(No Model.)

J. HARLEY.

SAW GUIDE.

No. 427,316. Patented May 6, 1890.

Fig. 1

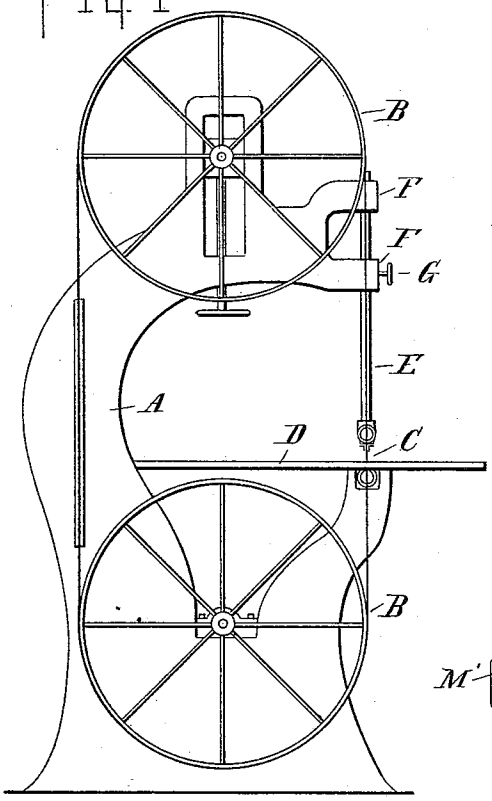


Fig. 2

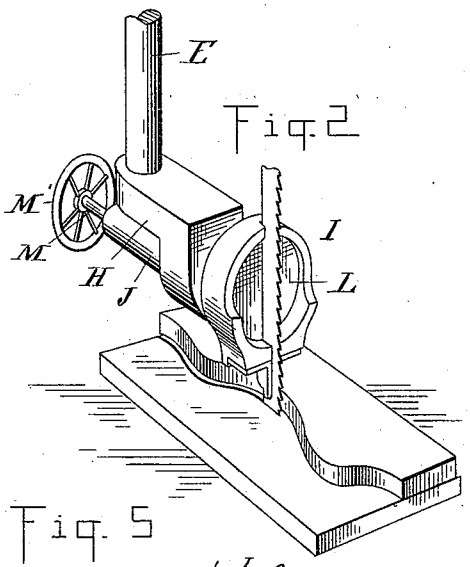


Fig. 5

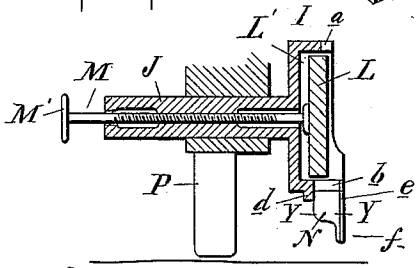


Fig. 4

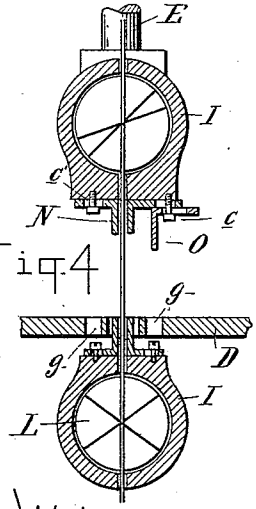


Fig. 3

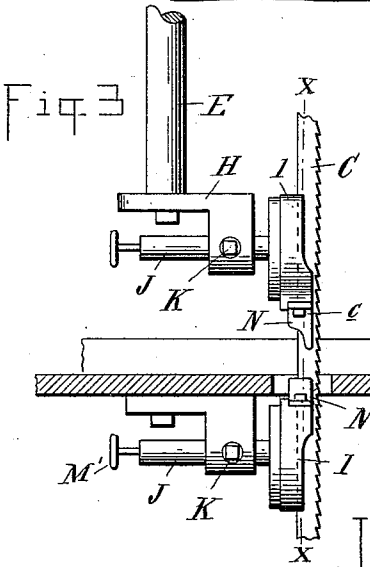


Fig. 6

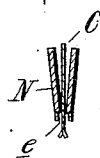
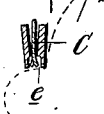


Fig. 7



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN HARLEY, OF DETROIT, MICHIGAN, ASSIGNOR OF ONE-HALF TO M. J. MURPHY, OF SAME PLACE.

SAW-GUIDE.

SPECIFICATION forming part of Letters Patent No. 427,316, dated May 6, 1890.

Application filed December 14, 1889. Serial No. 333,812. (No model.)

To all whom it may concern:

Be it known that I, JOHN HARLEY, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Saw-Guides, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in saw-guides, especially intended for band-saws, scroll-saws, &c.; and the invention consists in the peculiar construction of the guide-block and the detachable back bearing adapted to be held therein; further, in the peculiar construction and arrangement of adjustable side bearings so constructed that they may be used as pattern-guides, and, further, in the peculiar construction and arrangement of the various parts, all as more fully hereinafter described.

In the drawings which accompany this specification, Figure 1 is an elevation of a band-saw with my improvements attached. Fig. 2 is a perspective view of the upper guide detached and showing it as at work. Fig. 3 is a side elevation of the guides. Fig. 4 is a cross-section on line *x x* in Fig. 3. Fig. 5 is a vertical central section through the upper guide, and Figs. 6 and 7 are sections on line *y y* in Fig. 5, showing the different adjustment of the guides to the saw.

A is a frame of a band-saw. B are wheels. C is the saw. D is the table. E is a vertically-supporting rod adjustably secured in the brackets F of the frame in any suitable manner, preferably by means of the hand-wheel G. These parts are all of known and usual construction.

H is the guide-supporting bracket secured to the lower end of the rod E.

I is the guide-block provided on its rear side with the hollow shank J, which passes through an aperture in the bracket H and adjustably held therein by means of the set-screw K.

L is a wooden block or disk secured in the recess L′ of the guide-block and forming the back bearing of the saw.

M is a screw-threaded stem passing through the shank J, which is suitably screw-threaded interiorly to receive the same and bearing with its forward end against the block L, the free end thereof being provided with a suitable hand-wheel M′. The back bearing L is arranged with its front face at right angles to the path of the saw, which latter passes through suitable slots *a b* in the upper and lower sides of the guide-blocks.

N are side bearings, preferably formed of angle-iron, one arm of which depends opposite the saw-blade and the other arm of which is adjustably secured to the guide-block by means of the set-screw *c*, engaging through slots *c′*. To prevent any twisting or turning of these side bearings, they abut with their rear edges against the shoulder *d*, formed on the guide-block. These side bearings are of such shape that they approach most nearly to the saw at their forward edges and are cut away at their rear edges, so as to form a gradually-enlarging clearance to the rear. This may be accomplished, if desired, by simply arranging the side bearings angularly to the saw, or it may be effected by cutting away the material, if desired. These side bearings are provided at their front edge with the notch *e*, forming a clearance, when adjusted in the position shown in Fig. 7, for the saw-teeth and dust passing therethrough, as more fully hereinafter described.

f is a contracted downwardly-projecting finger or extension upon the side bearing, which may be used as a guide for the pattern. This downward extension may be made smaller than the rest of the side bearing, if desired, for scroll-work, but in straight work it may be of the same size, simply forming the side bearings of sufficient length.

O is a supplementary guide, formed of an angle-plate, similarly secured to the side bearing *b* and adjustably secured by a set-screw and slot to the under side of the guide-block. This is designed to be used in case a cut is desired to be made of larger dimensions than the pattern—for instance, where the material is afterward to be trimmed down or to have a mold cut upon it after it has been sawed.

P is a splitter, consisting of a piece of thin metal secured to the bracket H in any suit-

able manner, extending down the rear of the saw in line therewith, adapted to pass through the saw-kerf behind the saw. In practice I preferably place another guide-block below the table, secure it thereto by means of a similar bracket H, and provide this guide-block upon its upper edges with side bearings—such as *b*, which, however, do not extend above the top of the table, but are made adjustable and otherwise similarly constructed to those described.

I provide suitable apertures *g* in the table above the set-screws, so that these lower side bearings may be easily and conveniently adjusted.

The parts being thus constructed and arranged, they are intended to operate as follows: The parts are adjusted to their proper position, with the back bearing resting against the rear of the saw and the side bearing brought into proper relation to the sides of the saw, approaching with their rear edges to the sides of the saw just in the rear of the teeth. As soon as the saw has worn a slot in the back bearing it may be withdrawn by turning the stem M from engagement with the back of the saw and rotate it in its axis in the guide-table to present a new point against which the saw is to rest. In this way the face of the block may be entirely used up without the necessity of replacing it with a new one by simply rotating it from one position to another. Where it is desired to use the saw in cutting out scrolls in which there are abrupt shoulders, I adjust the guide-block forward upon the saw until the side bearings project beyond the edge of the saw-teeth, as shown in Fig. 7, so that the saw will not cut in advance of the guide.

To use the side bearing as a pattern-guide, I adjust the pattern upon the board designed to be cut in any suitable manner, preferably by means of points or contacts on the under side of the pattern, and then by keeping the pattern in contact with the outer edge of the saw-guide the saw is guided through the proper path.

The extensions *f* of the side bearing are made smaller than the rest of the bearing, so as to allow of its passing along the curved path more easily.

What I claim as my invention is—

1. In a saw-guide, the combination, with an adjustable guide-block having a circular recess in its face, of a back-bearing disk arranged in said recess and capable of being rotated therein, and a horizontally-arranged screw-threaded stem bearing against said disk for adjusting the same, substantially as described.

2. In a saw-guide, the combination, with an adjustable guide-block having a hollow threaded shank J and a circular recess in its front face, of a bearing-disk arranged in the recess and capable of being rotated therein, and a screw-threaded stem in said shank for adjusting the disk, substantially as described.

3. In a saw-guide, the combination, with an adjustable guide-block, of the adjustable side bearings arranged to incline outwardly in opposite directions from their front edges and formed with notches *e* in their inner forward edges directly opposite each other, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 2d day of November, 1889.

JOHN HARLEY.

Witnesses:
M. B. O'DOGHERTY,
S. M. HULBERT.