No. 682,315. Patented Sept. 10, 1901.

W. S. BRAINARD.

ATTACHMENT FOR CHANNELING MACHINES.

(Application filed May 9, 1901.)

(No Model.) 3 Sheets—Sheet 1.

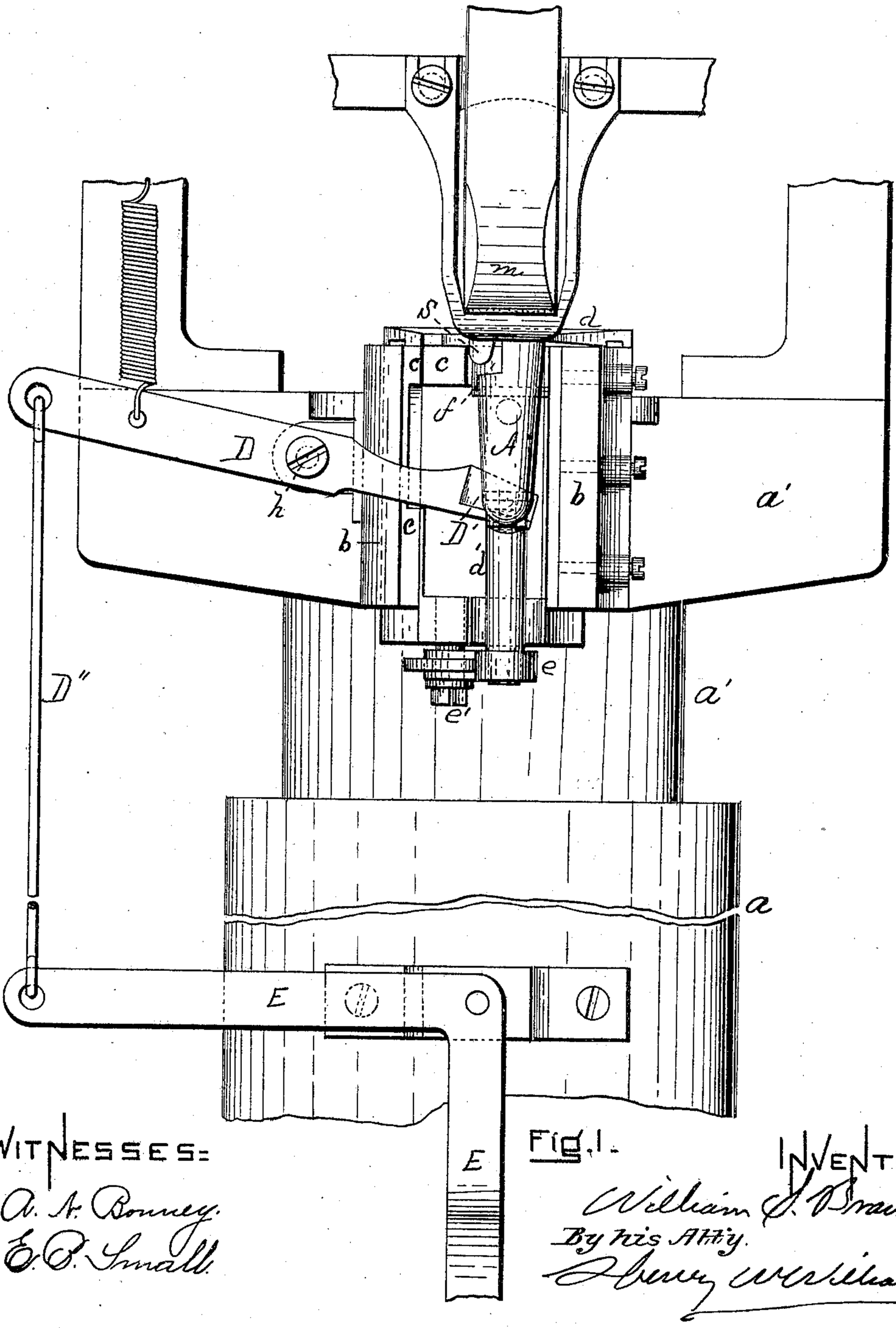

Fig. 1.

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A. A. Bonney.
E. P. Small.

INVENTOR:
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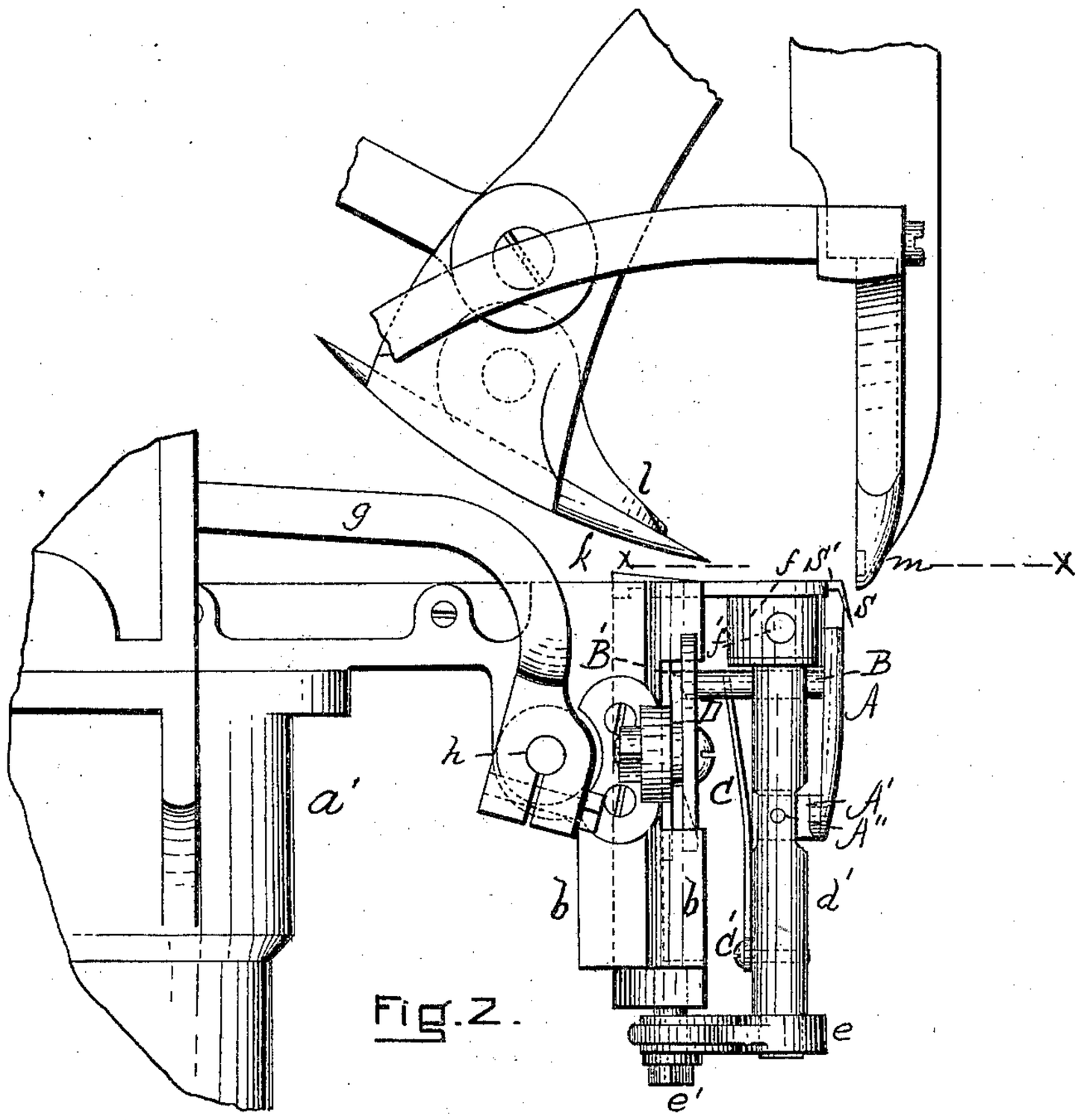

Fig. 2.

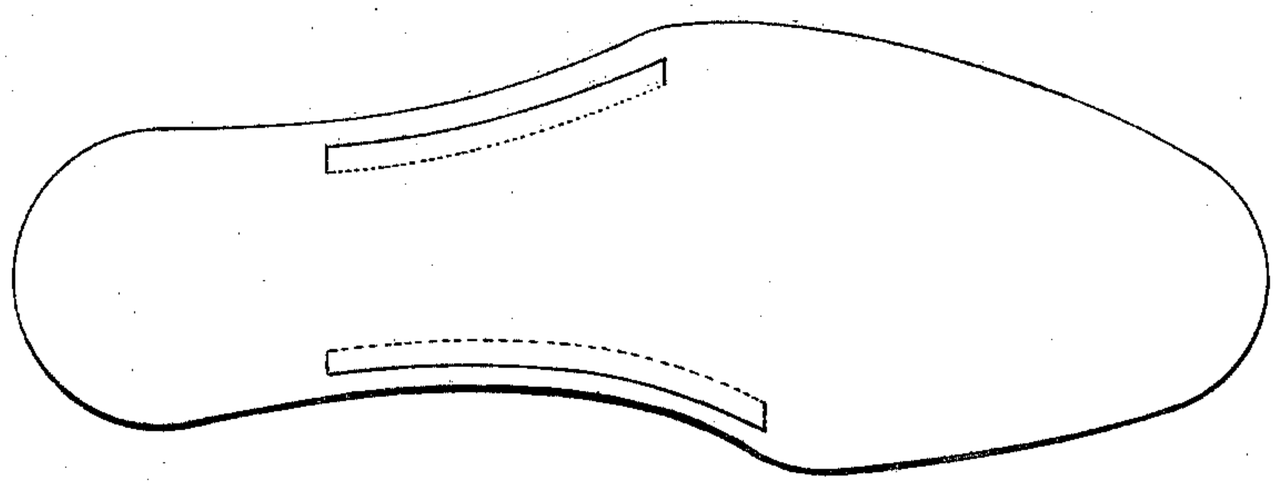

Fig. 3.

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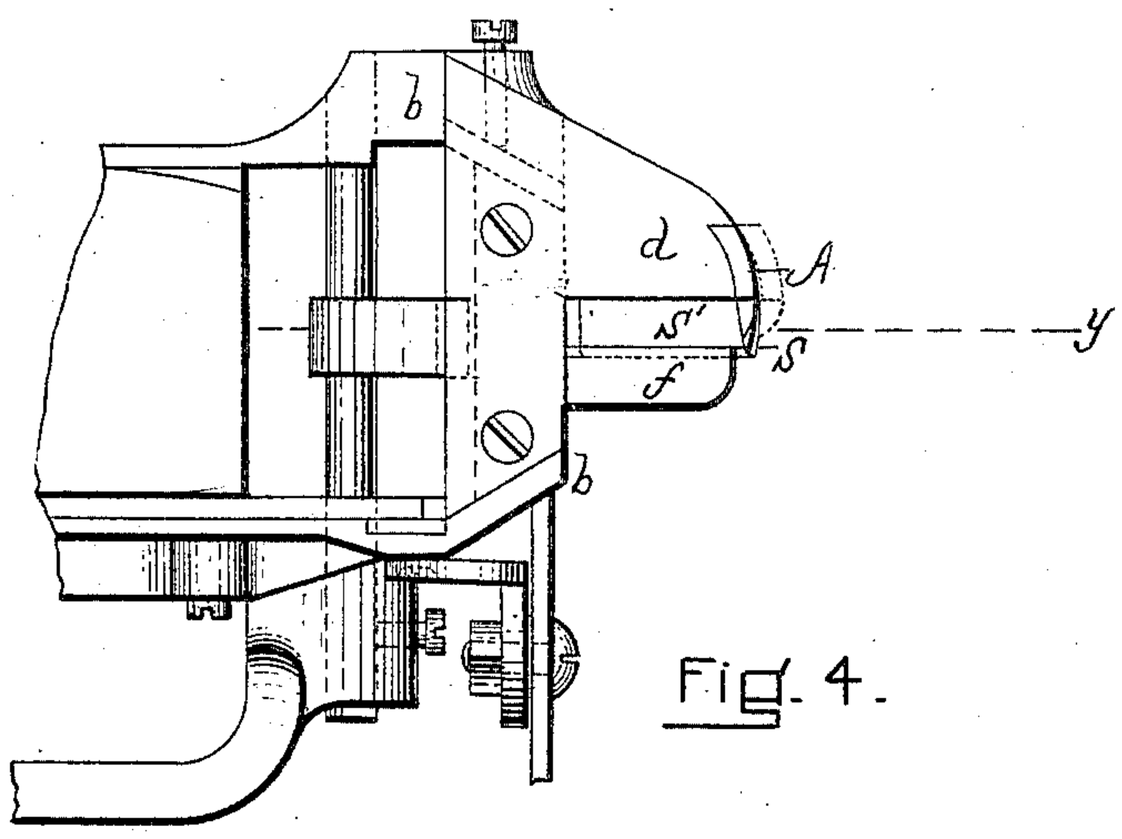

Fig. 4.

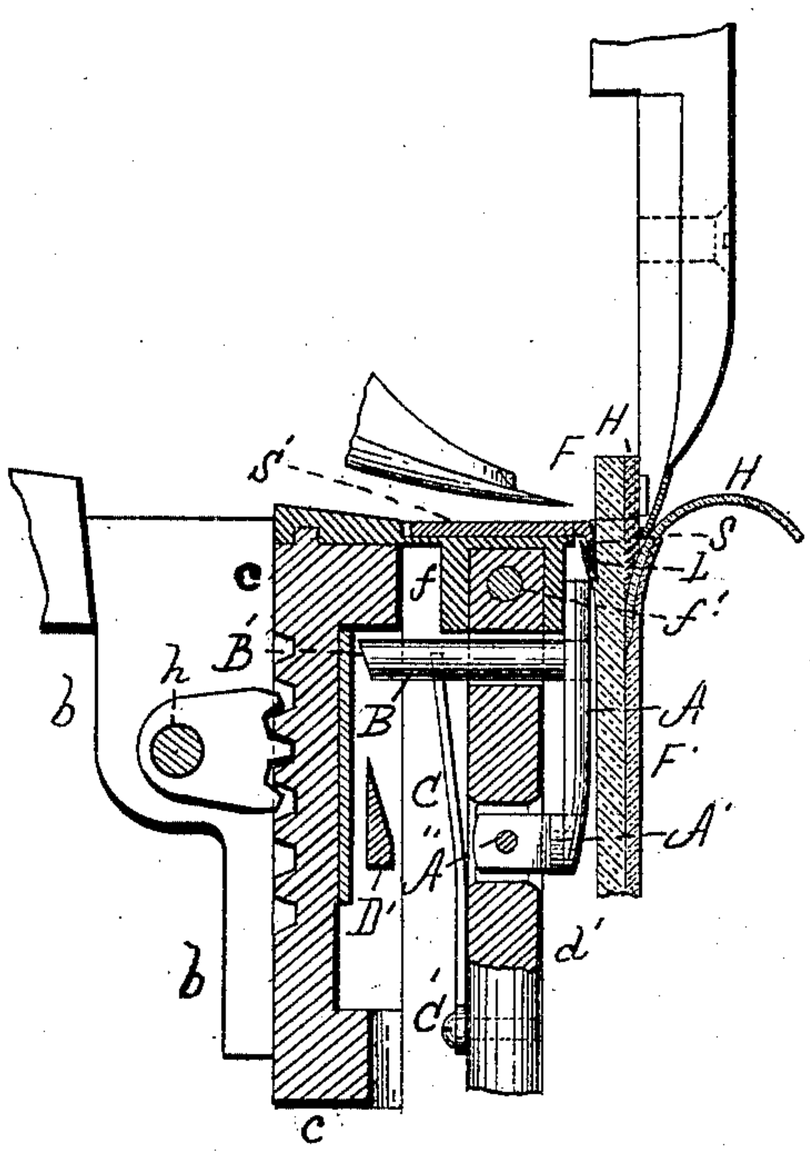

Fig. 5.

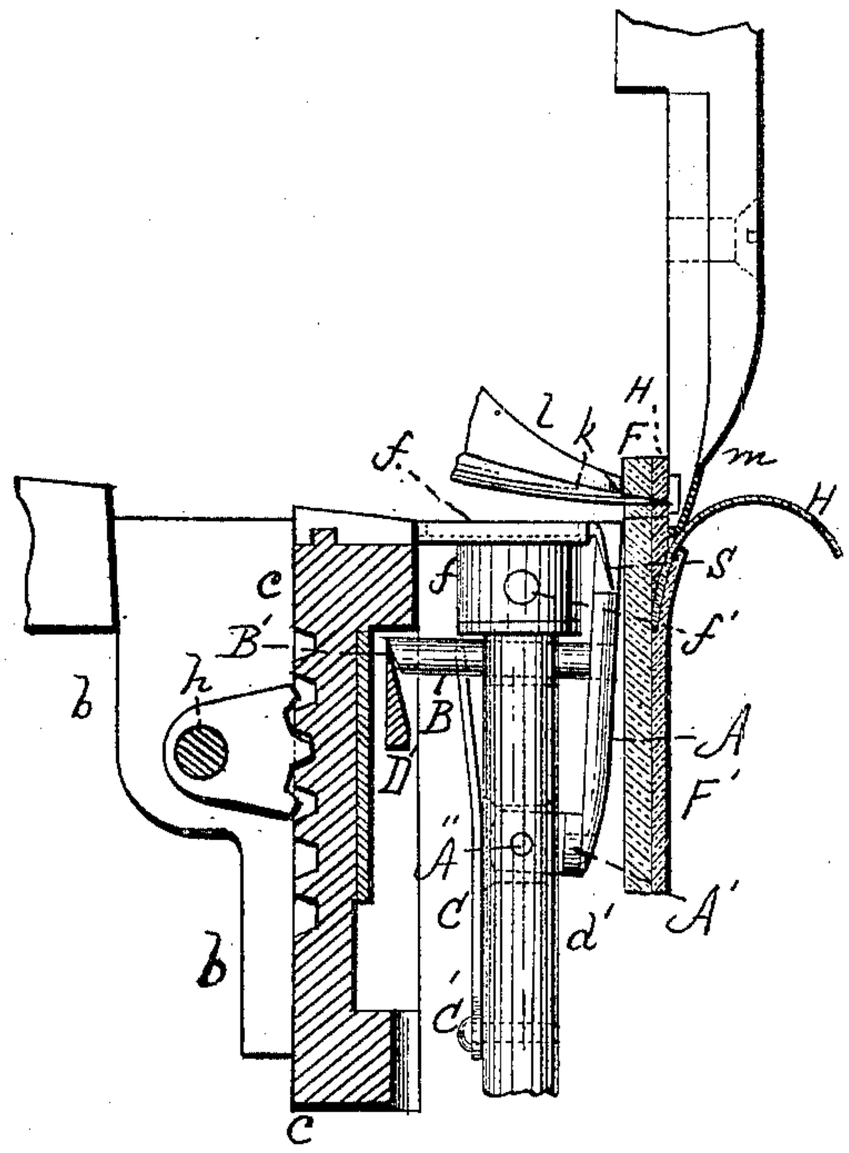

Fig. 6.

WITNESSES:
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INVENTOR:
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UNITED STATES PATENT OFFICE.

WILLIAM S. BRAINARD, OF WEST BRIDGEWATER, MASSACHUSETTS.

ATTACHMENT FOR CHANNELING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 682,315, dated September 10, 1901.

Application filed May 9, 1901. Serial No. 59,440. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. BRAINARD, a citizen of the United States, residing at West Bridgewater, in the county of Plymouth and State of Massachusetts, have invented a new and Improved Attachment to Sole-Channeling Machines, of which the following is a specification.

This attachment is especially adapted to the style of sole-channeling machines termed the "Goodyear Universal Rounding and Channeling Machine."

The object of the attachment is to enable the channeling-knife as the sole travels against the machine to be rendered operative or inoperative, as desired, and cut such portions only of that part of the sole which passes against the machine as the operator desires, leaving the rest plain. In other words, if a portion only of the sole—say the instep, for example—is desired to be channeled the knife can be made to operate upon the instep and leave the ball and heel untouched, or the ball only may be operated upon, leaving the heel and instep untouched, or the knife may be applied to and withdrawn from the sole as many times as desired while said sole moves against the machine without going over the work the second time.

My invention combines with the channeling-knife a covering-guard and mechanism for operating the same, whereby the knife-edge may be covered as often as desired and portions of the sole left uncut or unchanneled.

The nature of the invention in detail is fully described below, and illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of a portion of a sole-channeling machine with my attachment applied thereto. Fig. 2 is a side elevation of the same. Fig. 3 is a view of a sole with a portion only channeled by means of the machine provided with my attachment. Fig. 4 is a plan view taken on line X, Fig. 2. Fig. 5 is a vertical section on line Y, Fig. 4, showing the channeling-knife in section and in operation. Fig. 6 is a section taken on line Y, Fig. 4, showing the channeling-knife in elevation and the guard in use.

Similar letters of reference indicate corresponding parts.

a represents the column, and *a'* a portion of the frame, of a "Goodyear Universal Rounding and Channeling Machine."

b represents the slide supported by the frame, and *c* the slide which moves vertically in the slide *b* and supports the channel-knife holder, consisting of the plate *d* and vertical post *d'*, the lower end of the latter resting in a bracket *e*, bolted at *e'* to the slide *c*.

S represents the channel knife or cutter, and S' the shank thereof, said shank moving horizontally in dovetails in the edge of the plate *d* and the edge of the latch collar or holder *f*, bolted at *f'* to the post *d'*.

g represents the ordinary lever, mounted on the pinion segment-shaft *h*, whereby the slide *c* is lifted.

k shows the rounding-knife, *l* the sticker-point, and *m* the crease-guide, all in their ordinary positions.

All of the above-named parts are common in machines of this character and are operated in the ordinary and well-known manner.

In machines of this character constructed as thus far described if it is desired to channel a portion only of the sole the sole must be applied to the machine and removed at the beginning and end of the channeled portion and must be applied as many times as there are channeled portions separated from each other. In order to overcome this difficulty, I have provided the guard or cover A, which is adapted, when desired by the operator, to fend off the sole and protect it from the channeling-knife. This guard is provided with a shank A', which is pivoted at A'' to the post *d'*, and it has secured to it horizontally at right angles to its inner surface a cam B, which extends slidingly through the post *d'* and has its free end B' beveled, as shown. The guard is kept normally next the latch-collar *f* by the spring C, which is secured at C' to the post *d'*. A lever D, having the wedge-shaped end D', is mounted on the pinion segment-shaft *h* and is connected by a suitable rod D'' with an elbow-lever E, adapted to be actuated by the operator.

F represents an outer sole; F', an inner sole; H, the welt; H', the upper, and L the channel-lip.

In practice when the operator moves the sole in the ordinary manner against the channeling-machine if he wishes to channel

around the entire sole he leaves the machine with the channeling-knife and guard in the position indicated in Fig. 5—that is to say, with the wedge-shaped end D′ in the position indicated in said figure out of contact with the cam B B′. Hence the cover or guard A does not prevent the channel-knife from cutting a lip around the entire edge of the sole; but if it is desired to leave any of the sole plain—that is, uncut by the channel-knife, as indicated, for example, in Fig. 3, where the fore part and heel-seat are not channeled—the operator presses his knee against the lever E and pulls down the outer end of the lever D, pushing up the wedge-shaped end D′ thereof, and thus forcing out the swinging guard A, as shown in Fig. 6, and fending off the sole as the fore part and heel-seat are presented to the machine, releasing the guard only when the instep portion is released and again forcing the guard out when the instep portion is past. Hence it will be seen that the sole may be channeled at such portions only as is desired and the other portions left plain and the whole be accomplished at a single operation and without removing the sole.

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

1. In an attachment to a sole-channeling machine, the combination with the channeling-knife, of a knife-guard connected with said machine and normally out of use, and mechanism whereby the knife-guard can be moved forward from and with relation to the channeling-knife into position to fend off the sole and prevent the channeling-knife from cutting the channel-lip, substantially as described.

2. In an attachment to a sole-channeling machine, the combination with the channeling-knife and channel-knife holder, of a knife-guard pivotally secured to said holder and held normally against the same, and mechanism adapted to swing said guard forward from and with relation to the channeling-knife into position to fend off the sole and prevent the channel-knife from cutting the channel-lip, substantially as set forth.

3. In an attachment to a sole-channeling machine, in combination with the channeling-knife and channel-knife holder, the guard A hinged to said holder and extending up next the channeling-knife; a cam B, B′ extending from the guard and sliding horizontally in the holder; the lever D hinged to the machine and provided with the wedge D′ adapted to engage with the cam; and mechanism for operating said lever whereby the guard is moved forward in position to fend off the sole and prevent the channeling-knife from cutting the channel-lip, and out of such position, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM S. BRAINARD.

Witnesses:

HENRY W. WILLIAMS,

A. N. BONNEY.