(No Model.)

P. H. SCHOONMAKER.

TRACE TRIMMER AND FINISHER.

No. 523,131. Patented July 17, 1894.

Fig. 1.

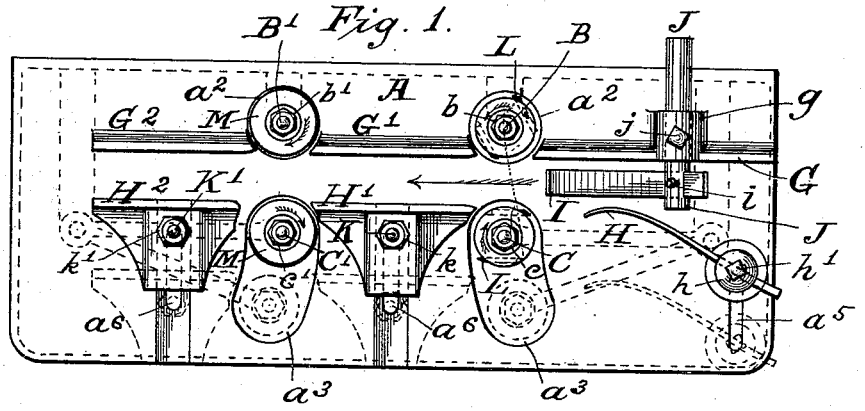


Fig. 2.

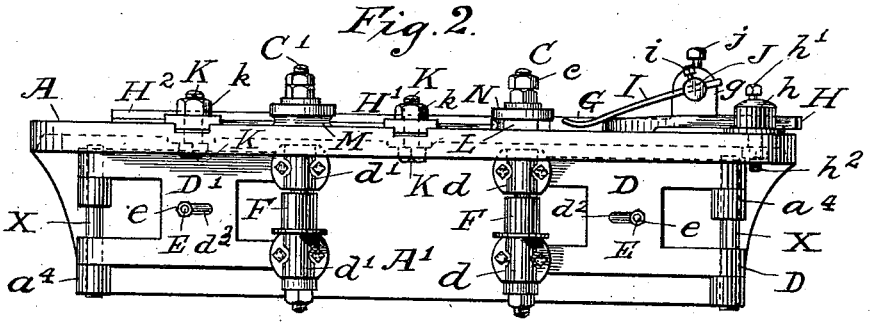


Fig. 4.

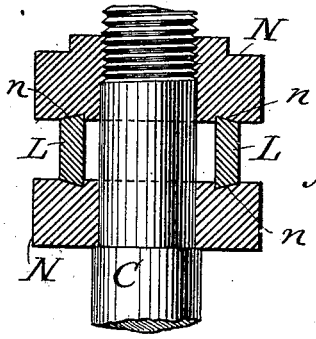


Fig. 3.

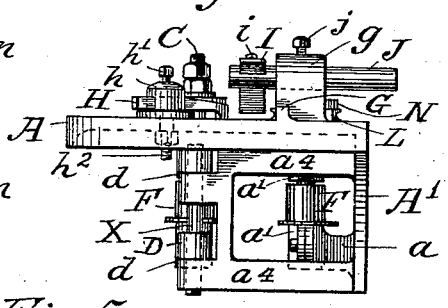


Fig. 6.

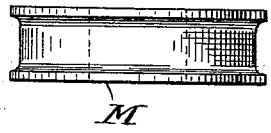
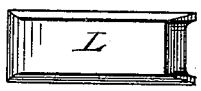


Fig. 5.



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UNITED STATES PATENT OFFICE.

PETER H. SCHOONMAKER, OF CONCORD, NEW HAMPSHIRE.

TRACE TRIMMER AND FINISHER.

SPECIFICATION forming part of Letters Patent No. 523,131, dated July 17, 1894.

Application filed August 29, 1893. Serial No. 484,272. (No model.)

To all whom it may concern:

Be it known that I, PETER H. SCHOONMAKER, a citizen of the United States, residing at Concord, in the county of Merrimac and State of New Hampshire, have invented certain new and useful Improvements in Trace Trimmers and Finishers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to the rapid trimming and finishing of the edges of leather, and is well adapted for trimming traces, rounding and finishing their edges, and is equally adapted to all straps pertaining to a harness;—it is also readily applicable for finishing various articles in wood, such for instance as blind slats, &c.

Among the objects of the invention may be mentioned, rapidity, and accuracy in trimming or paring, and beauty and elegance in finish, and general superiority over the hand method of finishing or polishing the edges of straps.

The invention consists in the combination and novel arrangement of the rotary trimmers, finishers, and the several parts comprising my improved machine to be fully set forth in the specification and claims, and clearly illustrated in the drawings accompanying and forming a part of same, of which—

Figure 1. is a general plan view of my improved machine, Fig. 2. being an elevation of same. Fig. 3. is an end elevation. Fig. 4. is an enlarged detached view showing in sectional elevation a portion of one of the cutter heads. Fig. 5. is a detached elevation of one of the trimming knives. Fig. 6 is an elevation of one of the rotary finishing or polishing wheels.

Similar letters denote corresponding parts throughout the various views.

A suitable bed or frame is provided which in the drawings is shown to consist of the horizontal and vertical parts respectively A—A′, connected by the frames a^4—a^4, at or near each end.

Projections a, carrying journal bearings a', may be attached to or formed integral with the part A′, of the bed frames for mounting the arbors B—B′, of which, in the drawings (Fig. 1.) the former carries a cutter head, and the latter a finishing or polishing wheel, each of which projects upward through openings a^2—a^2, formed for the purpose in the part A. Opposite to the arbors B—B′, are the arbors C—C′, carrying respectively a cutter head and finishing wheel, each projecting upward through a curved opening a^3—a^3—; these arbors C—C′, being rendered adjustable toward and away from the arbors B—B′, for the purpose of trimming and finishing straps of varying widths. These adjustable arbors are mounted in bearings d—d', formed respectively upon the adjacent ends of the brackets D—D′, the opposite ends of said brackets being hinged or pivotally connected at X to either part a^4—a^4, of the bed frame A A′.

The arms or brackets D—D′, may be adjusted or set at a given point in any convenient manner,—a simple method being shown in Fig. 2. which consists of a rod or bolt E, rigidly fastened to the part A′, of the bed frame, and having its outer end threaded and passed through an elongated opening d^2 d^3, formed respectively in the brackets D—D′, with a nut e, on the outside, or one on each side of the said brackets.

Between the upper and lower bearings a a', and d d', are mounted upon each arbor B B′, and C C′, an ordinary belt pulley F, the several arbors being rotated in the direction indicated by the arrows as seen in Fig. 1. when the machine is designed to be fed from the right, or from right to left as also indicated by an arrow in Fig. 1.

To carry my invention into practice, stationary and adjustable guides respectively G—G′, and H—H′, or their equivalent are desirable, and if deemed advisable the guides G^2 H^2, may be added as shown. A pressure bar located just forward of the cutter heads or trimmers is also very desirable, such for instance as the bar I, which may be mounted in a horizontal stud J, carried in a perforated ear g,—projecting upward from the guide G,—the set screw j, permitting any desired adjustment of said stud, while the set screw i, performs a similar office for the said pressure bar I.

The guide H, is represented in the drawings as being formed of some yielding material and secured in a perforated head h, by means

of a set screw h'—; said head being a part of a stud h^2, which passes downward through the elongated opening a^5, of the table or bed frame A, and may be adjusted therein by an ordinary nut threaded to the projecting end of said stud,—but a guide similar to those seen at H' H^2, may be substituted if desired.

The adjustable guides H', H^2, are easily secured in any desired place by the bolts and nuts K—k, the former passing through the elongated openings a^6, as shown.

The cutters or trimming knives and finishing wheels may be most any desired shape but when a nice flat edge with rounded corners is desired the knives L and finishing wheels M, are formed as shown best in Figs. 4—5, and 6, the knives resting in grooves n formed for the purpose in the ordinary collar N, and being clamped between said collars by one or more nuts b—c, fitting the threaded end of the arbors B.—C, upon which said collars are mounted.

This machine is of great advantage in the manufacture of harnesses, as it will trim and finish both edges (at one time) of any straps varying in thickness from three-sixteenths of an inch to three-fourths of an inch, and is well adapted for reins, either flat or round: and in skiving straps for making raised work, this machine by the application of suitable knives is admirably adapted, and it will also be found available for beveling the edge of saddle skirts. By actual test it has been found capable of doing with one operator the work of six men.

The bed-frame may be supported upon a suitable frame of wood or metal, or the part A', may be bolted to a bench or joists if desired.

Having described my improvements, what I claim is—

1. In a machine for trimming and finishing the edges of straps, a bed frame adapted to carry a pair of arbors each mounting rotary trimmers, a pair of arbors each mounting rotary finishers, guides positively fixed for keeping the work in its place between said pairs of trimmers and finishers said guides having their faces in a vertical plane to permit a strap to be directly inserted or removed from above, a yielding pressure bar bearing on the top of the strap being trimmed, and a belt pulley for each arbor, substantially as set forth.

2. A machine for trimming and finishing the edges of straps comprising a pair of arbors mounting a pair of rotary trimmers, a pair of arbors mounting a pair of rotary finishers one of each pair of trimmers and finishers being adjustable toward and away from the other, stationary guides, adjustable guides placed opposite said stationary guides, a belt pulley for each arbor and a removable pressure bar bearing on the top of the strap being trimmed, all arranged upon a suitable bed frame, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

PETER H. SCHOONMAKER.

Witnesses:

J. B. THURSTON,

JAMES MINOT.