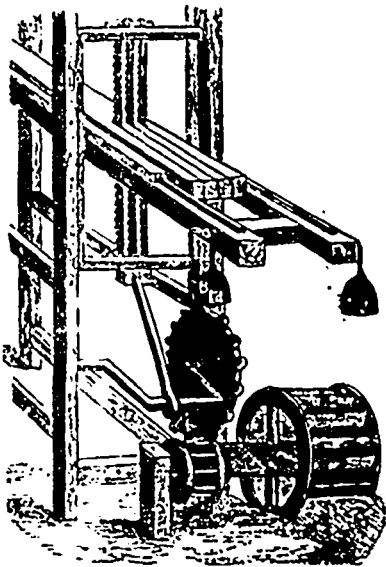


century that the mill came into general use in Great Britain. A saw mill was erected in England as early as 1663, but it was destroyed by the laboring mob in 1767 there are records of saw mills employed through this popular prejudice. Probably the earliest description of a saw mill to be found is that sent by the Ambassador from France, Queen of England, to the Court of Rome which has reference to one then in use in the neighborhood of Lyons. It is perhaps worth while to quote it verbatim: "The saw mill," the ambassador writes, "is driven with an upright wheel, and the water which maketh it go is gathered whole into a narrow trough, which doth carry the same water to the wheel. This wheel hath a piece of timber put to the axle-tree and like the handle of a broach and fastened to the end of a saw, which being turned by the force of the water, hoisteth up and down the saw, that it continually cutteth in, and the handle of the saw is kept in a rigall of wood from swerving. Also the timber lieth, as it were, upon a ladder which is brought by little and little to the saw with another vice."

It was in America that the saw mill when once introduced took the firmest root, as the vast extent of the forest that required clearing led to this kind of machinery being eagerly adopted and widely employed. The first saw mill of which there is any record was erected on Salmon Falls river, near the city of Portsmouth, N.H., be-



ONE OF THE FIRST SAW MILLS.

tween the years 1631 and 1635. About 1650 they came into use in Virginia. The accompanying illustration of the mill first built there is reproduced from a tract published in London, in which is also found the following description:

"This engine is very common in Norway and mountains of Sweden, wherewith they cut great quantity of deal boards; which engine is very necessary to be in a great town and forest, to cut timber, whether into planks or otherwise. This beer is altogether like those of Norway, for they make the piece of timber approach the saws on certain wheels with teeth, but because of preparations which those toothed wheels are often subject unto, I will omit that use: and instead thereof, put two weights, about 2 or 300 pound weight each, whereof one is marked A and the other B. The cords wherewith the sayed weights do hang to be fastened at the end of the 2 pieces of moving wood, which slide on two other pieces of fixed wood, by means of certain small pulleys, which should be within the house, and so the saw weights should always draw the sayed pieces of moving wood, which advancing always toward the saws, rising and falling, shall quickly be cut into 4, 5, or 6 pieces, as you shall please to put on saws, and placed at what distance you will have for the thickness of the planks or boards you will cut, and when a piece is cut, then let one with a lever turn a roller, whereto shall be fastened A strong cord which shall be fast back the sayed piece of wood, and lift again the weights; and after put aside the piece already cut, to take again the saws against another piece of wood, which once done, the ingenious artist may easily convert the same

to an instrument of threshing wheat, breaking of hemp or flax, and other as profitable uses."

Among the timber merchants doing business in England one hundred years ago appears the name of Irvin & Sellers, of Preston, Lancashire, and Bootle, Liverpool. This firm can boast of an unbroken success in one family for upwards of a century. Two years ago they celebrated their centenary, to commemorate Mr. John Irvin's commencement of business at Friargate in Preston as a manufacturer of shuttles in the year 1799.

PURCHASE OF MILL SITE.

Messrs. Geo. T. Houston & Co., hardwood lumber dealers of Chicago, have purchased 148 and a quarter acres in Vicksburg, Mississippi, as a mill site, paying therefor \$23,125. The tract fronts on Lake Centennial, corners the National Cemetery, and is bordered by the V. & M. V. R.R. Co.'s tracks. The proposed plant will include 4 band saw mills and numerous other gang and re-saws, including a number of veneer saws and woodstock factory connected with conveyors to consume low-grade material and refuse. The company will employ from 500 to 800 men in their manufacturing and logging operations and will build a fleet of light draft, modern steamers and barges for towing and barging logs on the Yazoo and Big Sunflower rivers.

The company will retain their big double band mill at Bigbee, which has made a record never before heard of. The mills were started on a night and day run January 10, 1899, about the time lumber began to boom, and has kept it up and is still running night and day, with a year's supply of logs ahead.

The company has recently secured additional stumpage near the Bigbee mill on Tombigbee river, known as the "Eikelberger Tract," amounting to 4800 acres, covered with a virgin forest of white oak, ash, cypress and poplar, and that, with their present holdings, will run the Bigbee mill a number of years.

The new plant to be built at Vicksburg will contain all new and modern machinery to be equipped with all the latest and most approved labor-saving appliances. Construction is to be commenced this coming fall, or probably sooner. To start with, a single band mill will be temporarily constructed at once, to saw out the material required for the construction of the new plant, which will take from 5 to 6 million feet of timber and lumber. The first floor of the mill proper will be of stone and brick; the second and third floors frame, covered with galvanized iron, strictly fire proof. The factory building, power plant and machine shop will be constructed of brick, stone and iron, modern and of a permanent nature and likewise fire-proof. The power house will include two 1,000 horse power engines, with separate attachments, and a battery of 18 boilers with 150 pounds steam pressure.

The four band, gang, veneer and re-saws are to be built with a capacity of 400,000 feet of lumber board measure, per day, which will be the largest hardwood mill ever constructed.

The company now own 260,000 acres of the finest virgin forest lands in the south, all of which has a perfect title and is suitable for cultivation. The company have distributing yards and branches in Chicago, Cairo, Memphis, Bigbee, and Vicksburg shortly to be added. Their handling of hardwood lumber is enormous, amounting to 100 million feet of assorted hardwood annually, which is distributed to the principal consuming markets throughout the United States and foreign countries.

ABOUT STRAIGHTEDGES.

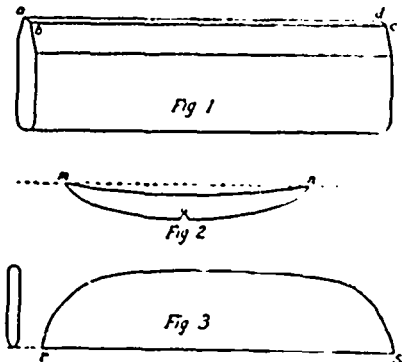
By T. L. HILES, IN THE WOOD-WORKER.

How many filers are there who hammer the circular or band saws under their charge, whose attention has never been specially directed to the subject of straightedges? Not a great many, let us hope. That there are a few such is evidenced

by the occasional accidents which call the subject of straightedges into view. A straightedge is a small affair to look at, but its condition is a large affair in anvil work. How many employers see to it that their filing room is supplied with correctly-made straightedges and with a test bar by which they can be gauged for accuracy?

Not every mill is all that could be wished for in this direction. This is one of those minor things if there are minor things in a mechanical point of view—which are sometimes left to the chance ability and opportunity of the filer to make for himself from a piece of an old saw. The edges of a straightedge should be parallel right lines. If they are not also straight lines they should vary from straight lines by a certain definite quantity, in a definite direction and for a definite purpose.

To illustrate, Fig. 1 may be a straightedge in which the surface a b c d is perfectly true, a d and b c being straight lines and parallel. It is the practice of some to use a straightedge with the edge concave about 1-100 of an inch, as shown, in an exaggerated form, in m n, Fig. 2. The thickness a b is of importance. The length of the straightedge will govern its general thick-



ness, which should be sufficient to render it stiff so it will not readily spring out of line. The edge a b need not exceed 1-16 of an inch in thickness, and may be less on short lengths. All straight edges should be of good steel, nicely tempered, so they will wear uniformly.

It is surprising to find upon what makeshift tools a mill is sometimes dependent. A young man who is the filer in the mill running a 6 inch resaw, depends upon a tool like that shown in Fig. 3. It is 6 inches long by 2 inches wide, and 13-gauge thick, made from an old circular saw. The edger is round, ground up by hand on a emery wheel. The rounding of the edge varies here and there, more metal being ground off at one place than another. Unless held perfectly vertical it will indicate an apparent lump upon a true surface. The user must often choose between a lump and the appearance of one. The industry he displays with the hammer and the appearance of his saw leads one to conclude he must labor on both the actual and the apparent inequalities.

In another mill a filer, in examining a shingle saw, complained it was in poor shape, seemed to be crooked and lumpy. An examination of his straightedge showed that it was soft, made from an old band saw, and had some kinks along the edge. Allowing that it was true on the edge, the least inclination of the level from a vertical position showed that what he mistook for lumps and wonds in the saw. The worst feature of this case lay in the insistence, by the filer, that the faulty condition of his level had nothing to do with the case. It being a level or straightedge, and made by himself, satisfied him that anything tested by it and found wanting should be condemned. Reflection, it is hoped, has since cleared away his brash confidence in this particular level. This is a fault in levels to be guarded against. It is just as important that they be true on the sides as on the edges.

A test bar made from a bar of steel 3-16 or quarter of an inch thick by 1 and one-quarter or 1 and one-half inches wide, straightened, and planed and ground true and square on the edge is very useful for testing the levels in daily use, to correct for wear. If the level is not of a uniform temper it will wear more in one spot than another.