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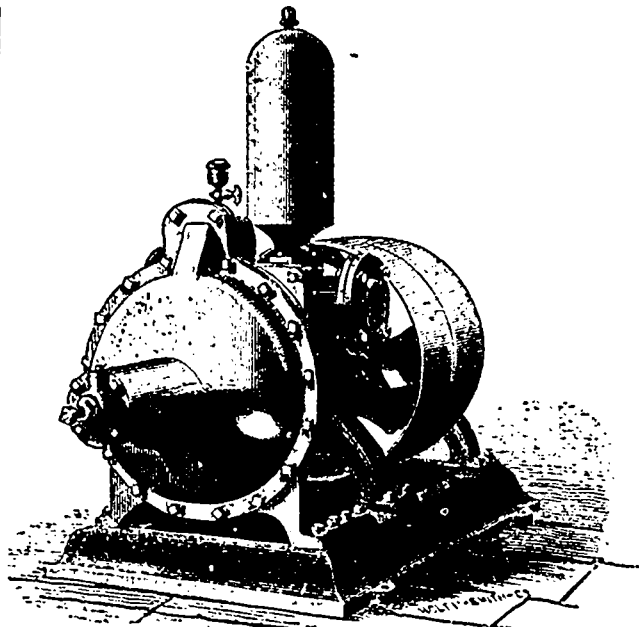
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**NORTHWEST FORESTRY.**

The subject of tree planting in the Canadian Northwest, which received considerable attention a year or two ago, has of late almost entirely been lost sight of. The Forestry Association, so far as known, exists but in name, and if any good has been accomplished by it there are no outward indications of the fact.

And yet there is no subject which should engross more attention, having, as it has, not only an important bearing on the appearance of our cities and towns but also on the comfort of the settlers on our prairies.

Our attention has been again called to this matter by a summary which is contained in the last report of the Department of the Interior of a preliminary report of Mr. J. H. Morgan upon the subject of the protection of the present forests of the Dominion and the planting of trees on an extensive scale.

Much of the document is taken up with the question of the preservation of Canadian forests from fire, and does not so particularly concern the Northwest as that relating to the planting of trees. He declares that the climate of the Northwest is one of the healthiest in the world, but it is very dry, and the territory therefore ought to have a large proportion of its area in woods. With this want supplied, there appears some reason to believe that early frost visitations would be avoided, and that one of the elements of uncertainty in connection with agriculture in this country would be almost entirely removed. Mr. Morgan is satisfied that woods would have most beneficial and ameliorating effect on the climate. They would temper the cold winds of the spring and retard the autumnal frosts. It is a well established fact that the atmosphere of the woods in summer is much cooler, as well as moister, during the day, than in open field, and that the reverse is the case during the night. So soon as the sun's rays leave the surface of the earth it chills very rapidly, and often in a dry climate, while the air at, say five feet from the ground, is moderately warm, the temperature of the earth is chilled by radiation, and often goes below the freezing point, while the air, at an elevation of five or six feet, is several degrees warmer. The presence of woods would often avert these early frosts, more especially if the woods occupied the higher grounds. The moist, warm air from the woods would spread over the fields after the sun had gone down, and act as a protecting mantle to the unripe crops, and become the means of averting what otherwise would be an almost certain danger. The drier the atmosphere the more liable are we to refrigeration of the earth's surface; consequently, the greater and the more imperative the necessity of planting forest trees in our Northwest. Of the great necessity of tree planting on our prairies there can be no practical doubt, fuel and shelter being among the first wants of

the settlers. In respect to the contention of some scientists, that the character of the soil of some of the high plains is such that trees will not grow thereon, he cites, in refutation, the experience of the pioneers of the adjoining territories and states, which affords promise of unquestionable success. From the Geological Survey report for 1875 Mr. Morgan quotes Dr. Bell's remarks on the relations of the different classes of soils to the wooded and open areas of the country, to show that the timber is found in those parts where the soil has capacity for receiving and retaining moisture, while those parts which are dry and the soil sandy and gravelly, are, as a rule, bare of timber. One of the greatest barriers to the success of arboriculture on our prairies is want of moisture. So soon, however, as the land becomes broken up, the rains will penetrate and remain on the soil to a much greater extent than at present. In Nebraska and Dakota millions of trees have been planted, and there are now to be seen magnificent groves of trees where, ten years ago, there was nothing but dreary waste. In Minnesota there is a Mennonite settlement where, in seven years from the turning of the first sod, the settlers were enjoying the shade of large groves of trees which they had planted. Similar instances are also found in Iowa.

Mr. Morgan regards the work to be done as one of great magnitude in which the Government, the railroads, the land companies and the people must all take a share. The Government should take the initiative, the first and most essential step being the establishment of experimental forestry stations at several points in Manitoba and the Northwest Territories. The aim of these stations would be to furnish a scientific as well as a practical foundation for a rational management of the forests, to examine the advantages which one method may have over another, and to establish an economical and profitable system of forest administration. Mr. Morgan thinks immediate steps should be taken towards the establishment of these experimental stations, which would be of great benefit to us, and solve many of the problems that otherwise might lead to failure. From these stations could be learned what trees could be grown; their adaptability to the soil; a study could be made of the animal and vegetable foes of trees, and the means to combat them, while reliable tables of increase could be acquired, as well as practical methods for valuing forests. They could also be used as nurseries for raising and supplying the young trees to settlers, and as meteorological stations. Various suggestions are then given as to the selection of sites for these stations, the preparation of land for the planting of shelter belts around them, the preparation of the soil for the planting of young trees, and for directing the progress of the work at the different stations while in operation.

Having shown that the denuding of the country of its trees causes an abnormal condition of the rivers and streams, Mr. Morgan proceeds to inquire whether the reforesting of a fair proportion of the plains would not cause a change in the level of the waters in the Red river, the Saskatchewan, Assiniboine and other rivers now subject to extremes of high and low water, and thinks it may reasonably be presumed that if their banks and the neighboring hills were clad with trees, whose foliage would protect the earth from the sun's rays and from the hot winds, the mosses and porous earth would hold and store the water till it found its way gradually to the rivers, preventing floods, causing a more regular water level, prolonging the season of navigation, and contributing largely to the prosperity of the country.

In concluding his report, Mr. Morgan says it is not too late to repair much of the damage that has been done by the destruction of our forests. Regulations for the use of the timber might be made without injury to the legitimate lumber trade, and the replanting and establishment of artificial forests may undoubtedly be made profitable for private as well as public enterprise. The forests of Manitoba and the Northwest, now being slashed and wasted with great recklessness, should be kept as permanent reserves to supply the wants of settlers, the mature trees only being cut down, and their branches left to litter to the ground, acting as conductors for the prairie fires. All our present forest land should be carefully surveyed, laid out in districts and charted, and the character and profile of the land described. Timber experts or competent wood rangers should be sent to examine, appraise and report on their value and availability. Enough has been shown, Mr. Morgan believes, to make it evident that it is the duty of the Government to adopt immediate measures to arrest the further destruction of our remaining forests, except under some very improved system of supervision; to replant, where practicable, the high lands formerly covered with forest trees, and to adopt some system of forest plantation for the great prairie regions of the Northwest.

In any system that may be adopted by Canada, special care should be taken to make provision for the fullest enforcement of the laws. By this means only can we expect to see our remaining forests protected from utter destruction, new ones produced, and our prairie country beautified with groves and plantations. Almost all the civilized nations of the old world long ago realized the danger that their improvidence and carelessness had caused, and have taken the most thorough and systematic steps towards the protection and reproduction of the forests, and in this have shown a striking contrast to the wastefulness and neglect that have characterized the conduct of those who have had control of the great forests of America. If we would keep

up with the march of progress and civilization of our time, if we would do our duty to the noble heritage with which God has endowed us, we must no longer defer a work which is of such paramount importance and so absolutely essential to our prosperity as a people.—*Winnipeg Times.*

**BELT vs. WALL**

Speaking of the prejudice that existed only a few years ago against high speed—speed that would at the present time be considered common, or even slow—an engineer relates his experience in speeding up a large mill engine. The engine being overloaded at its present speed, by his advice it was speeded higher. Upon starting up after the change, there was an unaccountable noise from the belt, which those present attributed to the high belt speed. The engineer being busy about the engine, advised that they look elsewhere for the trouble, and, while still too much occupied to investigate the cause of the noise, about a yard of plastering came tumbling down, filling the air with a cloud of dust, and bringing about a not entirely orderly retreat of every one but the engineer, who had advised the change, and was superintending the starting up at the increased speed. Stopping the engine by means of the governor rod, and looking around, he found that when changing the pulleys on the line shaft the wall had not been cut away sufficiently, and as a consequence that the belt came in contact with a timber, with the result mentioned. Cutting away the wall removed all the obstructions to the increased speed.—*American Machinist.*

**Big Fire at Albany.**

ALBANY, N. Y., March 1.—The immense freight depot at the Albany & Susquehanna Railroad on Gansevoort street, 600 feet long, and well filled with freight, was totally destroyed by fire to-day together with 15 loaded cars. It is thought the Delaware & Hudson Company's loss will be \$50,000. About 40 cars were damaged. The West Shore Company owned most of the freight and the Delaware & Hudson Company the greater part of the cars. The West Shore will lose \$50,000, making the loss \$100,000 to railroads. The Albany Aniline and Chemical Works' west building was almost entirely destroyed, involving a loss of 312,500.

**Bell Telephone.**

WASHINGTON, March 3.—Commissioner Butterworth has rendered a decision in the great telephone interference case of Bell v. Gray, McDonough, Voelker and others. The case involved the question of priority of invention of the telephone. The commissioner affirms the findings of the board of examiners and awards the priority of invention to Bell in all claims of importance.

**THE TIMBER CARRYING TRADE.**

The old prejudice against timber-carrying is not yet, perhaps, wholly eradicated. In times gone by, when wood-built vessels only were in fashion, as soon as a ship went out of class at Lloyd's, and would take too large a sum to put her back on a good letter, though still easily rendered seaworthy, she, as a matter of course, went, probably by transfer, into the timber trade, and, perhaps, for many years continued to make her two voyages out and home as regularly as any first-class vessel could have done. We could name many ships that did so, and perhaps the latest example of this kind was the old Marco Polo, of not inglorious memory, which finished her career last year by no fault of her own. But in those days timber ships came to be regarded as the *canaille* of the trade. Commanders of higher class vessels, who were eligible for a freight of more precious or more perishable commodities, treated them with something like contempt, though, perhaps, glad enough afterwards to get the chance to command one themselves. At all events, they were a sort of nautical *refugium peccatorum* for captains who could get no better berth, till Mr. Pimmell appeared on the scene, and put an end to this ancient institution, by such a severe wooding out that our old ships, and their trade with them, went into the hands of foreigners—whether for good or evil we need not here discuss—till steam boldly entered the list and took up the timber trade; eventually thereby effacing foreign rivalry, and bringing the carrying trade chiefly back again to British bottoms, when, unluckily, there seems little or nothing to be got by it.

But to account for the great fluctuations in the corn carrying trade, not affecting the freight of timber, there is, perhaps, a sort of prejudice still adhering to the timber-carrying, even with iron steamers, and it is probably not considered to be any recommendation to a vessel for the transport service, for instance, that she has been employed in the timber trade. There is possibly a sort of *esprit de corps* in this. If a captain chooses to accept a low freight for grain, he is still in the corn trade. He loses no caste. He cannot be spoken of as the commander of an old timber droguer, and possibly the prestige of his ship in some prospective employment may be of more value to him than the difference in freight on a solitary occasion. We do not say it is so, but it may be so; and how else can we account for the fact that a ship accepts a freight of 5s. with a port under her lee, as it were, and within a couple of days' run, where she might, at any rate, get double as much?

That increasing facilities multiply trade no one doubts; but it may be argued that the American timber trade has been more injured than aided by the use of steam in ocean timber-carrying. In the days before mentioned, when we were paying three guineas per standard from the Gulf of Bothnia, to 75s. was the rate from the Gulf of St. Lawrence and Quebec. The difference in favor of Europe might be estimated at 15 to 20 per cent. But when we see that 50s. can still be obtained from the St. Lawrence ports, while from the Gulf of Bothnia to London is done at 25s., we know that Canadian woods are more heavily handicapped, in contending in our markets against the Baltic, than they used to be; and from Norway to the east coast 15s. per standard by steam is about the average rate. The worst is that while we are trying to account for contrarities in trade that seem to be out of order with its natural laws, there is no appearance of any new force or stimulus to drive the whole forward in a steady current which might be expected to level in good time all inequalities by offering employment, each in his own groove, to all.

Prices still tend downward in the timber trade at least, and the business done is on a smaller scale. Not much, perhaps, but enough to show that the turn of the beam is the wrong way. And with corn it is the same. Six weeks ago, for instance, wheat took a little start upwards, and solemn farmers were seen to smile and look pleasant. But the advance could not be sustained. A fortnight ago it averaged still 33s. 9d. per quarter, but the accounts made up by the Board of Trade last Monday from the returns of 200 markets gave the average at 32s. 4d.

If the loss of the farmer were the gain of the laborer, there would be a social recompense, and trade would rather gain than lose by the transfer. But all experience teaches the other way. Bread is, or ought to be, cheap enough; but the money to buy it, and to lay out in other commodities—say, there's the rub!—that, unhappily, seems to be getting scarcer and scarcer, among our industrious classes, every day.—*Timber Trades Journal*.

**CONCRETE PAVEMENT.**

The well-known Belgian system of street pavement appears likely to be superseded—especially in those cases where the first cost is not a matter of overruling consideration—by a new and improved method of concrete pavement covered with a wooden cushion or carpet, such as has already been extensively adopted in portions of London, Paris, etc. The roadbed is first covered with a six-inch coating of concrete, composed of Portland cement and broken stone, finishing off with a top dressing of the cement and of fine gravel or sand, and upon this are laid blocks of common red pine of the size ordinarily used in the Nicholson pavement. Between these blocks are left spaces about one-third of an inch wide, into which is poured bitumen, or asphalt, for an inch in depth; this fastens them to the foundation of concrete and to one another. After setting, the crevices are filled with Portland cement, and the whole covered with a fine sharp gravel, which is ground into the pores of the wood and forms a protective coating. The wooden blocks are previously treated with creosote, to protect them from decay, and to prevent them from swelling on becoming wet; a space of three inches is also left between the wooden blocks and the curbing on each side, as a kind of expansion joint.—*Boston Journal of Commerce*.

**PRESERVATION OF WOOD.**

The decay of wood when exposed to the action of time and weather, is the result of a sort of fermentation process produced by the action of heat and moisture in the watery and albuminous ingredients of the wood, which gradually converts the sound timber into a rotten mass and renders it useless for any mechanical purpose, this process at the same time being assisted by the boring insects that make their homes within the cells of the decaying wood and live on the nutriment of the juices.

The fence builder is led to believe that a post will last a greater length of time if only set opposite in the position from which it grew. A coating of oil and charcoal is supposed to protect the posts that enter the ground till not a man will live to see them rotted. Heating till quite a depth has been converted into charcoal has not prevented the process of decay, or kept the insects from eating the cooked food within. A change that will make use of the whole material must meet a process of preparation that will reach the entire depth of the wood. Timber that has been steamed under a pressure of one hundred pounds to the square inch must feel the effects of heat in all the liquid ingredients contained within the pores, especially when the pressure is reduced and the vacuum pumps put on.

In the creosote process the timber is confined within a large cylindrical boiler and held under a pressure of steam until it has penetrated the wood and vaporized all the fluids within the pores. The pressure is then removed, even the atmospheric pressure, when the creosote is injected and forced into the wood by raising the pressure as before. The object of every rational treatment is to harden the albumen contained in the fluids within the pores of the wood, and nothing short of a complete change, making a different solution entirely, will ever arrest fermentation and destroy all the germs of animal and vegetable life and prepare the woods to resist the effects of weather.—*Eastern Journal of Commerce*.

**Tall Oaks from Little Acorns Grow.**

Great and good results often spring from small deeds and so fatal diseases come of a seemingly trifling neglect. Colds neglected often lead to serious catarrhal troubles. If this is your case lose no time in becoming acquainted with Dr. Sage's Catarrh Remedy. Its healing virtues will surprise you. It is simple, efficacious, speedy, sure. Dull, heavy headache, obstruction of the nasal passages, discharges from the nose into the throat are symptoms of this horrible complaint.

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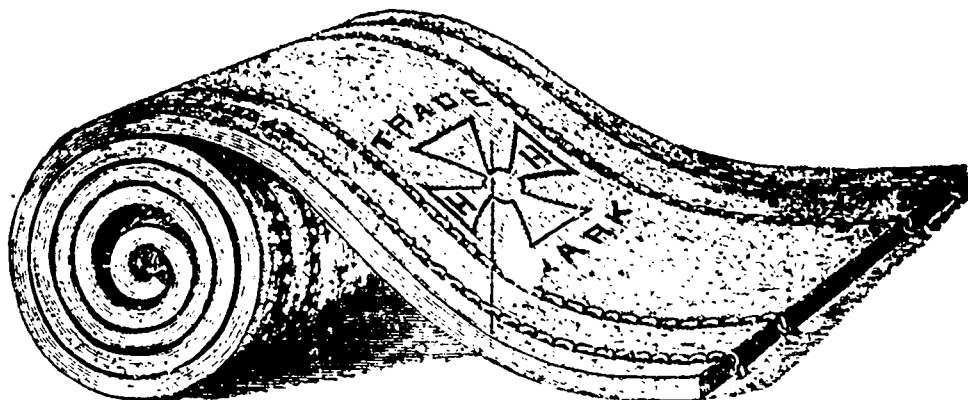
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 Yours respectfully,  
 W. C. MARSHALL,  
 Foreman City Flour Mills.



**TESTIMONIAL.**  
 PACT, BERRY & CO., CAROL HORSE SHOE AND  
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### THE OUTHROW OF A PULLEY.

It does not seem possible that any two mechanics should disagree on the outhrow of a pulley when being driven with a high speed. Every wheel that is out of balance has a heavy side, and one that is light, which are directly opposite to each other, and it is towards one or the other of these sides that the outhrow is claimed to be found by those who have made experimental study of this matter. It would seem that in an unbalanced wheel that the centre of gravity would be off from the central line of the shaft, and bring the effects of the whole pulley like a stone in a sling, with a tendency to spring the shaft toward the heavy side and increase the distance between the centre of gravity and the line about which the wheel is turning. This very feature is noticed in lathe work, and a shaft that throws out badly by its pulleys is not remedied by increasing its speed. But take the centrifugal switcher and notice how readily it will adjust itself with an unbalanced load. This hydro-extractor stands in a vertical position and can rock about in an elastic bearing at the foot, and if the sling stone principle could have its hold for an instant the whole machine would be thrown off its centre toward the heavy side.

There is another matter that must be taken into account in balancing the moving parts of any machine while driven with great velocity, and the advocates of high speed must give these forces time to act, or the effects of any cause may likely be found acting in a different direction than the cause that produced it. Take the force of gravity, for instance, and notice its effect on any single atom in a revolving wheel. If the plane of rotation is level, this downward tendency that gives weight to a substance acts directly to one side or at right angles to the direction of motion, and neither assists at one instant in drawing the particle forward nor holding it backward at another. If the axis of the wheel is inclined from its vertical position, this particle not only rises and falls with the force of gravity but travels in an elliptical path with reference to the former surface. Now if gravity required the least instant of time to act, this revolving atom would no longer balance the one directly opposite, and as far from the centre on the other side. Unless revolving in a level plane every particle of material, when they arrive on the descending side of an inclined wheel, would not have the downward effect on the pulley as they will on the similar portions of the ascending side, and the effects will be similar to those seen in the gyroscope, to bring the axes not toward the heavy nor to the light side, but around a vertical axis, leading the centre of gravity in a spiral shaped path till the wheel is steady and level with the axis in upright position. If the centrifugal force, or the outhrow of a pulley, should have a similar tardiness in its action, the speed of rotation could be such that the effects of the outhrow would be brought in a direction to bring the wheel into its central position instead of throwing it off its centre of rotation.

In balancing pulleys on the ball-and-socket joint, the tardiness of action is easily observed. A force applied to true the wheel has the effect of one that is taking place in some other part of the pulley, and if the combined efforts the centrifugal force of every particle, or the outhrow of the whole wheel were to manifest themselves, as the forces appeared on the ball joint, the mechanics would have reason to disagree, and it would be doubtful if the outhrow would be exactly to the heavy side or to the light.—*Boston Journal of Commerce.*

### HEAVY AND LIGHT TOOLS.

There is a general demand at the present time, from manufacturers and machinists, for strong, powerful tools, capable of taking as large cuts as the work will stand, and geared to the highest speeds that are practicable. Tool makers in all parts of the country are overhauling their patterns, increasing the weight of bed plates and frames, and adding to the stiffness in all directions, while at the same time feed-motions and driving gear are redesigned and made more powerful. In doing this, they are but complying with the strict requirement of the trade. Where such tools can be kept up to

their full capacity, doing the work for which they were intended, they are undoubtedly the most economical, but there are many shops in which a tool of this class can but rarely be used to the full extent of its capacity. For many classes of work, however, such a tool is manifestly too clumsy and altogether unsuitable, as, for example, when an 18-inch lathe is needed for turning up a lot of light rings, or there is a large quantity of light work to be done. Light lathes for these purposes fill the bill both from the commercial and mechanical standpoint. Having strict regard for the character of the work to be done, the best tool makers have reached the conclusion that the should be about three different patterns for each size of tool. Of these, the first and most important is the machine which is capable of doing all that can be required of it, able, in fact, to do all that the work will stand. The second or intermediate tool should be one adapted to a variety of work and to be useful in a wide range. Lastly, comes the light tool having the same capacity as the others, so far as size is concerned, but intended to do a class of work that could not be conveniently handled on either of the other styles of machine.

Buyers are now very frequently carried away with the fashion, and because it is the correct thing to take the heavy cuts with fast feeds, they select with a view to the number of pounds of iron which they get, and the strength and stiffness of the tool, rather than with reference to the character of the work they are doing and how it can be produced in the most economical manner. Practically, the price paid for the tool which will do the work in the best and cheapest manner is of no consequence. The difference between the lowest-priced machine tool to be found in the country and the best one which money can buy for a given purpose is so small, compared with the difference in the amount and quality of the product, as to make the first cost an entirely secondary consideration.—*National Car Builder.*

### THE WHEEL WORK OF MILLS.

Mistaken attempts at economy have often prompted the use of wheels of too small diameter. This is an evil which ought carefully to be avoided. Knowing the pressure on the teeth, we cannot with propriety reduce the diameter of the wheel below a certain measure.

Suppose, for instance, a water wheel of 20-horse-power, moving at the pitch line with a velocity of 3½ feet per second. It is known that a pinion of 4 feet diameter might work into it with impropriety; but we also know that it would be exceedingly improper to substitute a pinion of only one foot diameter, although the pressure and velocity at the pitch lines, in both cases, would be, in a certain sense, the same. In the case of the small pinion, however, a much greater stress would be thrown on the journals (or journals) of the shaft. Not, indeed, on account of torsion or twist, but on account of transverse strain, arising as well from greater direct pressure, as from the tendency which the oblique action of the teeth, particularly when somewhat worn, would have to produce great friction, and to force the pinion from the wheel, and make it bear harder on the journals. The small pinion is also evidently liable to wear much faster, on account of the more frequent recurrence of the friction of each particular tooth.

That these observations are not without foundation, is known to millwrights of experience. They have found a great saving of power by altering corn mills, for example, from the old plan of using only one wheel and pinion to the method of bringing up the motion by means of more wheels and pinions of larger diameter and finer pitches.

The increase of power has often, by these means, been nearly doubled, while the wear and tear have been much lessened, although it is evident the machinery thus altered was more complex.

The due consideration of the proper communication of the original power is of great importance for the construction of mills on the best principles. It may easily be seen that in many cases a very great portion of the original power is expended, before any force is actually applied to the work intended to be performed.

Notwithstanding the modern improvements in this department, there is still much to be done. In the usual modes of constructing mills, due attention is seldom given to scientific principles. It is certain, however, that were these principles better attended to, much power that is unnecessarily expended would be saved. In general, this might be in a great measure obtained by bringing on the desired motions in a gradual manner, beginning with the first very slow, and gradually bringing up the desired motions by wheels and pinions of larger diameters. This is a subject which should be well considered before we can determine in any particular case that ought to be the pitch of the wheels. In the case above alluded to, where the supposition is a pinion of 4 feet diameter, or of 1 foot diameter, it is obvious that the same pitch for both would be prudent; that for the small pinion ought to be much less than that which might be allowed in the case of the larger pinion. It is also equally obvious that the breadth of the teeth, in the case of the small pinion, ought to be much greater than that in the case of the larger pinion.

It is evident, however, that although great advantage may often be derived from a fine pitch, there is a limit in this respect, as also with regard to the breadth.—*Buchanan on Mill Work.*

### WOOD-POLISHING WITH CHARCOAL.

A Paris technical journal thus describes a method of polishing wood with charcoal. "All the world now knows of those articles of furniture of a dead black color, with sharp clear cut edges and a smooth surface, the wood of which has the density of ebony. Bringing them side by side with furniture rendered black by paint and varnish, the difference is so sensible that the considerable margin of price separating the two kinds explains itself. The operations are much longer and much more minute in this system of charcoal polishing, which respects every detail of the carving, while paint and varnish would clog up the holes and widen the ridges. In the first process they employ only carefully selected woods of a close and compact grain; they cover them with a coat of camphor dissolved in water, and almost immediately afterwards with another coat composed chiefly of sulphate of iron and nut-gall. The two compositions in blending penetrate the wood and give it an indelible tinge, and at the same time render it impervious to the attacks of insects. When these two coats are sufficiently dry, rub the surface of the wood at first with a very hard brush of couch grass, and then with a substance as light as possible; because, if a single hard grain remained in the charcoal, this alone would scratch the surface, which on the contrary they wish to render perfectly smooth. The flat parts are rubbed with natural stick charcoal, the indented portions and crevices with powdered charcoal alternately with the stick. The workman also rubs his piece of furniture with a piece of flannel soaked in linseed oil and the essence of turpentine. This process repeated several times causes the charcoal, powder, and oil to penetrate into the wood, giving the article of furniture a beautiful color and perfect polish, and which has none of the flaws of ordinary varnish."

### WHEN TO CUT TIMBER.

The fact is becoming fully recognized, says the *Lumberman's Gazette*, that the durability of timber depends very materially on the time of year in which it is cut, and there is no little diversity of opinion in relation thereto. This arises, probably from the fact that very few men engaged in getting out timber are enabled to follow it to the point of consumption, and thereby draw rational and practical conclusions regarding it. A gentleman named John H. Moore, at Arkansas Post, who has been long engaged in the business has made it the subject of study, and gives his conclusions to the *Cincinnati Artisan* in quite a lengthy letter, wherein he states his experiments and conclusions as follows:

"I have been getting out timber for forty years, and long ago noticed that of the same kind of wood some lasted much longer than others, that some would rot at the heart while the outside was sound; that in deadening

timber on land to be cleared some would rot at the sap off while the heart remained sound, while other trees would rot in the heart and fall while the sap was sound.

In looking for the cause of this, I concluded these effects were produced by the presence of sap. I find that after the fall of the leaf, the sap goes into the body of the tree, and that the only time when there is no sap in the body of the tree is after the leaf is fully grown and the sap is making new wood. I once supposed that this state of things continued until the leaf is ready to fall, but from an examination of oak wood, cut last September for steam purposes, I am induced to believe that it lasts but a few months—with us, probably from the 1st of June to the 15th of August, possibly until the 1st of September.

I have here some examples which I will give to your readers: In August, 1853, I cut some fence posts from post oak saplings about six inches in diameter. Some of these posts are still sound. Rails made from the same kind of timber cut in winter will not last over five years. In 1860, in August, I got some logs for a house; these logs are still sound, although they remained in the woods, after being cut, until 1863. In the winter of the same year (1860) I got out square timber of the same kind of oak to build a gin. They were not used, but were piled up, with slats between each layer, until, in 1866, they were found to be all rotten in the heart while the outside was sound. I am now using a piece of post oak as a bed for my engine, that was cut in the winter of 1863; it has been under cover, but the heart is rotten, while the outside is sound.

This proves to me that the cause of rot is not by exposure to the weather, but on account of the presence of sap. This is the conclusion that I have come to; timber lasts best when cut after the full leaf has grown, and before the sap returns to the body of the tree."

### FOREST FIRES.

The year before last was especially noteworthy or the sudden growth of public opinion favorable to the preservation of our forests. The convention in Montreal was participated in so heartily by men of science, by statesmen, by farmers and by merchants, that there seemed good ground for the belief that the day of apathy had gone by and that a new area of conservative wisdom had been inaugurated in which our diminished forest wealth would be secured the protection and fostering care which had been denied it in the past. And, undoubtedly, the interest in the subject of which the Montreal gathering was so encouraging an indication did not prove evanescent. All over this continent, in the United States, North and South, and in every province of the Dominion—there has been an earnest desire to omit no measure or effort which would directly or indirectly contribute to the great end in view—the preservation and renovation, as far as possible, of our own bountiful timber supplies. During the last two years some admirable manuals for the instruction and guidance of the public have been issued by governments and individuals. The people can no longer, therefore, be said to perish for lack of knowledge. Still more practical steps have been taken in the enactment and enforcement of certain regulations tending to secure the forests of the country from fire and other forms of waste.—*Montreal Gazette.*

### Chimney Stack Tops.

The tops of chimney-stacks need careful arrangement because the exit of smoke from them is very liable to be disturbed and hindered by gusts of wind; particularly when beneath other high objects in the neighborhood. There should be at the top of every flue an expanded space, within which most down draughts of air will rotate, and expend their force, without invading the flue below; and there should be louvred openings, so arranged as to direct the wind upward, and make it assist, instead of interfering with, or retard the exit of smoke.—*The Architect.*

\* \* \* Delicate diseases of either sex, however induced, radically cured. Address, World's Dispensary Medical Association, Buffalo, N. Y.

**Chips.**

McCRACKENS, GALL & Co., Toronto, Ont., have disclosed, Geo. Gall continuing.  
At the sale of Crown timber limits in Quebec on Feb. 25th, \$58,128 was realized.

The Buckingham, Que., Pulp Company, with a capital of \$50,000, has been incorporated.  
The site of the two new elevators at Duluth is being laid out, which looks like early work in the spring.

JAMES DIBBLE, of Campbellford, Ont., was recently killed on Wright & Ketcham's logging railroad, Midland County, Mich.

The Harbor Springs, Mich., toothpick factory has purchased 650 cords of wood at Carp Lake to be worked up into picks.

THOS. SCOTT, of Bloomfield, Huron county, Mich., was found dead in such position that it was seen he had been killed by the fallen branch of a tree that he was cutting.

The first lumber sold on the east shore of Lake Michigan, north of Muskegon, was in 1842, by Ross & Hyde, the price being \$5 a thousand. Wm. Lay, Chicago, was the purchaser.

The Ottawa Free Press of Feb. 27th, says:—The South American lumber trade is improving and large orders have recently been received here, and shipments are being made daily. Lumber is moving satisfactorily at present, the railway companies furnishing all the rolling stock required.

A BILL has been introduced into the Michigan legislature the object of which is to prevent litigation in cases wherein logs float from streams on to bordering land during overflow. Time is given for removing logs to the extent of one year, and in case litigation fails to settle damages, arbitration may be resorted to.

A SINGULAR and fatal accident occurred on Monday last at the logging camp of Anderson & O'Brien, in the St. Croix district, to Jos. O'Brien, who was driving a load of logs to the landing. By some mishap he slipped from his load, fell so that the runner of the sled passed across his neck, completely severing his head from his body.

**Cottonwood.**

The Greenville, Miss., Times says that there has recently been a noticeable growth in the use of cottonwood for the manufacture of furniture. Lately a steamer took 100,000 feet from that locality to Cincinnati for furniture making purposes. There is a selva of cottonwood all along the Mississippi on the bottoms below Cairo. The timber hitherto has been considered of little value, but hereafter it will be utilized. The trees grow to great size, and will make a large amount of lumber to the log. At the local mills on the lower Mississippi it sells for \$10 a thousand, and can be made very useful for negroes' cabins and any cheap farm building.

**The Weight of Logs**

Can you tell me how much the average pine log weighs per thousand? L. This question has been repeatedly asked, and we have replied 8,000 pounds. We are now in receipt of a letter from an official of the Flint & Pere Marquette railroad, and it answers the question so definitely that we make public the figures it contains. Twenty-three trains were weighed. These trains were loaded with 6,283 logs, scaling 2,342,603 feet, and the average was 7,700 pounds per thousand. The writer of this letter says that the logs that are moved now are heavier than the ones that were moved 10 and 15 years ago, owing to the fact that at that period a better grade of logs was cut. He says he has no actual data of the weight of ordinary logs, but confiders 8,500 pounds per thousand a fair average. These figures are based on Scribner measure. Taking the good, bad and indifferent logs together, it is therefore very probable that 8,000 pounds to the thousand feet is a safe average.—Northwestern Lumberman.

**Best Goods are put in Smallest Parcels.**

The old proverb is certainly true in the case of Dr. Pierce's "Pleasant Purgative Pills," which are little, sugar-wrapped parcels, scarcely larger than mustard seeds, containing as much cathartic power as is done up in the biggest, most repulsive-looking pill. Unlike the big pills, however, they are mild and pleasant in their operation—do not produce griping pains, nor render the bowels costive after using.

**A Log Stealing Story.**

The Saginaw Courier says:—They say there is considerable log stealing in the vicinity of Clare, and one gentleman interested in lumbering there relates a funny circumstance. He says that two men were set to watch a certain lot of logs and they got out a pack of cards and went to playing 'seven up' on one of the biggest logs, and got so interested that one of the log thieves came along and hitched on to a dog which he had driven in the end of the log and drew it out of the bark, leaving the fellows still playing on the empty shell. The story looks bogus but it has the true 'ring.'

If so-called remedies have failed, Dr. Sego's Catarrh Remedy cures.

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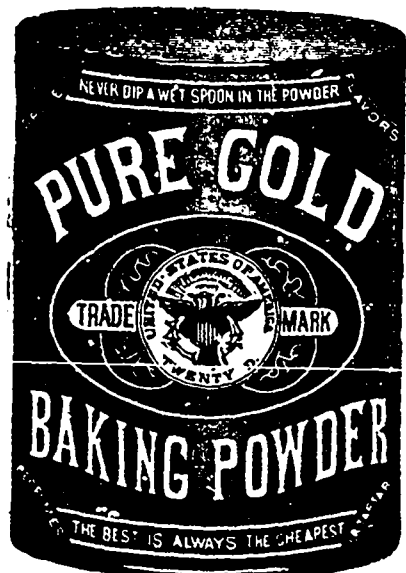
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All Exhibits for Antwerp should be ready for shipment not later than the first week in March next.

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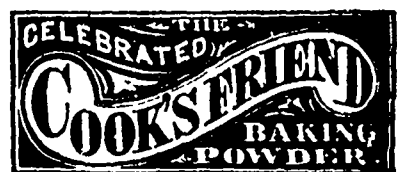
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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Office of Messrs. SIMON DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., MARCH 16, 1885.

Messrs. Garland & Thompson have started a saw mill at Portage la Prairie, Man.

ALL of the Canadian voyageurs, except 70, who went to Egypt to assist the British army in the ascent of the Nile, have returned.

A FACTORY at St. Mary's, Ohio, has furnished 120,000 oars for the Nile expedition against the Mahdi.

GIBBS BROTHERS, of Mayfield, Grand Traverse county, Mich., has about 1,000,000 feet of hardwood banked.

WHILE chopping down a tree in the township of Peel, Ont., Alex. McClance was almost instantly killed by a falling limb.

JOHN RUPRECHT has his new mill at Stephenson, Menominee region, Mich., about ready to start. Its capacity will be 50,000 feet a day.

J. C. MARBLE and C. C. Foster are putting 1,250,000 feet of spruce into Androscoggin river, at Rumford, Me., for the Livermore pulp mill.

Mr. PRINCE's new saw mill at Belmont Lake, Peterborough County, will be 30x66 feet and will have a capacity of 20,000 feet a day. It will commence running about May 1st.

THIS season, it is stated, will finish the pine owned by Heald, Murphy & Cropin, on White river, Mich., and their mill property at White Lake will be for sale at the next season's sawing.

THE Vanceboro, Me., Wooden Ware Company has received an order for three car loads of clothes pins to go to Australia, and the Augusta Furniture Company is turning out ash sets to go to England.

RECENTLY at Burrard Inlet, British Columbia, the following vessels were loading lumber for distant ports. The Lark Persia, for Great Britain; the ship Lorenzo, for Melbourne; the ship Argonaut for Cape of Good Hope; and the bark Mizpah for River Plate, South America.

Wet wood is more easily cut than dry, being softer, but the saw requires to be coarse set and very sharp, consequently there is more waste. Frozen wood is much more difficult to saw than dry, and the teeth should be more like those used for hard wood.

As George Wright, of Foxboro, was hauling logs north of Madoc, Ont., he fell under the sleigh, heavily loaded, and was pinioned for two hours, while his comrade went some distance to procure help. All the time he suffered extreme agony. It was afterward reported that he had died.

FRANK BARNHARDT has begun suit in the Muskegon, Mich., circuit court against Charles H. Hackley for \$20,000 damages suffered by son, John Barnhardt by the upsetting of a lumber pile in 1883. The pile was thrown into the lake from off a dock owned by C. H. Hackley & Co., that broke down, and Barnhardt was caught in the falling lumber, pressed down in the water and drowned.

ROBERT P. PENMAN, whose headquarters are at Evansville, Ind., has contracted for 1,000,000 feet of southern oak for his house in Glasgow, Scotland, James Kennedy & Co. The contracts were made at Nashville, South Pittsburgh and Chattanooga, Tenn. His firm furnishes a large number of oak cross ties for the British railroads. The ties are creosoted before they are laid in the roadbed.

McBURNAY & Co., of West Gravenhurst, are taking out this winter in the township of Humphrey, 2,000,000 feet by their own camp, and by J. J. Barns, jobber, 250,000 feet. They have some 2,000,000 left over from last year, which will give them, altogether, a stock of 4,000,000 for next summer's cutting. The firm intend operating in the woods as long as the winter lasts, and will probably supplement to above output by half a million.

THE Ottawa, St. Lawrence & Schenectady railroad is a newly incorporated enterprise, with a capital stock of \$2,000,000, the object being to build a railroad from Schenectady, N. Y., to the St. Lawrence river, in the county of the same name, there to connect with a road to Ottawa, Ont., the passage across the great river to be made by means of a bridge. The route would be a direct one between New York and Ottawa, and consequently would at once become an important thoroughfare for Canada lumber. It would also travel the western portions of the Adirondack wilderness, and open up much timber land in that region.

**U. S. FORESTRY.**

To the Editor of the Canada Lumberman.

DEAR SIR,—The American Forestry Congress has published three numbers of a "Forestry Bulletin," which I presume you have received, I send the last one and some other publications upon the subject.

Since July, 1883, I have resided with my family here, still working for the Department of Agriculture.

The Department has a fourth volume of reports in press, a part of which I prepared.

On Saturday last we organized, at Utica, "A New York State Forestry Association," with Andrew D. White, (President of the Cornell University) as President.

Our Legislature has half a dozen bills before them for forestry protection, but none of them in my opinion will pass. A sub-committee is appointed from both Houses to digest and prepare a bill from them all. It will hold a session to-morrow evening, and I am invited to address them.

Important changes in the Department of Agriculture are close at hand, in Washington, and if the present commissioner does not remain the future welfare of forestry in our general Government will depend very much upon the choice of his successor.

I notice that my son, F. H. Hough, furnishes you with patent lists. He may have sent you his card, printed on cross-section of maple. If not, the inclosed may prove a novelty. They are made here by my second son Romeyn

B. Hough, with a machine invented by himself and constructed with his own hands. He is now putting in steam power and will be soon ready to produce them from various kinds of wood, and in any quantities. He sells them at \$1.00 per 100 or \$5.00 per 1,000, and has done quite a business in a small way, chiefly for ornamental painting as Christmas and fancy cards.

His ultimate object is to issue one or more volumes of wood-sections with descriptive text. I send an exceedingly thin section of the Magnolia, which shows a wonderful optical property. Hold it to a luminous point in the dark, and notice the brightly colored pathelia. The cause of this easily enough understood: It is but one of several kinds of prismatic effect which these woods display, and which will be fully described and explained in his publication.

Yours truly,

FRANKLIN B. HOUGH,  
Agent of Forestry Division, Department of Agriculture.

Lowville, N. Y., Feb. 27th, 1885.

**TORONTO LUMBER YARDS.**

To the Editor of the Canada Lumberman.

DEAR SIR,—I would not like to deal with all that appears in the LUMBERMAN at the hand of your Toronto correspondent. But one thing calls for special mention. He says the retail yards are overstocked and then undertakes to suggest a remedy. In the first place I have to say there is not a retail yard in this city overstocked—not one; nor is there one suffering any special anxiety. Then as the remedy. Your correspondent suggests that a large retail yard be opened in the outskirts of the city with switches into it from the railroad. Which railroad, may I presume the C. P. R.? I would like to know what he would do with the millions of feet now in railway yards; would he move it out of them to his ideal yard or does he propose to get the C. P. R. to bring in lumber from Ottawa and from the French river, via Owen Sound. If he does, and his dreams ever come to pass in solid fact, he will then learn that its the wholesale men who are overstocked and suffering from anxiety, and that the lumber in their yard will, to a large extent, rot right where it is, viz., in the railway yards of this city. I may with your kind indulgence take in account the matter of price in another issue.

Truly yours,

N. A. P.

Toronto, March 4th, 1885.

**ONTARIO FORESTS.**

THE annual forestry report of the Ontario Government from the pen of Mr. R. W. Phipps will be perused with much interest by many of our readers, for it is a mistake to suppose that lumbermen are mere tree destroyers, some of the most zealous advocates of forest preservation being found among their ranks.

A great portion of this valuable address is more especially interesting to the farmers, dealing with the necessity of plantations for protection, and for their climatic influences. For the benefit of this class is all the information in regard to the manner of planting and selection of trees. The statements by manufacturers as to the variety of woods used for different purposes is of interest and may be of service to our readers.

The account of the watershed of Eastern Ontario with its forests is interesting. The conclusions drawn by Mr. Phipps are evidently well warranted; one being that a forest reservation should be established, and the other that greater precautions should be taken by the Government against fires. He shows plainly by his description how dangerous to the forest is the system of encouraging settlers, right among the pines, on land ill fitted for farming. A division of our public lands into forest and agricultural districts would be more economical and better for all concerned.

The concluding portion of the report contains information as to the forest reservation in the Province of Quebec, the Dominion of Canada and the United States. This good example may well be followed by Ontario. Having appointed Mr. Phipps, who has proved himself to be such an efficient officer, they should now accept his recommendations.

**LIST OF PATENTS.**

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, Feb. 24, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., Washington, D. C.:

312,839.—Chuck, centering—C. W. Glover, Boston, Mass.  
312,838.—Chuck, lathe—C. W. Glover, Boston, Mass.  
312,615.—Lathe—J. W. Cullen & J. W. See, Hamilton, Ohio.  
312,669.—Mortising machine—F. W. Stevens, Lowell, Mass.  
312,870.—Saw fastenings, device for adjusting—A. J. Linton and R. D. Stewart, Saginaw, Mich.  
312,735.—Saw gummer—H. Van Nostrand, Gloversville, N. Y.  
312,735.—Sawing machine, hand—J. V. Rowlett, Richmond, Ind.  
312,849.—Wood ornamentation—L. S. Kayser, Cortland, N. Y.

**PATENTS ISSUED MARCH 3.**

313,447.—Lathe—S. W. Putnam, Fitchburg, Mass.  
313,294.—Log crib—C. C. Barker and T. Craney, Bay City, Mich.  
313,293.—Log loader, floating—O. C. Barak & T. Craney, Bay City, Mich.  
313,195.—Plane for picture moldings—E. L. Gaylord, Bridgeport, Conn.  
313,395.—Saw mill dog—T. S. Wilkin, Milwaukee, Wis.  
313,396.—Saw mill set-works—T. S. Wilkin, Milwaukee, Wis.  
313,427.—Saw tooth—N. Johnson, Jasper, N. J.

**AUSTRALIA.**

Messrs. Lord & Hughes' monthly circular, dated Melbourne, Jan. 14th, 1885, says:—

Since the date of our last we have had a succession of Christmas and New Year's holidays, which have prevented sales, in fact nearly all business has been suspended. Sales that have taken place show a decline in nearly every line; but now that business has again fairly commenced we look for a more active demand.

The arrivals of most descriptions have been heavy, especially from the Baltic ports.

Trade from the yards continues active, and with a slight cessation of arrivals we may look for a small advance.

RED DEALS.—Imports: 1,354 standard, 5,081 pieces from the Baltic. The arrivals have been—Border Chief and Felix, from Gofe, Savenna, from Skelleftea, and Svea, from Sundwall. The cargo, ex Fritze, was offered at auction on 9th instant, all the K H B and H A B being quitted at prices quoted in our list of sales, C x B brand being unsold, with the exception of small line 9x4. Other sales have been of shipments ex Sobraou, Cambrian Duchess, and Nanna, the latter two vessels bringing cut deals; and at yesterday's sale, when the balance ex Glencarn, were offered, only a portion being sold.

SPRUCE DEALS.—Imports: 59,061 pieces from Canada, and 1,101 pieces white deals, from the Baltic. The arrivals have been—Prior Hill and Prince Frederick, from Saguenay, and G. P. Harbitz and Schwanden, from the Baltic. The cargo ex Prior Hill, was offered on 6th inst., all the spruce deals and boards being cleared off.

OREGON TIMBER.—Imports: 1,246,428 feet super. The arrivals have been—Sir James Family and Katis Flickinger. Both of these cargoes, as well as those ex William Ronton and W. H. McNeil, being cleared off at auction, prices naturally showing a fall on last month's rates.

LUMBER.—Imports: Clear pine, 722,079 feet super; white pine chelving, 540,458 feet super; T. and G. ceiling, 155,606 feet super. The arrivals have been Abner Coburn, and the Monarch, from New York; S. F. Homan, and Jupiter, from Boston, with clear pine, ceiling and ceiling; Prior Hill and Prince Frederick, from Saguenay, with Canadian clear and carpenter's clear pine. Sales have been made at



Moses B. Tower, S. F. Hervey, Prior Hill, and Abner Coburn.

**REDWOOD.**—Imports: 360,824 feet super. The only arrivals has been Estella, from Humbolt Bay. The demand for consumption of this timber is but small. Sales by auction have been made of small lines, 3, 4, 5 and 6 inch, ex Adel side steamers, at \$9 10s.

**FLOORING AND WEATHERBOARDS.**—Imports: 4,070,518 feet lineal from the Baltic and Great Britain; 907,670 feet lineal from Canada. The arrivals have been, Waaland, Botvid, and Schwanden, from Frederickstadt; Nanna and G. P. Harbitz, from Christiania; Solkirkshira Garelch, from London; Prior Hill and Prince Fredrick, from Saguenay. The only public sales have been ex Nanna and Regina, of Baltic Red and white flooring, lining and weatherboards; and of spruce flooring, ex Prior Hill, at following prices:—Red, 6x1½, at 9s. 6d.; 6x½, at 7s. 6d. and 7s. 3d.; 6x¾, at 6s. 3d.; 6x¾, at 4s. 7d. and 4s. 6d. 4-out weatherboards, at 6s. 6d. and 6s. 3d. White, 6x1½, at 8s. 3d. and 8s. 6d.; 6x¾, at 7s. 6d. and 7s. 3d.; 6x¾, at 6s. and 6s. 9d.; 6x¾, at 4s. 6d. 4-out weatherboards, 6s. 6d.; spruce, 6x¾, at 6s. 3d. Since writing the foregoing the Zenobia has arrived, but cargo is not included in these imports.

**KAURI PINE.**—Imports: 508,024 feet super. The arrivals have been—Defiance, from Wanganui, and Killarney and Grassmere, the latter not being included in these quantities, from Kaipara. All the auction sales during the past month are comprised in the boards and fitches, ex Clausman, a small portion of logs, and all the fitches, ex Wenona and Defiance.

**CEDAR.**—Imports: 14,300 feet. The arrivals have been Rodondo and Nemesia, from Sydney. Sales are not easily made except at very low rates.

**DOORS.**—Imports: Nil. There have been no sales publicly since our last.

**LATHS AND PICKETS.**—Imports: Laths, 9,494 bundles; pickets, 4,901 bundles. A fair amount of business has been done at auction, prices being slightly lower.

**SLATES.**—Imports: 301,437 pieces. In consequence of continued heavy arrivals prices have declined.

**PLASTER.**—Imports: 1,250 barrels. The market remains about the same as on date of our last advice. There have been no public sales to report.

**CEMENT.**—Imports: 5,860 barrels. The only sale by auction has been line of Adamantine cement, at 12s.

**GALVANIZED IRON.**—Imports: 769 tons. Nothing of interest has transpired since our last, and sales by auction are difficult to effect. Prices for best brands are quoted at £18 to £19.

**EXPLANATION.**—Red deals and spruce deals are sold at per foot of 9x3; T. and G. flooring at per 100 feet running; Oregon timber, redwood, clear pine, shelving, ceiling, per 1,000 feet super; Kauri pine and cedar logs at per 100 feet super; laths, pickets, and slates at per 1,000 pieces. Shorts are all lengths under 12 feet.

**A Serious Explosion.**

**DUNNVILLE, March 10.**—An explosion occurred about 11 o'clock this morning in the second story of the building occupied by Robert Hall as a liquor store. The explosion was the result of placing a powder flask in the oven of an unused stove, for safe keeping, where it was forgotten. This morning it appears a servant lighted a fire, and commenced to work about the room. It was not long before the stove was blown to atoms. The front windows were blown out, and very considerable damage to the ceiling and walls of the room. The furniture was much damaged, and the servant received a rather severe cut on one of the limbs which was struck by a fragment of the stove.

"Frozen Facts" is a purely American expression, and one, too, of recent origin. It has the merit of attracting attention, and also seems to bear conviction of truthfulness on its face. We make room in our issue of to-day, for a fact of this character. A correspondent, Henry Whiting, Esq., of Boston, Mass., says: "Dr. R. V. Pierce's 'Golden Medical Discovery' has cured my son of a fever-sore of two years' standing. Please accept our gratitude." We believe it to be a fact, whether "frozen" or otherwise, that America needs more men like Mr. Whiting; men who act, men who investigate truths, and seize opportunities.

**BELMONT.**

**NEW SAW MILL.**—The new steam saw mill of Messrs. Penevau & Co., which is being erected on the south shore of Belmont Lake, about two and a half miles from Havelock, will be ready to commence work on about the first of May. Its size is 30 x 60, and its capacity will be 20,000 feet a day. It will turn out lumber, shingles, bill stuff, &c.

**MADOC.**

**SHANTYMEN VS. ITALIANS.**—On Tuesday a row occurred between a party of Italians and some shantymen returning from the woods, at the village of Bannockburn, that may yet result fatally for some of those engaged. It appears that the shantymen met some of the Italians a short distance north of that place, and had a row. The Italians followed the others back to the hotel where they were reinforced by several more of their gang, making in all seven. They were evidently bound to have a fight, as one of them immediately drew a knife and made an attack on the shantymen, whom he appears to have had the first row with. The latter warded off the murderous blow but received a bad glancing cut on the head, and the fight then became general, chairs, poker, sticks of wood, &c., being freely used. The woodmen numbered six, but one of their party thought discretion the better part of valor and quickly got himself out of the back door, leaving his five companions to battle with the treacherous sons of sunny Italy. The fight was a desperate one while it lasted, but the Italians were finally defeated, two of their number being so badly used up that they have since been confined to their beds, one of them especially being so badly injured that his life is despaired of. Fortunately he was the fellow who first drew the knife. None of the shantymen were badly injured, and they proceeded on their way to Trenton.—*Review.*

**THE CLIMATE OF BRITISH COLUMBIA.**

**OTTAWA, March 9.**—Two weeks ago Mr. A. W. Ross left Victoria, Vancouver island, to attend Parliament. In conversation with him today he tells me that when he left the grass was high and green, and wild flowers were in blossom everywhere. He counted five varieties of flowers in full bloom in one garden. The farmers were ploughing. Gooseberry bushes were out in leaf. The buds of pear trees were just bursting. Speaking with an Englishman, Mr. Ross says he told him he had no idea that there was such a climate in any part of Canada. It was like the south of England. Indeed he preferred it, as the climate was not so raw as in England in February. Ivy grows on all walls, and trees and fences, and the holly attains great perfection. Mr. Ross says Vancouver is England and Canada combined. The ivy clinging to the maple tree and the holly growing at the roots. The last winter was one of the severest experienced for twenty-three years, yet the lowest temperature in any night of the winter was ten above zero. The snow lasted for about two weeks. Mr. Ross considers the island and the mainland near the coast the best region for apples, pears, plums, and cherries he had ever seen. He saw plums weighing six and eight ounces last autumn. In the interior among the valleys grapes, peaches, and watermelons attain perfection in the open air. The hardier varieties of fruit are better than those grown in California.—*Mail Cor.*

**A BURSTING GRINDSTONE.**

**St. CATHARINES, March 7.**—About 8.30 this morning a most painful accident occurred at the Welland Vale Works. Mr. A. Corker, one of the grinders, was tuning up a grindstone that was set a few days ago, assisted by Mr. T. Moses. The stone was running at an unusual speed for one under the process of preparation, when it burst, part going down through a double floor into the race and the other half flying back, breaking the pulley in two and carrying Moses with it and hurling him against a bundle of scythes. The pulley, with part of the stone, pinned him to the floor, the poor man received innumerable gashes over his body from the scythes, one of his arms being so badly lacerated that it will probably have to be amputated, and one of his legs is so seriously cut about the knee that it is thought to be worse than a break. He is about 30 or 35 years of age, and has a wife and family. Corker only got a scalp wound and will be all right in a few days.

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This book should be read by the young for instruction and the afflicted for relief. It will benefit all.—*London Lancet.*  
There is no member of society to whom this book will not be useful, whether youth, parent, guardian, instructor or clergyman.—*Argonaut.*  
Address the Peabody Medical Institute, or Dr. W. H. Parker, No. 4 Bulfinch Street, Boston, Mass., who may be consulted on all diseases requiring skill and experience. Chronic and obstinate diseases that have baffled the skill of all other physicians are especially such treated successfully.—*HEAL THYSELF*

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A FEW SIMPLE TESTIMONIALS THAT SPEAK FOR THEMSELVES.

OTTAWA, September 3rd, 1899.  
A NORMAN, Esq.—Dear Sir,—I have experienced considerable benefit from your appliances. I feel stronger and better every day.

Yours truly, R. E. HALIBURTON.

PETERBOROUGH, October 15, 1899.  
A. NORMAN—Dear Sir,—Soon after I commenced to use your Electric Appliances, they opened my bowels, cured my cough and cold, relieved my head and considerably relieved my catarrh in consequence. The discharge from my head and chest are now easy, and I feel altogether better. My digestion has improved, my stomach less sour and windy, and I am less troubled with lascivious and vivid dreams. I had previously tried almost all the advertised patent medicines without deriving any good.

Yours truly, J. GREEN.

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## FALL OF A GIANT PINE.

The other afternoon the writer and a friend rode over to the Pratt lot, Westbrook, where Melville Hamblett, of Nason's Corner, is logging with a large crew of men. Some of the men were chopping down trees, others sawing the fallen trees into logs, others were dragging with oxen the logs to the side of the logging road, where they could be loaded on to sleds to be hauled to the city. The visitors told Mr. Hamblett that they wanted to see a big tree cut down. "All right," says Mel, "you shall," and calling two of his best choppers directed them to tackle a gigantic pine, that ran up into the sky more than 100 feet and measured four feet through at the butt.

"Good gracious, Mel" cried Deaire, "we can't stay long enough for them to cut that tree down—it will take all the afternoon! Let them take a smaller one."

Mel smiled out of a corner of his eye and said, "Don't you worry. You'll have plenty of time to see them fell that pine and another like it, and then get back to the city in good season."

In the meantime the choppers—two brothers, named Hugh Ettinger and Archie Ettinger—young, smart looking men, with straight, athletic figures, had tramped down the snow around butt of the big tree and cut down several little trees that would otherwise have interfered with the swing of their axes. Then they sailed into the giant tree with might and main. Big chips and little chips flew with gaping carfs in rapid succession. In just twenty-five minutes the choppers stepped away from the tree with the warning cry, "Watch out!" This cry means that the tree is on the point of falling and warns all to keep "out from under." For a second or two after the call the enormous tree stood tottering as if in doubt which way to fall, and then down it came with a crash that shook the ground and woke the echoes on every hand. In its fall it swept past another pine almost as big as itself and took from it every one of the lower branches almost as clean as if chopped with an axe. It was a sight richly worth riding over there to see. Hugh and Archie did not appear to be winded in the least by their sharp labor, and, incutting the trunk of the fallen pine, began the task of "limbing;" and thus engaged the visitors to it them, bidding them and the genial Mel "a good day and a clear track" for the remainder of the logging season.—*Portland Argus.*

## SUBTERRANEAN WOODS.

Glarence Deming, in his "By-ways of Nature and Life," says of the swampy region of southern New Jersey.

"The huge trees which lie under the swamp to unknown depths are of the white cedar variety, an evergreen, known scientifically as the *Cypripedium Thuyoides*. They grew years ago in the fresh water, which is necessary for their sustenance, and when in time, either by a subsidence of the land or a rise of the sea, the salt water reached them they died in numbers. But many of them ere they died fell over as living trees, and were covered slowly by the deposits of muck and peat which fill the swamp. These trees that fell over by the roots, and known as 'windfalls,' to distinguish them from the 'breakdowns,' are the ones most sought for commercial use, and there are found and worked as follows. The log digger enters the swamp with a sharpened iron rod. He probes in the soft soil until he strikes a tree, probably two or three feet below the surface. In a few minutes he finds the length of the trunk, how much still remains firm wood, and at what place the first knots, which will stop the straight 'split' necessary for shingles, begin. Still using his prod, like the diving rod of a magician, he manages to secure a chip, and by the small knots whether the tree is a windfall or a breakdown. Then he inserts in the mud a saw like that used by ice-cutters, and then saws through the roots and muck until the log is reached. The top and roots are thus sawed off, a ditch dug over the tree, the trunk loosened, and even the great stick, sometimes five or six feet long, is brought to the surface and is split by hand and worked into shingles, as well as into staves used for piles and tubs. The wood has a coarse grain which

splits as straight as an arrow. The shingles made from it last sixty or seventy years, are eagerly sought by builders in southern New Jersey, and command in the market a much higher price than ordinary shingles made of pine or chestnut, which last for roofing usually not more than twenty or twenty-five years. In color, the wood of the white cedar is a delicate pink, and it has a strong flavor, resembling that of the red cedar used in making lead pencils. The trees, once fairly buried in the swamp, never become waterlogged, as is shown by their floating in the ditches as soon as they are pried up, and, what is more singular, as soon as they rise they turn invariably with their under side uppermost. These two facts are mysteries which science has thus far left so. The men who dig the logs up and split them earn their money. The work is hard, requiring, besides lusty manual labor, skill and experience; the swamps are soft and treacherous, no machinery can be used, and long stretches with mud and water must be covered with boughs or bark before the shingles can reach the village and civilization."

## THE EFFICIENCY OF A BOILER.

To estimate the efficiency of a boiler the engine must not be left out of consideration, as the quantity of water required per horse power has been shown to be variable, and depending on the kind and make of the same. The amount of water converted into steam from 212 deg., to 220 deg., Fahrenheit is the most reliable means of determining the efficiency of a boiler; then all boilers cannot be compared on the same basis. If the standard for a horse power fixed by Emery is adopted, then all boilers can be compared on this basis, which will give the correct result for engines conforming with the standard, but which results must be altered to conform with engines requiring different standards. Steam heat and power still hold their supremacy as mechanical civilizing agents, and their use is increasing every moment. The expense for fuel represents the largest current expenditure in the production of heat and power, and to save materially in the largest is the aim of every steam user and manufacturer. As a rule, those who supply the money to meet the expenses of the steam plant are men not conversant with the principles and details of steam engineering. They know not the cardinal facts as the theoretical heat energy in the fuel, the limits of efficiency in the steam engine, and rarely have a correct idea of the conservation of energy and its equivalent ratios. They do know, however, that their plant cost them a large amount of money for fuel, and they are, therefore, ready at any time to give ear to those who propose to reduce the figure.—*American Engineer.*

## BOXWOOD GETTING SCARCE.

"In less than one year the price of boxwood has tripled," said a hardwood dealer. "The roller skating mania has completely exhausted the market of a certain size of boxwood. Less than 18 months ago I could sell a ton of three-inch boxwood for \$38, and it would be first grade wood in every respect, and admirably suited for turning small work. The demand then was steady, and the principal consumers of the wood were rule makers, tool manufacturers and turners, who supplied the market with boys' toys, pool pins and toys of various kinds. The sudden and remarkable growth of the roller skating pastime has created a constantly increasing demand for a size of wood, and now it is impossible to purchase a ton of suitable wood for skate wheels for \$120. Rollers are made in several sizes, ranging from 1½ to 2½ inches in diameter, and only the natural growth of boxwood approximating these sizes is fit for use. Large wood is too costly, and is less firm in resisting the tremendous strain of skater's weight upon an axle only 7/32 of an inch in diameter. The boxwood grows in Persia and Turkey, and heretofore the crop has always been handled in England. It is a wood of very slow growth, and in its native country stringent timber laws restrict the depletion of the growing trees. At the present rate of consumption, the world will be practically exhausted of its boxwood in less than 12 months unless some equally cheap and durable substitute is found to take its place."

"Has nothing been tried which gives promise of superseding boxwood?" asked the reporter.

"Yes, rubber, culluloid, rawhide, vulcanized fibres and compressed paper have been tried in making rollers, but for one reason or another they have proved unsatisfactory. Some have proved too soft, while others, like the pure celluloid wheels, have been found too expensive for general sale, and the necessary metal bushings have proved objectionable, because the grit and dust from the floor and shoes of the skaters, wearing between two metal surfaces, has rapidly cut away the axles of the skates, rollers with anti-friction bushings, consisting of a number of small steel plugs freely revolving around the axles, have been tried with some composition wheels with success, but they are necessarily very expensive, and on this account cannot come into general use."

"Will no other kind of wood than boxwood answer?"

"Only for very cheap skates. Dogwood, apple, pepperidge, laurel and lignum vite have been tried by almost every roller maker, and all have been rejected. The lignum vite alone is hard enough, but it will not stand the strain of the small axle. Metal wheels with a rubber surface are made, but nothing has yet been found which in all respects is as good for the purpose as boxwood."—*Lumberman's Gazette.*

## ART APPRECIATION.

It seems not unnatural that a Boston correspondent should make a Chicago man the hero of this incident in what is called real life:

A prominent merchant of one of our Western cities, who counts his dollars with seven figures, but who, in the ardent pursuit of wealth, has neglected such frivolities as literature and art, was recently visiting Boston with his family, and seeing the sights of "the Hub." In the course of his wanderings he entered the museum of Fine Arts, and after gazing superciliously around at the contents thereof, his attention finally rested upon some fine paintings by Gustus Dore, which were at the time the pride of the city. These seemed to interest him, for, turning to his guide, he said, "G. Dore? G. Dore? are those by G. Dore?"

On receiving an affirmative response, he continued, "It seems to me that he has improved greatly of late, hasn't he?"

The guide, remembering that the artist had been dead some time, struggled a while with the desire to be truthful, but delighted that the great man had at last found something to interest him, finally doubtfully answered that perhaps he had.

Then the Westerner called his son to him; "John, see these pictures by G. Dore? G. Dore, ay, he painted our house in Chicago!"—*Harpur's Magazine.*

## A Pretty Old Tree.

A Pottersville correspondent writes. "Joseph and Wm. Archer chopped down a hemlock tree the other day measuring 3½ feet in diameter, and in the centre of the tree there was an old chip. There was nearly a foot and a half of sound timber grown over the chip, and, by the number of growths from the old scar, it must have been 200 years since the tree was chopped into. Messrs. Archer have saved the old chip and a block of the sound wood, and any parties doubting the above statement are welcome to come to come and see for themselves."—*Hamilton Times.*

## Fire At Belleville.

BELLEVILLE, March 4.—At about midnight a fire broke out in the lower part of the butcher market building the upper story of which is used as an armory by No. 1 company of the 49th battalion. The fire was confined to the lower floor, where the damage done was estimated at \$1,500, insured in the Queen's for \$300. The fire was incendiary.

## Woman's Face

"What furniture can give such finish to a room as a tender woman's face," asks George Elliott. Not only are we happy to answer, provided the glow of health tempers the tender expression. The pale, anxious, bloodless face of the consumptive, or the evident sufferings of the dyspeptic, induce feelings of sorrow and grief on our part and compel us to tell them of Dr. Pierce's "Golden Medical Discovery," the sovereign remedy for consumption and other diseases of the respiratory system as well as dyspepsia and other digestive troubles. Sold everywhere.

## A PIECE OF MECHANISM.

A Berlin school contains at present a scientific novelty of particular attention, namely a monster movable globe, made of copper, the work of a blind clock-maker, on the construction of which the energetic man spent seventeen years of his life. The globe, which represents the earth, turns on its own axis by means of mechanism. An artificial moon moves round the globe in twenty-eight days and six hours, while a movable metal band, on which the hours are marked, indicates the mean time in the different parts of the earth. Round the upper part of the immense globe, which weighs a ton and a half and whose surface measures 126 feet in diameter, spins a railroad car (capable of holding six persons,) which serves to give a better view of the regions of the North Pole. The painting of the globe is done in oil, and necessitated the employment of two men during one entire year. The sun is represented by an apparition lighted by an immense Drummond calcium light, which enables the spectator to catch the ori. and change of the different portions of the day and early dawn, the twilight, eclipses of the sun and moon, etc.

## PITIFUL SUICIDE.

Mrs. Bertie Wheeler, formerly of Toronto, and wife of a furrier in Winnipeg, took poison on Monday night and died at St. Vincent's Hospital on Tuesday. She lived on the topmost floor of a Bleeker-street tenement. On Monday she spoke constantly of her trouble, and said "I will do it; I will kill myself," over and over again; but there was nothing in her actions to indicate that she really intended to commit the deed. Shortly before midnight loud groaning was heard in her room, and she was asked what she had done. She replied, "I have taken poison, and I want to die." A box containing "rough on rats" was found under the sofa. She said that she had swallowed two spoonfuls. She had frequently said that she was unhappy, and threatened to commit suicide. Last Saturday she received a letter from her husband imploring her to return home. She told the landlady that she would not go, and answered her husband's letter and wrote to her father in East Hanover, Germany. Mrs. Wheeler was a fine-looking woman, about 30 years of age. Mr. Wheeler was notified of his wife's death.—*Globe.*

## A COWARDLY MURDER.

CANAJOHARIE, March 2.—There is much excitement in this country over the brutal murder of Prof. C. S. Smith, principal of the Fairfield Seminary, who was shot and killed by Dr. Richter, at Middlefield, on Saturday afternoon. Richter had separated from his wife, and refused to give her any property. She obtained a writ of replevin, and went to Richter's house, accompanied by Prof. Smith, who was the husband of her niece. While Smith was pointing out to the constable the goods claimed by Mrs. Richter the doctor shot him in the back. Smith was only able to reach the street and tell passengers how he had been shot, when he expired. The murderer was lodged in Herkimer county gaol. The people here threatened to lynch him. Smith was very popular.

## Catarrh—A New Treatment.

Perhaps the most extraordinary success has been attained by the Dixon treatment for Catarrh. Out of 2,000 patients treated during the past six months, fully ninety per cent. have been cured of this stubborn malady. This is none the less startling when it is remembered that not five per cent. of the patients presenting themselves to the regular practitioner are benefited, while the patent medicines and other advertised cures never record a cure at all. Starting with the claim now generally believed by the most scientific men that the disease is due to the presence of living parasites in the tissues, Mr. Dixon at once adapted his cure to their extermination: this accomplished the Catarrh is practically cured, and the permanency is unquestioned, as cures effected by him four years ago are cured still. No one else has ever attempted to cure Catarrh in this manner, and no other treatment has ever cured Catarrh. The application of the remedy is simple and can be done at home, and the present season of the year is the most favorable for a speedy and permanent cure, the majority of cases being cured at one treatment. Sufferers should correspond with Messrs. A. H. DIXON & SON, 303 King street west, Toronto, Canada, and enclose a stamp for their treatise on Catarrh.—*Medical Star.*

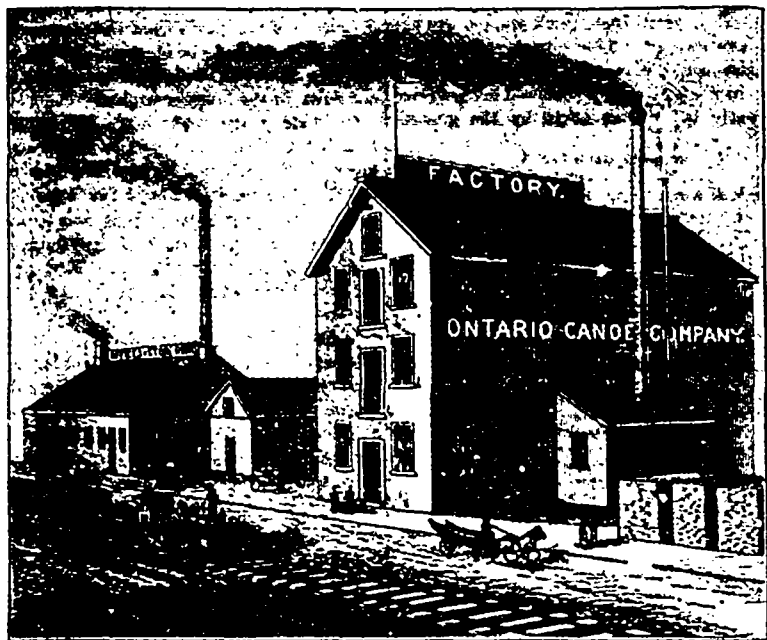
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Canoes for Lumbermen, designed to carry any amount of goods and chattels and strongly built, made to order on short notice.

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LEATHER Belting.



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Our Improved Artificial Ear Deafness cure Deafness in all stages. Recommended by scientific men of Europe and America. Write for illustrative descriptive book and testimonials from doctors, judges, ministers, and prominent men and women who have been cured, and who take pleasure in recommending them. They are unseen while in use, comfortable to wear, and make a permanent cure. Address, J. H. HICKSON, 7 Murray St., New York.



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MONTREAL.

Lease Leather, American Rubber and Cotton Belting, etc., always on hand

Market Reports.

TORONTO.

From Our Own Correspondent.

MARCH 9.—Our retail men have had their patience and purses well tried by the long and severe winter through which scarcely any business has been transacted, and they will all hail with delight the signs of renewed activity now near at hand.

Considering lumber is now coming, in by rail and brisk competition may be anticipated in the carrying trade of that kind of freight, between the G. T. R. and C. P. R., and in the scrimmage that ensues the lumbermen will get the benefit.

The quality and quantity of our timber decreases, year after year, so does the ideas of our mill men go up as to grading. I do not say this is universally the case, but it is so in many instances.

Table with 2 columns: Item description and Price. Includes items like Mill cull boards, Shipling cull boards, and various shingle types.

MONTREAL.

From Our Own Correspondent.

MARCH 9.—There is as yet no appreciable change in this market, as the spring trade cannot be said to have opened and will not do so till about the first of April, but that trade is likely to be good on account of the extensive building trade which is being prepared for.

were when snow was scarce and the roads at the shanties unfavorable for lumbering. Now the roads are good and there is every probability of as much lumber being got out as usual.

Table with 2 columns: Lumber type and Price. Includes Pine, Spruce, Hemlock, Ash, Oak, Walnut, Cherry, Butternut, Birch, Hard Maple, Lath, and Shingles.

CORDWOOD.

Pretty free supplies are being received by the railways, while the retail demand for the past week has been lighter than usual.

BOSTON.

The Journal of Commerce of March 7th says: Business has not opened yet for spring, and the prospect has not developed itself.

CANADA PINE.

Table with 2 columns: Lumber type and Price. Includes Selects, Dressing, Shelving, and various shingle types.

CHICAGO.

AT THE YARDS.

The Northwestern Lumberman of March 7th says.—The continuance of warm weather has caused a marked increase in the movement of lumber.

There is now sufficient movement of lumber to make some test of prices, but, as yet, there appears to be a degree of uncertainty.

There is some disappointment about the selling prices of shingles. Some houses quote standards as low as \$2.10 to \$2.15, but the majority say that \$2.15 to \$2.20 is as low as they can be bought in quantities.

to conform to some sales between yards that may be lower than quotations. For the same reason the general list in the Lumberman is permitted to stand until a further revival of trade has developed a more positive range.

In regard to prices at this season it must be taken into consideration that some stocks are being closed out entirely, and that as a consequence, low prices are sometimes made to the trade.

STOCK ON HAND FEB. 1.

Table with 2 columns: Lumber type and Stock quantity. Includes Lumber & timber, Shingles, Lath, Pickets, and Cedar posts.

FREIGHT RATES TO EASTERN PORTS.

Table with 2 columns: Destination and Freight rate. Includes Chicago, New York, Albany, Boston, Philadelphia, Baltimore, Washington, Buffalo and Pittsburgh, Erie, Pa., Dunkirk, N. Y., Troy, Shenectady, and Wheeling.

ALBANY.

Table with 2 columns: Lumber type and Price. Includes Pine, Spruce, Hemlock, Black walnut, Scaymore, White wood, Ash, Cherry, Oak, Hickory, Maple, Chestnut, Shingles, Lath, and Spruce.

OSWEGO, N.Y.

Table with 2 columns: Lumber type and Price. Includes Three uppers, Picking, Cutting up, Fine Common, Common, Culls, Lath, and Shingles.

BUFFALO.

Table with 2 columns: Lumber type and Price. Includes Upper, Common, and Culls.

TONAWANDA.

Table with 2 columns: Lumber type and Price. Includes Three uppers, Common, and Culls.

LIVERPOOL.

The Timber Trades Journal of Feb. 28th says.—Had it not been for the public sales of timber and mahogany, there would have been but little to interest your readers, for the business of the past week has been upon a very limited scale.

On Friday the 20th inst., Messrs. Alfred Dobell & Co., offered a portion of the cargo of hewn pitch pine per Sirian Star, from Apalachicola, consisting of about 209 logs and 243 deals.

Messrs. Duncan, Ewing & Co., immediately afterwards offered the entire cargo of hewn pitch pine timber and deals ex Choice, from Apalachicola, to the same company, and cleared it out at prices ranging from 13d. to 19d. per foot.

On Wednesday, the 25th inst., Messrs. Farnworth & Jardine offered the cargo of sawn pitch pine timber now landing, ex Voeni, from Pensacola, and, with the exception of a few lots, it was sold at from 13d. to 17d. per foot.

It having been suggested to the Mayor of this city (Alderman D. Radcliffe) that an exhibition of appliances used in "navigation, travelling, and commerce" might not only be of immediate benefit to this port, but might tend to its permanent advantage, he issued a private circular to the most prominent citizens.

"That in the opinion of this meeting the proposal to hold an exhibition in Liverpool next year, of navigation, travelling, and commerce, with a complete collection of Lancashire products, is deserving of hearty approval and support."

According to the private circular, a prominent feature in the proposed exhibition would be a complete collection of imports; hence it will be of considerable interest to those engaged in the timber trade of this port.

LONDON.

The Timber Trades Journal of Feb. 28th says.—Things at Messrs. Churchill & Sim's sale on Wednesday went somewhat better, and though this apparent activity was limited to the small parcels likely to go cheap, it was still a welcome change to the monotonous character the public sales have for some time past assumed.

were anxious to compete for the small parcels, and for these values took a somewhat elevated range. 3rd Dram white battens, for instance, that pro rata with other descriptions would have been no great catch at £4, went 20s. higher.

Comparing one week's prices with another, the variation is unimportant. Deals may show a 5s. or 10s. improvement to day, and the next occasion a corresponding drop, and so on; though, on the whole, the stationary attitude of values from the commencement of the year up to the present time is somewhat remarkable, and can be attributed solely to the uncertainty surrounding things generally. There is a lot of private business doing, but nothing like the trade that ought to be going on at the opening of a new season. The mildness of the weather has been all in favor of the consumption, yet we hear of stocks hanging on hand almost everywhere. The dock deliveries themselves are a sufficient indication of the slackness of trade. Week by week they go on without even keeping pace with last year's demand, and those recorded in the present number of the *Journal* seem to show that no beneficial effect has been felt in the market yet from the large Government orders for deals and sleepers.

The latter article would have little or no effect on the dock deliveries, as it is a description of timber that does not appear in the stocks at Rotherhitha. Still the mere fact of a large demand being made for timber of any kind, coming from an unexpected quarter, might be supposed to have some effect on other descriptions, but the market is dull apparently to all influences; at any rate, we do not see any symptoms of sensitiveness from the present low values which are being realized at public auction.

Things at the Baltic on Thursday went a bit livelier, and though taken throughout no marked advance could be pronounced, several of the parcels submitted fetched better prices than they did a short while back. This was, however, mostly confined to the small odd lots, for which bidding was brisk and buyers plentiful. This, perhaps, foreshadows an improvement, but it has not assumed any tangible shape at present, and that is about all we can say. To convey some idea of the appreciation these odd parcels were held in we may mention a little lot of 3rd white spruce ends, 7 and 8 inch widths, for which £5 10s. was readily forthcoming, and for some 50 pieces of damaged 4th pine; the absurd price of £7 10s. was paid. For the 2nd Quebec spruce, ex Uno, there was some spirited bidding, but prices kept low notwithstanding the presence of the leading representatives of the box-making trade. These latter apparently did not care to go beyond the prices paid by the regular dealers, to whom the bulk of the parcel fell.

St. Petersburg battens sold freely, but at cheap figures. Throughout the sale things moved off pretty freely, and the bidding was fairly brisk; but, if we except the oddments, without improving prices. The Tornea battens, ex Consul, described as 1st and 2nd, went very cheap, and those who bought them cannot have done wrong. The highest price of the sale was for some 3x12 12 ft. Quebec bright pine, which ran up to £27 10s.

There were some heavy parcels of unreserved flooring offered, and for which the competition was of a lively description. The cargo of the *Volante*, from Fredrikstad, one of the leading shipments (Hjornberg's), was keenly competed for by the leading members of the trade, all the big dealers being to the fore. Prices, though slightly better than on the last occasion, went, nevertheless, much under last year's values, and 10s. 6d. was the most the room cared to give for 1st 1x7 yellow, and other sizes at proportionately low rates.

The impression left on the mind, after watching the proceedings closely, was that, if there was no pronounced advancement, things, at any rate, were no worse, with a more general readiness to buy amongst those who were present.

GLASGOW.

The *Timber Trades Journal* of Feb. 28th says:—The timber trade during the past week at Clyde ports has been singularly quiet. There have been no arrivals except some small

parcels of state staves, and no auction sales have taken place.

The local demand presently seems to be rather languid, but some may be looking forward to supplying themselves at the sale of American timber and deals; to be held at Greenock on 5th prox.

Apart from what has gone into shipbuilders' hands, the deliveries from Greenock of timber in rafts are not far short this year to date compared with corresponding period last year—say 140 loads less. What is received in this way at Broomielaw crane is taken up mostly for house-building purposes.

Scarcely any change is reported as having taken place in shipbuilding. As regards the Government contracts, the Lords of the Admiralty a few evening ago intimated that they have lost no time in completing the specifications in more detail than formerly, and in accordance with the recommendations of the committee which had recently reported on contracts and repairs.

Six torpedo cruisers are included in the contract, decision as to which is now awaited, and in the course of a fortnight the Admiralty expects to be in a position to again invite tenders, this time for the belted cruisers, and the two ironclads, and offers will be immediately called for the construction of ten powerful torpedo boats.

At the annual meeting of the *Shipowners' Association*, held here a few days ago, the chairman mentioned he was sorry he could not congratulate the shipowners on the present condition of the trade; there was too much tonnage everywhere afloat, and at all the important ports of the world competition for employment was such as to compress rates to unremunerative figures.

FROM THE LOGGERS.

Reports from most of the logging districts of the Northwest are to the effect that the recent rise in temperature has materially improved the roads, and made the concluding operations of the season more easy. In some isolated cases, however, the melting process has gone so far that the roads are nearly bare. In central Wisconsin the camps are beginning to break up, and the great bulk of the log crop is in. Some of the loggers in that district are coming out with no more, or less, than the amount intended, but others are doing such good work that the fear is expressed that they may overstep the mark. From the Saginaw district and from both shores of Lake Michigan comes confirmation of an actual curtailment in the crop, equal to that anticipated at the beginning of the season. The Black river also sends the cheering intelligence that the crop is likely to fall below the estimates. The Mississippi district is still in doubt, and far sighted operators are hoping that the warm and thawing weather may continue. Much still depends on the weather. If it should be cold roads would generally be in better shape for hauling them than at any previous time during the winter, and, in that case, many camps, particularly in the jobbing districts, would go briskly on with work. It is to be hoped that spring will speedily come. — *Northwestern Lumberman.*

Navigation of Lake Michigan.

MILWAUKEE, March 9.—The steamer *Wisconsin* arrived from Grand Haven last evening. This is the first boat to arrive from the east shore for a month. She sighted several steamer fast in the ice. One is supposed to be the *Onida*, two days out from Grand Haven, and another the *City of Ludington*, which has been fast in the ice for 22 days.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentery and diarrhoea, regulates the stomach and bowels, cures wind, colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the prescription of one of the oldest and best female nurses and physicians in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

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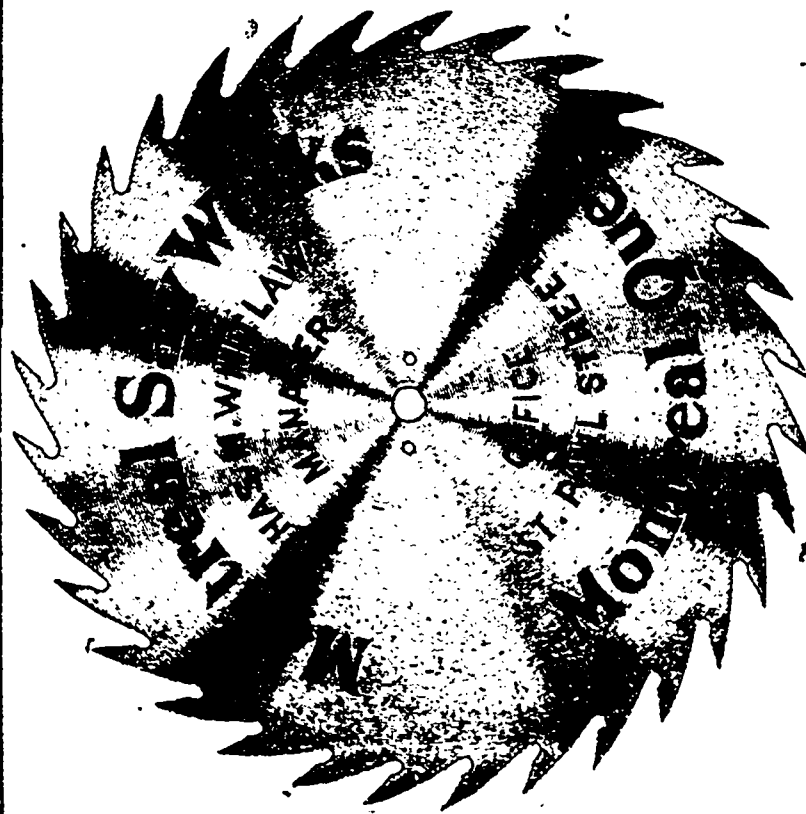
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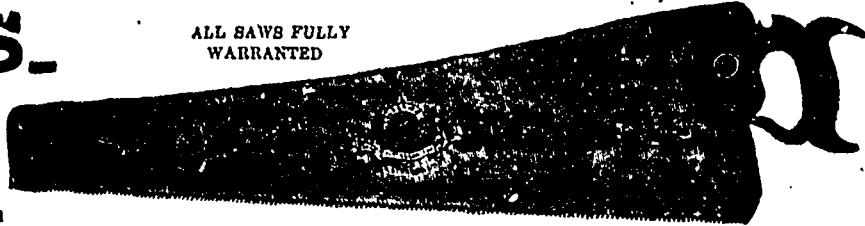
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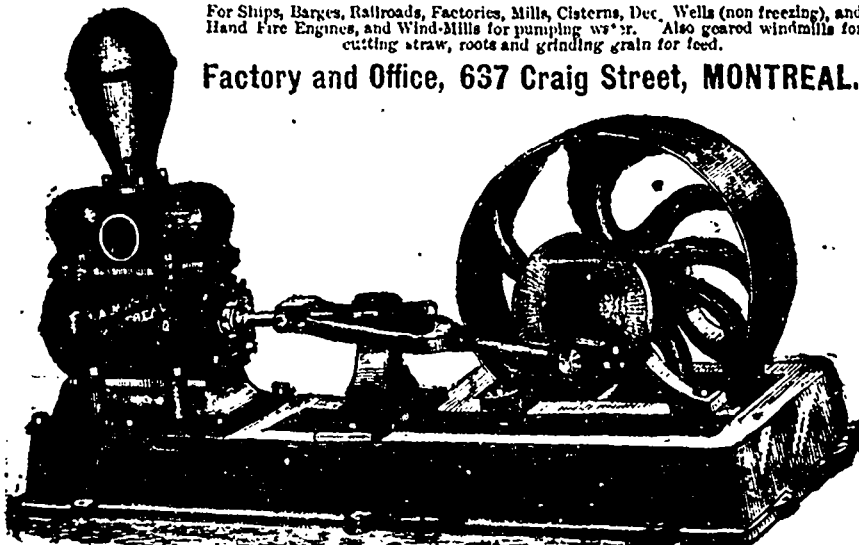
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### McMartin Patent Double and Single Acting Lift and Force Pumps

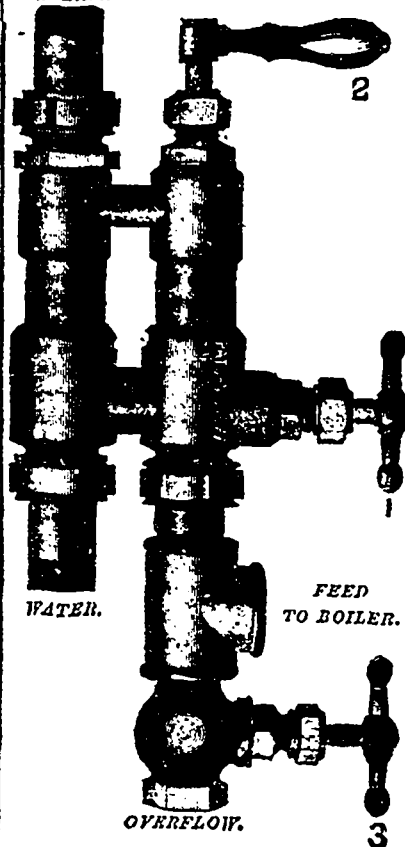
For Ships, Barges, Railroads, Factories, Mills, Cisterns, Dec. Wells (non freezing), and Hand Fire Engines, and Wind-Mills for pumping water. Also geared windmills for cutting straw, roots and grinding grain for feed.

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The above cut shows our Double Acting Brass-lined Horizontal Suction and Force Pump, mounted on a Cast Iron Bed Plate with tight and loose pulleys, 4 inch face, 18 inch diameter. This is one of the most compact and powerful pumps of the kind yet out, with Bed 4 feet long and 2 feet 2 inches, where the pulleys are placed, all being in good proportion. The pump has a guide to the piston rod, and is driven by the connection rod attached to the disc with steel pin and wrought iron connections. The valve seats and valve are made of gun metal, and easily got at by bolts on either side of the pump, so that access to the bottom or top valve can be had without any difficulty. We make two sizes of these pumps, which are adapted for mills, factories or Janneries. We make these pumps with a clutch to drive them direct, when so ordered, and dispose of the pulleys and belt. All enquiries will be promptly answered, by addressing the above, and catalogues of our pumps sent out.

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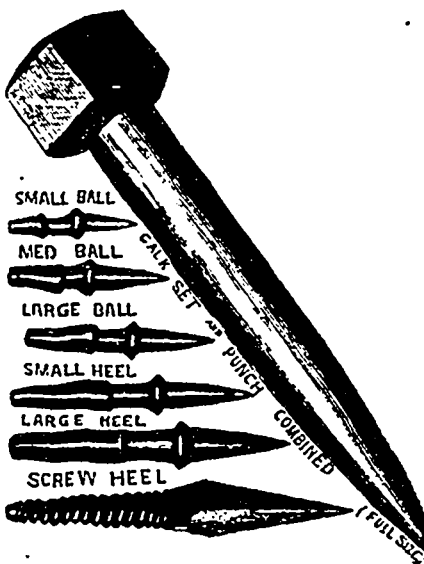
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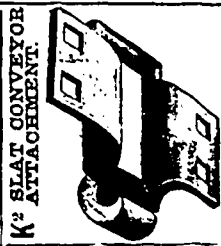
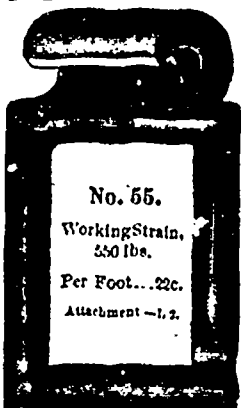
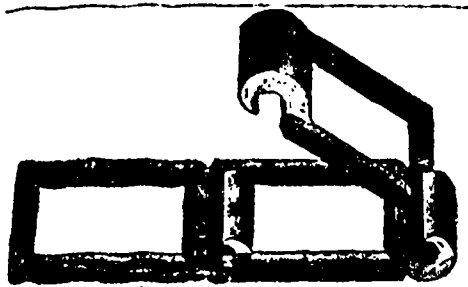
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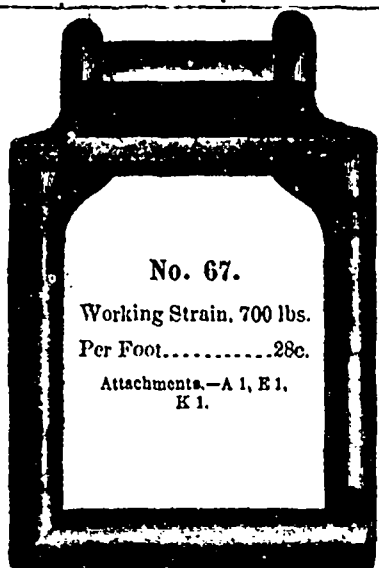
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For CONVEYING, ELEVATING, and TRANSFERRING every Product of a Saw Mill, into, through and out of the mill.

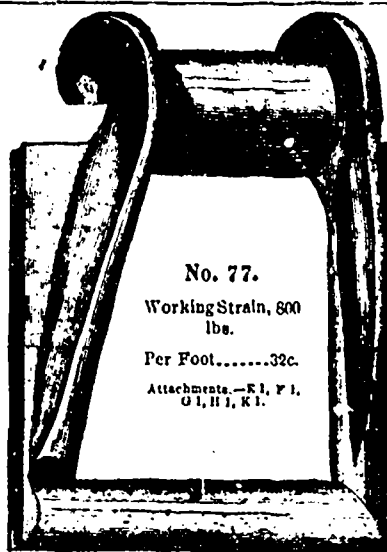


No. 45-16 cents per foot and 55 used for Light Sawdust Conveyors.



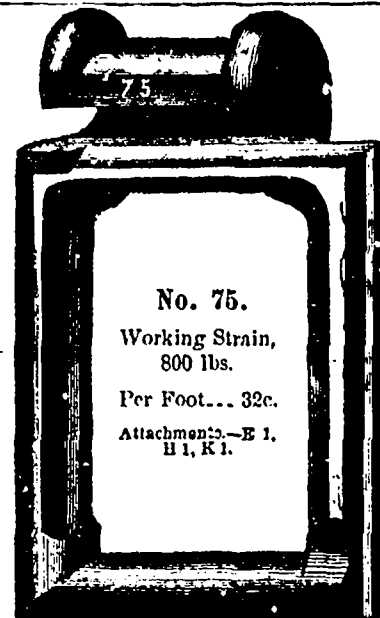
No. 67.  
Working Strain, 700 lbs.  
Per Foot.....28c.  
Attachments—A 1, E 1,  
K 1.

No. 67—MEDIUM SAWDUST CONVEYOR CHAIN.



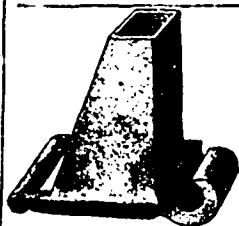
No. 77.  
Working Strain, 800 lbs.  
Per Foot.....32c.  
Attachments—E 1, F 1,  
G 1, H 1, K 1.

No. 77 CONVEYOR AND LIVE ROLL CHAIN.

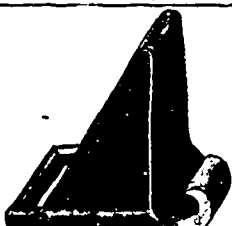


No. 75.  
Working Strain, 800 lbs.  
Per Foot... 32c.  
Attachments—E 1,  
H 1, K 1.

No. 75—LIVE ROLL AND DOUBLE STRAND ELEVATORS.



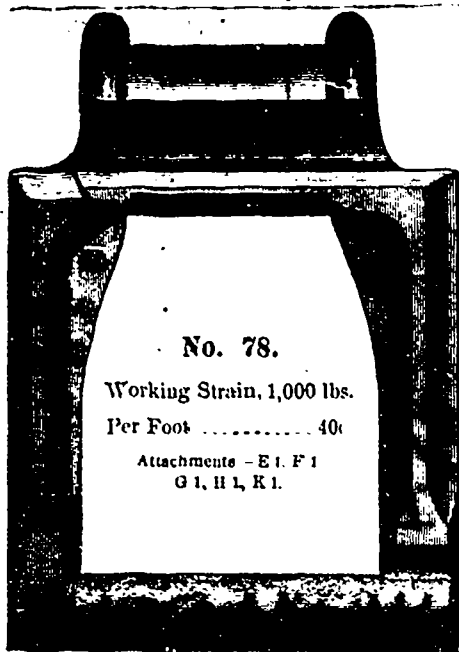
H¹ TRANSFER ATTACHMENT.



H² TIE & POLE LOADING ATTACHMENT.

## GIANT CHAIN for Log Haulups

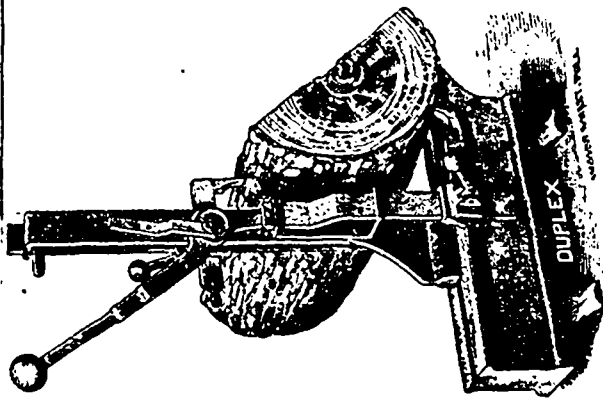
And Main Refuse Conveyors for Large Mills.



No. 78.  
Working Strain, 1,000 lbs.  
Per Foot ..... 40c.  
Attachments—E 1, F 1,  
G 1, H 1, K 1.

No. 78 & 88—HEAVY TRANSFER AND LIVE ROLL CHAIN.

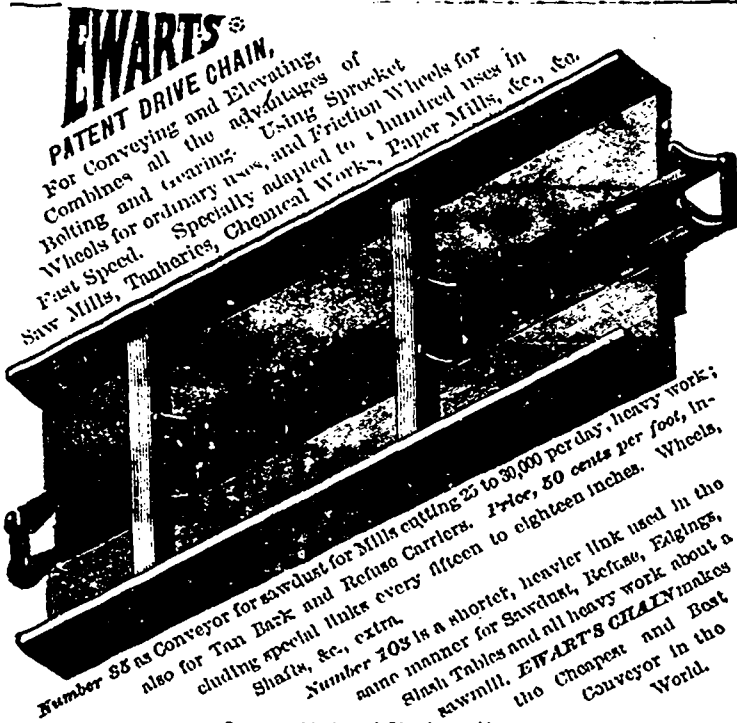
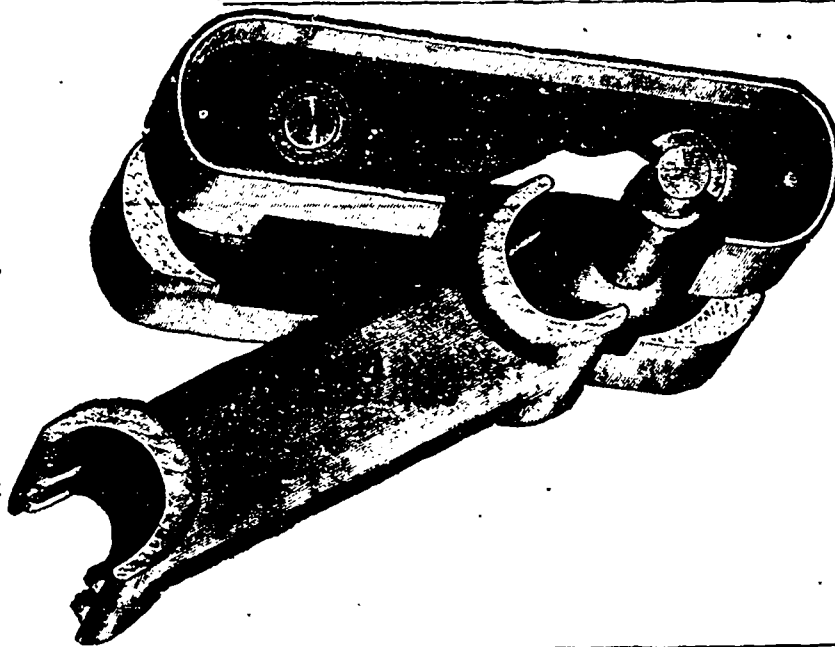
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Special Prices for Giant Chain during next 60 Days.



**EWART'S PATENT DRIVE CHAIN.**  
For Conveying and Elevating, Combines all the advantages of Bolting and Gearing. Using Sprocket Wheels for ordinary uses, and Friction Wheels for Fast Speed. Specially adapted to a hundred uses in Saw Mills, Tanneries, Chemical Works, Paper Mills, &c., &c.

Number 55 is Conveyor for sawdust for Mills cutting 25 to 30,000 per day, heavy work; also for Tan Bark and Refuse Carriers. For, 50 cents per foot, including special links every fifteen to eighteen inches. Wheels, Shafts, &c., extra.  
Number 703 is a shorter, heavier link used in the same manner for Sawdust, Refuse, Filings, Slat Tables and all heavy work about a sawmill. **EWART'S CHAIN** makes the Cheapest and Best Conveyor in the World.

Send for Illustrated Circular, address

THE WATEROUS ENGINE WORKS CO., BRANTFORD, CANADA,  
Sole Manufacturers and Proprietors of Canadian Patent.

# Waterous Engine Works Co'y,

BRANTFORD, CANADA. Send for Catalogue.

# NORTHEY & CO'S STEAM PUMPS, TORONTO, ONT.

*Pumps for Fire Protection a Specialty.*

## SAVE INSURANCE.

*Our Combined Boiler Feed and Fire Pumps are a NECESSITY IN EVERY WELL ORDERED STEAM MILL or FACTORY.*

### Cheap.

*Cheaper than any Pump built.*

*Our Independent AIR PUMPS and Condensers will effect a saving of 30 to 50 per cent. when applied to high pressure Engines.*

IF YOU WANT

## Pump

FOR ANY PURPOSE

WRITE TO US.

### Simple.

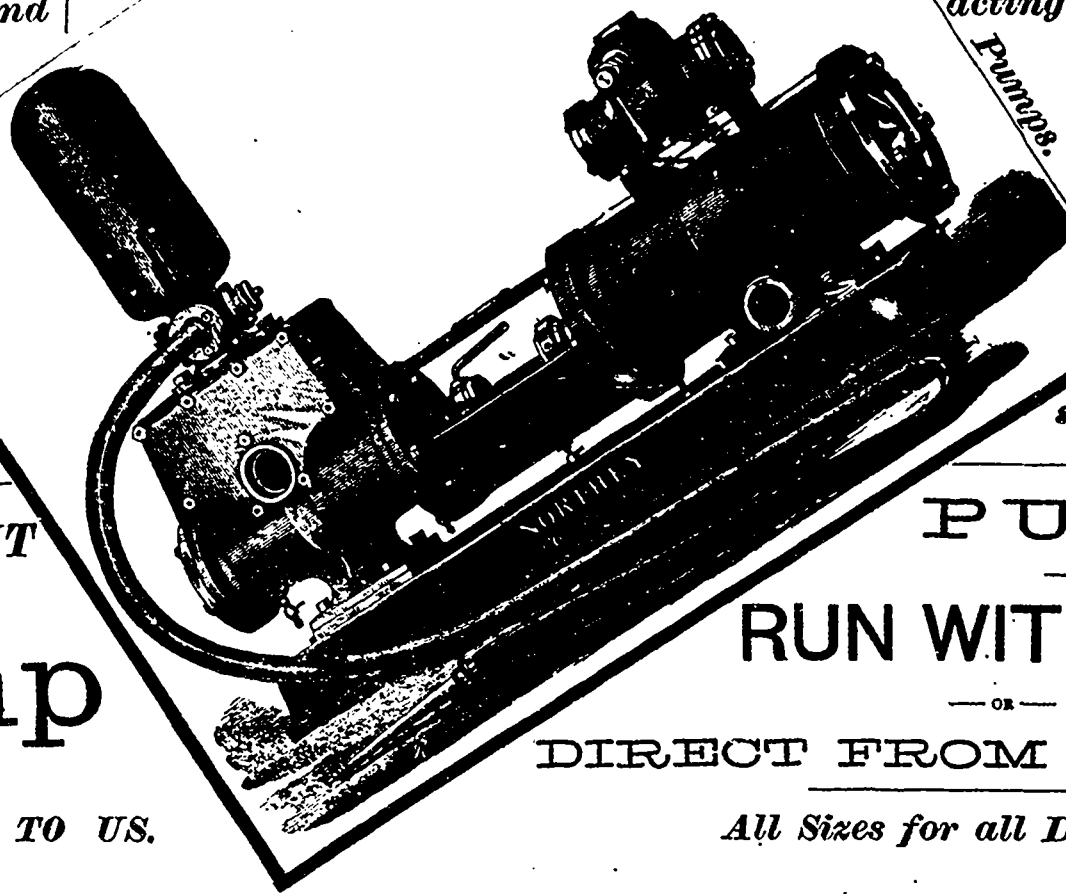
*Only two moving parts in Engine.*

### Compact. Durable.

*Having the well known compactness of direct acting Pumps.*

*Guaranteed the most durable Pump made; impossible to break down.*

*Our PUMPS for general water supply give the greatest satisfaction.*



## PUMPS

— TO —

## RUN WITH BELT

— OR —

## DIRECT FROM POWER

*All Sizes for all Duties.*

*Our make of Pump is specially adapted to Mills in out of the way places, as they can be absolutely relied on, and occasion no vexatious stoppages for repairs.*

WE INVITE CORRESPONDENCE ON ANY POINT CONNECTED WITH PUMPS.

## SEND FOR CIRCULAR AND STATE YOUR REQUIREMENTS.

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Corner FRONT & PARLIAMENT STS.,

TORONTO, ONT.



# CHASE & SANBORN

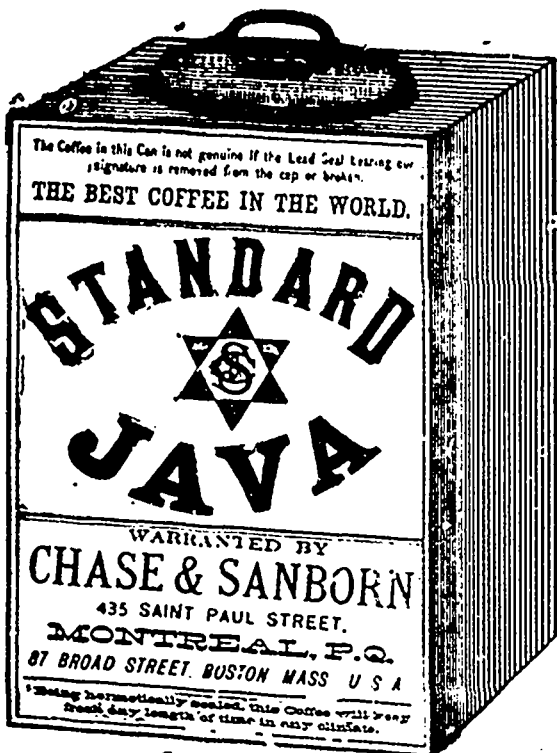
Importers, Jobbers and Roasters of

MONTREAL.

## COFFEES

BOSTON.

Buy this Brand, which is the only and Original Private Plantation JAVA on the Market.



Our Coffees always put up in 50 or 25 Lb. Air-tight Tin Cans thereby retaining all the Original Strength & Aroma.

All Coffees Packed by us Guaranteed Strictly Pure. The Wholesale Grocers of Canada are our Selling Agents. Order our Coffees through them.

# HUGH GIBSON,

MANUFACTURER OF

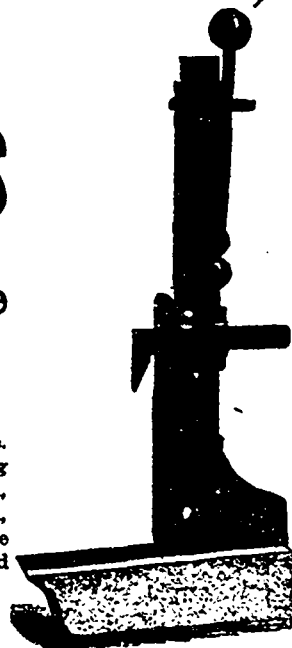
KNIGHT'S PATENT "EXCELSIOR"

## SAW MILL DOGS

The Sawyer's Favorite

For Holding Logs upon a Saw Mill Carriage while being Sawed into Lumber.

These Milldogs I guarantee to give satisfaction in every case. They will hold a frozen log as well as a soft one, for cutting Scantling, Square Timber, &c. These Cante cannot be excelled, I sell them all on their own merits, give ten or fifteen days trial, and then, if not satisfactory, return them to my order, as I have no agents on the road this year, I will sell them at a reduced price. Send for Circular and price list.



Manufactured by HUGH GIBSON, CHATHAM. EXCELSIOR DOG.

## FILES-Now's the Time

Collect them and Ship to the

### RE-CUT

BEFORE THE SPRING OPENS.

DO NOT WASTE

Your Money on Buying new, when the old ones will do. We pay Freight one way.

SHIP THEM TO-DAY

-TO THE-

ONTARIO FILE CO.

150 FRONT STREET, EAST, TORONTO. Agents Wanted Everywhere.

THE

## Cooks' Favorite!

BAKING POWDER.

DOMINION SILVER MEDAL

At Ottawa Exhibition, 1884. It is the most economic and the best in use. Perfectly Pure.

# THE INTERNATIONAL TENT & AWNING CO.

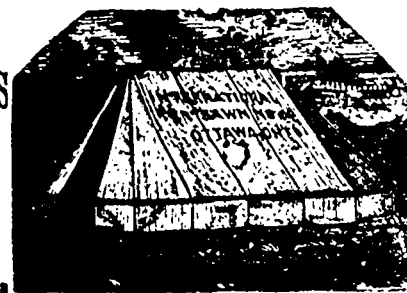
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MANUFACTURERS OF

## LUMBERMEN'S TENTS

The Cheapest and Best in the Market!

32 First Prizes (L.A.N.D.) 16 MEDALS.



AT HALIFAX AND TORONTO, 1883.

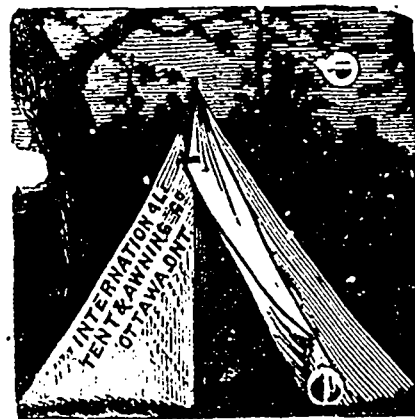
Tents, Flags, Tarpaulins, Waterproof Goods, Camp Furniture, etc., etc.

Estimates for Circus Tents, Range Marquees, Hand-made Sails, etc., furnished on application. Liberal Discount to Large Buyers.

## PORTABLE CANVAS BOATS MADE TO ORDER

Send for CATALOGUE

AND PRICE LIST.



Camp Furniture!

SEE OUR NOVELTIES

At Toronto, Ont., and St. John, N.B., we made the best Display of Tents ever shown in Canada—and we never substitute an article inferior to sample in filling orders.

We control "THE LATOUR PAT." for Camp Furniture, the best on earth. The only Gold Medal ever given for this class of goods was awarded to the Latour Camp Furniture at Toronto in 1882.

## SAIL-MAKING.

We have secured the services of the best practical sail-maker in Canada. Orders in this line will receive prompt and satisfactory attention, as is usual with all orders entrusted to us.

Agency for the WILDERMUTH BED SPRING, the best in the Market.

A. G. FORGIE, MANAGER,

## International Tent & Awning Co.,

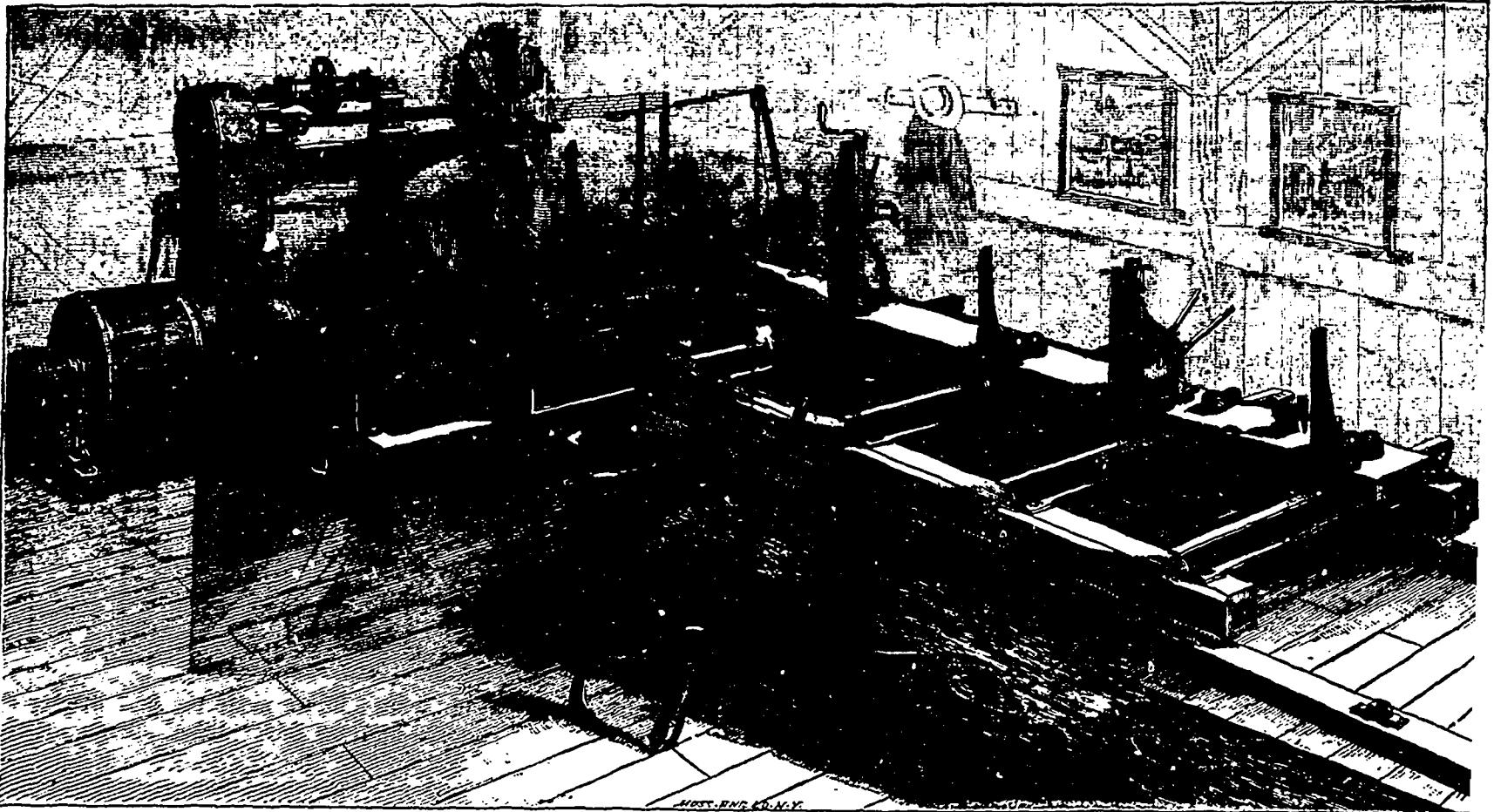
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# THE LANE MANUFACTURING COMPANY!

MONTPELIER, VERMONT,

MANUFACTURERS OF LANE'S CELEBRATED

## CIRCULAR - SAW - MILLS



Circular Saw Mills,  
Saw Mill Set Works,  
Double and Single Traveling Bed  
Planers, Shingle Bolters,  
Bed Timber Planers,

Clapboard Machines,  
Clapboard Planers,  
Stationery Bed or Roll Feed  
Planers,  
Drag Saw Rigs,

Shingle Machines,  
Lath Machines,  
Double and Single Power Feed  
Edgers,  
Mill Supplies, Etc., Etc.

FOR DESCRIPTIVE CIRCULARS AND PRICE LISTS, ADDRESS:

**LANE MANUFACTURING CO'Y, MONTPELIER, VT**

# The William Hamilton Manufacturing Co'y

MANUFACTURERS OF

(LIMITED.)

## SAW MILL AND GENERAL MACHINERY

PETERBOROUGH, ONTARIO.

### Our Saw Mill Engines

Are made strong, neat and durable, knowing well the ever varying strain they are subjected to in driving a Saw Mill.

### IRON AND STEEL BOILERS

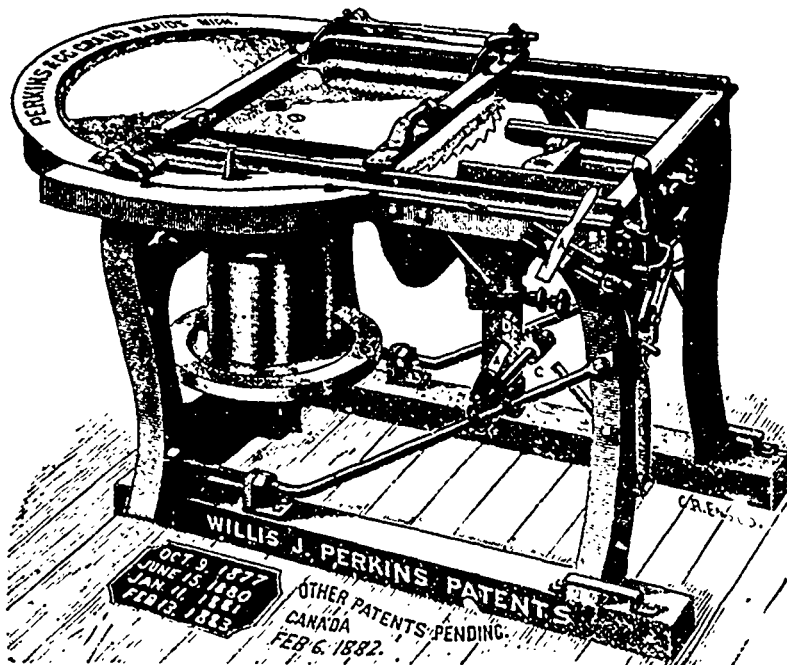
of the Best Material and workmanship.

We wish again to call the attention of our Canadian Lumbermen to our First Class IMPROVED SAW MILL MACHINERY, Heavy and Light Circular Mills; our Pat. Twin Circular, with Steam Rack or Rope Feed for Slabbing, Iron Oscillating Gang Mills of the most improved designs besides our Patent Improved Long Cylinder Steam Feed. We would call attention to Cunningham's Oscillating Twin Engines for Feeding Long Carriages with Rack or Rope; our Patent Wrought Iron Jack Chain with Short Trucks; Heavy Wrought Iron Refuse and Sawdust Chains; Trimmers and Slab Cutting Tables; Lath Mills and Bolters; Lumber Markers; Trout's Patent Automatic Log Counter, to count the Logs as they come into the mill; Covel's Patent Saw Sharpener, Saw Swages and Improved Bench for Dressing and Hammering Saws, Perkins' Patent Shingle Mills, Bolters; Sappers; Jointers; Drag Saws; and Packers. We also forge a very superior ANCHOR for Lumbermen.

We are now introducing to those requiring Small Mills our IMPROVED SEMI-PORTABLE MILL, got up strong and durable, and are now adding to the many Machines for cutting Lumber. MILNE'S IMPROVED HEAVY BAND SAW for cutting Lumber out of large logs. The small carfe these Mills take out in using a No. 18 Gauge Blade, is a very important point in saving Lumber, besides the small amount of power required to drive it, making it a favourite in sawing lumber—capacity from 25 to 30 thousand per day.

We are prepared to submit plans and specifications, together with any information our many years of close application to the Saw Mill Business may have suggested to us; also when required to enter into contract for supplying the machinery and all material complete.

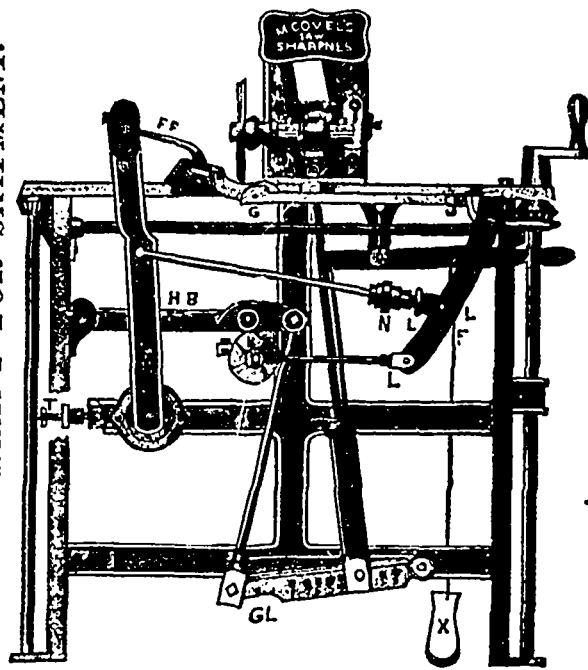
Communication from anyone intending to build Saw Mills solicited.



### GRAND TRIUMPH! WILLIS J. PERKIN'S DROP TILT

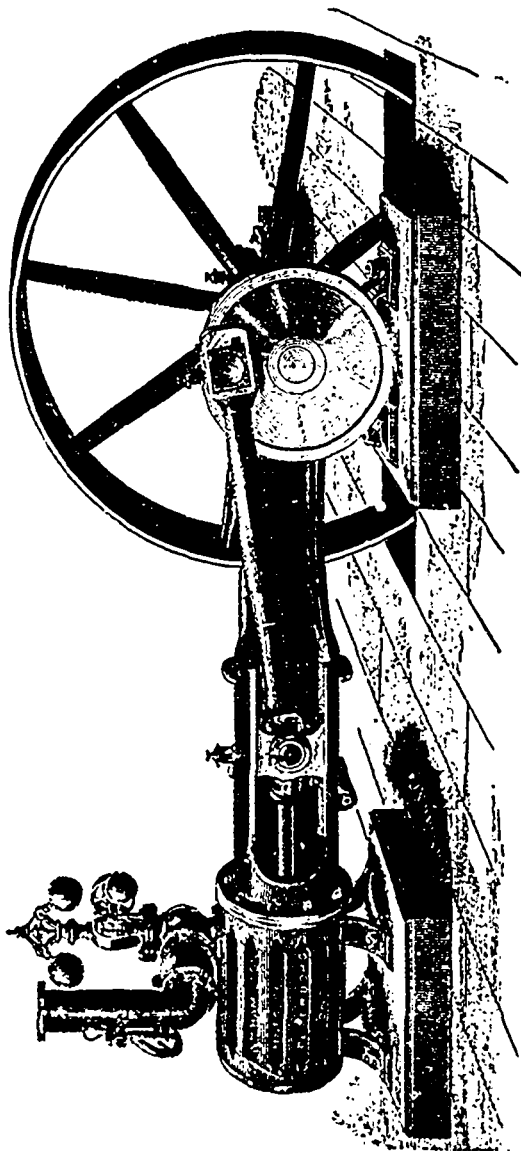
The only Horizontal Saw Machine on which a thick slab can be cut from the bolt. SECOND CUT ALWAYS A SHINGLE. Knots, rots, hearts, bolt squared rift-ways, and all irregularities cut off at one clip. This improvement will pay for the whole machine every season by increase of quality and quantity cut.

OUR SPRING STOCK OF  
The M. Covel Patent  
Saw Sharpener  
IS NOW READY FOR SHIPMENT.



They are now so well-known to the Lumberman, that their utility requires no comment.

ENGINES AND BOILERS.



This Cut represents our SAW MILL ENGINE, of which we make the following our Standard Sizes, 12x16, 16x20, 18x24, 20x24 and 24x80, built Strong and Substantial for Heavy Work.