

NEW STEAM LOGGER.

A NUMBER of attempts have been made to use log haulers in the woods on ice roads, and several contrivances have been planned and constructed, but none with great success. Illustrated herewith is a steam logger invented by Mr. F. S. Farr, of the H. C. Akeley Lumber Co., of Minneapolis. It will be remembered that in the mill of this company the first double acting band saw was tested.

The machine illustrated was built entirely in the woods with what materials and facilities could be obtained, and is therefore somewhat crude in appearance. As will be observed, the boiler and engine occupy two sleds. This was found necessary because the gasoline engine that was first designed to furnish the power, and which was placed on the forward sled, proved insufficient to do the work. This necessitated a change, and Mr. Farr placed an engine on the forward sled and used another sled for a steam boiler. When constructing another machine,

DOUBLE-CUT BAND MILLS.

A. J. BURTON, in Wood-Worker.

In the Wood-Worker for July, on page 27, a filer gives his opinion of the double-cut band mill. He says it will not be the mill of the future. In my estimation, this is the very best evidence that the makers of the double-cut mill want. It is only about fifteen years ago when those same people, with others, were trying to make a success of the single-cut mills of to-day, and it was no unusual thing to hear experienced mill men say the band would never be a success or the mill of the future. I, for one, believe it is the coming mill. I am a band saw filer, but have never seen or filed a double-cut band saw, although I tried it on a Clark mill in Pennsylvania in 1897, but could not make a success of it, for the teeth on the back edge would cut out the guides, knock off the corners of the teeth and raise Cain in general, so I decided the idea was no good unless we had a mill built to suit it. But now, as the E. P. Allis Co. have made a mill suitable to run a double

will not a saw do as much from one edge as the other, or both edges cut twice as much as the saw with teeth on one side, and with a straight back? I claim it will do just as much work and stand just as much feed from one edge as the other, although I have never seen a double-cut mill, but I will accept a position as filer for one the first chance I get, and if my saws will not stand up to cut 100,000 feet per day, I will write and tell the readers of The Wood-Worker that I have made a failure.

From what I can learn of those that have seen the double-cut mill work, the greatest trouble is that it cuts a thick and thin board alternately, caused by the saw trying to follow the grain of wood. They tell me if the saw leads in, say one-quarter inch the first cut going ahead, it will lead out in the return cut, and if the log continues to be twisting all the boards will be thick and thin. Now, this may all be so, but I have my doubts as to a saw leading in or out, if it is put up perfectly flat, with a suitable tension and properly fitted teeth.

I was very much amused when I read about the filer who never used a straightedge on a band saw, but simply squinted along the edge of the saw with one eye to find where a high or low place showed on the back, and how he, with hammer in one hand and a piece of iron in the other, hammered the crook out. This reminds me of a mill in Whaleyville, N. C., that I called on in 1896, when I was traveling for a saw company. The saws were cutting to "beat the band." I made my way to the file room, and there, to my surprise, I found the filer rolling his saw and squinting along the back to see when he got it straight enough. When he was done he got a piece of iron and a hammer and tightened up the saw on the wheels of the grinder, then proceeded to level his saw, all with his eye, which he did in about twenty minutes. After he was done I introduced myself and talked about saws, free silver, etc., as this was in August, 1896. Then I asked the filer if he objected to me trying his saws with my pocket straightedge to see how he had them put up. I was surprised that they were put up about as well by this man without a tension gauge or straightedge as it was possible for me to do with both. His saws cut finely, and had no cracks. He had saws that had been worn down from twelve inches to six inches without a crack. When I left the mill I would cheerfully have traded my straightedge, if it were possible, for eyes as good as this filer had.



NEW STEAM LOGGER, INVENTED BY MR. F. S. FARR.

both engine and boiler will be placed on one set of runners.

One of the superior points of this sled locomotive is claimed to be the arrangement of the propelling gear. The heavy calked wheels are arranged so that they may be raised or lowered automatically with the unevennesses in the road bed and are operated by chain gear that connects them with a shaft lower than their own centres. This has a downward pull on them and holds them to the road. The calking is a specially arranged and patented device automatically cleaned, thus preventing from being clogged up with snow or dirt. Another unique arrangement is the use of the exhaust steam. It is forced out directly under the front of the runners and serves to keep the ice ruts in order, doing away with the necessity for a sprinkler. The illustration shows only four loads, but it has hauled as many as eight sleds with 30,000 feet of logs, and the limit of its capabilities depends only on the power of the engine that operates it.

toothed saw on, I see no good reason why a good progressive filer cannot do the rest, and make the double-cut mill the mill of the future.

This filer says: "Of course they may be made to run successfully, but they are sure to cause trouble." Now, the only trouble I can see that is most liable to turn up is that if the filer in charge of the double-cut saws is not a progressive filer, he is not likely to be successful, and it will be a hard matter to "hold her down" alongside of superior brother filers. I do not see why there should be any trouble in making a saw perfectly straight with teeth on both sides; it will be much easier to keep the saw straight on its edges for the simple reason that it is cutting with both edges, therefore most of the labor in fitting up the saw will be to put in a good even tension, so the saw will be fully capable of standing as much feed on one edge as it will on the other.

I hope all operators of double-cut mills will bear in mind that about one-half of the filers of single-cut band saws are running their saws straight on the back edge, with a tension in the saws put up to a 32 to 40-foot circle, or tension gauge, and those same single-cut bands are cutting from 40,000 to 60,000 feet per day. Now, why

To imitate rosewood, maple is best employed, since its texture approaches that of the rosewood the closest. According to Deutsche Drechsler Zeitung, the maple board must be carefully rubbed down, a handsome color being obtained only if this is attended to. For staining use anilic acids, a dark red one consisting of roesine 10 grammes, coralline 10 grammes, and analine brown 1.5 grammes, dissolved in 1 liter of alcohol, and a pale red one which is obtained by dissolving roseine 10 grammes and coralline 10 grammes in 1 liter of alcohol. With this pale red liquid draw the veins on the maple plate in distances of about millimeters, using a repeatedly divided brush, and fill up the intervening spaces with the dark red mixture. Before drying is completed blend the light and dark stripes with a soft brush, so that they do not appear too sharply defined.

The Hastings Shingle manufacturing Co. is building a new mill, the machinery of which was furnished by the Wm. Hamilton manufacturing Co.