

DEMUTH'S IMPROVEMENT IN GLASS WINDOW LIGHTS.

This invention is one of the simplest character, and can be described in very few words; notwithstanding which fact it possesses several important advantages which the practical mind will at once recognize.

In place of figured, ground, or stained glass used for transmitting light without permitting objects to be viewed through them, for office windows, screens, signs, etc., the inventor employs a series of glass rods cut to the proper length and placed side by side in grooves cut in the frame or sash, as shown in Fig. 1; or two or more series of glass rods placed across each other at right angles, as shown in Fig. 2, or at any other angle desired to produce a given effect.

The light, in passing through these rods, becomes broken up so as to cut off vision through them, at the same time that the illuminating power of the light transmitted is not materially impaired when plain white glass is employed.

The advantages claimed for this method of using glass in window lights, screens, etc., are, that a much cheaper light can be made in this manner than by grinding, etching, or staining glass; that in case of breakage only the broken rods need be removed and their places supplied with new rods at a comparatively small cost; while, by using rods of various colors, in a single or crossed series, as shown in the engraving, very striking and showy effects can be produced by the transmitted and refracted light through such a series; the combinations of color being practically without limit.

This invention was patented through the Scientific American Patent Agency, by William A. Demuth, September 22, 1868. The agent for all sales is Victor E. Mauger, 110 Reade street, New York, who may be addressed for further information.

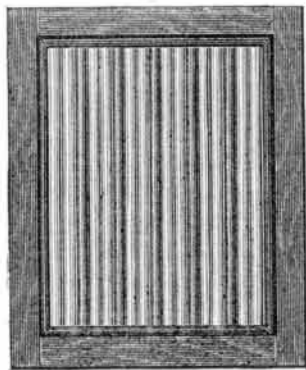


Fig. 1.

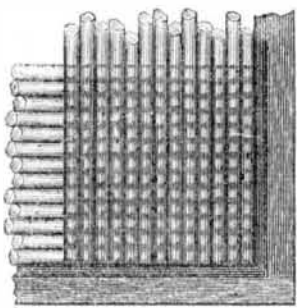


Fig. 2.

Fig. 2.

THE DRIVE WELL.

A recent number of the *Country Gentleman* contains an interesting communication from Dr. S. J. Parker, an old resident of Tompkins County, New York, showing conclusively that the drive well is an old invention, and was in actual use at Syracuse, New York, between 1840 and 1847. Dr. Parker says:

A piece of cast iron about six feet long, both with and without side holes, was made, and a hole four to six inches in diameter in the center. This cast iron point was fastened to a wooden log ten or more feet long, and pressed down in the mud near the lake. Then to this log, joining like the common aqueduct log, everywhere in use, the second log was secured, and so on a third and fourth and more logs, as one after the other they were sunk to the salt water. A shed with earth and stones to weight the part of the logs and of the ground so as to sink the log tube was used. Here is truly, in 1840 to 1847, the American driven well, for it had a point, a tube sunk without the removal of the earth upwards, holes near the point, and what is singular the tube itself was used as the pipe of the pump, for the line of logs, nearly or quite a quarter of a mile long to the Salina pump-house, was attached to the top of the tube, and drew the water that distance; that is, drew the water up one hundred and sixty or eighty feet, thence along the level many rods to the pump-house, and up to the great cylinder worked by the canal water wheel, and forced it, a boiling stream, to the top of the tanks; whence a similar line of logs conveyed it to the fires that boiled the water. There were wells over twenty years ago, seen by tens of thousands of our citizens, with every principle or device of the American driven well that inventive skill can name. The substitution of one material, gas-pipe, for log-pipe, is not invention but the choice of a mechanic, artist, or engineer.

In some cases a wooden plug was driven in the cast iron pipe, which weighed several hundred pounds, and the well sunk to near the salt water by the pressure of the stones that lay near by—the tube being dry and clear over 100 or 150 feet, when a heavy bar on the end of a rope was let down and the plug driven out. The tube was thus cleared at the point after being sunk.

In 1860, Dr. Parker had occasion to drive a tube well for his own use, and employed for this purpose two old locomotive flues, which he had welded together, making a pipe 16 feet long. This he pointed with a block of wood, drove it down with an axe, then with an iron rod pushed out the wooden point, and thus in an hour's time, at a cost of only \$2.50 he had a good well, which has been in operation ever since. The Doctor was advised to apply for a patent, but as he had only copied the plans which he saw used several years previous, he felt that he could not conscientiously take the oath of invention. Other parties saw the pump at the time the Doctor started it, and since that time several patents have been granted for improvements. It remains to be seen whether the original patentees of the drive well can sustain their broad claims in view of the facts above presented.

ANDREWS' PATENT SAW HANGINGS AND SAWS.

The improvements to which the attention of our readers is invited in this article, and which are illustrated in the accom-

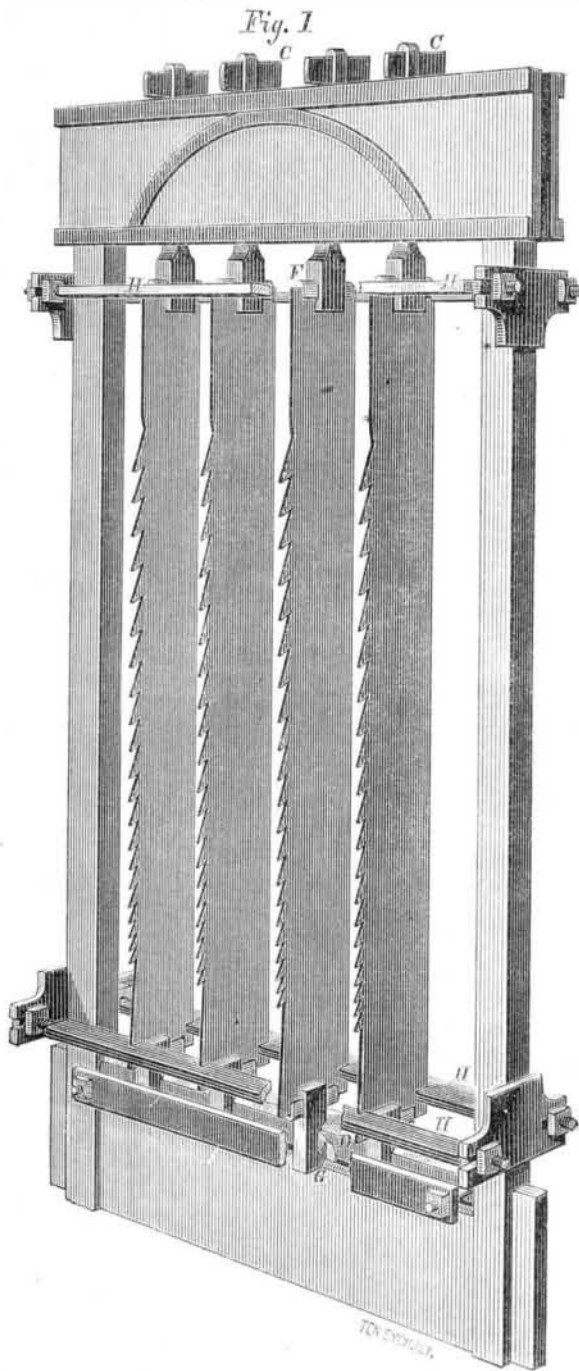


Fig. 1.

panying engravings, are, in our opinion, the most important recently made in methods for hanging mill saws. These im-

The objects sought in these improvements are five; namely, to do away entirely with punching or drilling saws at the mill; to allow the strain to be placed at any desired part, and to be gradually changed as the saw wears away; to enable the sawyer to adjust the "rake" of the saw, or, as it is commonly styled, the "overhang," in a very short time; to permit the employment of thinner saws and thus reduce waste in the kerf; and, finally, to obviate the objections against the exclusive use of fine teeth, or of coarse teeth, on such saws, by a compromise between them; the teeth at the upper part of the saw being coarse and gradually becoming finer toward the bottom.

We shall treat the means by which these objects are attained in the order of their statement; but we ought, perhaps, to state first that they are the result of long experience in the cutting of lumber, and that an intelligent analysis of first principles has been brought to the aid of experience in bringing them to their present state of perfection.

The punching of the saw at the mill is avoided by placing over the end of the saw a piece of metal, the form of which is shown in Fig. 2, drilled and permanently riveted to the saw.

Upon this piece of metal is slipped the hook shown in Fig. 3, the slot, A, of this hook being made to admit and fit closely the metallic piece shown in Fig. 2, and a short portion of the saw blade below it. The bearing at the upper part of the slot, A, is curved, as shown at the dotted line, I, Fig. 5, to permit parallel strain in adjusting the overhang. Fig. 3, however, is the hook used at the bottom of the saw, while Fig. 4 represents the application of the same method to the upper end of the saw blade; the shank, B, of the stirrup passing through the upper girt of the saw gate, and being keyed up in the usual manner, as shown at C, Fig. 1. A metallic plate, D, bolted to the lower girt, Figs. 1 and 5, and grooved to fit the hook, as shown in section at Fig. 5, forms the means for making the attachment of the saw at the lower end. These attachments are shown at F and G, Fig. 1, parts being broken away for the purpose. This engraving gives a good representation of a gang of saws mounted in the manner described.

It will now be seen that any desired rake, or overhang, may be given to the saw, and that the strain can be placed at any desired part by simply tapping loose the keys, C, and sliding the blade in the slots A of the hook, Fig. 3, or the stirrup, Fig. 4.

These advantages lead naturally to the securing of the fourth object above enumerated; namely, the employment of thinner saws than could otherwise be used, as the strain may be adjusted in a line parallel and very near to the teeth. The distance between the saws is regulated by the bars, H, having slots sawed on their inner edges to fit the thickness of the blades.

The manner in which the fifth object sought is attained has already been stated in general terms; but as this involves a new principle in the construction of mill saws some further explanation is needful.

It is well known that hand rip saws are made with coarser teeth at the heel than at the point, or so that fine teeth commence and coarse teeth finish the cut. Fine teeth cut at the outset much more smoothly than coarse ones, but as soon as they become clogged with sawdust they lose their efficiency to a great degree. As this partial clogging becomes most troublesome at the latter end of the stroke, the arrangement adopted in these improvements brings the larger teeth into play just where they are needed, and obviates the rank tearing of coarse teeth at the commencement of the cut, and reduces the amount of splintering at the bottom of the kerf. Thus a much smoother action and better work are obtained.

These improvements have secured the warmest approval from some of the most extensive lumber manufacturers in the United States. Among these we may mention Benjamin W. Thompson, superintendent of the celebrated Dodge Mills, Williamsport, Pa., and J. G. Marvin, foreman of the same, who state that they should be very unwilling to dispense with their use. Numerous other testimonials from prominent men in the lumber trade, have also been shown us, which leave no room for doubt as to the value of the improvements.

It is almost unnecessary to mention that these improvements may be adapted to double hook gates as well as to single hooked ones, or that the attachment shown in Fig. 2, when clasped and riveted to the saw, must greatly strengthen the plate. They are also equally applicable to muley saws.

A patent for the improvements in saw hangings was obtained April 21, 1868, one on the improved construction of the mill saw, December 29, 1868, and on the strap or tab, June 1, 1869, by E. Andrews, of Williamsport, Pa., who may be addressed for further information.

S. H. K., of Ky., sends us a sample of eggs of the Rear Horse, and says, "In your current volume, page 181, I notice a cut and concise history of the Rear Horse. They have been known to me by the name of 'Devil Horse.' I have always been afraid of them, not because they ever did me any harm, but because they looked as if they might if they had a chance, and I have always killed them. The mother of this bundle of eggs, I suppose I killed only a few days before I received your statement about them. It is a source of relief to me to know that they are harmless, as I frequently meet them.

DYNAMITE.—A correspondent writing from St. Louis, says, "Will you please, in your paper, inform vendors of 'Dynamite' that a subscriber thinks if they would advertise with you, they would increase their sales?"

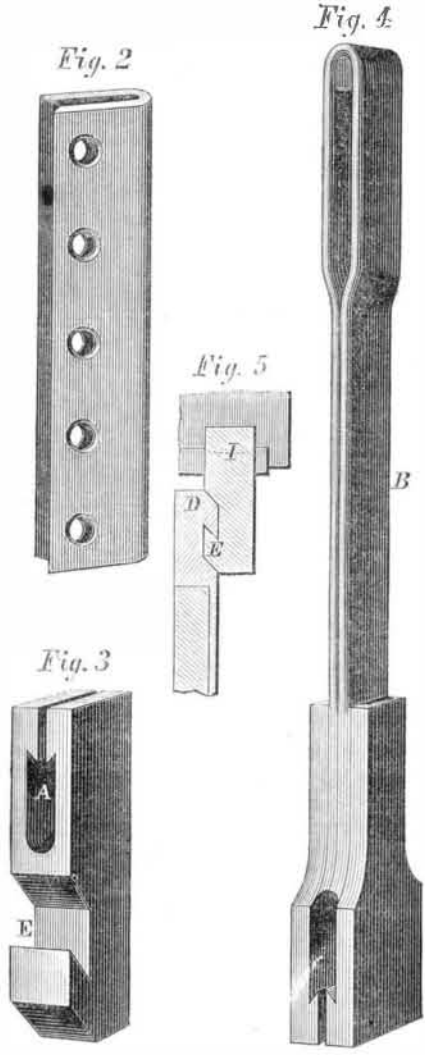


Fig. 2.

Fig. 4.

Fig. 5.

Fig. 3.

provements, however, not only include the hanging of the saw, but an inspection of the engravings will show an important change in the saw itself.