(No Model.) 3 Sheets—Sheet 1.

E. F. WHITE.

CHANNELING AND EDGE TRIMMING MACHINE.

No. 500,174. Patented June 27, 1893.

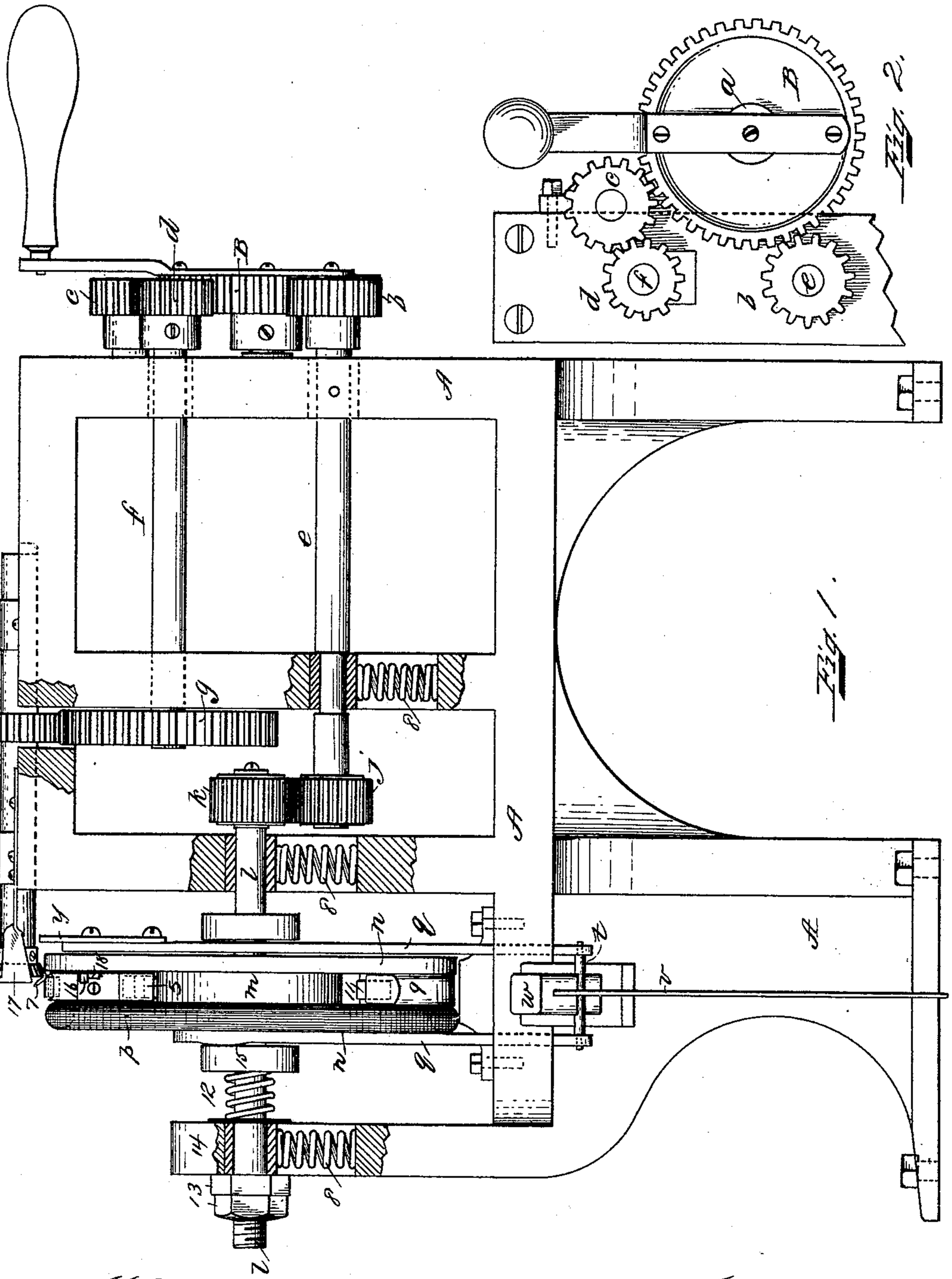

Fig. 1.

Fig. 2.

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Eugene Humphrey
Robert A. Lee

Inventor:
Edward F. White
per T. W. Porter Atty

(No Model.)

3 Sheets—Sheet 2.

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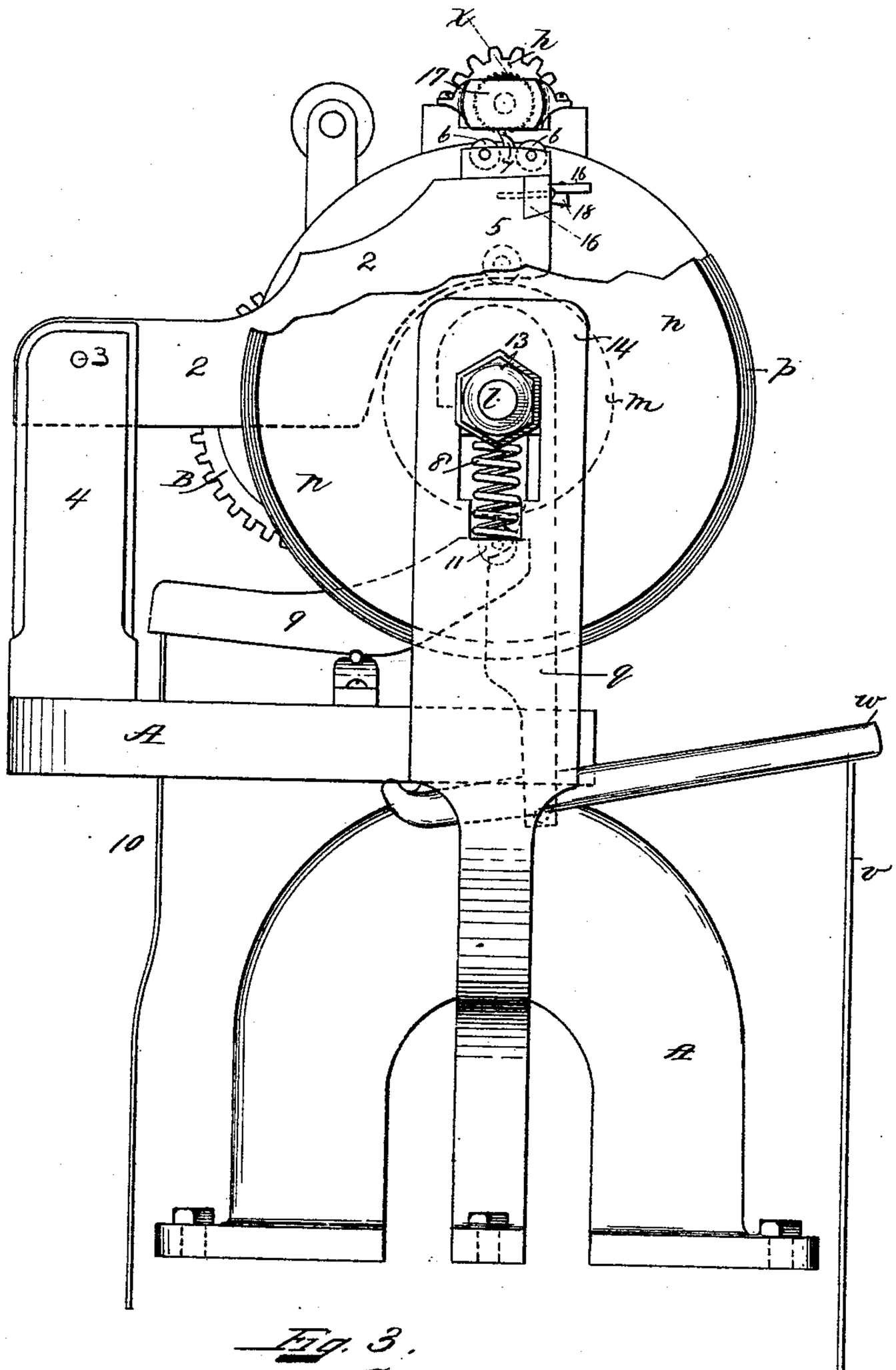

Fig. 3.

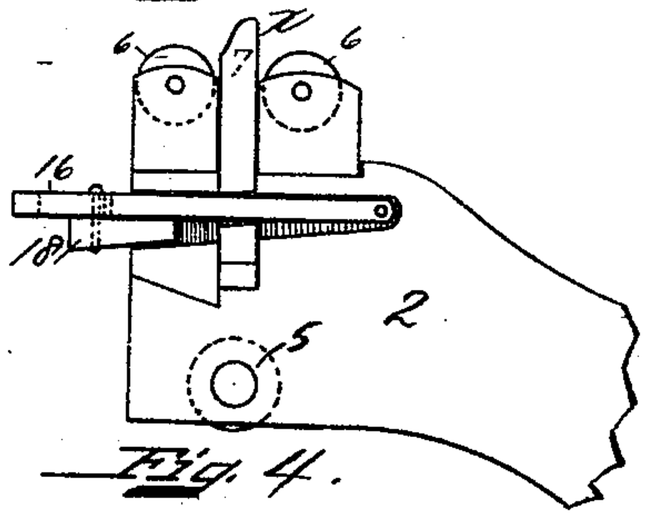

Fig. 4.

Witnesses.
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(No Model.) 3 Sheets—Sheet 3.

E. F. WHITE.

CHANNELING AND EDGE TRIMMING MACHINE.

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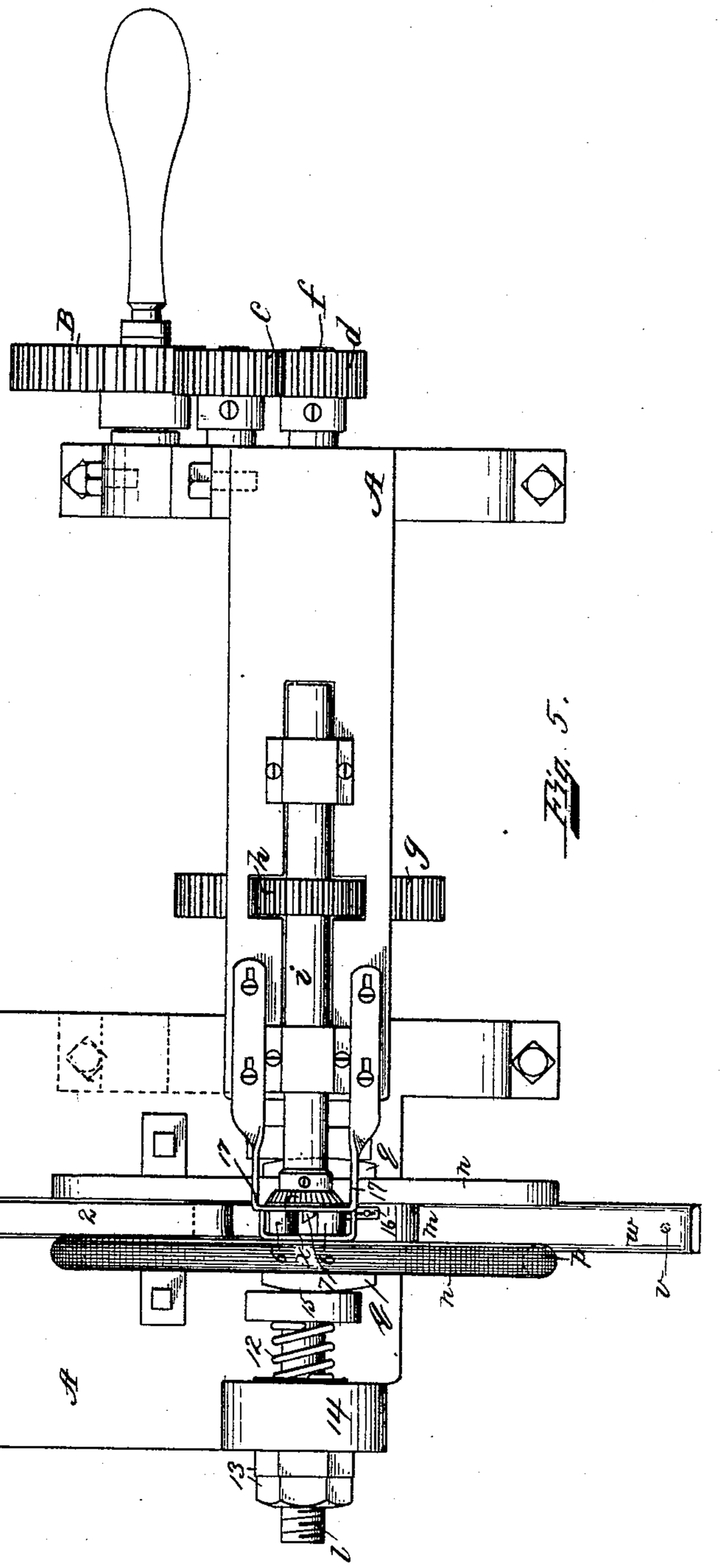

Witnesses.
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Robert Ashe

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UNITED STATES PATENT OFFICE.

EDWARD F. WHITE, OF WEYMOUTH, ASSIGNOR OF ONE-HALF TO H. L. WILLIAMS, OF DEDHAM, AND H. F. KNEELAD, OF BRAINTREE, MASSACHUSETTS.

CHANNELING AND EDGE-TRIMMING MACHINE.

SPECIFICATION forming part of Letters Patent No. 500,174, dated June 27, 1893.

Application filed March 30, 1893. Serial No. 468,258. (No model.)

To all whom it may concern:

Be it known that I, EDWARD F. WHITE, of Weymouth, in the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in Channeling and Edge-Trimming Machines, which will, in connection with the accompanying drawings, be hereinafter fully described, and specifically defined in the appended claims.

In said drawings, Figure 1, is a side elevation of my machine. Fig. 2, is a detached elevation taken at the right of Fig. 1, and showing the arrangement of the gears. Fig. 3, is an end elevation taken at the left of Fig. 1. Fig. 4, is a detached side elevation of a stock that carries the rolls on which the shoe is moved, and the channeling knife; which parts are also shown. Fig. 5 is a top plan view of my machine.

The object of my invention is to provide a small compact machine by which the channel in the bottom of the sole is cut and at the same time the superfluous leather at the edge is pared off. And the machine consists in certain features of novelty and the combinations thereof, as will be herein described and pointed out in the claims.

Referring again to said drawings, A represents a frame formed preferably of cast iron and of a size to adapt it to the machinery thereon assembled. At the right hand end of this machine, as shown in Fig. 1, I mount the gear B, on a short shaft or stud *a* secured in the frame. Said gear engages and drives gears *b* and *c*, which latter engages and actuates gear *d*. Gear *b* is mounted on shaft *e* while gear *d* is mounted on shaft *f*, as is clearly shown in Figs. 1 and 2. Motion may be imparted to the machine by the crank shown as attached to gear B, or by a pulley attached to said gear, or in any suitable manner. Upon shaft *f* at its front end is mounted the gear *g* which engages and drives gear *h* secured on shaft *i*, journaled in the top of the machine. At the left hand end of shaft *e*, as shown in Fig. 1, is secured a gear *j* which meshes with and drives gear *k* secured on shaft *l* mounted in the front part of the machine.

The front end of shaft *e*, and shaft *l*, are supported on helical springs (shown by breaking away the frame in Fig. 1), so as to be depressed as exigencies may require in using the machine. Upon shaft *l* is mounted a pulley or wheel having a center *m* and side flanges *n* that extend a considerable distance beyond said center, and upon the front one of said flanges is mounted the rubber roll or cushion *p* which is arranged in a groove in the periphery of the flange. Upon the sides of said wheel *m*, are arranged the bars *q* that hook onto shaft *l*, and at their lower ends they are attached by pin *t*, with lever *w*, to which rod *v* is attached to be operated by a treadle when it is desired to depress said wheel *m*. Upon the front end of shaft *i*, is mounted a feed wheel *x*, which by the action of gears already explained will revolve in an opposite direction to wheel *m*, and thereby tend to move a body past them when placed between them.

The stock of the channeling knife is shown at 2, as pivoted at 3, in standard 4, secured upon frame A. Said stock is arranged in wheel *m*, between its flanges *n*, and is provided with a small roll 5, that bears upon the hub of said wheel to prevent friction. In the top of said stock are mounted two rolls 6, upon which the shoe sole rests and over which it passes in the act of being channeled. The channeling knife is shown at 7, and as secured to stock 2, between rolls 6. A pivoted lever 9, having a roll 11, at one of its ends is arranged to have said roll bear beneath wheel *m* and is provided with a cord or wire 10, to be attached to a treadle so that the operator can hold said wheel up in case he may so desire when, from any cause, it becomes necessary.

Upon shaft *l* is arranged a spring 12, that bears between collar 15 on said shaft and part 14 of frame A, so as to allow said shaft to be tilted and yet hold its lock nuts 13 against said part 14.

In operation the shoe will pass from the right to the left, as viewed in Fig. 3. The shoe sole will rest on rolls 6, while the shoe upper will bear against guard 17, arranged in front of but close to feed-wheel *x*, the sole at the same time being engaged and carried forward by wheel *m* in conjunction with feed

wheel x, which will be close to the point where the upper rises from the sole. As the sole is fed along the channel will be cut by knife 7, and the surplus projection of the sole will be trimmed off by knife y which is secured to the inner hook q arranged inside of wheel m. The shafts e l resting upon yielding springs, with a treadle to aid in depressing these shafts, and a treadle by which to hold shaft l up to the feed wheel x insures the requisite liberty of manipulation of the shoe by the operator to bring it in every case into proper relation to insure its being channeled as it is fed forward through the machine.

In Fig. 4 a means is shown for raising the knife 7, when desired, by means of bar 16, pivoted to stock 2; and if desired the wedge 18 can be arranged to hold said bar as adjusted; and when the knife is properly adjusted it is locked in position by block 16, which bears against it and is locked by a screw as shown.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the upper feed wheel x, its guard 17, a lower recessed wheel m, a stock 2, duly pivoted and arranged in the recess in wheel m and provided with rolls 6, to support the shoe and a knife to form the channel, and means substantially as described whereby said wheels x and m are rotated, substantially as specified.

2. In combination with wheel m of a channeling machine supported upon springs as shown, the hooks q engaging the shaft of said wheel and a treadle mechanism attached to said hooks by which to depress said shaft as specified.

3. In combination with the spring supported wheel m the lever 9, pivoted to the frame and provided with a roll 11, to bear beneath said wheel to aid in raising it, substantially as specified.

4. In a sole channeling machine, the knife stock 2, provided with lower roll to bear in the recess in wheel m, the rolls 6, to serve as a support for the shoe and a knife x to form the channel in the sole, all substantially as specified.

EDWARD F. WHITE.

Witnesses:
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T. W. PORTER.