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THE TRADER.

TORONTO, ONTARIO, AUGUST, 1883.

Sent free to every Jeweler and Hardware Merchant in the Dominion of Canada

Advertising Rates.

Full Page,	\$20 00	each issue
Half Page,	12 00	"
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Small Advertisements, 8 cents per line.

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Business and other communications should be addressed to

THE TRADER PUBLISHING CO.,
13 Adelaide Street East, Toronto.

SPECIAL NOTICE.

To ensure insertion, changes or new advertisements must be sent to the office not later than the 20th of each month.

Editorial.

WATCHMAKERS, ATTENTION.

The letter of "Hamilton Jeweler" in another column suggests to the possibility of very much good being done by an interchange of ideas amongst Canadian watchmakers.

It certainly seems strange to us that jewelers and practical watchmakers in this country apparently take but little interest in the new and useful inventions that are continually cropping up in this line of business, and that might with great advantage to the trade, be discussed in such a paper as THE TRADER.

The difference between Canada and the United States in this respect is very marked, and we are sorry to see that the comparison is not at all favorable to us.

Take up almost any one of the many journals published in the United States in the interests of watchmakers and jewelers, and you will find in it ample evidence of the *Espre du corps* that American watchmakers have in their profession. Amongst these letter contributions from practical men, may be found some of the best and ablest articles contained in the paper, and these are entitled to all the more weight when it is remembered that they are principally the result of, in many cases, long and varied experience. Watchmaking is a science, and as everyone knows that ever hadanything to do with it, requires long years of patient study in order to master its intricacies and understand thoroughly its principles. Indeed, so difficult is the thorough mastery of the science of horology that but few ever attempt such a thing, and those who do are a kind of *rara avis* amongst their fellow workmen. A thoroughly skilled workman, as everyone knows, can always command the highest wages and need never be out of work; in fact, his services are in constant demand, and he has immeasurable advantages in every way over any ordinary workman.

Now, while we have many first-class watchmakers in Canada, it is no disparagement to the trade to say that we have also a great many inferior workmen who might be very much improved if they would but take the time and pains to improve themselves in their trade. If anything were wanting to prove this assertion, the mass of "botched" work that is continually pouring into our city trade shops would abundantly confirm it. In no way can such a desirable improvement be carried out than by an interchange of ideas upon subjects of vital importance to the craft.

For example, a watchmaker in some country village finds a difficulty in doing a certain kind of work, and he has no older head near by to get advice from, if he were to clearly state his want in some trade journal, some one perhaps that had experienced the same difficulty and overcame it, would enlighten him. Those who had made any useful discovery in any branch of the business would have a medium by which to communicate it to others, and in this way the general standing of the watchmaking trade might be very much improved. Many of our best workmen are self-taught mechanics, and they, more than any others, will be able to estimate the advantage that a little friendly advice furnished in this way, at the right moment, may do.

Now, watchmakers of Canada, is it not time that you were stirring yourselves in the direction of discussion and improvement? Are you, as a class, less intelligent than your fellow workers on the other side of the line? If not, why do you allow yourselves to drift along with the stream when you have such grand possibilities before you? Wake up and prove that you are live workmen, and not mechanical Rip van Winkles, whose ideas and abilities are just what they

were when they first learned the trade.

Ventilate every new matter, and keep abreast of the times, take improvements by the forelock, and don't let them tread on your heels.

We have plenty of intelligent and educated watchmakers, let us hear from a few of them on live subjects, let those that want information be not afraid to ask for it, and if they do we are satisfied that some brother craftsman will be able and willing to give it to them.

To all we would say don't hide your light under a bushel. If some one asks a question, and you can answer it intelligently, do so by all means and you will do yourself no harm, and probably the enquirer a great deal of good.

As we have said before, the columns of THE TRADER are always open for such purposes as the above, and we shall be only too glad to help along such a laudable object by every means that lies in our power.

Now then fellow craftsmen let us hear from you.

THE FUTURE OF THE AMERICAN WATCH TRADE.

As everybody in the watch and jewelry trade knows, for the past four years it has been almost an impossibility to get as many low priced movements as the requirements of business demanded. We have often been asked, why is this, why can't we get the goods we want for our trade as easily and as cheaply as we did formerly?

The reasons, we think, are not far to seek. From 1873 till 1879 may safely be said to have been all years of depression, and bad years for business in general. The period before that was unusually prosperous, and as everyone knows, one particularly suited to an expansion in every line of business.

The watch industry, like every other, is governed by circumstances, in other words it is regulated by the law of supply and demand, and has to ebb and flow with the tide of commercial prosperity. Looking at the subject in the light of these generally acknowledged principles of trade, we cannot help being struck with the precision with which the watch industry has obeyed the ups and downs of mercantile life. We have often expressed the view, that as far as any one business can indicate the state of prosperity in any country, the watch and jewelry trade is certainly the most reliable for that purpose.

Indeed so accurately does it register the advance or decline of the general prosperity, that it may be pretty safely taken as a reliable mercantile barometer.

Watches and Jewelry are articles of luxury, and when the country is prosperous, and people generally are making money, they meet with a ready sale; the commercial barometer then indicates "fair weather." On the other hand when times become depressed, money scarce, and people barely able to obtain the necessities of life, these goods become almost a drug in the market and can hardly be sold at any price; the commercial barometer then indicates "bad weather, look out for squalls." We do not for a moment wish to be understood as meaning that good and bad times come and go because the jewelry and watch business is prosperous or otherwise, but simply that the watch and jewelry business is lively or depressed because the general prosperity is in the same condition. In other words, the success or otherwise of this particularly sensitive business is purely a result of good or bad times as the case may be.

This being so anyone can see at a glance that in the prosperous decade previous to 1878, trade in this line was good simply because the demand was good, and the public having money to spare were of the opinion that they could afford these luxuries. During the period of depression from 1878 to 1879, the great mass of the population spent all they earned in obtaining the necessities of life, and but few had anything to spare for its luxuries. The demand thus being cut off or very much reduced, the natural result of over-production inevitably followed, and this line of manufactures soon became a drug in the market. But says some one, why did not the watch factories shut down, or limit their production when the dull times came on? We answer for the same reason, that it is very hard for a man to stop suddenly when he is going at full speed down hill. A watch factory, like any other factory, has to keep its machinery going up to its full capacity in order to produce paying results, and they would probably lose more by shutting down or curtailing their production than by keeping up their former output, and reducing their prices to within a fraction of cost. The watch companies evidently looked at it in this light, for we do not remember of a single factory either shutting down or

trying to limit their output. The result was however strictly in accord with the well recognized law of supply and demand; in spite of extra inducements in the shape of greatly reduced prices and better terms, in spite of the fact that the reduction of the American watches sensibly diminished the importation of Swiss goods (thus in some measure making up for the restricted consumption by giving them the almost unopposed control of a formerly divided market), the consumption could not be forced up to the level of production, and as a consequence, the end of the depressed period found them holding heavier stocks of manufactured goods than at any former period of their history.

With the advent of good times came another change, and one for the better. The purchasing power of the nation became so much increased by the general prosperity, that the demand for watches not only rose to a level with the production, but soon left it far behind. The result has been, that although the watch factories have tried to keep pace with the demand in two ways, (1) by raising their prices, and (2) by increasing their capacity, they have been utterly unable to do so, and to-day some of them have on their books orders sufficient to keep them running at their full capacity for twelve months to come. This, too, in spite of the fact that as soon as American makers advanced their prices, Swiss goods again began to be imported in large quantities. The prosperity of this country for the past five years has been something wonderful, and it is little to be wondered at, if when the watch manufacturers had the ball at their feet, they not only tried but have fully succeeded in recouping themselves for their losses or rather want of profit during the preceding period of depression.

This we think is why the watch companies are neither able nor willing to supply the lower grades of goods wanted by the trade generally, nor willing to offer to them the concessions in prices and terms they formerly enjoyed.

"Every dog has his day" is a homely proverb but a true one; it was the merchants chance during the period of depression, it is the manufacturers now, and who can wonder or blame them if they take advantage of it. When one man has an article that he wants badly to dispose of to another person who is unwilling to buy, the inducements and

concessions are generally on the side of the seller; but when the case is reversed and the seller is the indifferent party, then the concessions must come from the side of the buyer, and he must not consider himself aggrieved if he fails to get the favors he formerly obtained when the seller was in embarrassed circumstances and could not help himself. In short the whole matter comes back as we have previously asserted, to the law of supply and demand.

And now ask many of our readers, what about the future, will watches always remain as scarce and as dear as at present? Bearing in mind the effect of this unalterable law, we unhesitatingly answer, no. Just as soon as hard times come again, or the output surpasses the consumption, just so soon will prices drop down to or below their lowest former figures. Already the indications of hard times are apparent by the greater number of failures, both in Canada and the United States, and the reduced volume of trade in both these countries, and the result has at this early stage made itself felt upon the watch business. That the slight falling off of trade that has been felt by the retail trade has affected the manufacturers is evidenced by the fact that one factory that one year ago (the height of our prosperous era) was said to have orders enough on hand to last it for three years, is now said to have gained two years on its orders, and that it could now catch up in twelve months. Were dull times to come on we fancy even the half of this would either level up their orders or else ruin most of the wholesale houses on whom they would unload their unsaleable stock.

Watch manufacturers are at present apparently whistling to keep their courage up; if we may judge by the elaborate computations they make public at stated periods, and all pretty much in the same view, viz., proving by figures that the population of this country is increasing so rapidly that if every factory in the United States were to double its capacity, they could not possibly keep pace with the demand. These fancy theories are all first-class as long as times are good and sales brisk, but just as soon as depression again lays its blighting hand on the industries of the country and cripples its purchasing power, these gentlemen will find their very plausible theories blown to the winds.

Another factor, we think, in this ques-

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DUST

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KEYSTONE.

For Sale by all Jobbers.

tion is the advance of Swiss competition in this country. Switzerland, the land of natural born watch makers and cheap labor, has no intention of allowing herself to be driven from the markets of this continent without knowing the reason why. Although for a time she has been out-distanced by the improvements in American watch making machinery, she will surely overcome this disadvantage by adopting the same helps to manufacture. When they do then it will be "Greek meeting Greek," and although neither may be forced to go to the wall, the result of the competition will be a large increase in the supply and a consequent reduction of prices all along the line.

We do not know that a reduction in the price of watches would add anything to the prosperity of the retail trade, as we have shewn, such a reduction is generally the result of hard times when goods are cheap because they cannot be easily disposed of. On the whole we think we would prefer, and it would be better for the trade, to have the good times continue, for they could then sell the goods they bought at a fair profit even supposing they had to pay a slightly advanced price for them.

Correspondence.

"A GOOD SUGGESTION."

Editor *Trader*:

Sir,—In looking over your valuable journal, which I think, without flattery, is certainly most creditable to Canadian enterprise, I have often been struck by the fact that the jewelry trade, for whom it is principally intended, do not take more interest in it. It seems to me that we have in *THE TRADER* a medium for the interchange of ideas bearing on our business that we should not fail to take advantage of, and that if the editor of *THE TRADER* would allow us a certain amount of space in the columns of his paper, it might develop a good deal of latent talent among our jewelers that they never before suspected.

I see no reason why we in Canada should not be fully abreast of our craftsmen in the States and England in this particular, and we all know that jewelers in both these countries not only write for their journals, but write well on nearly every subject connected with the trade. I would like to know, Mr. Editor, what you think of this idea, and if practicable,

would you give us the small amount of space we could use regularly? Trusting to get a favorable answer from you, and that the trade in Canada, generally, will fall in with this idea of mutual improvement by interchange of ideas.

I beg to remain, yours truly,

"HAMILTON JEWELER."

Selected Matter.

THE DIAMOND DRUMMER.

The diamond drummer, according to a recent writer, is a real genius. He is said to be less encumbered by baggage than any of the drummer fraternity. Every ounce that he carries is worth a good deal more than its weight in gold. He is the aristocrat of the drummers. A sharp and experienced member of this profession is quite sure to be a partner in the house he travels for, or to receive a handsome salary and expenses, and a liberal commission on his transactions. The best diamond drummer does not expect to rely on regular customers for his trade. He is a sort of guerrilla, who instinctively knows where to find the best purchasers for his goods, which presupposes an accurate knowledge of the business and its possibilities in all parts of the country. He must be a thorough expert in gems, having a full knowledge of their production, the fields where they are found, their cost, color, shape and lustre, and be able to detect the slightest variation in the shade of precious stones. A rare diamond which he has once seen he will never forget, no matter what change may have been made in its setting. He can tell by its cutting whether the work was done by an American or a European lapidary, and some experts can even recognize the cutting of special artists, in the forms and fashions which distinguish the work.

But the diamond expert is also proficient in the fashions and styles of jewelry. He must know the most appropriate settings for all precious stones, for these add greatly to the saleable value, especially of the diamond. The diamond setter should be an artist of great taste and powers of discrimination. An ordinary jeweler is apt to destroy the beauty of the stone by clumsy workmanship, or to hide its brilliancy by an attempt to display his own skill. The real artist who knows and loves the diamond for its rare brilliancy and purity, will surround it with such delicate yet luxurious mater-

ials and colors as shall enhance its perfection and beauty. By virtue of such knowledge as this the diamond drummer is often enabled to buy a rare stone, which appears absolutely ugly in the setting that some blacksmith has given it, but which in another garb shines out resplendently, challenging the admiration of the world. In regard to prices of all kinds of gems he is never at a loss. He does not need to place a diamond on the scales to determine its weight; a single glance at it will establish its quality and value.

The diamond drummer's chief customers are jewelers and the diamond dealers out of town. New York is the centre of the American diamond trade, but there are several dealers in Chicago who make a specialty of this business, and several experts are employed here. Some diamonds are imported direct to Chicago, the wearers of diamonds being on the increase here. A considerable number of Chicago ladies have very valuable sets of diamond jewelry, in which they have invested not alone for display and dress purposes, but for the safety of their property. It is a prevalent idea that diamonds will always bring their value in cash; and this is true to a certain extent, though subject to trade modifications. "Mine uncle," for instance, while charging interest on money he will loan on a thousand dollar set at five or six per cent. a month, will value the property at not more than \$500, and it is sometimes difficult to find purchasers for expensive stones. The drummer, who actually knows the market, is the useful middleman in such transactions. From the local dealer he receives orders for special sets of single ornaments which they have been commissioned to procure. This special order business is a very important feature of the trade. It often takes months to fill one satisfactorily, and one drummer spent two years in getting a match for a solitaire ear-ring for a lady who had lost one of hers, obtaining in the end what he had every reason to believe was the identical diamond she had been bereft of. Most drummers carry a little sack with all the way from \$10,000 to \$50,000 worth of unset stones in it, for the purpose of matching lost ones and furnishing sets to satisfy the caprice of ultra particular buyers.

The sales to jewelers are generally of mounted gems of the newest fashions. Commonly the jeweler buys these for

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English and American Jewellery

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samples, and has them copied by his own workman, with his own materials. As the sample sets are of the most expensive order, this branch of the trade is a very profitable one, in spite of the limits set to its proportions. But private buyers frequently deal with the diamond drummer, too. Well known drummers, on arriving at a place where they propose operating, generally get a personal in the local papers, stating that so and so, the well known and popular diamond dealer, etc., is in town, at such and such a hotel, and private custom soon finds him out. There is in Baltimore an old man, who presents the appearance of a veritable vagrant, who is a regular buyer of diamonds for investment. He is a heavy speculator in grain, and turns every dollar he wins into diamonds. Where he hides them no one knows, but several attempts to rob him have failed to discover their whereabouts. He is popularly reputed to bury them, but where their grave is will probably remain a mystery till he goes to his own, if, indeed, it is discovered then.

Apropos of robbery, that of a diamond drummer is very rare, though it does occur now and then. He travels heavily though not obtrusively armed, does not go to bed in his hotel with the door unlatched, and never carries his stock with him in strange places at night. By observing such simple, common-sense rules of precaution, he preserves himself from most of the perils that menace a man known to be travelling with a store of wealth about him, and generally lives to a good and opulent old age. When he is robbed his loss is generally irredeemable, for even the cleverest diamond drummer could not swear to his own jewels with the settings removed or a facet or two recut. He would recognize them to his own satisfaction, but it would require a jury of diamond experts to convict a thief on the slender evidence he could adduce.—*Exchange*.

ROMANCE OF OLD GOLD.

There has always been more or less reverence attached to old and venerable specimens of wrought gold, and poets and novelists have dealt lovingly with the theme. As a matter of fact, however, from a business standpoint, old samples of wrought gold are usually worth just what their value is after emerging from the melting pot. But

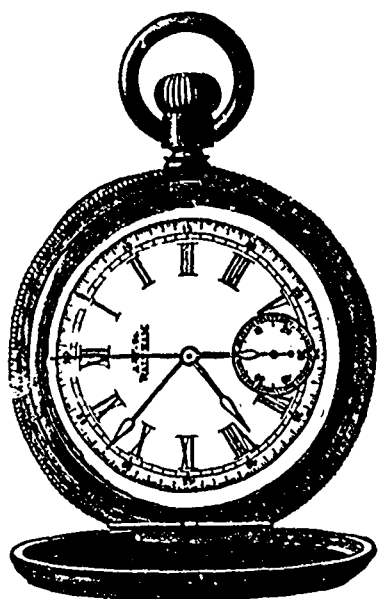
associations and pleasant memories have, with many a value that money cannot buy, and in the hands of this class of persons, old samples of wrought gold, that have been heirlooms in families for ages, become inestimable treasures. There is, however, much exaggeration relative to gold workers that the public lends a ready ear to. For instance we have heard the story frequently repeated that an enterprising man once gathered the dirt in John Street, including the sweepings from many jewelers' shops, and on assaying the dirt, recovered over \$10,000 worth of old gold waste. The craft must indeed be wealthy when it can throw such a bonanza into the street. Of course the story is absurd, but there are many such in existence to which a credulous ear is lent. A reporter of a daily paper recently published the result of his investigations upon the subject of old gold, and below we give the substance of what he says on the subject :

Passing through John street, the other day, a glare of a brilliant light blazed blindingly in the reporter's eyes. It was the reflection of the rays of the noonday sun from an eccentric mass of white metal in the dirty little window in a dirty little shop which was sandwiched between two of the handsome silversmiths' stores, like some skulking tramp being taken care of by a brace of stalwart guardians of the peace. How the solar shaft overpierced the grimed panes with sufficient power to create such a responsive radiance is a mystery. It was as much as the reporter could do to make out that the white metal was a mass of crucible silver, of the most fantastic and charming filagree structure, its surface fretted like the frosting on a winter morning window in designs which might have been made in fairy-land. In trays and heaps all around it was a confused mass of the most heterogeneous articles of ornaments and utility, or rather of bygone ornaments, whatever their present utility might be, of both antique and modern pattern, but all of one of the two precious metals, and all run to one common character of seed. There were long chains festooned all about and coiled in heaps like sleeping serpents, battered bracelets and rings varying in style from the plain wedding circlet to the aristocratic seal strung like dried apples on long wires. A golden sword hilt and a gold arabesqued scabbard,

several daggers with tarnished silver grips, ornamental scrolls wrenched from gun stocks and revolver butts with the rivets still sticking in them, brooches without pins, earrings without hooks, watch cases, old coins, medals and badges of every description. A couple of crucibles were crammed with settings from which the jewels had been torn, and there was a bushel or so of the same spoiled jewelers' work in two battered black silver pitchers, whose dented but portly corporosities bore an engraved crest with a graceful monogram and the date of 1742. These heirlooms come to a common level with their frivolous companions, and waiting, like them, for the melting-pot, had the air of dignity about them of two gentlemen of the old school, dropped by misfortune among the proletarian paupers of an almshouse. The flaunting sign in the window, "Old gold and silver bought at the best prices," seemed a wanton insult to them, a fling at their hapless deteriorated age.

The shop inside was, if that is possible, more in want of a purification than the exterior. In its gloomiest corner a red-eyed furnace glowed through a veil of blue charcoal smoke. The ceiling was black and festooned with cobwebs, which made hammocks for the soot and dust to repose in. The walls were black—a meary, unwholesome black, like the complexion of one of those toilers in a Siberian Lead mine who have forgotten the light of day. There were some cards and price lists gummed to them, but their inscriptions had long since been smudged into illegibility. Over a board counter a bent old man was testing some chains and bracelets with acid, while their vendor stood by and awaited the decision of the dumb detective as to the worthiness of his stock. A florid gentleman was tumbling over the chaotic contents of a boxfull of seals, monograms and the like, which had been deprived of their settings. "It's no use," he observed; "it isn't here, that's certain. I must try another place."

"He has been here every day for a month now," explained the man behind the counter. "His house was robbed lately, and among the articles stolen was a seal ring which had belonged to his family for unnumbered generations. He had hoped that he might come across it here, but I guess his chance is a slim



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one. If it is worth anything it has long since been sent across the water."

"How do you mean?"

"Simply that the thieves, or rather the deceivers with whom they deal, never try to do anything with that sort of property here; seals, intaglios, cameos and the like, which possess any intrinsic value, are packed off to Europe at once and reset there, while their old settings are melted down. In the same way those stolen abroad find their way to this market. We get a great many valuables of that sort, of course in the legitimate way of trade. They are brought here by people who are hard up, or who do not appreciate them. We make no allowance for them. It is the settings we are after, and we pay for its weight and fineness. The stones go into a heap, and anybody who wants can buy them. We have regular customers in that line—collectors and dealers—who, from time to time, relieve us of our stock. Of course we don't give the stones away, and when by a rare accident, we get any of exceptional value, we get our own price for it, too. But it is not our regular line, and with the general run we don't haggle over the price, unless we have plenty of time to waste."

"Do you take any precautions against being made the purchaser of stolen property?"

"The ordinary one of common sense. It isn't a very difficult thing to distinguish between an honest seller, who has a right to dispose of what he sells, and the other sort. Besides, the thieves don't get a chance to patronize us. They are generally so entangled with fences that the latter get whatever is worth getting, at their own prices, and they do their own melting. The mass of settings there, for instance, comes from various jewelers, who have purchased them for the stones and sold the metal to us. The big jewelers either do their own smelting and refining or send it outside to places like this to be done. If, however, a customer does not turn up whom I think likely to be the off color variety, I simply decline to deal with him. I suppose I have bought stolen property at one time or another. I don't see how anyone in this business can very well help it. But ignorance is my best title to innocence, and I guess I won't suffer very seriously for it."

Here, a little faded woman in widow's

woods came in. She had a little package under her decent dolman, and in a little, quivery voice, explained that she desired to find a market for it. It was a silver baptismal mug, of an old, old style, and bore the inscription, worn by zealous polishing, "To Bella, from Her God-mother, Arabella Matcham, London, 1887." The little woman started as if some one had stabbed her when the mug fell rattling among a heap of silverware tossed from the scale by a careless hand. But she gathered up the few bank notes with eager fingers, and pulled her veil closer about her face as she went out.

"Some people," the dealer explained, "are as shamefaced about coming here as they would be on a first visit to a pawn shop. And the queerest part of it is that they have all generally been to the pawn shop first. Pawnbrokers won't advance anything like its value on such stuff as this any more than they will on anything else. If the owners only need money temporarily, they take what they can get. But if they are so hopelessly hard up that they are constrained to part with their collaterals for good, they generally find their way to some place where they can get more like their value. We don't pay for workmanship, as I needn't tell you, and that's the biggest part of the jeweler's bill. But we pay honestly for the metal, and as much as we can afford. There's considerable competition in the business now, and the profits are much less than they were when I commenced to smelt."

The prices paid for old gold vary, of course, according to the quality of the metal. Eight karat gold brings from about thirty to thirty-two cents per pennyweight, twelve karat from forty to forty-eight, fourteen karat from fifty to fifty-five, sixteen karat from sixty to sixty-five, and eighteen from seventy to seventy-five. There is very little twelve karat gold in the market. In such low grade gold ranks as eight karat or less, the price paid depends greatly on the character of the alloy and the difficulty of extracting it in refining. If it is exceptionally difficult to separate the silver and copper, the price is merely nominal. Apropos of this fact, it is worth noting that much second-hand jewelry is offered for sale, dating from the first houses of the country, and of a very low grade of metal, indeed almost on a par with cheap factory work. To sum up in simple English, old gold of good quality brings

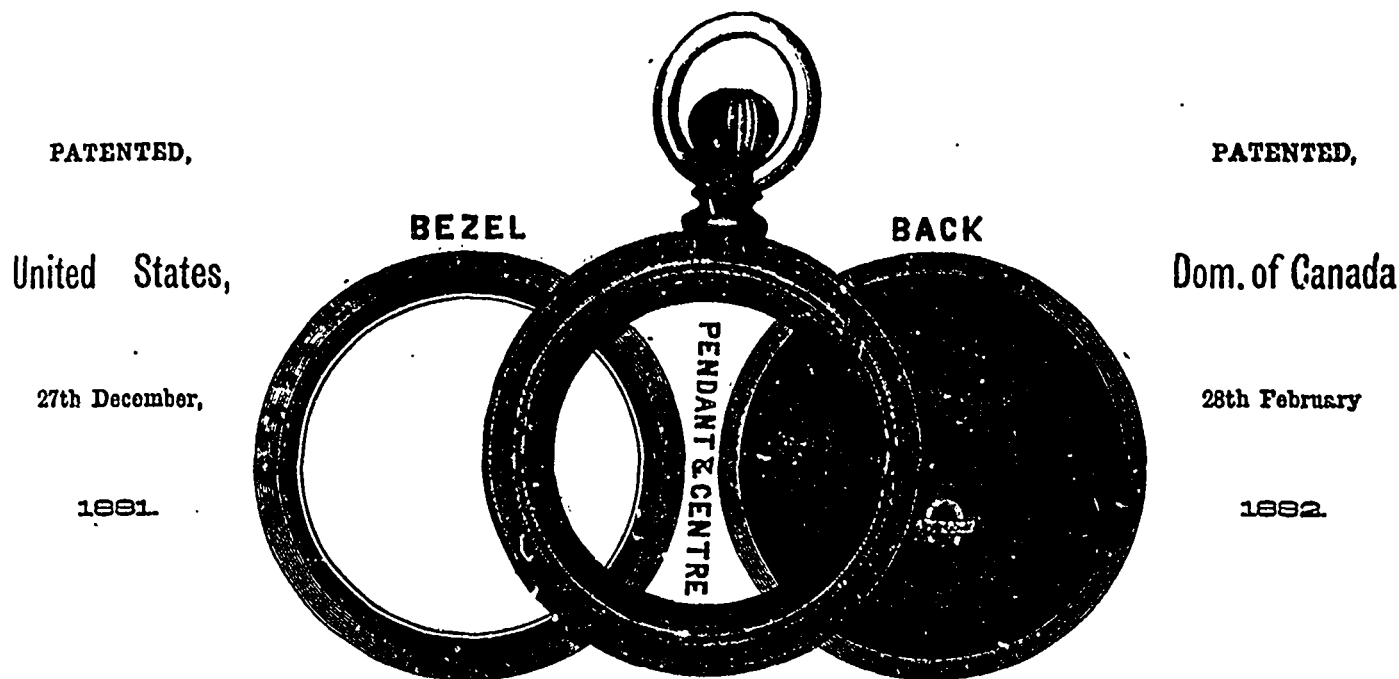
about ten per cent. less than its intrinsic value, that sum constituting the smelter's profitless expenses.

The gold, when it is refined, is run into bars and either sold to manufacturing jewelers or turned over to the Sub-Treasury as bullion. Very little of it goes that way, though. The ornamental uses to which it can be put claim its full service as a rule. The chief source of supply of the smelters is the jewelery fraternity. They not only have large quantities to dispose of through resetting, but most of them trade new-fashioned trinkets for such as are out of date, the latter being rated by weight, and they find their way to the smelter in due course.

Old gold, of course, isn't bought like auction bargains or junk, on the chance of its being worth the purchase. The tests it is subjected to determine its value are extremely interesting. The chief factors in it are the test stone and test key. The former is a whetstone, which one finds on every smelter's counter. The latter is a contrivance on the plan of an old-fashioned fan toothpick, only, instead of being of ivory it is brass. The various points or picks are numbered 8, 12, 14, 16, 18 and 20, and the figures designate the quality of the gold with which they are tipped. When you bring a ring in for sale, say, it is rubbed on the whetstone, to which a few atoms of the precious metal adhere. Then the key, pointed with gold of the fineness at which your ring is estimated or stamped, is used to make its auriferous mark beside it. A drop of muriatic acid and then of sulphuric acid, used *seriatim*, brings out the color of the two marks, and verifies the fineness of the one according to the standard of the test key. When very thick rings or heavy jewelry are offered, the dealers will not venture on a purchase unless they are permitted to cut them and ascertain what they are made of inside.

The most perfect method known for testing coins, it may be interesting to state here, though it has no particular bearing on the subject, is that in use in the Bank of England. The bank never circulates a coin that is a thistle-down's weight under the standard. The sovereigns, as they come to the test are heaped up on a big table, whence they are swept into tubes which are part of a sort of a delirium tremens of machinery operated by a little steam engine. The rolls

The "Excelsior" Patent Dust Proof Case.



PATENTED,

PATENTED,

United States,

Dom. of Canada

27th December,

28th February

1881

1882

This is the first and only case made without one grain of solder. Every piece is cut from the solid metal and pressed into the shape used in the case. This process hardens the gold and silver by the only method known (that is to work it), and is handed to the Trade as hard as is possible to make it, being a great advantage over a case made in the ordinary way, in saving gold and silver by making a case as strong as a much heavier one that has been softened as heat does in soldering on pendant, joints, thumb catches, or joint to swing movement in. Heat not only softens the gold or silver, but warps it out of the shape that the snaps have been fitted to, and it is never perfect after soldering. The Excelsior Patent Dust Proof is never soldered, never heated, is fitted perfectly, and remains perfect. The Excelsior Dust Proof has no joints to wear out or break off. The Excelsior Patent Dust Proof has no spring to break or wear the case. There is no part of the Excelsior Patent Dust Proof that will wear. The Excelsior Patent Dust Proof is the safest case made for protecting the movement—it will never open in the pocket. Put an Excelsior Dust Proof in your pocket, bend forward, backward, put yourself in any position you please and the Excelsior is closed tight. In an ordinary case, with springs, by bending forward the case will often open and when the lock-spring is worn, the case is nearly always open.

The Excelsior Patent Dust Proof Case is the strongest, best fitting and most durable case made. Ask your Jobber for the Excelsior Patent Dust Proof. Every case warranted as stamped, 18 kt., 14 kt., 12 kt., 10 kt., United States Mint Assay or Coin Silver, as may be stamped, and every genuine case bears the Trade Mark. The Excelsior Patent Dust Proof Case may be obtained from any of the jobbing houses in the country.

TRADE MARK.



Instructions to Open the Excelsior Patent Dust Proof Case.

First press the crown as in opening an ordinary Hunting Cased Watch, then to open front, turn bow to the right with thumb and finger; to open the back, turn left. To close, turn case back in same position as when case was closed, and snap same as glass bezel on any watch.

of sovereigns pass slowly down these tubes, which traverse the table at a descending grade of thirty degrees, and if they are full weight the coins drop one by one into a box on the floor. But when over a light piece reaches the lower end of the table a little brass plate pops out of some hidden corner and pushes the defaulter into a compartment of the box where he can't contaminate his honest fellows. Not one is allowed to pass. The sovereigns are then dumped into a sort of barrel organ with steel blades for pipes, whence a turn of a crank drops them out, out in half and ready for romancing.

In addition to the smelters who suspend their shingles in Maiden Lane and John Street, and in that block of Chambers Street between Chatham and Centre, there are poripatetic speculators in old gold, argonauts of the trade who travel all over the country gathering in stock wherever they can find it, and bringing it to New York to dispose of at sufficient profit to make their wanderings pay. These middlemen often pick up some marvelous curiosities in their particular line; historic heirlooms that have spent long generations in country cupboards, and the plate chest of provincial families. But whatever their associations may be, the red-eyed furnace devours them all, and their death incense makes the smelter think hard words as he stirs his pot in the mophitic fumes of a charcoal fire.

The oldest smelting business here is said to be that of G. W. Platt. John Waters' sons continue a business their father founded long before they were born. The Longman establishment is also an old and prominent one. The head of this firm is reputed the greatest expert in metals on the Western continent. His cognizance of his profession is called colossal. His assays in the most delicate and important cases are accepted as final. A reference of a disputed point in practical metallurgy to him is understood to mean its definite settlement, *pro* or *con.*, and no one demurs at his decision. One instance of his fundamental thoroughness in the business is adduced in the fact that he can detect, with rare exceptions, where any article of jewelry which comes under his hands has been made, his knowledge extending not only to the characteristic national styles, but even to the peculiarity of individual workmanship. The gold brick which was donated by California to the Irish

Famine Fund was sent to him for assay. He made his report, accompanied by a receipted bill. Some of his assays are said to be marvels of the triumphs of an analytical brain, and a practiced intelligence over what had been regarded as Gordian knots in the metallurgical annals. There are numerous famous "crooked" smelters here, men whom only the thief can reach, who have garnered fortune from their pots of "brown sou," as their patrons familiarly christen them. One of them, a little weasened Hebrew, who has for years been a tantalizing mystery to the police, is a regular speculator on Wall street, where he spends his off hours in company with his daughter. The pair are as familiar to that portion of down town as the Stock Exchange itself. The infatuation of the old man is akin to that of a gambler who, after fleecing a victim, goes off to be fleeced himself at his own game. "Every dollar he makes in one way he loses in the other, and if theft should become a lost art he would inevitably become a client of the almshouse."

HOW HE CHEATED THEM.

SUCCESSFUL FEAT OF A DIAMOND SMUGGLER.

A well-known diamond smuggler whom the New York Custom House detectives have in vain tried to seize, not long since sailed from Antwerp on the *Rhyndland*. A Hamburg detective came over with him to watch him the whole voyage. This clever smuggler wore a thick, black beard and whiskers, and it was suspected that he carried his precious freight concealed in them. One morning not long ago the New York authorities received a despatch from the Hamburg agent, which read:—"R. has shaved his beard. Did not know it till he had sailed five days. He is on the *Rhyndland*. He has got 70 large diamonds concealed on his person." As soon as the *Rhyndland* was sighted, six Custom House officers steamed down and intercepted her. They looked for the now beardless man. Just as they were about to give up the search a stranger asked, "You are Custom House officers and you look for Rosenberg with the diamonds?" "We are and we do." "That is Rosenberg, and the diamonds are sewed in the lining of his necktie." In another minute a pale, smooth-faced, sallow man was struggling in their hands. His scarf was taken from his neck and carefully explored with a sharp

penknife. Twenty diamonds of various sizes were found. His trunk was next rummaged, every necktie searched, and seventy-three diamonds of great lustre discovered. The fellow wept and wrung his hands. When the Custom House officers arrived at headquarters the chief, who held a cablegram in his hand, eagerly enquired, "Did you get Rosenberg?" "Yes, sir." "Where were the stones?" "Sewed in the linings of his neckties." "That's rather strange," remarked the chief. "Here's a Hamburg despatch which says, 'Just learned that R. carried the diamonds between his back and a porous plaster.'" "Here are the diamonds, anyhow," said the leader of the raid, "and we found 'em in the lining of his neckties." The chief looked at the gems, and said:—"Send the jewel expert here." He came, examined the diamonds, shrugged his shoulders, and said:—"Paste, but first-class." Three frantic officers spent the afternoon tracing Mr. Rosenberg. They discovered him at the Metropolitan Hotel, and without a word of ceremony burst into his apartment. "What do you want?" he enquired with apprehension. They threw him on his face and made frantic explorations of his back. He had taken his bath and the plaster had vanished, but where it had been, mixed up with the impression of the plaster, were the imprints of seventy large diamonds.

The largest library is the Bibliothique National, in Paris, founded by Louis XIV. It contains 1,400,000 volumes, 300,000 pamphlets, 175,000 manuscripts, 300,000 maps and charts, and 150,000 coins and medals. The collection of engravings exceeds 1,300,000, contained in some 10,000 volumes. The portraits number about 100,000. The building which contains these treasures is situated on the Rue Richelieu. Its length is 540 feet, its breadth 130 feet.

The most remarkable whirlpool is the maelstrom, off the northwest coast of Norway and southwest of Moskenesol, the most southerly of the Lofoden Isles. It was once supposed to be unfathomable, but the depth has been shown not to exceed twenty fathoms. The whirlpool is navigable under ordinary circumstances; but when the wind is northwest it often attains great fury and becomes extremely dangerous. Under

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strong gales the maelstrom has been shown by official statistics to run at the rate of twenty-six miles an hour.

Among the most remarkable natural echoes are that of Eagle's Nest, on the banks of Killarney, in Ireland, which repeats a bugle call until it seems to be sounded from a hundred instruments, and that on the banks of the Naha, between Bingen and Coblenz, which repeats a sound seventeen times. The most remarkable artificial echo known is that of the Castle of Simonetta, about two miles from Milan. It is occasioned by the existence of two parallel walls of considerable length. It repeats the report of a pistol sixty times.

BUSINESS CHANGES FOR JULY.

W. H. Cooper, Emerson, Man., Hardware &c., stock sold at 45c. on the dollar to W. Beach. Potts & Co., Wardville, Tins &c., burned out. D. H. Cunningham, Plattsville, watches, moved to Bothwell. Geo. B. Meadows, Barrie, stoves &c., assigned in trust. — Roberts, Regina, jewelry, store burglarized. J. & J. Pennington, Winnipeg, tinware, &c., left for parts unknown and stock sold by sheriff. Charles Paille, St. Jean Baptiste, jeweler, moved to St. Johns. N. Germain & Co, Winnipeg, hardware, offering compromise. L. Jacobson, Winnipeg, jewelry, giving up business. L. H. Noel, Montreal, jeweler, called meeting of creditors. R. J. Butler, Winnipeg, jewelry, &c., sheriff in possession.

BUSINESS NOTES.

COUNTERFEIT \$10 notes of the Ontario Bank are in circulation in Winnipeg.

THE good people of Lindsay have experienced a new sensation; a few days ago many of the large stores and all the principal streets were lighted with gas for the first time.

THE Western Assurance Company declares a dividend for the current half year at the rate of twelve per cent. per annum, and the British America one at ten per cent. per annum.

THE old Toronto Mechanics' Institute, the year before it is handed over to the Free Library board received in rent \$598 in excess of the amount required to pay interest on its mortgage. It would seem, therefore that it was well worth accepting as a gift. Mr. Bain was chosen librarian, and Mr. Davy assistant.

A MEETING of the creditors of H. G. Levetus, wholesale jeweler, Montreal, was held last Tuesday, when the statement showed liabilities of about \$65,000, with assets of \$35,000 nominally. Mr. Levetus made an offer of 17½ cents cash, or 25 cents in 6, 12, and 18 months, but neither proposition was accepted, and the estate will likely be wound up. This man claimed a surplus of \$30,000 not many months ago.

WE notice that the co-partnership that has existed for some years under the firm of Hagstoz & Thorpe, of Philadelphia, has been dissolved by the withdrawal of Mr. Hagstoz, and a new co-partnership has been formed with Mr. C. N. Thorpe, as general partner, Geo. W. Childs, special partner, while Messrs. E. C. Chappatte and H. L. Roberts have been admitted to an interest in the business. We wish the new firm every success.

ATTEMPTED BURGLARY.—A party of burglars made a determined to burglarize the premises of Messrs. E & A Gunther, corner of Jordan and Melinda streets, Toronto, last month, as well as their neighbor, Mr. Carter, 12 Jordan street. They entered the premises of the latter by prying away the bars of a window. Gaining the roof they proceeded to enter the adjoining warehouse by sawing open a square hole in the roof. They, however, did not enter, being deterred by fear or some other cogent reason. Several burglar's tools were found on the premises.

THE Troy pound, still used in this country for weighing the precious metals, is believed to have been deprived from the Roman weight of 5759.2 grains, the one hundred and twenty-fifth part of the large Alexandrian talent, this weight, like the Troy pound, having been divided by the Romans into 12 ounces. The earliest statute of this kingdom in which the Troy weight is named is the 2 Henry V., statute 2, chap. 4, but the Troy weight is universally allowed to have been in general use from the time of King Edward I. The most ancient system of weights in the Kingdom of England was the Moneyer's pound, or the money pound of the Anglo-Saxons, which was continued in use for some centuries after the Conquest, being then known as the "Tower pound," or sometimes the Goldsmith's pound. It contained 12 ounces of 450 grains each, or 5,400 grains, and this weight of silver was a pound sterling. The Tower pound was abolished in 1527 by a statute of Henry VIII., which first established Troy weight as the only legal weight for gold and silver, and from that time to the present our system of coinage has been based on the Troy weight, the Troy pound containing 5,760 grains.—*Nature.*

WORKSHOP NOTES.

TO REFINE GOLD.—If you desire to refine gold from the baser metals, swedge or roll it out very thin, then cut into narrow strips and curl up so as to prevent its lying flatly. Drop the pieces thus prepared into a vessel containing good nitric acid, in the proportion of acid, 2 ounces, and pure rain water, ¼ ounce. Suffer to remain until thoroughly dissolved, which will be the case in from one-half to one hour. Then pour off the liquid carefully, and you will find the gold in the form of yellow powder, lying at the bottom of the vessel. Wash it with pure water until it ceases to have an acid taste, after which you may melt and cast into any form you choose. Gold treated in this manner may be relied on as perfectly pure.

ESSENCES FOR CLEANING WATCHES.—Essences for cleaning watches are rapidly coming into cus-

tom. They are to be obtained at any of the material dealers and at all drug stores. The object is immersed and left in them for a few minutes, to permit all adhering matter to dissolve, not too long, however, since several qualities are apt to leave stains. The piece is to be dried on removal, and finish by passing a fine brush over that has been charged with chalk and subsequently rubbed on a hard crust of bone. This will produce a brilliant surface on either gilding or brass. The following composition, the ingredients of which may be obtained in a drug store, has been highly recommended 90 weight parts of refined petroleum and 25 parts of sulphuric ether. The object is immersed for several minutes, in fact, they may remain for a longer period without danger, and on removal from the bath, are found to be clean and bright. It must not be forgotten that many of these essences are liable to ignite with the mere proximity of a lighted lamp.

TESTS FOR DIAMONDS.—Hydrofluoric acid will not affect the diamond, while it quickly corrodes glass, which is the material of most of the imitation gems. The only objection to its use is that it will attack certain stones of minor but real value, like the topaz, which are some times passed off as diamonds. Of course, being a dangerous agent to experiment with, it must be employed with great caution. The following directions may be safely followed: Take a leaden vessel, of saucer shape and moderate size, in which place pulverized fluor spar, which cover with enough oil of vitriol to completely moisten the powder. Then put in the stone to be tested, and gently warm the mixture over a gas lamp or any other convenient source of heat. This should be done in a good draught, where the vapors will be drawn up a chimney or dissipated, as they are dangerous to breathe. When the evolution of vapors appears to have ceased, which will occur in from five to fifteen minutes, according to the quantity of material employed, the heat should be withdrawn and the vessel allowed to cool. The stone may now be fished out from the pasty mess and examined. If it shows no sign of being attacked, you may be assured that it is a genuine diamond. A paste stone will be found to be strongly corroded by the acid that has come in contact with it, and if it was a small one it will probably have been entirely dissolved.

SEPARATING SILVER.—The following simple method of separating silver out of alloys may be useful. It is described by Herr Gottheim: The silver-holding alloy or metals are dissolved in the least possible quantity of crude nitric acid. The solution is mixed with a strong excess of ammonia and filtered into a high cylinder, provided with a stopper. A bright strip of copper, long enough to project beyond the liquid, is next introduced, which quickly causes separation of pure metallic silver. The reduction is completed in a short time, and the reduced silver washed first with some ammoniacal solution and then with distilled water. The more ammoniacal and concentrated the solution, the more rapid the reduction. The strip of copper should not be too thin, as it is considerably attacked, and any little particles which might separate from a thin sheet would contaminate the silver. The operation is so

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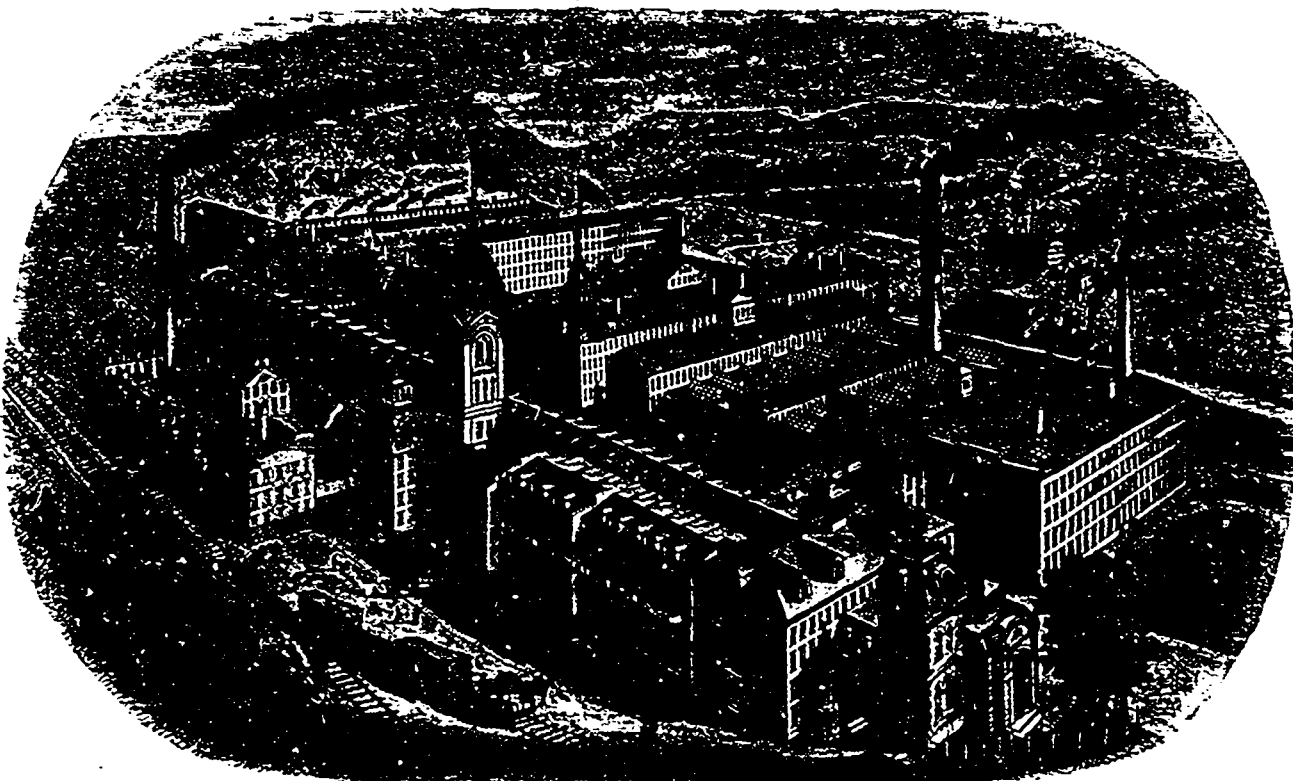


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simple that it seems preferable to all others for such operations as the preparation of nitrate of silver from old coins, etc. Any accompanying gold remains behind during the treatment of the metal or alloy with nitric acid, chloride of silver, produced by the impurities [HC] in the nitric acid is taken up by the ammoniacal solution like the copper, and is also reduced to the metallic state; and whatever other metal is not left behind, oxidized by the nitric acid, is separated as hydrate (lead bismuth), on treating with ammonia. Any arseniate which may have passed into the ammoniacal solution, is not decomposed by the copper.

SCIENCE AND OTHER NOTES.

A poor Jewish watchmaker, of Kisheny, in Russia, has just completed after two years labour, an ingenious clock, which at certain hours of the day plays the national anthem, and gives a mimic representation of the coronation ceremony. When the hour arrives two doors fly open, disclosing a model of the Cathedral of the Assumption at Moscow, where the Czars are crowned. Then the gates of the cathedral swing back, and within appears the Metropolitan of Moscow surrounded by dignitaries of the church in gorgeous robes. The Emperor and Empress enter and are sprinkled with holy water, thereupon the Emperor takes a golden crown from the Metropolitan and places it on his own head, and a second crown upon the head of the Empress, and the doors of the cathedral close. The maker of this ingenious toy will present it to their Imperial Majesties immediately after the coronation, provided, of course, that the police are sure it contains no dynamite.

THE VOLTA PRIZE COMPETITION OF 50,000 FRANCS.—The French Department of Public Works has recently communicated to the President of the Academy of Sciences the conditions of the Volta prize to be competed for in 1887. After a general explanation of the importance of the Voltaic column, follow the five articles for competition: 1st, the prize of 50,000 francs, established by resolution dated June 11, 1882, will be given as a reward to the author of a discovery making electricity suitable to be adapted in an economical manner to the following uses: As source of heat, light, chemical operation, mechanical force, as means for sending despatches, or for the treatment of sickness. 2nd, Scientific men of all nations are admitted to competition. 3rd, competitive documents will be received up to June 30, 1887. 4th, a committee, to be nominated by the Secretary of Public Works, will test the discoveries of each competitor, and decide to whom the prize shall be awarded.

INTERNATIONAL MERIDIAN.—As is well known, the U. S. Government has proposed a uniform international meridian in a diplomatic circular addressed to the several civilized nations. A very great service would be rendered both to shipping interests and geographical science by the universal adoption of this measure. But it is, unhappily, to be feared that petty national jealousies will also in this case thwart the proposal. While Germany would undoubtedly sacrifice its ancient, almost obsolete, meridian of Ferro for a more modern sensible one, the case is more doubtful already with France, whether they would

patiently resign the meridian of "Paris," and when we come to England the case is still more dubious. London papers already claim that Great Britain, as the first commercial, marine and colonial power, should under all circumstances have the exclusive right of giving the deciding vote. This, when practically interpreted, means nothing less than that England retains its Greenwich meridian also for the future, and all other nations adopt it without further cavil.

EARTH MAGNETISM.—The magnetism of the earth is still an unsolved problem. Professors Ayrton and Perry lately published an hypothesis that the earth was loaded with static electricity, which, by reason of the revolution of the earth, operated like a circulating current and magnetized its core. This hypothesis, however, suffered a sad blow by the mathematical criticism of Professor Rowland, who explained that the charge necessary for the surface would also be strong enough to send a spark from the earth to the moon. Another theory is based upon the presence of an electric current in the air surrounding the earth. Proceeding from the idea of M. Edlund, that an electric current is nothing else than a current of ether, which flows in the revolution, and that electro-static effects were due to the rarification and condensation of the air, M. Selim Lemstrom sought to produce such an ether current in a mechanical way. If a double tube of paper is set into rotation with a core of soft iron, this will become magnetized, as proven by two fine static needles. Upon reversing the rotation, also the magnetic poles will reverse. M. Lemstrom deduces therefrom the relative motion of the ether in the rotating tube to be the cause of polarity. If the tube were stationary, and the core revolve, a similar effect would be obtained.

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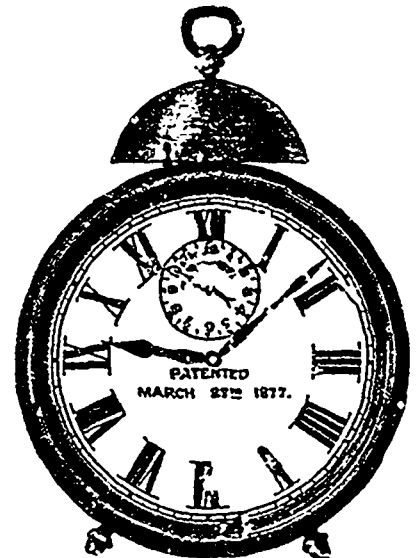
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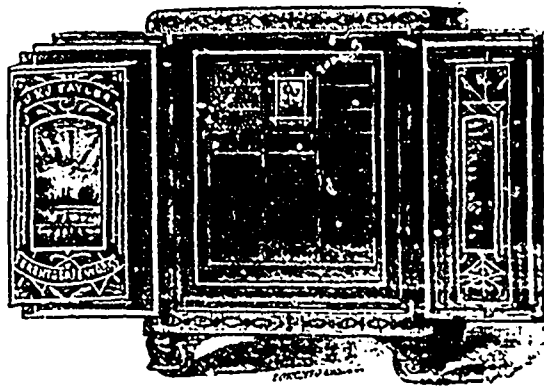
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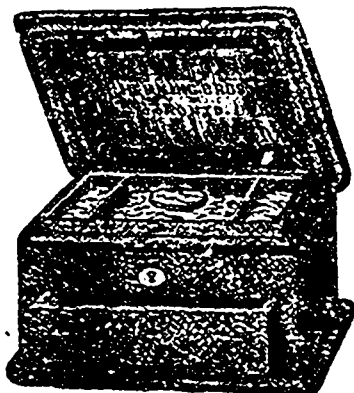
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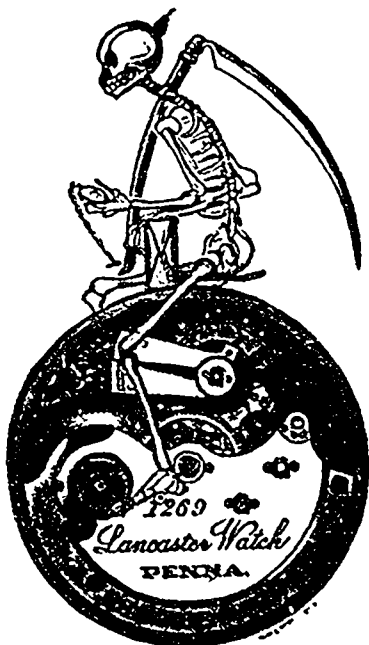
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