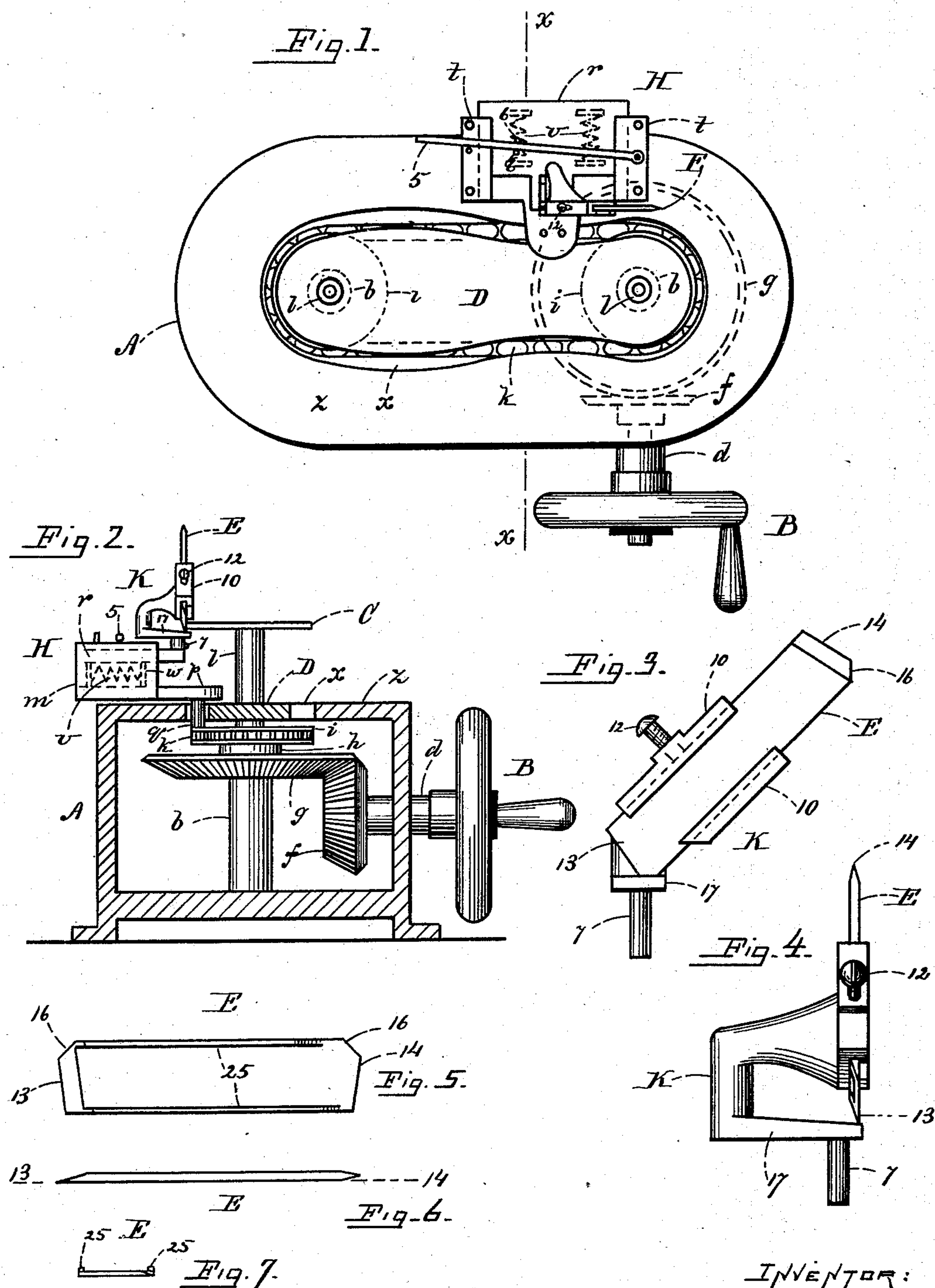


(No Model.)

V. H. WHITTAKER.
ROUNDING OUT MACHINE.

No. 384,807.

Patented June 19, 1888.



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VICTOR H. WHITTAKER, OF BRADFORD, ASSIGNOR TO HIMSELF AND ELLEN V. WHITTAKER, OF GLOUCESTER, MASSACHUSETTS.

ROUNDING-OUT MACHINE.

SPECIFICATION forming part of Letters Patent No. 384,807, dated June 19, 1888.

Application filed April 25, 1888. Serial No. 271,817. (No model.)

To all whom it may concern:

Be it known that I, VICTOR H. WHITTAKER, of Bradford, in the county of Essex, State of Massachusetts, have invented a certain new and useful Improvement in Rounding-Out Machines, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of a rounding-out machine embodying my improvement; Fig. 2, a vertical transverse section of the same, taken on line *x x* in Fig. 1, some of the parts being shown in side elevation; Fig. 3, an enlarged front elevation of the knife and holder detached; Fig. 4, a side elevation of the same; Figs. 5 and 6, front and edge elevations, respectively, of the knife detached; and Fig. 7, a sectional view of the same.

Like letters and figures of reference indicate corresponding parts in the different figures of the drawings.

My invention relates more especially to the knives and their holders employed in machines for "rounding-out" the soles of boots and shoes, being particularly applicable to the machines commonly known as the "Stevens" machines; and it consists in certain novel features, as hereinafter fully set forth and claimed, the object being to produce a more effective and otherwise desirable device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation:

In the drawings, A represents the body or frame of the machine, B the wheel, and C the sole-plate.

The body consists of a wooden box, preferably oval or oblong in top plan view, as shown in Fig. 1. An endless slot, *x*, following closely the outline of a shoe-sole, is cut centrally in the upper side, *z*, of the box A. The plate D thus formed is supported at the toe and heel portions by vertical standards *b*, secured within the box A. Journaled horizontally in the side

of said box there is a shaft, *d*, provided on its outer end with a hand-wheel, B, and on its inner end with a beveled gear, *f*, which intermeshes with a similar gear, *g*, journaled horizontally on the rear or heel standard *b*. Journaled on the rear standard *b*, and secured to the gear *g* by a sleeve, *h*, is also a horizontally-arranged sprocket wheel or pulley, *i*, a similar pulley being journaled in the same plane on the forward standard, *b*. A chain belt, *k*, is disposed on the pulleys *i*, said belt being connected with the knife-carriage H by a stud, *q*, which projects through the slot *x*, as hereinafter described.

The sole-plate C consists of a metallic plate supported by two vertically-arranged standards, *l*, secured to the toe and heel portions of the plate D.

The body of the carriage H consists of a box, *m*, secured to a plate, *p*, having a downwardly-projecting stud, *q*, on its inner end, said arm passing through the slot *x* and having its lower end secured to the chain-belt *k*. A plate, *r*, (see Fig. 1,) is fitted to slide horizontally in ways *t*, formed in the upper portion of the ends of the body of the box *m*. Coiled springs *v* are disposed in the box *m*, said springs being compressed between the rear side of said box and a vertical plate, *w*, (see Fig. 2,) secured to the plate *r* and acting expansively to keep the plate *r* forced outward toward the sole-plate C. A lever, 5, is pivoted to one of the ways *t* and passes between studs 6 on the plate *r*, the purpose of said lever being to enable the operator to force the plate forward by hand when necessary.

A bracket, K, having a spindle, 7, adapted to enter a socket (not shown) formed in the inner end of the plate *r*, is provided for carrying the knife E. The upper end of the bracket K is provided with vertically-arranged inclined ways 10, in which the knife E is disposed, said knife being held in position therein by a set-screw, 12. The knife is provided with a chisel-edge, 13, on one end; and at its opposite end with an edge, 14, which is Λ -shaped in cross-section, as best shown in Figs. 4 and 6. A corresponding corner of each of the edges 13 and 14 is beveled at 16 to enable it to rest firmly against the table portion 17 of the

bracket K. One face of the knife is also provided at each edge with a longitudinally-arranged flange, 25.

In the use of my improvement the shoe sole to be rounded out is placed on the plates C with the pattern-plate above it and is secured in the ordinary manner. The knife E is then secured in the ways 10, so that a beveled corner, 16, rests on the table 17 of the bracket K, the spindle of said bracket being inserted in the spindle-hole in the plate *r*. By revolving the handle B the carriage H is caused to travel by means of the chain-belt *k*, the knife E at the same time cutting or rounding out the sole on the table C to conform to the pattern-plate. It will be readily understood that the springs *v* will keep the outer face of the knife against the pattern-plate, and that when their pressure is not sufficient for that purpose the operator, by means of the lever 5, can effect this result and cause the knife to cut in accordance with the pattern.

By reversing the knife so that the beveled portion of the Λ -shaped edge rests on the table 17 and the flanges 25 rest against the outer face of the clamp 10, it will be seen that the cutting-edge of the knife is farther removed from the pattern-plate, thus enabling a broader sole to be cut with the same pattern than is possible with the knives as at present constructed.

Having thus explained my invention, what I claim is—

1. In a rounding out machine, the herein-described knife having a chisel-shaped edge at one end and a Λ -shaped edge at the opposite end, corresponding corners of said edges

being cut off or beveled to adapt it to rest upon the table of the knife-bracket, substantially as set forth.

2. In a rounding-out machine, the herein-described knife having a chisel-edge at one end, a Λ -shaped edge at the opposite end, and longitudinal flanges along the sides of one of its faces, corresponding corners of said edges being cut off or beveled to adapt it to rest upon the table of a knife-bracket, substantially as described.

3. In a rounding-out machine, the herein-described knife, the same consisting of the body E, having the chisel-edge 13, Λ -shaped edge 14, beveled corners 16, and flanges 25, constructed and arranged substantially as and for the purpose described.

4. In a rounding-out machine of the character described, the bracket K, having the table 17, stud 7, inclined clamp 10, and screw 12, in combination with the knife E, carriage H, and adjunctive mechanism for actuating said carriage, substantially as set forth.

5. In a rounding-out machine of the character described, the bracket K, having the table 17, stud 7, inclined clamp 10, and screw 12, in combination with the knife E, provided with the edges 13 and 14 and beveled corners 16, and adjunctive mechanism for causing said bracket to move around the pattern and said knife to press thereon, substantially as specified.

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Witnesses:

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