J. KRAUS.
Band-Saw.

No. 205,876. Patented July 9, 1878.

Fig. 1.

Fig. 2.

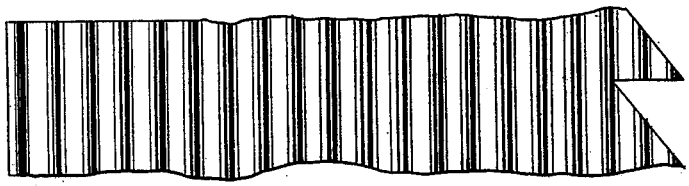
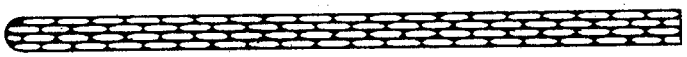


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN KRAUS, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, OF TWO-THIRDS HIS RIGHT TO JOHN W. MUNDAY AND EDWARD S. EVARTS, OF SAME PLACE.

IMPROVEMENT IN BAND-SAWS.

Specification forming part of Letters Patent No. **205,876**, dated July 9, 1878; application filed March 20, 1877.

To all whom it may concern:

Be it known that I, JOHN KRAUS, of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Band-Saws, of which the following is a specification:

In the accompanying drawing, Figure 1 is a side view of a portion of one of my improved saws. Fig. 2 is a smaller fragment, greatly magnified to represent the direction of the elongated steel fibers; and Fig. 3 is a section across the same to show the flattened condition of said fibers.

In making my improved band-saw I first draw the steel into wire or rod of suitable size, according to the size of the saw. Next I pass the rod or wire so formed between rolls and flatten it into a band. Next I cut upon one edge of the band the teeth. This process leaves its mark upon the completed article by producing a band-saw of wonderful toughness and flexibility.

The ordinary band-saw lasts not over two weeks without breaking. This saw will last four weeks on the average, and has been known to have been used six months without breaking, and saws made after this invention have been known to last without breaking until filed down to a third of their original width.

The first step of the process—the drawing of the steel into wire—greatly elongates the fibers of the steel, and disposes them to lie in the direction of the length of the wire. The steel is now in the best condition to resist a break by a pull in the direction of its length. The next step of the process—the rolling—flattens the fibers, and renders the wire very flexible when bent across the thin way. This logically puts the steel in the very best theoretical condition for use as a band-saw.

The saw made after my invention possesses not only a remarkable and unexampled toughness and flexibility, but also does not dull so easily as ordinary saws, and does not require to be sharpened so often.

I claim—

A flattened-wire band-saw, substantially as specified.

JOHN KRAUS.

Witnesses:
JOHN W. MUNDAY,
FORDE R. SMITH.