G. ABEL & J. PEDDER.

Blanks for Saws.

No. 156,964. Patented Nov. 17, 1874.

Fig. 1

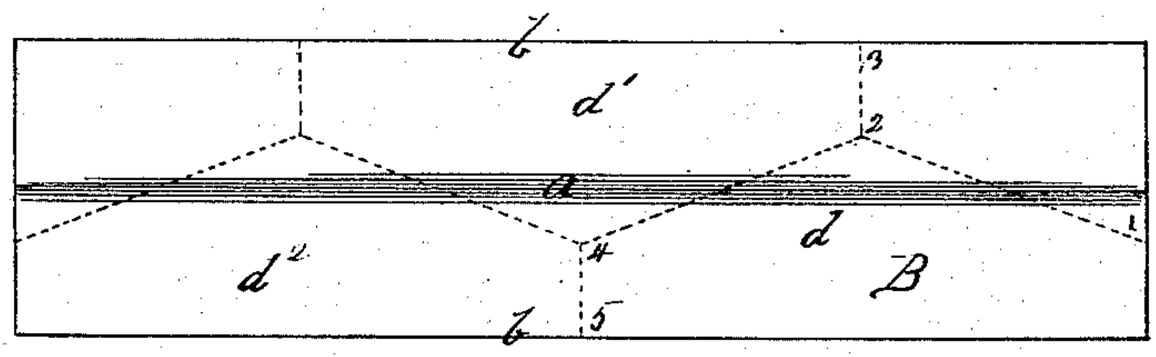


Fig. 2

Fig. 3

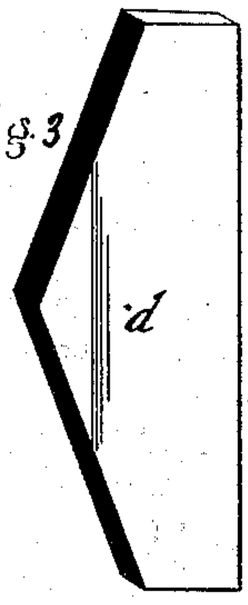
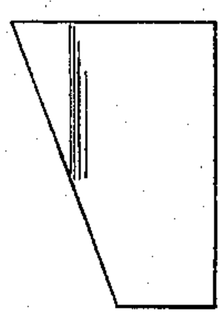


Fig. 4



WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE ABEL, OF CHARTIERS TOWNSHIP, ALLEGHENY COUNTY, AND JOHN PEDDER, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN BLANKS FOR SAWS.

Specification forming part of Letters Patent No. **156,964**, dated November 17, 1874; application filed April 24, 1874.

To all whom it may concern:

Be it known that we, GEORGE ABEL, of Chartiers township, and JOHN PEDDER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Saw-Blanks; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of specification, in which—

Figure 1 is a plan view of a bar of suitable form for the cutting of saw-blanks therefrom in accordance with our improvement, the lines of cut being represented by dotted lines. Fig. 2 is a cross-section thereof. Fig. 3 is a perspective view of one of the blanks as cut from the bar; and Fig. 4 is a face view of the cutting-die by which the blanks are severed.

Like letters of reference indicate like parts in each.

In the manufacture of crosscut-saws and up-and-down mill-saws, as practiced previous to the date of our invention, it has been usual to roll out each saw blank or blade by itself to the required length, width, and thickness. The blank then had to be trimmed at each end, sometimes on both edges, and, in those saws in which the cutting-edge was bellied from either end toward the middle, such shape was given by trimming of a portion of the edge.

This mode of manufacture occasions a loss of, say, fifteen per cent., more or less, the parts so trimmed being thrown into the scrap pile. By our improvement we save nearly the whole amount of this waste, and at the same time produce a better saw-blank.

To enable others skilled in the art to make and use our improvement, we will proceed to describe the same.

By the use of suitable grooved rolls, and by the ordinary mode of rolling, we produce a bar, B, of, say, ten to fifteen inches in width, and as long as may be desirable or practicable, and, preferably, make it somewhat thicker along the middle than at the edges. Ordinarily, we prefer to make the bar of a thickness of from one-fourth to three-eighths of an inch at its middle part, and gradually reduce the thickness by from one thirty-second to one-eighth of an inch each way to the edges, and the increased thickness of the middle part may be made either on one or both faces of the bar.

In the drawing, *a* represents this thickest part, and *b* the opposite edges referred to. The bar thus made is then cut up into a series of blanks, along the dotted lines shown in Fig. 1, by the use of a pair of dies, the male or cutting-die of which is of the form shown in Fig. 4. This cutting-die is so shaped that at the first stroke it will cut out a corner of the bar indicated by the figures 1 2 3, and by the next stroke (the blank being inverted for that purpose) it will sever a blank, marked *d*, by carrying forward the line of cut from 2 to 4 and 5. This operation, being continued throughout the length of the bar, will give a series of blanks, d d^1 d^2, until the bar is cut up into blanks, as indicated. These blanks, being properly heated, are rolled to the length and thickness desired in the saw, after which a very little trimming will give them the exact shape desired, preparatory to cutting the teeth. The remainder of the work of finishish the saw is done in the usual way.

By this mode of manufacture we not only save material, as above stated, but also dispose of the metal which goes to make the saw in such way as to give the desired bellied edge with the least possible labor, and we also make the cutting-edge from the material of the center of the bar, which part of the bar, as is well-known, contains the best material, since the material in the middle of the bar is always in the operation of rolling more perfectly worked than that which forms the edge.

In the old method of making saws, the cutting-edge of the saw was made up of the material which was at or near the edge of the bar, and, of course, to that extent, was the the poorest material in the bar. Also, by making the bar thicker at the middle than at the edges, we secure, without other than the ordinary labor, the greater thickness at the edge of the bar, which is also an important feature in the manufacture of saws, since, ordinarily, the saw-blade should be thickest at the edge, but where this increased thickness in the edge is not desired the bar B may be made of uniform thickness from edge to edge, and such

modification we include as part of our invention. Also, in the manufacture of gang-saws, or other saws where a straight edge is desired, the bar may be rolled thicker in the middle, as described, split directly along the center, and cut transversely into blanks of the desired length, which blanks are then rolled down and finished, as above indicated.

What we claim as our invention, and desire to secure by Letters Patent, is—

A saw-blank cut from the bar, substantially as herein set forth, so as to have, when cut, a greater thickness in one edge than in the other, for the purpose specified.

In testimony whereof we, the said GEORGE ABEL and JOHN PEDDER, have hereunto set our hands.

GEO. ABEL.
JOHN PEDDER.

Witnesses:
W. N. ERWIN,
JOHN W. AUTH.