

## PROTECTION OF LIMITS FROM FIRE.

A meeting of the timber limit holders, district No. 1, of the province of Quebec, called by Mr. J. McCuaig, superintendent of fire rangers, was held in Ottawa recently. Mr. Robert Henderson was appointed chairman, and Ald. R. J. Davidson secretary. There were present Messrs F. P. Bronson, representing the Bronson-Weston Lumber Company, Ottawa; Robt. Hurdman, representing the Sheppard-Morse Lumber Company, of Burlington, Vt.; Hon. Peter White, representing the Pembroke Lumber Company; David Gillies, M.P.P., representing Gillies Bros. Lumber Company, of Braeside; W. H. Rowley, representing the E. B. Eddy Co., Hull; Armon Burwash, representing McLachlin Bros., Arnprior; Ald. R. J. Davidson, representing Davidson & Thackray, Ottawa, and John Charlton, M.P., representing Charlton Bros.

It was moved by Messrs. Gillies and Hurdman that a committee, consisting of H. K. Egan, R. Hurdman and D. Gillies, be appointed to obtain the signatures of the license holders of the Ottawa Valley in district No. 1, to a petition to be presented to the commissioner of crown lands and the Quebec Government, asking that the regular number of fire rangers be increased to at least 50 to protect Ottawa limits as far as possible from fire. - Carried.

It was also moved by Messrs. White and Gillies, that, in view of the fact that the Province of Quebec is equally interested with the license holders in the prevention of forest fires, the Government be requested to adopt the system prevailing in Ontario in the appointment of fire rangers. - Carried.

## A SAWDUST MACHINE.

A new machine designed to convert sawdust into commercial products was recently brought to the attention of a number of Ottawa lumbermen by the inventor, Mr. H. Spurrier, of Montreal. The inventor says that his machine has passed the experimental stage, and has been successfully worked. He says it is about the most economical method yet discovered. The machine is like a large cylinder, and is usually covered in with bricks. Running through the centre of the cylinder is a large hollow shaft with a worm shaped like the flanges of a bolt. The screw-shaped shaft is covered with metal, but around this is another screw-like contrivance enclosed in metal. The sawdust is introduced into the spaces between the flanges on the inner shaft and in turning the dust is carried along the shaft to the other end and there escapes to the outer shaft, and after passing along to the end escapes by an outlet into a receptacle where the dust—which is charcoal after the above process—is deposited. The dust in going through the cylinder passes over heated surfaces, and as the screws keep turning the dust is kept moving and the heat is well distributed through the mass.

The gas separated from the sawdust by the heat passes through a pipe into a condenser and issues from this as acetic acid and wood tar. These two products can be further refined and other valuable products secured. Mr. Alfred Benn, commercial agent of Montreal, is associated with Mr. Spurrier. They expect to organize a company, with headquarters either in Montreal or Ottawa, to use the machines in manufacturing commercial products from sawdust.

## SUCCESSFUL CULLERS.

The annual examination of cullers for the district of Ottawa was held at Hull, Que., on Saturday, June 17th, the examining officers being Messrs. Gilson, Derome and Pozie, of Quebec. Mr. F. A. Gendron, crown timber agent, acted as superintendent. A roll-way of logs was prepared on the shore of the Ottawa river, and the candidates were called upon to measure and cull them.

The list of successful candidates is as follows: J. H. Cameron, Buckingham; Alph. Martel, Three Rivers; Louis French, Hammond, Ont.; J. R. Rene, St. Gabriel de Brandon; Olivard Robitaille, Gatineau Point; F. G. Woonsdorf, Pembroke; Herbert Carr, Point Alexander, Ont.; Nap. Charest, Gatineau Point; E. J. Belisle, St. Andre Avellin; Telephore St. Jean, Gatineau Point; R. C. Perrier, Buckingham; Jeremie Alix, Chute Aux Iroquois; S. Richardson, L'Orignal; Peter Le Roy, Grenville; Henry Row, Buckingham; Chas. Major, Montebello; J. P. Sarisan, Buckingham; A. T. Buchan, L'Orignal; Hugh Martin, Buckingham; S. Pouliot, Rockland; S. Surtees, Rockland; M. Galibeau, Hull; John Miller, Ottawa; W. B. Bertram, Billings Bridge; Ovice Latullup, N. Desmarais, Alf. Sauve, N. A. Sauve, John McGreen, Buckingham, Hull; A. R. McLachlan, G. A. Berminer, Arnprior; J. L. Close, John Yuill, H. Cailler, Arnprior; M. Beland, Gatineau Point.

## ONE HUNDRED YEARS IN BUSINESS.

The firm of Messrs. Irvin & Sellers, sawmillers and timber importers, Liverpool, Eng., enjoy the unique distinction of having celebrated its one hundredth year of unbroken existence in business. The business was first established by Mr. John Irvin, who in the closing year of the last century commenced the manufacture of shuttles in the small town of Preston. In those early days of shuttle making box-wood was almost entirely used, and to those accustomed to the shuttle of the present day and its manufacture by modern machinery, but little of the arduous labor then involved in its construction by hand labor can be appreciated. Hand labor soon gave place to steam power, and the business gradually extended, the manufacture of bobbins being entered upon. In January, 1851, the founder of the firm died and was succeeded by his youngest son David, who is now the senior partner of the firm. Although at the ripe age of eighty-three years, he is still in the enjoyment of vigorous physical and mental powers. At the present time the firm is composed of Mr. David Irvin and his grandson, Mr. W. B. Irvin, who have built up an extensive business as sawmillers and timber manufacturers, having their mills at Preston, head office at Bootle, Liverpool, and branches at London, Glasgow, Birmingham and New York. At the present time they are giving considerable attention to the Canadian trade, and will be pleased to receive correspondence from manufacturers in this country.

Work on the development of the water power at Shawinigan Falls, Que., has been commenced. A syndicate, promoted by Messrs. Greenshields, has guaranteed to spend a large sum of money on calcium carbide works, and a United States concern, it is said, propose to erect large paper and pulp mills.

## PRACTICAL NOTES.

In the latest patent barrel the stave is wedge shape, tapering from end to end rather than from the middle to the ends, and in making the barrel the wide and narrow ends are placed alternately. By this arrangement the barrel is given the essential swell at the center. For handling commodities of finer composition it is proposed to make a barrel consisting of two layers of these staves, one within the other, the staves of the outer layer being reversed with relation to those of the inner section.

The most objectionable of all methods of emptying and cooling a boiler is to blow it out under pressure, and afterwards run cold water in, in order to cool the shell still more rapidly. This arrangement really consists of emptying the boiler as described in the preceding and then cooling the plates by running cold water in. This plan should never be adopted; it is always likely to seriously injure the boiler. The sudden strains which are set up by the cold water running on to the hot plates may set up concealed fractures through the line of rivet holes forming the seams, which cannot be detected in the ordinary way, and which may lead to explosion and loss of life when the boiler is again worked.

**CARE OF FILES.**—If files have been used for working on wrought iron and are clogged with iron filings, says an American exchange, the file should be immersed for a short time in a dilute solution of sulphate of copper. The solution will completely remove the objectionable filings without affecting the file itself. Zinc filing can be dissolved with dilute sulphuric acid. Files which have been used in filing copper, or in filing the spelter from around frame joints, may be cleaned and sharpened by dipping in dilute nitric acid. It must be understood that before the files are immersed in the acid as much of the coarser filings as possible be removed with a file cleaning brush, and that the files be cleaned so that there shall be no grease of any kind present to hinder the action of the acid. Grease can be best removed from files by treating them in a dilute caustic alkali.

**BELTING.**—When a belt becomes badly oil soaked, and the pulleys have oil on them, it is well to sprinkle fuller's earth or prepared chalk on the belt. This will absorb the oil. Scrape off the residue with a piece of flat wood, slightly sharpened. A solution of salt on pulleys roughens the leather and helps to overcome some of the slip. Anything that acts as an unguent should be kept from a belt. If oil comes in contact with gum belts it softens them. If water gets between the canvas and the seams, and then freezes, it separates the layers. Even a frosty pulley in contact with a gum belt tears the seams from the canvas. Boiled linseed oil lightly applied on the pulley side of a gum belt will help to overcome slipping, caused by dust, etc. Gum belts are now used with success in damp or wet places in preference to leather ones. These belts cannot be successfully used at half cross or on cone pulleys.

**JOINTING BELTS.**—Endless belts while not in general use on lathes or similar machinery, are of great advantage and deserve to be used more than they are. A slight drawback is the lack of means of taking up the slack, such as is obtained with dynamos and motors, instead of requiring the joint to be opened and reglued, which is something of a nuisance. A means of avoiding this, says American Machinery, is to glue the joint with a piece of paper the full size of scarf intervening. While the pull of the belt lengthwise is easily resisted by the paper, it can readily be split by opening the corner of the joint sufficient to get a grip with the finger and thumb, a moderate pull from which will open the joint, when the belt can be shortened, rescarfed, and glued up with paper in between. Another way to open such joints is to place a moderately small sized wire in the middle of the joint and allow sufficient length to project out, so that the two ends can be folded over the outside of the belt and twisted. When the joint is to be opened the ends of the wires can be pulled steadily by pliers, and half of the joint is soon opened, then the other half can be opened by pulling by hand or by a second wire inserted in the joint. Of the two methods of opening the joint, as proposed by our contemporary, the first method, by paper in the joint, appears to us preferable, but care would have to be taken to use a paper that would split readily. A wire on outside of the belt would be inconvenient, and liable to tear the hands of the workman, in the case of a lathe belt for instance, that has to be shifted so much by hand.

Mr. Madison Williams, Port Perry, Ont., reports recent bookings of orders as follows: 30½ inch Vulcan for Toronto Lime Co., Limehouse; 40 inch Lefel for C. Spencer, Ursa, Ont.; 13½ and 23 inch Lefel for Austen Bros., Halifax, N. S.; 52 inch Special Lefel for F. Sanford, Fenelon Falls, Ont., and two 61 inch Vulcans for the monastery of The Good Shepherd, Pare Laval, Que., making five turbines of this size for the same institution within 8 months; also several saw mills and orders for heavy gearing, pulleys, etc., for the Eastern provinces. Mr. Williams has recently remodelled his machine shop, adding greatly to the facilities for handling the different parts of the very heavy wheels under way.