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the work, and it is said that the company have since deposited with a Canadian bank the sum of \$200,000, in accordance with the provisions of the statute incorporating the company. Further development will be awaited with much interest, as the construction of the canal will certainly prove of much benefit to Canada, and be a boon to the lumber industry of the northern country.

It is indeed gratifying to learn that both the Imperial and Dominion governments have decided to grant Messrs. Pickford & Black substantial subsidies for a fast steamship service between Maritime province ports and the West India islands. These islands are gradually becoming of more importance from a commercial standpoint, and conditions being favorable to an interchange of products with Canada, a considerable increase in the volume of trade may be looked for. The appointment of a Jamaican commercial agent at Ottawa is also a step in the right direction.

THE PATCHING OF CRACKS IN BAND SAWS.

By J. S. JACKSON.

It is probable that there is no band filer who has not had considerable trouble in the fitting of band saws by reason of the cracks, which occur variously both on the back and toothed edges, and occasionally also in the central portions of the saw. It is unnecessary here to take up the question of the causes for the formation of these cracks, as they are many and varied, and a treatment of the subject would make in itself a long article. It is obvious that with any band filer having troubles of this kind the most important thing for him to do is to look to the prevention rather than to a remedy for the cracking. But having cracked saws, the question arises, "how can the cracks best be remedied?"

Where a few or a considerable number of short cracks form on the back edge of the saw, or perhaps also on the front edge, extending in but a short distance, one of the most common remedies is to shear the back edge, if that edge is affected, or to shear and retoothe the front edge if that side is affected. There are instances where this process will prove the only successful remedy, and where it is necessary to remove only a very narrow strip it will not materially impair the saw by lessening its width. But there are occasions when these cracks extend in for a distance of an inch or an inch and a half, or perhaps further, and in such a case the remedy of shearing would work a serious loss to the saw, and the filer therefore resorts to cutting the saw in two and brazing it. But cutting and brazing band saws, if the process can be avoided, is highly objectionable, by reason of the fact that it involves a considerable amount of labor and skill to effect a successful braze, and it leads to the shearing of the saw and usually to an impairment of the life of the saw.

It would seem, therefore, that any method calculated to reduce the necessity for cutting and brazing must recommend itself strongly to both mill men and saw filers. Such a process consists of putting a patch on the saw over a crack, in such a manner as to largely restore the integral character of the saw and at the same time in no way diminish its life or strength, as is likely to result from a complete cutting and brazing. A band saw patch is simply a short braze. The patching of band saws has been practiced by

numerous filers for a number of years, but heretofore they have performed the process entirely by hand, having no machines or tools with which to render the process easy, simple and exact, hence the hand method has not been largely adopted and never will be.

The difficulty of patching a crack by hand will be readily apparent when one considers that two bevels must be filed in the saw plate, tapering to the crack on opposite sides, and also from the central portions toward the end of the crack, and a piece of steel filed accurately to fit this portion of the plate thus filed away, before the ordinary process of brazing is resorted to. In view of the fact that in a large number of band mill filing rooms there have hung in the racks, unused, band saws that have been condemned as worthless by reason of the cracks in them, it is perhaps a wonder that some makers of saw fitting machinery have not long before this developed a machine which would render the preparation of a cracked saw, and of suitable patches for same, a simple, easy and successful process. I am glad to learn that one of the concerns making filing room machinery has recently placed on the market a machine which will very quickly prepare a cracked saw ready for patching. By their method the surface of the saw along the edges of the crack is milled to the proper bevels, and strips of saw steel, of proper gauge, according to the requirement, are furnished in length as desired, so that the operator has nothing whatever to do except to prepare the crack and then apply the patch, brazing it on in the same manner as the ordinary braze is effected.

In brazing on a patch, the heated irons are applied only on the surface of the patch, and no other portions of the blade are affected. It is a much easier and quicker process to prepare the saw for a patch an inch long, more or less, than to prepare two laps the width of the saw. It is easier to straighten up a patch than a braze, as you have only from an eighth to a sixteenth as much surface, as if the patch is properly brazed on the saw becomes practically as good as new. I would advise any mill man or filer who is interested in this process to look into the machine referred to above, which is made by Baldwin, Tut-hill & Bolton, Grand Rapids, Michigan, and which is illustrated in their catalogue for 1899. —The Wood-Worker.

The mill of the Riordan Pulp Company, at Hawkesbury, Ont., will commence operations at an early date. The daily output is to be forty tons up to the first of next January, after which it is to be eighty tons. There is a mistaken impression that the product of this mill is to be ordinary sulphite pulp, such as is used in news. It is, however, to be a superior book pulp. It appears that the Riordans discovered, when marketing in the United States the surplus of the Merriton mills, that the grades affording the most profit were the higher ones. They found competition too keen in the ordinary qualities, and therefore kept exclusively to the finer kinds. The twenty tons per day that they could spare from the Merriton mills have been disposed of in the United States for more than the last twelve months, and it was a class of pulp that could be used for book paper. This quantity from the old mill will continue to be marketed across the line, as well as the whole output of the new mill. At Hawkesbury, production will be cheaper than at Merriton. For the Merriton mill wood had formerly to be brought all the way from the north shore of the Georgian Bay, and cost about \$6 per cord laid down. At Hawkesbury, contiguous to the company's own limits on the Rouge, wood will cost not more than \$2.50 per cord delivered.

TRADE OPENINGS.

The following were among the enquiries relating to trade matters received at the High Commissioner's Office in London, Eng., during the week ending June 17th, 1899:

An enquiry from Budgett Bros., 70 Bishopsgate St. Within, E. C., for a good manufacturer of dining tables made from birch, spruce, and basswood, in quantities and shipped in the white.

An enquiry from C. L. Miller, 117 Bothwell St., Glasgow, for shippers of hickory suitable for golf sticks, in lengths of 44" by 7/8" square. The goods are required immediately for wholesale trade.

THE SONG OF THE SAW.

The song is the shriek of the strong that are slain—
The monarchs that people the woodlands of Maine;
'Tis the cry of a merciless war,
And it echoes by river, by lake and by stream,
Wherever saws scream or the bright axes gleam—
'Tis keyed to the sibilant rush of the stream,
And the song is the song of the saw.

Come stand in the gloom of this clamorous room,
Where giants groan past us a-drip from the boom,
Borne here from the calm of the forest and hill,
Aghast at the thunderous roar of the mill,
At rumble of pulley and grumble of shaft,
And the tumult and din of the sawyer's rude craft.

Stand here in the ebb of the riotous blast,
As the saw's mighty carriage goes thundering past,
One man at the lever and one at the dog,
The slaughter is bloodless and senseless the log,
Yet the anguish of death and the torment of hell
Are quivering there in the long, awful yell
That shrills above tumult of gearing and wheel
As the carriage roars down and the timber meets steel.

Scream! And a board is laid bear for a home.
Shriek! And a timber for mansion and dome,
For the walls of a palace, or toil's homely use,
Is reft from the flanks of the prostrate King Spruce,
And thus in the clamor of pulley and wheel,
In the plaint of the wood and the slash of the steel,
Is wrought the undoing of Maine's sturdy lords,
The martyrs that nature yields up to our swords.

The song is the knell of these strong that are slain,
The monarchs that people the woodlands of Maine,
And the fury that whirls by mechanical law,
With biting teeth and insatiable maw,
Is the saw;
And this is the song of the saw.

—Holman F. Day, in Lewiston Journal

Referring to the old subject of the value of hardwood lumber cut in winter compared with that cut in summer, the American Lumberman says that, while some practical lumbermen do not believe it makes much difference in what part of the year it is manufactured, the general theory that when the tree is full of sap, fermentation and incipient decay are more likely to set in than at other times, finds acceptance and is reasonable. It also thinks that winter sawn lumber comes out whiter and of a more uniform color, while lumber sawn during the hot months, with alternating periods of heat and dampness, is likely to stain in a way likely to diminish its value for some purposes.

Chemically hardened railway sleepers—the idea of a Munich architect named Hasselman—are proving quite satisfactory on the Bavarian state railroads. The process, lasting about six hours, consists in a double baking of the wood and treatment with oil of vitrol and sulphate of iron, followed by placing in a bath of chloride of lime and milk of lime at a temperature of 100° to 125° C. and a pressure of about 2½ atmospheres. The cost is about two cts. per tie. The first baking destroys the germs of fermentation and induces mechanical union of the preservatives with the fiber of the wood, and the second imparts remarkable hardness and so changes the character of the wood that it remains dry even in damp places.

The Brockville Times defines the Canadian position thus happily:—

We don't want to retaliate,
But by jingo, if we do,
We've got the spruce,
We've got the pine,
And we've got the nickel too.