

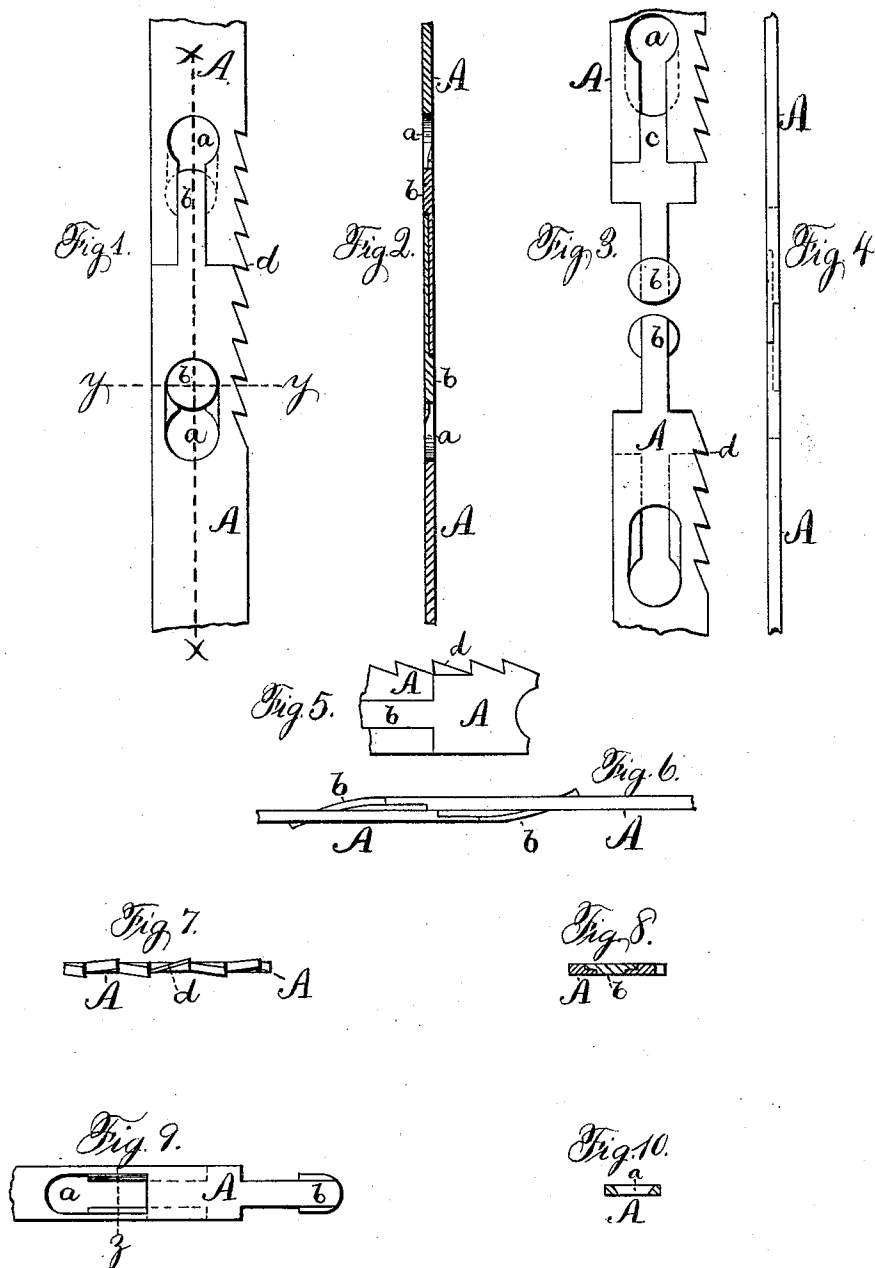
(No Model.)

H. N. GALE & W. L. WRIGHT.

Band Saw Connection.

No. 230,934.

Patented Aug. 10, 1880.



Witnesses
John Edwards Jr
L. S. Burr

Inventors
Herbert N. Gale
Wilbur L. Wright
By James Shepard Atty.

UNITED STATES PATENT OFFICE.

HERBERT N. GALE AND WILBUR L. WRIGHT, OF BRISTOL, CONNECTICUT.

BAND-SAW CONNECTION.

SPECIFICATION forming part of Letters Patent No. 230,934, dated August 10, 1880.

Application filed April 21, 1880. (No model.)

To all whom it may concern:

Be it known that we, HERBERT N. GALE and WILBUR L. WRIGHT, both of Bristol, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Connections for Band-Saws, of which the following is a specification.

Our invention relates to improvements in band-saws in which there is an eye and tongue in the adjoining ends of the saw; and the object of the invention is to furnish a cheap, strong, and convenient fastening for connecting and disconnecting the ends of a band-saw in such manner as not to interfere with the working qualities of the saw.

We attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the connected ends of a band-saw. Fig. 2 is a longitudinal section of the same on line *xx* of Fig. 1. Fig. 3 is a side elevation with the ends disconnected. Fig. 4 is an edge view of the back of the saw. Fig. 5 is a side elevation, showing the opposite side of the connected ends, and designed particularly to show the thin tooth at the lap. Fig. 6 is an edge view, showing the manner of detaching and attaching the ends. Fig. 7 is an edge view, showing particularly the set of the thin tooth. Fig. 8 is a sectional view on line *yy* of Fig. 1. Fig. 9 is a side view, showing a slight modification in the form of the ends, and Fig. 10 is a sectional view of the same on the line *z* of Fig. 9.

Similar letters refer to similar parts throughout the several views.

The thickness of the saw in the drawings is represented as proportionally larger than it should be in practice, in order to avoid crowding the lines.

We design to make the ends in detached and separate pieces from the saw proper, and to afterward connect them by soldering, or rather let the user so connect them. In this way we can make them of any suitable or desired metal—as, for instance, soft steel or iron—so that they will not break; but they may, if desired, (so far as part of our invention is concerned,) be formed in one and the same piece with the saw proper, which, if too

hard to bear use when reduced by forming the clasp, may have its connecting ends annealed.

In each piece *A A* we form an eye, *a*, which is widest at the farthest point from the lap and narrow at the end nearest the lap. We also form a tongue, *b*, of corresponding form—that is, with a head and narrow neck fitted to the eye. This tongue is reduced in thickness upon the two sides of its broad head, as shown on the tongue of the lower one of the pieces *A A*, in Fig. 3, while the body of the tongue is reduced in thickness upon its opposite side, as shown by the upper piece in said figure. The end of each piece *A* is also reduced in thickness its whole width for a short distance, equal to the intended length of one tooth, from which reduced portion a groove, *c*, of a width to receive the body or neck of the tongue, extends inward to the eye, all as shown in Fig. 3. The opposite side of the pieces *A A* is also recessed out upon each side of the narrow portion of its eye. These reductions or depressions extend about half-way through the original thickness, so that the remaining thin portions are about one-half the thickness of the metal in the body of the pieces *A A*. Both of the ends to be connected are made just alike, except in the teeth, which should not be formed until after the ends have been connected together.

In order to connect the pieces they are first lapped at the ends until the heads of the tongues *b b* are by the side of the largest parts of the eyes *a a*. The heads of the tongues are then forced into and through the eyes by springing the tongues, and while they are so sprung the pieces are pulled away from each other so as to draw the heads into eyes and into the position represented in Figs. 1, 2, 4, and 5, when the parts are locked together in such manner that they will not become detached in the ordinary uses of a band-saw.

In order to detach the ends the strain upon the saw is released, the abutting shoulders (shown in Fig. 4) are slipped by each other by springing the metal and then crowding said shoulders away from each other a little farther than the position represented in Fig. 6, when the tongues can be removed from the eyes and the parts detached.

One important feature in this connection is that there is a tongue running by the abutting shoulders at the junction of the saw, so that if the ends of the saw should spring outward at this point the tongues, which are still secured to the eyes and upon each side of the lap, will hit the wood and guide the shoulders by it without catching.

After the ends are joined the teeth are formed, taking care that the front sides of the teeth come opposite the abutting shoulders on the saw, the saw being reduced in thickness at the lap for the length of one tooth and the whole width of the saw.

In order to prevent catching and making a split tooth, the point of the tooth (or rather the whole tooth on one-half of the lap) is removed, as shown in Fig. 5, and the remaining thin tooth *d* is, in setting the saw, bent toward and over the side having the point removed, as shown in Fig. 7.

If desired, instead of making the reduced portions or depressions by the sides of the eyes and on the heads of the tongues flat, so as to form the rabbeted form of connection, as shown in cross-section, Fig. 8, the same may be beveled so as to form a dovetail, as shown in Figs. 9 and 10.

If desired, for small and narrow saws the teeth may be omitted in the end or connecting pieces, which would not seriously affect the operation of the saw.

Another important result of our construction is that the abutting shoulders and the locked tongues prevent the saw from deflecting edgewise at the junction—or, in other words, the back of the saw upon both sides of the connected ends is in the same plane, whereby it is adapted for working against a stationary guide to keep the saw on its wheels.

We claim as our invention—

1. In a band-saw connection, one of the saw ends formed with the eye *a* enlarged at one end, and with a narrow neck at the opposite end, the narrow neck being wider upon one

side of the blade than it is upon the other, in combination with the other saw end having a headed tongue, the head of which is made wider upon one side of the blade than it is upon the other, and fitted to and engaging with the said eye, substantially as described, and for the purpose specified.

2. In a band-saw connection, the ends made with the eyes and tongues and provided with a groove upon one side which extends from the eye to the shoulder near the neck of the tongue, the neck of the tongue also being reduced in thickness and fitted to said groove, substantially as described, and for the purpose specified.

3. In a band-saw connection having reduced portions lapping by each other, the thin tooth *d*, with its front end located nearly opposite to the abutting shoulders of the connected pieces, and with said tooth set or bent over toward the side from which the companion thin tooth has been removed, substantially as described, and for the purpose specified.

4. In a band-saw connection, the ends halved for their whole width for a short distance, terminated by the abrupt transverse shoulder, and lapped one upon the other, and provided also with an eye and tongue each for securing the ends together at two points upon opposite sides of the halved and lapped portion and outside of the two transverse shoulders, substantially as described, and for the purpose specified.

5. In a band-saw connection, the transverse abutting shoulders and the eyes and tongues for securing the connected ends together at two points, one of which is upon one side of said transverse abutting shoulders, and the other upon the opposite side, substantially as described, and for the purpose specified.

HERBERT N. GALE.

WILBUR L. WRIGHT.

Witnesses:

JAMES SHEPARD,

JOHN EDWARDS, Jr.