of the trade will quarrel with the reduction of duty on this single article, it will not satisfy their just demands for *real reduction*, and, as we have before pointed out, the present duty is not only no protection, but a positive detriment to honest trade by placing a premium upon dishonesty in the shape of smuggling. Houses which are loyal enough to their consciences and the Government of the country, to pay the duty demanded by law, are placed at a serious disadvantage when forced to compete against unscrupulous dealers who, having no fear of the consequences, refuse to "render unto Cæsar the things which are Cæsar's," and import their goods by way of the "underground railroad." The Government cannot plead ignorance of this competition, damaging alike to morality and trade, for the recent developments—such as the Patterson and other seizures—must have convinced them that this dishonest practice was no myth but a stern reality. We have all along stated that while we believe in protection, if it can be carried out, we are opposed to so called protection where it not only cannot be enforced but becomes from its very nature an incentive for the perpetration of the crime it was intended to prevent. The present Government and all former Governments, have recognized the principle we are contending for in the case of diamonds and other precious stones unset. These are admitted free of duty for the simple reason that they are so valuable and they are so small in bulk that it would be impossible to collect the duty were it to be levied. This being recognized in the case of the unset gem, why cannot the Government see that the same principle should govern the importation of the same gem if set with a solid gold mounting. True its value and bulk are slightly increased, but not so much so as to make it materially harder to smuggle, and thus give one kind of importer an undue and decided advantage over another in the struggle for trade.

We have not the slightest doubt but that time will shew that this proposed change of tariff is an absolute necessity, and we very much mistake the temper of the trade if they are not found helping to put in men who will give them justice in this respect, if the present incumbents of office do not. As far as the encouragement of trade is concerned, the policy of the

present Government has worked favorably, and they deserve well of their country for it, but it is far from being perfect, and they, themselves, will probably ere long not only acknowledge but remedy the defect we have endeavored to point out.

RAILWAY MONOPOLY.

With the exception of the boom in Manitoba, perhaps nothing is attracting more attention at present than the question of Railway monopoly. Hitherto Canadians have known about railway monopoly only as an historical fact, but of its selfish, grasping tendencies they have had no personal experience. This state of Acadian simplicity, however, seems destined to have a sudden termination, and if we can read the signs of the times correctly, our people will, unless they offer a very determined resistance, be subjected to a railway monopoly more grinding than has ever preyed upon the commerce of the country to the south of us. It is not very comforting to the people of Canada to know that after having spent millions of dollars in subsidizing independent railways for the purpose of creating competition, they should find their money worse than squandered because the rival routes were being acquired or controlled by some gigantic monopoly. But such seems to be the case, and almost every week brings news of some new development in this scheme of commercial piracy. The Bill now before Parliament to create a Railway Commission which shall have power to regulate freight rates and do such other things as may be necessary to protect the public against the insatiable greed of these corporations is a good one, and no time should be lost in giving it effect. Such a Bill if properly selected and organized, could do the country infinite service, and aid very materially in developing its commercial capabilities. The first duty of such a Commission should be to do away with the unjust discriminating freight rates that have so long disgraced the management of such lines as our "Grand Trunk," and substituting therefor a regular equalized rate, based upon the cost per mile for carrying such freight. Thus every town would enjoy the advantage of its geographical position, and would not, as in some cases they are now compelled to do, pay a double rate in order that other places less favorably situated may reap the ad-

vantage. The Commission should not only put a stop to this unjust practice of discrimination, but should compel railroads to base the freight rates upon the cost of transportation, and not as at present upon what it will bear.

The present rate charged for passenger traffic should also be reorganized and a maximum rate of two cents per mile for first-class passengers substituted for the present three cent arrangement. As we have several times before pointed out, the present passenger rate is a most exorbitant one, and its reduction is a necessity of the near future, and we are strongly of the opinion that not only the public but the railways themselves will be benefitted by the change.

Public opinion is now beginning to be aroused upon this subject, and it is only a question of time when the principles underlying the creation of a Railway Commission will be carried into effect.

In England where such a body has been practically tried, it has been found to work so satisfactorily that the people seem to favor larger powers being granted the Commission than they formerly possessed. The abuses they were called on to reform (so like what we are at present laboring under) were so great that last year a Parliamentary Commission was appointed to investigate the complaints against the Railway Companies.

From the report of the committee, summarized by the *London Times*, which we give below, it will be readily seen that railway monopolists are the same all the world over, and that it is only by a determined effort on the part of the public that their rights will be respected by these powerful corporations. The summary of the report is as follows:—

1. That railway companies charge the public higher rates for the carriage of goods upon their railways than they are authorized to charge.

2. That the classification of goods in railway Acts is misleading and ridiculous, and that as a consequence traders are, as a fact, improperly charged when you compare one trade with another; and that they have the greatest difficulty in discovering in any case whether they are properly charged or not.

3. That certain places and districts are preferred in the matter of rates, or "nursed" by railway companies to the prejudice of other places or districts not so favored.

4. That the rates charged by railway companies for goods to be exported from, or which have been imported into this country are lower than the rates for sim-

ilar goods passing over the same railways from and to home markets, and that the home producer is seriously prejudiced by this action on the part of railway companies.

5. That railway companies do not give traders and towns the advantage of their geographical position, but by lowering the rates for persons and places less favorably situated relatively to the market they introduce a competition which, but for such low rates, would not exist.

6. That railway companies do not regulate their charges by a consideration of the cost of carriage of the goods, but by considerations of what the traffic "will bear," and that, consequently, they charge one trader high rates, that they may charge another low, and so carry the trade of the latter at the expense of the former.

7. That the means of remedying these and other grievances is not efficient. The traders dare not seek legal remedies against railway companies, and that, consequently it would be expedient to give Associations of Traders and Chambers of Commerce a *locus standi* before the Railway Commissioners.

THE REMEDIES

for these grievances the Commissioners cannot settle upon without further consideration and further testimony. But they have arrived at the following definite conclusion in their report:— They consider it necessary permanently to maintain some special tribunal to which shall be referred questions arising as to the rights and duties of railway companies in their relations to trade and traffic; and security shall be taken that the procedure of such tribunal shall be simple, cheap and expeditious. This tribunal shall have jurisdiction to enforce the provision of the special Acts of the several railway companies, and should be empowered to give redress in any case of alleged illegal charges. A *locus standi* before it should be given to Chambers of Commerce and Agriculture, and similar associations of traders and agriculturists. A revised classification of goods and merchandise ought to be adopted by the railway companies as between themselves and the public, such as under the name of the Clearing House Classification, is already in use as between themselves. Railway companies should be bound to make no increase in any rate or rates without giving at least one month's public notice in the locality. This is about all. The permanent special tribunal seems to incorporate the American idea of State Boards, though much larger powers are conferred upon them. It is needless to dwell upon the probable working of such a measure, however, seeing that as yet it is a simple recommendation from a parliamentary body which seems to be, if not helplessly floundering in deep water, at least sorely puzzled to know just how to find its way out.

Selected Matter.

THE COMPENSATION PENDULUM.

The compensation pendulum is to the astronomical clock exactly what the compensation balance is to the chronometer, and whatever facilitates the narrowing of the margin borders the central line of absolute accuracy, reduces the space demanded by final adjustment. It may never become possible to produce, by mechanical means, either a balance or a pendulum absolutely correct, and requiring no further adjustment. There are means of closely approximating to that condition, and these I propose to impart.

In the first place, the conditions of the manufacture of Graham's mercurial pendulum, the adopted both of the art and of the astronomer, require careful consideration. The rod and the stirrup should, after all mechanical work is completed, be annealed down to the simplest softness, and all subsequent bending avoided, as well as any large amount of friction for the sake of polish; and no part of the stirrup should be left on a train, but should fit without shake, but still without bind. Here we arrive at the point where the closest approximation to the proportion nearest mechanically achievable—perfect compensation for temperature. The ordinary glass jar and mercury, being the simplest, is amongst, if not absolutely, the best; and the result of a great number of experiments has proved that a glass jar of exactly two inches internal diameter, containing eleven pounds eight ounces (avoirdupois) of mercury, will be so near to absolute compensation as seldom to require any correction when tested in heat and cold. The mercury should be carefully relieved from all admixture of atmospheric air, and this is by no means an easy task. In addition to the careful removing of any visible air-bubbles, time and the application of heat should be given, in order to facilitate the decomposition of such remaining portions of air as cling with great tenacity to mercury that has been recently shaken. For this purpose a piece of bladder neatly tied over the top of the jar will enable the maker to aid this decomposition by keeping the jar for a week or so in a temperature of (say) from a hundred to a hundred and five, and the jar should not be put into the stirrup until the manipu-

lations of the clock and its pendulum suspension are completed.

During the evening of the pendulum the addition or subtraction of mercury from the jar should be effected by a dipping tube. The most convenient form of this latter tool is a piece of glass tube, half an inch in diameter, drawn out at one end for a couple of inches to a nose about two inches long, and about a quarter of an inch in diameter. The top end of the dipper should also be drawn out a little, and the end of the drawn out part rounded where the orifice is about one-tenth of an inch in diameter. The plane in which the pendulum swings should be east and west, and the suspension should always be of such a form as will enable the pendulum by its own weight bringing the suspension of itself from all restraint of friction.

The fulfilment of the foregoing conditions will give in all cases good practical results.—*English Horological Journal.*

AMBIGUOUS ORDERS.

You can do a great service to your subscribers by occasionally calling attention to the subject of this communication. One of the vexatious things connected with our business is the annoyance caused by want of definiteness in giving orders for goods and materials, occasioned in part by deficiency of standard gauges, and by not giving measurements by such gauges as are in use, and often for lack of consideration. Particularly does this happen when the persons ordering are not familiar with the technic of the business. Many have taken up the occupation of watchmaker and jeweler without having been "brought up to it," consequently they have only a general knowledge of it and cannot know the technical name for everything pertaining to it. Such persons are liable to order from a material dealer "a little spindle that the tick wheel plays onto," and he might receive in answer to such an order either a cylinder, verge, or duplex balance staff. An order for "two dozen mainsprings, assorted," is definite enough, but yet has a vagueness that is puzzling to the dealer; for two dozen would only contain about one of each width, with no assortment for strength. How, then, can we fill such an uncertain order? Only by guessing at the wishes of the customer by what is known of him and his business.

Orders ambiguous and absurd are of

daily occurrence, such as "a few glass to fit open-faced nickel watches," "hands for an American stem-winder," "a dozen hole jewels, assorted;" "send a hairspring for a very small cylinder watch," "a mainspring for an old-fashioned verge watch," "a dozen glass to fit a five-ounce case," "a winding wheel for an Elgin watch." These and kindred absurd orders are made doubly annoying by the fact that the jobber is expected to know exactly what the customer wishes, and if the order is filled by an article he does not wish, the blame is attributed, not to ambiguity in the order, but to the stupidity of the seller, and an angry answer is often returned with the undesired article, and possibly a transfer of patronage to a rival establishment.

The thoroughly educated mechanic will probably ask why such ignorant pretenders are permitted to call themselves watchmakers, and why they are allowed in the ranks of legitimate tradesmen who have spent years in learning their art. We don't know; we only know there are thousands of naturally good, honest, ingenious men who are groping about in the dark, trying to follow a path in life that would have been all sunshine and success if they could have been started on it properly in the beginning—who, even in the dim light in which they labor, do more honest, honorable work than some others who, with the advantages of tools and competent instruction, make their trade and its mysteries a cloak to cover all sorts of petty cheats and swindles. How to give encouragement and instruction to the former class, and to suppress and eliminate the latter, are as yet two unsolved problems. That both are felt to be important questions for solution is obvious from the fact that so many are suggesting remedies, getting up organizations, societies and unions for protection of the good and suppression of the bad craftsmen. The outcome of these endeavors is veiled in the hereafter. Possibly the earnest search for the right path out of this labyrinth may ultimately succeed.

Ignorance is not the cause of all ambiguous orders. One of our best workmen lately sent in for a ten-leaf pinion of a particular size by the wire gauge. It was sent, and returned with the message that he wanted a cannon pinion, that came back with an order for a ten-leaf hollow centre pinion, which was really the one required. This was simply

carelessness. Another sent a written order for a P. S. B. hole jewel for balance wheel. The workman himself returned the jewel, and petulantly asked why we did not send what he ordered. We said the order had been filled as well as its obscurity would allow. He replied there was no obscurity about the order. The explanation that there was an upper and lower hole silenced him but did not please him; he selected a cock hole, but how were we to know which he wished.—*R. C. in the Jewelers' Journal.*

JOHN HARRISON.

THE FATHER OF ALL CHRONOMETER MAKERS.

The following account of John Harrison and his works was recently published in an English paper:

John Harrison was born at Foulby, near Pontefract, Yorkshire, in the year 1693, his father, Henry Harrison, being a carpenter at that place, who was married in the month of July, 1692, at the parish church of Wragby, to Elizabeth Barber, of the same parish, where their eldest son John was baptized, it is said, on March 31st, in the following year. The father was in the habit of repairing clocks, and as much of the mechanism of the larger clocks was, in those days, frequently made of wood, the carpenter was very often called upon to repair them. It is said that during an attack of small-pox, from which young Harrison suffered at the age of six years, a clock on his pillow was the only thing that would keep him quiet. In the year 1700 his parents removed to Barrow, in Lincolnshire. Here he attracted the attention of a clergyman, who lent him a MS. copy of the lectures of Nicholas Saunderson, the blind Lucasian professor of mathematics at Cambridge, which he copied with all its diagrams. His early devotion to mechanical pursuits led him to give his attention to the improvement of clocks, and in 1726 he had constructed two, chiefly of wood, in which he applied the escapement and compound, or, as it is called, gridiron pendulum, of his own invention. In 1718 an Act of Parliament, 12 Anne, cap. 15, was passed, the preamble of which recites as follows: "Whereas, it is well known by all that are acquainted with the art of navigation, that nothing is so much wanted and desired at sea as the discovery of the longitude for the safety and quickness of voyage, the preservation of ships, and the lives of men; and where.

as. in the judgment of able mathematicians and navigators, several methods have already been discovered, true in theory, though very difficult in practice, some of which, there is reason to expect, may be capable of improvement, some already discovered may be proposed to the public, and others may be invented hereafter; and whereas, such a discovery would be of particular advantage to the trade of Great Britain, and very much to the honor of this kingdom." A commission was appointed under the Act, upon which a large number of officers of state and men distinguished as mathematicians, mechanics and navigators were appointed, and a reward of £20,000 was offered to any one who could discover a method whereby the longitude at sea could, within certain stated limits of exactness, be ascertained. He came to London in 1728 with drawings of an instrument for the purpose, hoping to get assistance from the commission for its construction, but the Astronomer Royal referred him to the then great watchmaker, George Graham, a member of the company, who advised him to make his machine first and then apply to the commission. He returned home to do so, and in 1736 again came to London with his first timepiece, which was examined by several members of the Royal Society (Halley, Graham, and others) who certified its excellence to the Board of Longitude; and in 1736 Harrison was sent with it on a voyage to Lisbon and back to test its performance. In this voyage he is said to have corrected the reckoning nearly a degree and a half. In 1737 the commissioners presented him £500, and encouraged him to proceed in his improvements.

In 1739 he produced a second instrument, and in 1749 a third, which erred only three or four seconds in a week. For this he obtained the annual gold medal of the Royal Society. Some time afterwards practising improvements upon watches, he was induced to make a fourth machine in the form of a pocket watch, about six inches in diameter, which he finished in 1759. Trial of its accuracy was made during two voyages, when his son William went in charge of it, one to Jamaica and the other to Barbadoes, in 1764, in H. M. S. Tartar, Captain Sir James Lindsay. In both voyages it corrected the longitude within the nearest limits required by the Act of Queen Anne, and entitled him to the reward of £20,000,

one moiety of which he received in 1765, and the remainder, not without some official delays, at a subsequent period. In later years he made a fifth instrument, which, on a ten weeks' trial at the King's private observatory at Richmond, was found, it is said, to have erred only four and a half seconds. As will be seen by his works in the company's library mentioned below, he had a musical ear, and made experiments on sound with a curious monochord of his own invention, from which he constructed a new musical scale or mechanical division of the octave, according to the proportion which the radius and diameter of a circle have respectively to the circumference. He died at his house in Red Lion square, in his 34th year.

TRICKS OF JEWELRY THIEVES.

SOME CUNNING DEVICES — LOSS AND RECOVERY OF DIAMONDS — WORKINGS OF THE PROTECTIVE UNION — A GALVANIC THIEF CATCHER.

(From the N. Y. Evening Post, Dec. 29.)

Dealers in jewelry are particularly exposed to losses through thieves and swindlers, as their goods, more than those of any other tradesmen or manufacturers, contain great marketable value in a small compass, and therefore afford especial temptations to the dishonest. This season of the year is the jewelry-thieves harvest-time, as the shops which they visit are largely stocked with goods, which are frequently on the counters, and the number of customers in search of holiday goods distract the attention of the proprietors and salesmen. Even the wholesale dealers, who hang out placards marked "No goods sold at retail," do a quiet little retail business during the holiday period, when their acquaintances come around under the impression that they can get goods cheaper from them than from the retailers—which, by the way, is usually a mistaken impression, except in the case of persons who are thoroughly on the "inside" of the trade. The wholesaler is bound to protect the retailer, and wishes to make a good profit himself. Besides, this practice gives the wholesale dealers a good opportunity to dispose of old stock which has gone the rounds of the trade "on memorandum" (that is, sent out on approval), and which would otherwise go into the melting pot.

The thieves, both male and female, who are frequently of very good appear-

ance, hang about the jewelers' stores until they see some respectable looking person enter, and then go in with them. They usually say that some friend advised them to come to that store to look at a particular line of goods, and they commonly ask for some standard article. Then, if they can get some young and inexperienced clerk to wait upon them—and they always try to get served by a salesman of that kind—the chances are that they will carry away with them a great deal more in value than they buy. Sometimes they buy nothing, but usually they make some small purchase, so as to cover their game more effectually.

The "umbrella trick" was a very successful device of the thieves a few years ago, but it is now pretty well known to the trade, and is therefore but little practiced at present. Before its secret was detected, a well-dressed thief would enter a store with an umbrella in his hand, closed, but not rolled up. He was usually accompanied by one or two confederates. Seating themselves by the counter, they would ask to be shown a variety of certain goods, and in passing the articles from one to another, the principal would deliberately drop one now and then within the loose folds of the umbrella. When a number of chains, rings, or bracelets had thus been stowed away, the man with the now valuable umbrella would suddenly remember an engagement, and bid good-bye to his companions, who would cover his retreat by buying some trifling ornament.

Some time ago a clever rogue was successful in robbing several diamond merchants, in this city, of costly gems, having equipped himself by smearing a little wax on the end of his nose and providing a number of handkerchiefs in his pockets. He was further prepared by wearing spectacles and appeared to be very near-sighted. When a package of small unset diamonds was shown to him, at his request, he would take it to the window, and hold it very close to his face. Simultaneously he would bring the end of his nose against a diamond, and make use of a handkerchief to conceal and remove the stone which had adhered to the wax. By affecting to have a bad cold, and always using a different handkerchief, he was able to abstract a number of stones from the same package. His last operation of this sort had an unsuccessful ending through his mistake in taking out a handkerchief which he had used already. A

diamond fell from it and rolled upon the floor. Hoping that this was unnoticed, but not daring to remain, he hastily excused himself and went to the door, but found it securely fastened. One of the firm of diamond dealers, by pressing an electric button under his table, had shot a bolt at the entrance, and when the thief turned round a revolver was pointed at his head. He was obliged to submit to a search, and a number of diamonds were found in the handkerchiefs distributed through his clothing. His arrest followed, and he was sent to state prison.

After this a man with a cane executed a theft very neatly in a New York diamond house. Pointing over the counter with his cane at an open package of unmounted stones, and asking to be shown a certain one, he lightly touched a gem with the end of a stick, which had been dipped in a glutinous cement. A diamond worth \$800 adhered to the tip, and the thief got away undetected. Some time afterward he was caught while attempting the same trick in Philadelphia, and was identified by his New York victim.

Recently one of the "box-men," or drummers, who travel for small jewelry factories in Providence or Attleboro, called at a well-known jobbing house here, and was so gratified at his warm reception by one of the firm, who happened to be in a particularly good humor, that he set his box down on the floor and entered into conversation without immediately proceeding to business. When he turned to take up his box it was missing, and he has never seen it since. Undoubtedly a thief had walked into the place "on speculation," and seeing the unguarded box had quietly walked out with it. Its contents were worth several hundred dollars, although most of the articles were of only six to ten karat gold.

Sometimes the thieves adopt still bolder methods. Within the past fortnight a man entered a jewelry store in Maiden Lane, and after looking at a number of gold watch-chains, suddenly snatched three of them and dashed out of the door. A hue-and-cry was instantly raised, and a number of persons began running. The thief ran into a "pal" on the sidewalk, and knocked him down, transferring the chains in the scuffle. When seized and accused of the robbery he indignantly denied the charge and demanded to be searched. He said that he had merely run in pursuit of the real offender. As he had got rid of the stolen articles, and

as no one could positively identify him, he was released. His confederate, of course, had lost no time in disappearing.

Fastening the door of a jewelry store on the outside by means of a cord, and then smashing the show window, forms a method of robbery so extremely bold and dangerous that it is rarely attempted at present, although some years ago it was not very uncommon. Some of our readers may remember the ingenious effort once made to rob a Broadway jeweler's window which projected over the sidewalk. At night a thief cut a hole in the bottom of the window, and neatly plugged it up again. The next day he had a well trained boy crawl under the window, and, by means of a long wire with a hook on the end, pull down through the hole a number of gold chains, etc. The trick was defeated by the investigations of a salesman, after he had been astonished to see chains and bracelets creeping about in the window as if endowed with life.

A few seasons ago a certain down-town jeweler determined to turn the tables and cheat the thieves. He got together a lot of old rubbish which had been designed to look like gold, and had the chains, etc, newly dipped and polished. The articles were such goods as the alleged rolled plate Roman gold bracelet which are not rolled at all, but simply German silver dipped in plating solution. When visited at that holiday time by customers whom his experienced eye recognized as probable thieves, he would lay before them a quantity of this special stock, tell them to make their selection, and carelessly turn his back. The trap was successful, and quantities of the trash carried away before the end of the holidays. One thief was so disgusted that he wrote a letter to the jeweler, telling him that if his goods were a fair sample of those in the neighborhood, the shopkeepers were worse thieves than any in the "profession."

The practice already mentioned of letting jobbers have goods from manufacturers "on memorandum" is one that gives excellent facilities to swindlers at this time of year, when all the firms are too busy to make careful investigations, if things appear right on the surface. Very recently, it will be remembered, an innocent-looking, rosy-cheeked young man obtained considerable quantities of valuable goods from several prominent houses in this city by presenting memorandums with the letter-heads of well known jobbers. His operations were finally checked


simply by the fact that in one case the goods were not ready for delivery when he called, and were afterwards sent to the firm believed to have ordered them. The surprise of the latter led to an explanation, and this to a revelation in the newspapers which stopped the swindler's career. The rogue was not caught, however, and it is believed before his methods were exposed he had obtained jewelry to the amount of several thousand dollars. On this last point his victims have been very reticent.

Sometimes the thieves who visit jewelry stores rob a customer instead of the proprietor. About two years ago a banker in Wall street gave to his wife a large sum of money, some \$4,000 or \$5,000, for the purchase of a set of diamonds. He took her to a jeweler's, introduced her, and then hurried away to attend to some business. The lady placed her pocket-book containing the money inside her muff, and laid the latter on the counter while she examined an assortment of gems. Meanwhile a very well dressed young man took a seat by the counter near her, and looked at some rings, finally purchasing one for about thirty dollars, and leaving the place. When the lady looked for her pocketbook she was overwhelmed by the discovery that her muff was empty. The young man was doubtless a professional thief, who had entered the store to "take chances," and was probably as much surprised as gratified when he ascertained the amount of his "haul."

Persons who are in the habit of handling valuable goods are apt, in time to grow careless in regard to them, and therefore diamonds are often lost through gross negligence, as well as by thieves. A few years ago a broker in gems lost a fine pair of diamonds, valued at \$8,000, while on his way to a customer in Wall street. They were advertised, a few days afterward a lawyer reported that he had found the jewels in the possession of his office boy, who had picked them up in the street, and, ignorant of their value, had been using them as jack-stones. The recent case in John street will be generally remembered, where a little Italian boot-black picked up a package of twenty-one small diamonds, valued at \$2,000, and sold them to a jeweler for a dollar. The purchaser immediately advertised them, and for days was visited by all sorts of "frauds," who pretended that they had lost diamonds, and made desperate guesses when asked to describe the stones and



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their wrappings. The diamonds were in fact folded up in a paper packet, such as is always used for the purpose by dealers, on the outside of which was a complete memorandum of its contents. This proved to the custodian of the gems that they had been lost by some one in the trade, and the owner finally appeared and identified them. The boot-black was then sought out and suitably rewarded.

Some years since, a diamond dealer here picked up an unset stone worth about \$800, with a pair of steel nippers and as he turned it about to examine it closely, he happened to press the nippers in such a way that the gem flew out. And the search was made, but the diamond had vanished as completely as if it had changed into air. For weeks afterward the search was resumed at intervals: all the sweepings of the store were preserved and not even a scrap of paper was thrown away. Finally, the last hope of ever finding the stone was abandoned, and its value set down to "profit and loss." The next winter, when the diamond dealer was about to put on a heavy overcoat which he had worn the previous season, he noticed a little rip near the velvet collar. As he was about to hand it to his wife, and ask her to take a stitch in it, he chanced to feel a small, hard substance in the skirt of the coat, between the cloth and the lining. A little ripping was done and the long-lost diamond was revealed. At the time the stone flew into the defective seam the coat was hanging up on the wall of the store.

BUSINESS CHANGES FOR MARCH.

W R Roberts, fancy goods, Toronto, giving up business, E Burrell, axe mfr, Belleville, dead; T. L. McNece, hardware, Tottenham, selling out and going to Manitoba; E. C. Marshall, jeweler, London, seized for rent; J. D. Gunn, hardware, Springfield, business for sale, Chalmers & Carney, Emerson, Man., business for sale; H. Hodges, crockery, Winnipeg, Man., sold out to J. A. Moors; Jno. Dado hardware, Beeton, style now Dado & Kemp; D. R. Dingwall, jewelry, Port Hope, business for sale.

BUSINESS NOTES.

Mr Wm. Perrot, jeweler, of Orangetown, has located himself in Winnipeg, and writes us to say that he expects to open his new store in a few days. Mr Perrot is well known in Ontario as one of the most skillful workmen that ever came to this country, and we have no doubt that his skill will be fully appreciated and recompensed in his new field of labor. We wish him success in his new venture.

Mr. CHAS. ROBINSON, of the "Sheffield House," of this city, has returned from Winnipeg, Man. He reports the jewelry business there as being overdone, and advises those who have a good paying business in any of the older provinces to stick to it in preference to going to the North-West.

THE UNKINDER CUT OF ALL.—About a month ago we noticed the fact that Mr. S. P. Kleiser had a person arrested for an alleged attempt to steal some unset diamonds. The Police Magistrate dismissed the case for want of sufficient evidence, and now the alleged thief threatens to enter an action against Mr. Kleiser for false arrest. This is unkind to say the least.

CHANGE OF FIRM NAME.—Our readers will notice a change in the firm name of Messrs. Zimmerman, McNaught & Co., the name of Mr. Lowe being substituted instead of the "Co." as heretofore. As Mr. Lowe has been a member of the firm for the past five years, the change is merely in name, the partners being as before, John Zimmerman, William K. McNaught and W. G. H. Lowe.

WE HAVE just been handed one of Messrs. P. W. Ellis & Co.'s new catalogues of tools, materials, &c., and without any flattery, must pronounce it the best thing of its kind ever published in Canada. This catalogue embraces almost every article known to the watch repairing business, and may be safely taken by the retail trade as a reliable guide for the purchase of goods of this kind. Wherever possible the articles are illustrated by first-class wood cuts, a feature which not only improves the appearance of the book, but renders it much more valuable to the dealer. Taking it altogether, it is highly creditable alike to Canadian enterprise and workmanship, and we trust that the firm issuing it will by largely increased orders be amply repaid for the heavy outlay involved in its publication.

VERY grave reports regarding the moral character of Mr. A. Brownley, jeweler, of Ailsa Craig, Ont., are being freely circulated by the papers. The charge is mainly that he attempted to seduce Miss Howie, a niece who resided with him. This charge Mr. Brownley emphatically denies, declaring it to be a case of blackmailing, while Miss Howie insists on sticking to the truth of her statements. So far, things wear a very ugly appearance for Brownley, and we only trust that he can satisfactorily controvert the charges brought against him, as we would be sorry to think that a person who for many years had borne such an honorable reputation as Mr. Brownley, should be guilty of an action so dastardly.

NEW ELECTRO-PLATED WARE FACTORY.—The first annual meeting of the Toronto Silver Plate Co. was held at the Rossin House on Saturday afternoon last, Mr. W. K. McNaught, of Toronto, in the chair. After the by-laws of the Company had been discussed and carried, the following officers were elected: President, J. A. Watts, Toronto; Vice President, J. Robertson, Hamilton; Secretary, J. A. Lash, Toronto; Directors, Messrs. Drake, Montreal; Murray, London, and Partridge, Hamilton. The Company's new brick factory, at the corner of King and Portland Streets, is fast reaching completion, and will be one of the most complete of its kind on this continent. It is built of red brick and has a frontage of 100 feet on King Street and a depth of about 200

feet. Mr. Watts, the Manager, expects to have it in full running order in about three months.

ENTERPRISE.—We are glad to notice the removal of Messrs. Zimmerman, McNaught & Lowe to their new and enlarged warehouse, on Wellington Street East. These premises they have fitted up in the latest and most improved style, and now possess one of the finest wholesale jewelry establishments in Canada. The jewelry vault, which is lined with steel, and guarded by one of J. & J. Taylor's most approved steel burglar proof doors, is a curiosity in itself, and well worthy the inspection of jewelers who desire to put their stock in such a position that they can sleep soundly at nights. The accountant's and private offices are fitted up in first-class style, and the firm have ordered a telephone from the "Bell Telephone Co.," which will not only largely facilitate their own business, but prove a very great convenience to their customers. The heat is at present supplied by a hot air furnace, but arrangements have been completed whereby the premises will in future be heated by steam, it being considered much healthier and less injurious to the silverware and other stock. The firm are now fairly settled down, and will be pleased to have their friends and customers call and inspect their new premises. Such enterprise is highly commendable, and we wish this well-known firm a long and prosperous career in their present quarters.

WORKSHOP NOTES.

The silver, which is held in a dissolved state in the decanted liquid dissolved by adding by degrees small quantities of muriatic acid, which will precipitate the silver as chloride; allow to settle after each adding, and continue to repeat until no more clouding be observed. Decant the fluid carefully from the precipitated chloride of silver, wash three or four times with warm water, dry and melt with carbonate of soda, which will realize chemically pure silver.

To strip the gold from old fire-gilt watch-plates. Remove all steel parts and cover the plates with paste of two parts of sulphur to one of salmmoniac in vinegar, anneal in charcoal-fire and plunge into water acidulated with sulphuric acid, and leave therein for several hours, and, before removing, brush with a fine and soft scratch-brush, when the gold will become loosened in the shape of fine scales, the water is then filtered, and the gold which will remain on the filtre, washed dried, and melted with finely powdered borax and saltpetre.

To recover the gold from old silver-gilt lace.—First of all, extract all silk or cotton not directly interwoven with the metallic threads, and burn the lace in order to destroy all remaining silk and organic matter, wash and clean well of all ashes, press the silver threads into as small a compass as possible, dry and dissolve in pure nitric acid (free from muriatic, which is tested by dropping a small piece of nitrate of silver into and no clouding will be produced), diluted again with an equal quantity of distilled or boiled rain-water, let stand undisturbed for several hours, in order to allow the gold, which will remain undissolved in minute particles, to settle, decant the liquid carefully from the sediment and wash the same for three or four times with warm distilled water.

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adding the washings to the decanted solution; dry and melt the sediment with a small addition of equal parts of finely powdered borax and saltpeter, which will produce a button of fine gold

Advantageous method to strip the silver from old silver-plated articles. Take a cast iron vessel and pour into strong sulphuric acid, add about one-eighth part of powdered saltpeter and bring to a boiling heat, dip into this acid a bucket made of sheet iron perforated at the side and bottom, therein place the articles to be stripped and keep moving about up and down until the coating of the silver has dissolved, lift the bucket out and let drip into the acid and rinse in cold water, remove the stripped articles and treat another lot in the same way. The dissolving of the silver will take but a few minutes in the beginning, will work slower after the acid has taken up a quantity of silver, and will cease to act when saturated with it. The solution has the property of dissolving silver only, and barely affecting the inferior metals of which the articles to be stripped are constructed. The silver is reduced by pouring the solution whilst hot into a leaden vessel and immersing therein clean copperplates, when the silver will flock in a metallic state on to the plates, which are removed and washed in clean water, and the immersion repeated until no more silver becomes deposited on the copperplates; the solution is finally tried for silver by dropping into it a small quantity of saturated saltwater, which will produce clouding or precipitation if silver be retained in the acid solution; or the whole of the silver may be reduced by precipitation of salt solution; which should be added by degrees until no more precipitate is formed. The acid is then carefully decanted, the precipitate washed with clean water to remove all the acid, dried and mixed with carbonate of soda.—H. BUSH.

To effect the best possible results in timing an ordinary watch to various positions, it is absolutely necessary to strictly observe the condition of the pivots of the cylinder or staff in lever, etc, escape-ments, and the jewel-holes in which the pivots run. The pivots ought in all cases not be unnecessary long, be made conical at the shoulder and elongating, perfectly cylindrical for about one and a half the length of the jewel-hole, in order to rest freely on the cap jewel. When the watch is in a horizontal position, the point of the pivot should be quite flat, with merely the sharp edge removed and well polished; a pivot so constructed will work easy in all positions, and be least exposed to bending or breaking. The hole in the jewel should always be of the same length as the width of it, which is the proper size to equalize the friction of the pivot, whether the watch be in vertical, horizontal, or slanted position. If the hole is found to be larger than the diameter, the length can easily be reduced with the aid of a diamond drill, the end of which to be of a round instead of a sharp pointed shape, or too large a hole may be reduced in a few seconds, the bars of the polished steel effectes in the hollow of the jewel is quite immaterial to the action of the pivot, as long as it is kept clean. Last of all, the balance should be carefully poised, and the balance spring be kept quite flat and free.—From *Albirt Johann's Lehrbuch der Uhrmaceerkunst.*

SCIENCE AND OTHER NOTES.

In France a pearl costing sixteen dollars is now imitated for fifty cents or a dollar, and so successfully as to be sold at the price of the genuine article to any one not a veritable expert, and even the latter class are often puzzled. The artificial pearl, however, is simply a glass bead or globe which is first coated on the inside with a glue made of parchment, then treated with a peculiar so-called "essence," after which it is filled with wax. The essence is the chief pearly ingredient, and is obtained by rubbing together white fish, so as to remove the scales, the whole is then strained through linen and left to deposit its sediment, which is the essence in question. It requires about 17,000 fish to produce a pound of the pearly essence.

SHEFFIELD EXPORTS TO AMERICA.—The exports from Sheffield to the United States during November last show a great increase upon the value of the goods sent from that town to the United States in November, 1881, as may be ascertained from the appended figures:—

	Steel	Cutlery	Total Exports
November, 1880	£30,418	£23,058	£53,299
November, 1881	34,077	20,387	98,619

The steel exports are more by 2,649%; but the cutlery exports show a decrease of 2,680%. The total exports for the month, however, show the large increase of 33,550%.

In the time of Alfred the Great the Persians imported into Europe a machine which presented the first rudiments of a striking clock. It was brought as a present to Charlemagne from Abdallah King of Persia, by two monks of Jerusalem, in the year 800. Among other presents, says Eginhart, was a horloge of brass, wonderfully constructed by some mechanical artificer, in which the course of the twelve hours *ad clepsydrum vertebatur*, with as many little brazen balls, which, at the close of each hour, dropped down on a sort of bells underneath, and sounded the end of the hour. There were also twelve figures of horsemen, who, when the twelve hours were completed issued out at twelve windows which till then stood open, and returning again, shut the windows after them. It is to be remembered that Eginhart was an eye-witness of what is here described, and that he was an abbot, a skillful architect, and very learned in the sciences.

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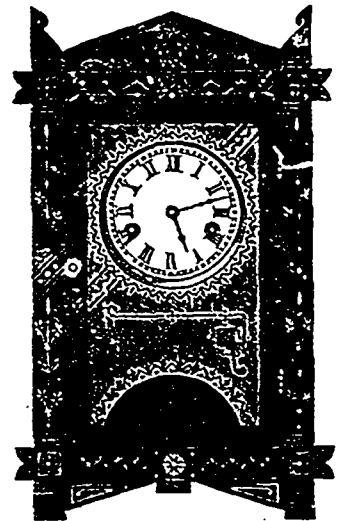
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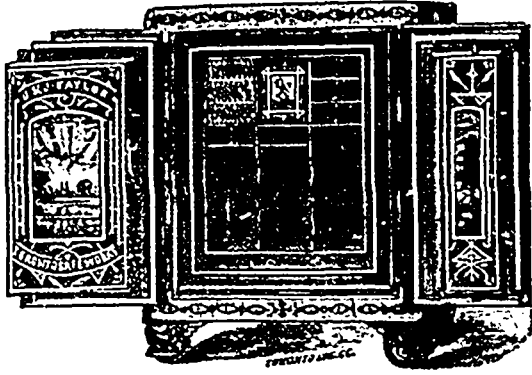
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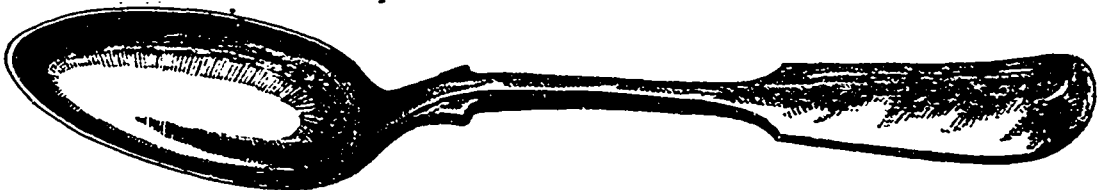
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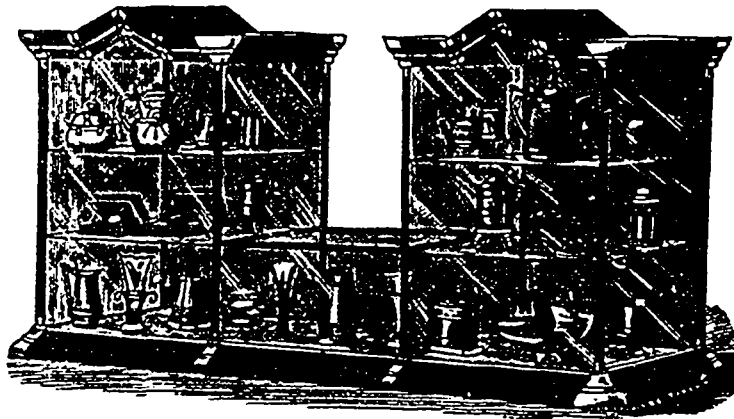
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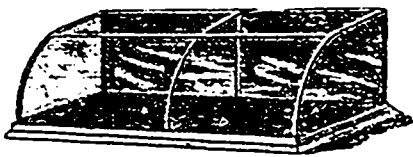
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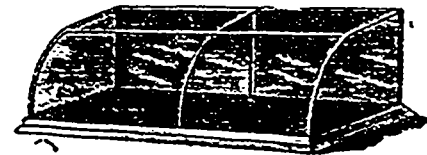
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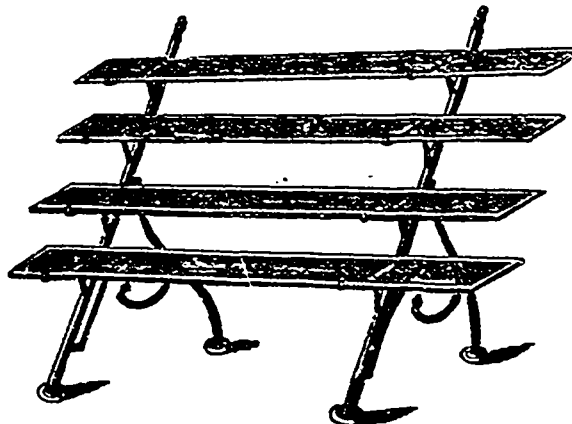
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