

(No Model.)

M. E. HANOVER.
SAW FRAME.

No. 562,464.

Patented June 23, 1896.

Fig. 1.

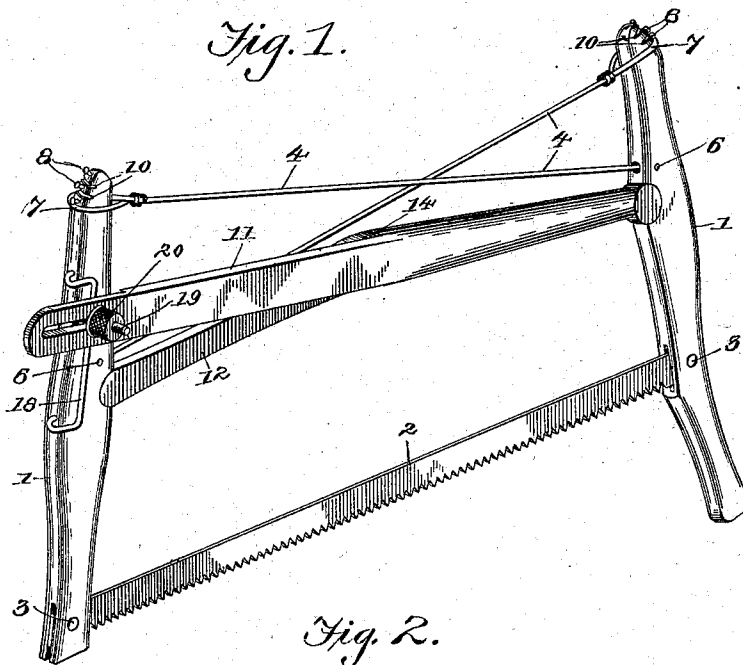


Fig. 2.

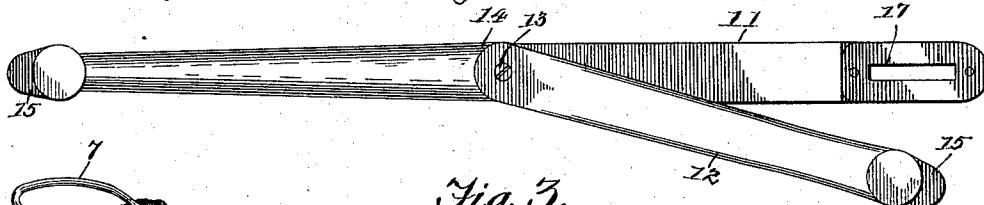


Fig. 3.

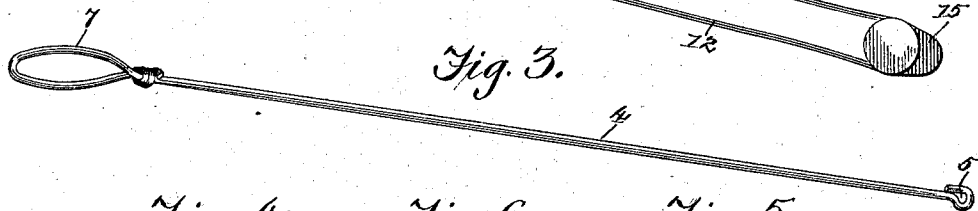


Fig. 4.

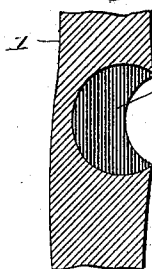


Fig. 6.

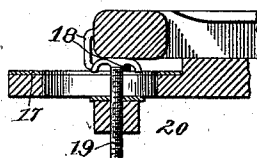
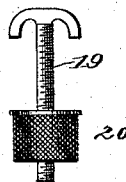


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

MAJOR E. HANOVER, OF EVANSVILLE, WISCONSIN.

SAW-FRAME.

SPECIFICATION forming part of Letters Patent No. 562,464, dated June 23, 1896.

Application filed February 21, 1896. Serial No. 580,228. (No model.)

To all whom it may concern:

Be it known that I, MAJOR E. HANOVER, a citizen of the United States, residing at Evansville, in the county of Rock and State of Wisconsin, have invented a new and useful Saw-Frame, of which the following is a specification.

This invention relates to bucksaws, and has for its object to provide a frame in which novel and superior means are provided for expanding the frame and thereby putting the saw-blade under the desired tension.

The improved frame herein contemplated is so constructed that the several parts thereof may be readily disassociated and packed in a minimum amount of space for the purposes of storage and transportation.

The invention consists in certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and finally embodied in the claims.

In the accompanying drawings, Figure 1 is a perspective view of the improved saw-frame. Fig. 2 is a detail elevation of the frame-expanding toggle-levers, taken from the reverse side to Fig. 1. Fig. 3 is a detail view of one of the metal braces. Fig. 4 is a detail section through one of the side pieces of the frame. Fig. 5 is a detail plan view of the T-shaped clamping-bolt. Fig. 6 is a detail horizontal section showing the means for holding the long toggle-arm.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the accompanying drawings, 1 designates the usual end pieces of a bucksaw-frame, one of said pieces being extended below the saw-blade 2, to form a handle by which the frame may be reciprocated. The saw-blade 2 may be connected at its extremities by means of pins 3, passing through openings in the side pieces and the saw-blade, or in any other usual manner. At their upper ends the end pieces 1 are connected by means of cross-braces 4, formed of stout wire or slender rods, each of said braces having its lower end looped, as at 5, and inserted in a socket in the inner edge or face of one of the end pieces where it receives and is engaged by a transverse pin or rivet 6. The brace at its

upper opposite end is provided with a loop 7, which is adapted to be passed over the upper end of one of the side or end pieces 1 and to be engaged behind or under one of several pins 8, driven into the outer beveled or tapered upper end of such side or end piece. In lieu of the pins 8, grooves 10 may be used for engaging the loops 7, or, if desired, both may be employed, as shown.

11 designates the long member, and 12 the short member, of a pair of toggle arms or levers, by means of which the saw-frame may be expanded. The long arm or lever for about half of its length is of twice the thickness of the short arm and for the remaining portion of its length is cut away or reduced in thickness, so that the short arm, which connects pivotally at one end to the proximal center of the long arm, may rest within the plane of the greatest thickness of the long arm. The inner end of the short arm 12 is rounded off in the arc of a circle of which the central pivot 13 is the center, and the shoulder 14 of the long arm is correspondingly concaved to receive such rounded end, so that a neat and flush joint is obtained.

The outer end of each of the arms 11 and 12 is rounded, as shown, and is seated within a corresponding concavity in the inner face or edge of the side bar against which it bears. The rounded end of the arm is also provided with an extension forming a central tenon 15, which enters a corresponding mortise 16, formed as an extension of the concavity aforesaid. This construction admits of the necessary rocking movement of the arms 11 and 12 while the tenons 15 prevent the lateral disengagement between such arms and the end or side pieces 1 of the frame. The swinging extremity of the long arm 11 is formed with a longitudinal slot and is faced upon the inside with a slotted wear-plate 17. Such end of the arm extends past the side or end bar 1 at that end of the frame and bears against a stay-rod or guide 18, slightly offset from the end piece and having its terminals deflected and driven into the same in order to afford the proper support for such rod or guide. A T-shaped clamping-bolt passes through the slotted end of the arm and engages the rod or guide 18 upon the inside of the arm, and the said bolt (indicated at 19) has its shank

threaded to receive a knurled nut 20, by the tightening of which the slotted end of the arm, through the medium of the bolt, may be clamped at any point on the rod or guide 5 18. The extremities of the T end of the bolt are shaped like hooks, so as to partially embrace the rod 18, and prevent accidental disengagement between the said parts when the nut is loosened.

10 The means hereinabove described for bracing and expanding the saw-frame will be found very effective, as it brings into use the well-known toggle principle and affords the greatest power obtainable for giving the desired tension to the saw-blade. At the same 15 time the operation is easy and rapid in execution and if desired the several parts of the frame may be readily disassociated and bundled into compact shape for storage or transportation. 20

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

25 Having thus described the invention, what is claimed as new is—

1. In combination with a saw-frame, a pair of toggle - arms, one of which is extended

across the end piece of the frame opposite to that upon which it is fulcrumed and provided 30 with a longitudinal slot at its free end, a clamping-bolt passing through said slot and having a hook at its inner end and a nut upon its outer end, and a rod or guide on the saw-frame adapted to be engaged by the hooked 35 end of said clamping-bolt, substantially as described.

2. In a saw-frame, the combination with the end pieces, and means for expanding the frame and stretching the saw - blade, of a 40 metal brace or stay attached to one of the end pieces and provided at its opposite end with a loop for engagement with the opposing end piece, the upper end of said last-named end piece being provided with several stops 45 or seats with which the looped end of the stay or brace may be engaged for the purpose of varying the width of the frame at the top, substantially as described.

In testimony that I claim the foregoing as 50 my own I have hereto affixed my signature in the presence of two witnesses.

MAJOR E. HANOVER.

Witnesses:

JOHN WILSON,
GEORGE W. MARKS.