

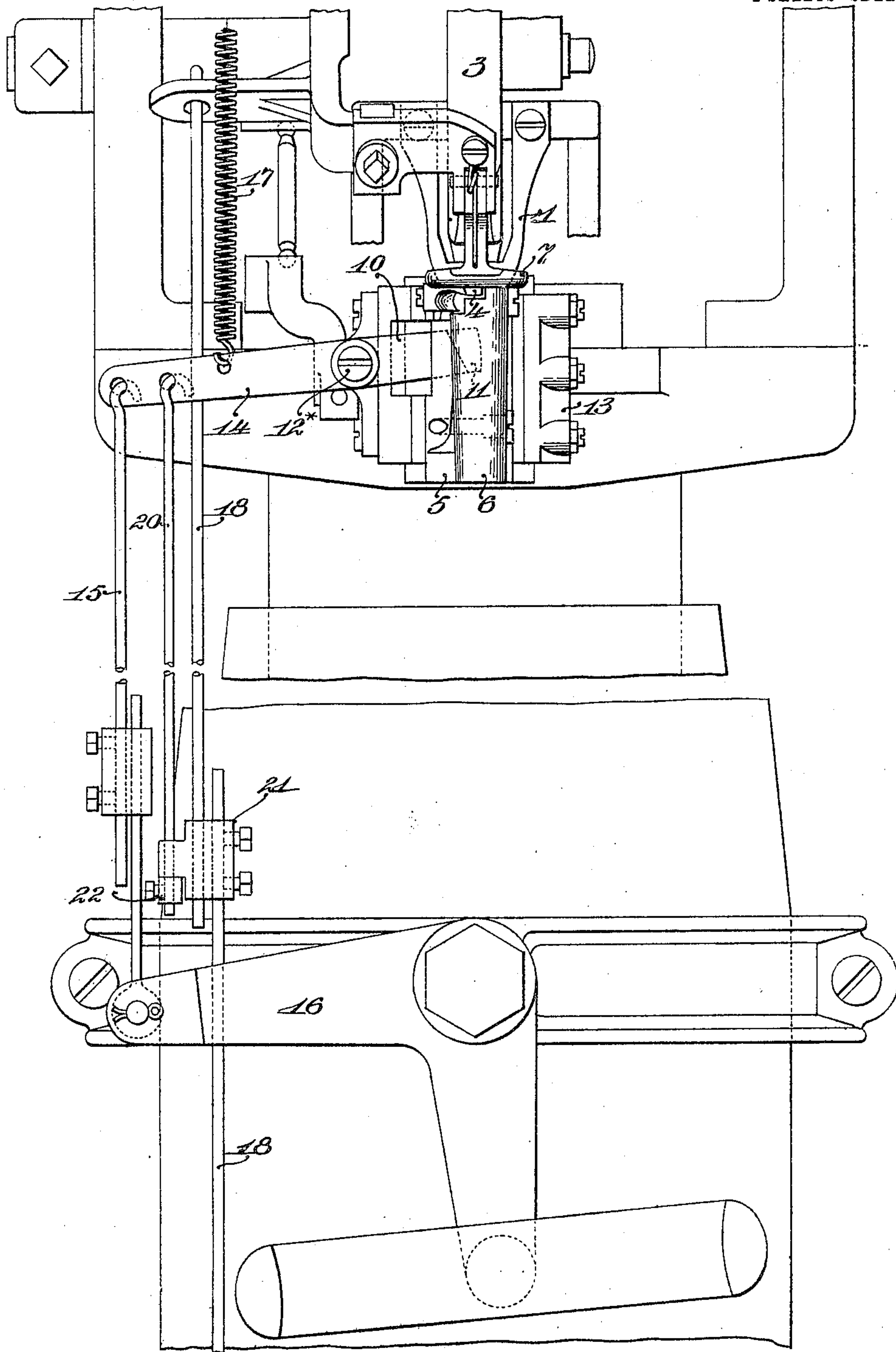
No. 808,628.

PATENTED JAN. 2, 1906.

W. S. BRAINARD.
ROUGH ROUNDING AND CHANNELING MACHINE.

APPLICATION FILED MAR. 6, 1903.

2 SHEETS—SHEET 1.



Witnesses
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Furness F. Dorsey

Inventor
Fig. 1. William S. Brainard
by his attorneys—
Philip Van Curen & Fish

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Fig. 2.

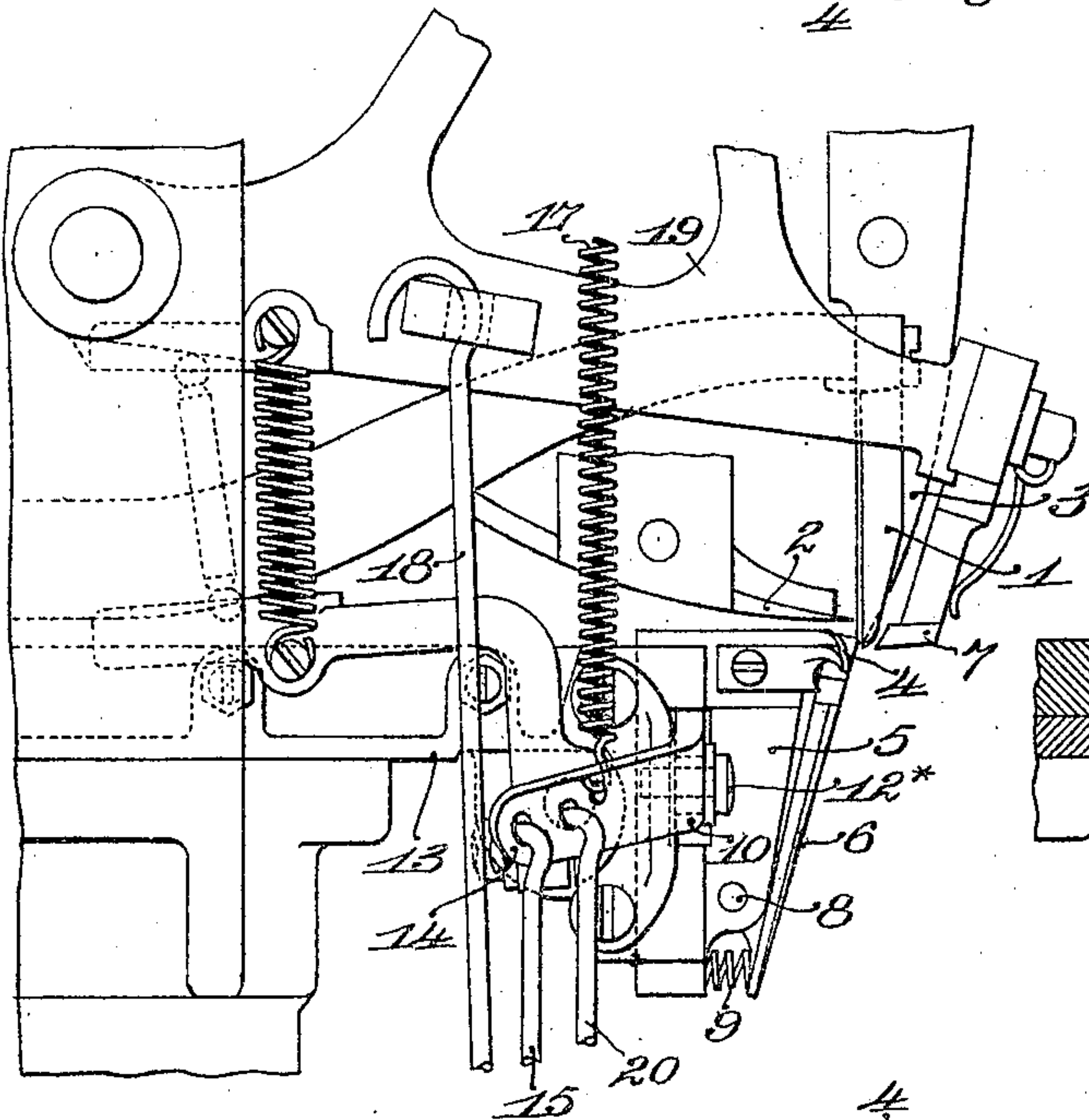
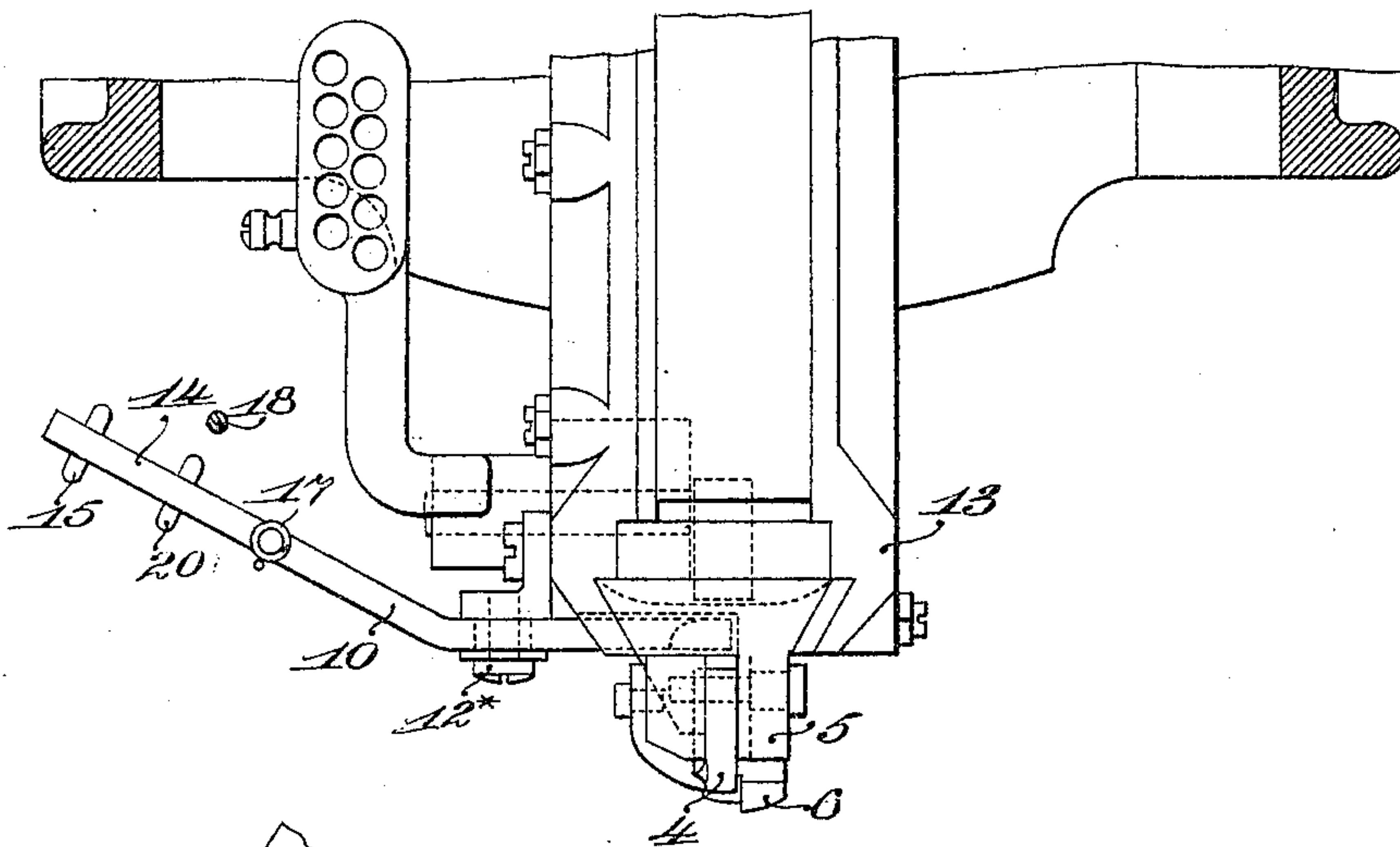


Fig. 3.

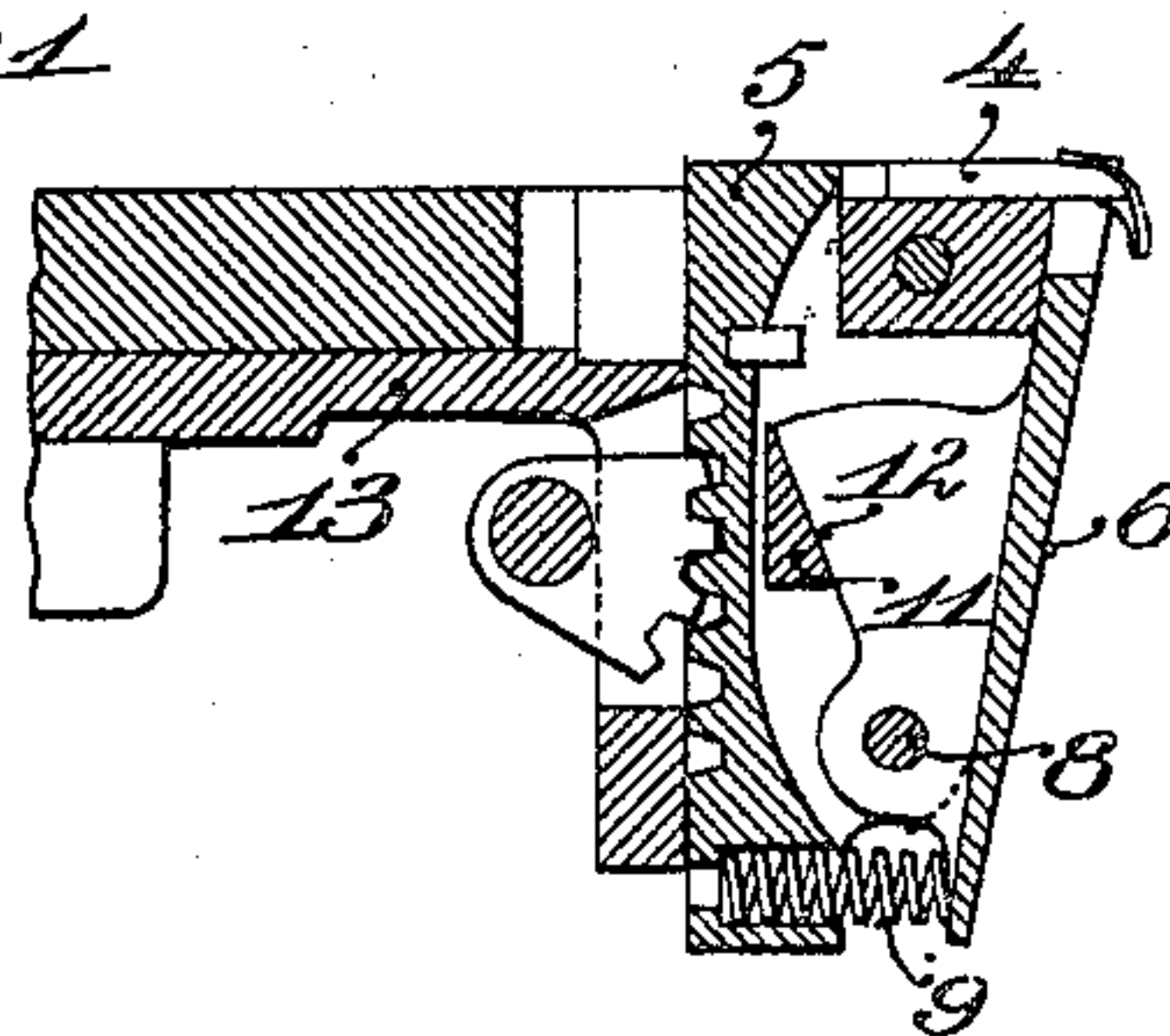


Fig. 4.

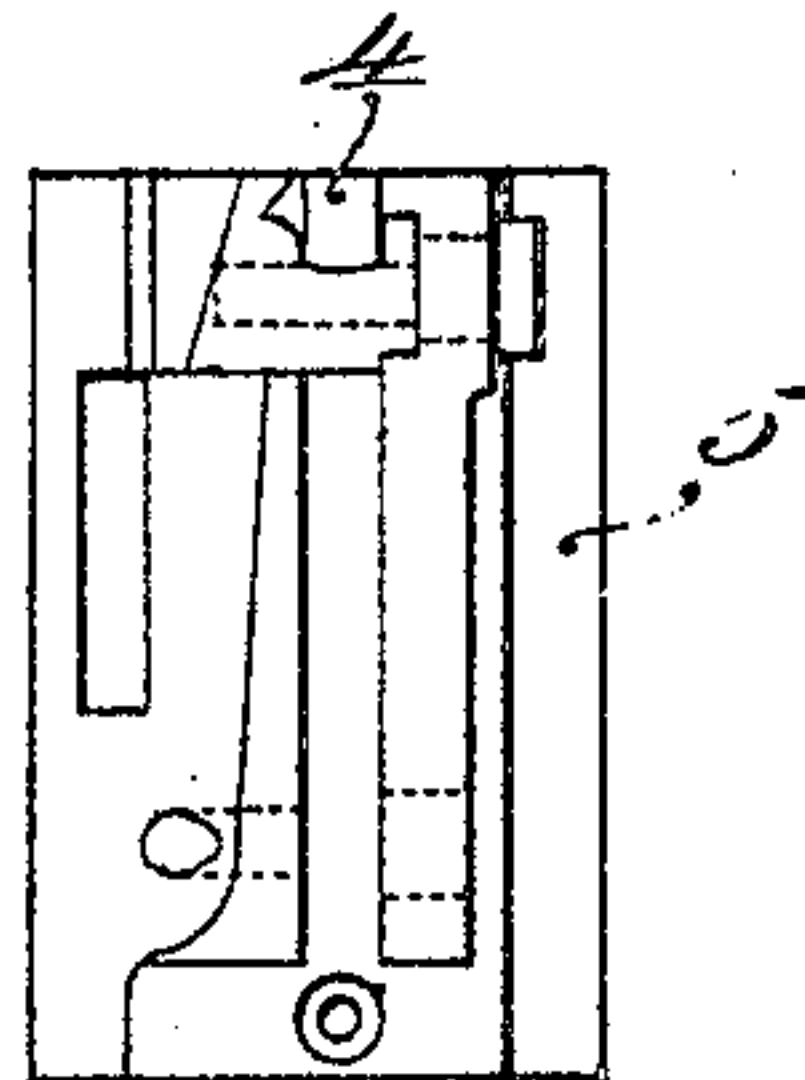


Fig. 5.

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UNITED STATES PATENT OFFICE.

WILLIAM S. BRAINARD, OF WEST BRIDGEWATER, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

ROUGH-ROUNDING AND CHANNELING MACHINE.

No. 808,628.

Specification of Letters Patent.

Patented Jan. 2, 1906.

Application filed March 6, 1903. Serial No. 146,444.

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 certain new and useful Improvements in Rough-Rounding and Channeling Machines; 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.

The present invention relates to rounding and channeling machines, and more particularly to an improvement on the well-known "Universal" rounding and channeling machine of the Goodyear system, particularly the machine illustrated and described in Letters Patent granted to French and Meyer, No. 599,602, February 22, 1898, and especially as modified by the invention to me illustrated in Letters Patent No. 682,315, September 10, 1901. In the said "Universal" rounding and channeling machine the trimming-knife trims the edge of the sole at a distance from the last determined by either the stationary guide which may act continuously all around the shoe or by the said stationary guide which guides the shoe during the operation along the shank and the fore-part guide, which guides the shoe around the fore part when Scotch or Baltimore edge shoes are being rounded and channeled upon the machine. In the said patent to me, No. 682,315, the said "Universal" rounding and channeling machine is shown as provided with means for fending off the sole, so as to prevent the channeling-knife from cutting a channel therein, which in some classes of shoes wherein the fore part is stitched aloft is desirable. In rough-rounding and channeling Scotch and Baltimore edge shoes which are to be stitched aloft it is desirable to throw the channeling-knife out of operation at the same time that the fore-part guide is thrown into operation; and the object of the present invention is to reorganize and improve rounding and channeling machines embodying means for throwing the channeling-knife out of and into operation, so as to secure the throwing in of the fore-part guide and the throwing out of the channeling-knife at the same time and by one movement of the operator.

To the above end the present invention consists in the improvement in rounding and channeling machines hereinafter described and claimed.

In the accompanying drawings, illustrating the preferred form of the invention, Figure 1 is a front elevation of so much of the "Universal" rounding and channeling machine as is necessary to be illustrated in order to disclose my invention. Fig. 2 is a plan view of the channeling-knife carrier and associated parts. Fig. 3 is a left side elevation of a portion of the machine provided with the present devices. Fig. 4 is a medial section of the channeling-knife carrier and the guard for fending off the work from the channeling-knife, and Fig. 5 is a front elevation of the same.

The illustrated embodiment of the present invention is described as follows:

The rounding and channeling machine proper consists of the stationary guide 1, the trimming-knife 2, the outside feed-plate 3, the channeling-knife 4, the channeling-knife carrier 5, the channeling-knife guard 6; and the fore-part guide 7, which are constructed, operated, and arranged substantially as in said "Universal" rounding and channeling machine as modified by the construction illustrated in said patent to me. The channeling-knife guard 6, for convenience hereinafter termed the "knife-guard," consists of a plate pivoted at 8 to the channeling-knife carrier 5, the said guard being cut away on the left side at its upper end in order to afford a space through which the channeling-knife 4 may project. A spring 9 is provided which is received in a socket in the lower portion of the channeling-knife carrier 5, the outer end of which spring engages the downwardly-projected end of the guard 6 and normally tends to move the knife-guard into the position illustrated in Fig. 4. In this position the channeling-knife projects beyond the surface of the guard and is operative to cut a channel in the sole of a shoe. The knife-guard is moved by means of a lever 10, having a wedge-surface 11, which engages an inclined face 12, mounted upon the rear side of the knife-guard 6. The lever 10 is pivoted at 12* to the channeling-knife-carrier lever 13, the arrangement being such that when the outer end 14 of the lever 10 is depressed the wedge-surface 11 of the said le-

ver is raised, thereby forcing the inclined face 12 of the knife-guard outwardly and moving the knife-guard from the position illustrated in Fig. 4 to the position illustrated in Fig. 3 and fending off the sole and preventing the operation of the channeling-knife. A link 15 connects the lever 10 with a knee-lever 16, pivoted upon a portion of the frame of the machine, so that by this means the knife-guard may be thrown out or be permitted to be moved in by its spring. In rounding shoes which are to be stitched aloft around the fore part and in which the sole projects a uniform distance from the last all of the way around, which distance is determined by the adjustment of the stationary guide 1, the operator, after cutting the channel and trimming the sole along one side of the shank of a shoe, will move the knee-lever 16 so as to throw the knife-guard 6 forward, thereby fending off the work from the channeling-knife, while the trimming-knife continues to trim the edge of the sole going around the fore part, and then will again release the knee-lever 16, so that upon the opposite side of the shank portion the channeling-knife will again come into operation, the spring 17, secured at its lower end to the outer end 14 of the lever 10 and at its opposite end to a stationary part of the machine, operating to restore the knife-guard-actuating lever 10 to its position, so that the spring 9 will return the knife-guard to the position illustrated in Fig. 4.

In the machine of said Patent No. 599,602 the fore-part guide 7 is drawn down into position to engage the last by means of a treadle having a connecting-link 18, connecting it to the lever 19, carrying said fore-part guide 7. In Scotch and Baltimore edge shoes, in which the fore-part guide 7 is thrown into operation after the completion of the rounding and channeling of one side of the shank, in which shoes it is desired to stitch aloft around the fore part, it is desirable to connect the means for throwing the knife-guard 6 forward to fend off the sole with the means for throwing the fore-part guide 7 into operation, and to this end the outer end 14 of the knife-guard lever 10 is connected by means of a link 20 with the link 18, so that upon the depression of the treadle to throw the fore-part guide 7 into operation the knife-guard 6 is simultaneously thrown forward by this connection to fend off the sole from the action of the channeling-knife at the same time. The link 20 is connected to the link 18 in such manner that operation of the knee-lever 16 to throw the knife-guard forward is inoperative to actuate the fore-part guide through the means described, such connections being as follows: The link 20 passes through a hole in the connection 21, secured to the link 18, the end of said link 20 projecting beyond said hole, and upon such projecting portion of the link 20 a sleeve 22 is secured by means of a set-screw. Thus

when the knife-guard lever is actuated by the knee-lever the link 20 slides downward through the hole in the connection 21 without moving said connection 21 or actuating the fore-part guide 7. By this construction, therefore, when the fore-part guide is thrown into operation the knife-guard is thrown forward to fend off the sole and to prevent the channeling-knife from cutting a channel therein, while, if desired, the knife-guard may be thrown forward without throwing the fore-part guide into operation, so that the device is capable of being used upon differing classes of work without adjustment or change.

If it is desired to sever the connection between the knife-guard lever and the fore-part guide, it is simply accomplished by loosening the set-screw which secures the sleeve 22 in place upon the link 20 and sliding such sleeve down the link, so that upon a depression of the treadle the link 18 will only actuate the fore-part guide-lever 19, thereby throwing the fore-part guide into operation without throwing the knife-guard forward to fend the sole off from the action of the channeling-knife. In such case the machine is provided with two independent means for actuating the fore-part guide and channel-knife guard. It is considered, however, that the present invention is principally useful in operation upon shoes having Scotch or Baltimore edges which it is desired to stitch aloft around the fore part so that by one movement the operator may throw the fore-part guide into and the channeling-knife out of operation, and incidentally to provide means for throwing the channeling-knife out of or into operation independent of the means for throwing the fore-part guide into or out of operation.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. A rough-rounding and channeling machine, having, in combination, a trimming-knife, a channeling-knife, a fore-part guide, and common means for throwing the fore-part guide into and the channeling-knife out of operation, substantially as described.

2. A rough-rounding and channeling machine, having, in combination, a trimming-knife, a channeling-knife, a fore-part guide, common means for throwing the fore-part guide into, and the channeling-knife out of operation, and independent means for throwing the channeling-knife out of operation, substantially as described.

3. A rough-rounding and channeling machine, having, in combination, a trimming-knife, a channeling-knife, a fore-part guide, a channeling-knife guard, connected means for throwing the fore-part guide and channeling-knife guard into operation, substantially as described.

4. A rough-rounding and channeling machine, having, in combination, a trimming-

knife, a channeling-knife, a fore-part guide,
a channeling-knife guard, connected means
for throwing the fore-part guide and channel-
ing-knife guard into operation, and independ-
5 ent means for throwing the channel-knife
guard into operation, substantially as de-
scribed.

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

WILLIAM S. BRAINARD.

Witnesses:

ALFRED H. HILDRETH,
FARNUM F. DORSEY.