

(No Model.)

S. H. RANDALL.
LEATHER SKIVING MACHINE.

No. 391,190.

Patented Oct. 16, 1888.

FIG. 1.

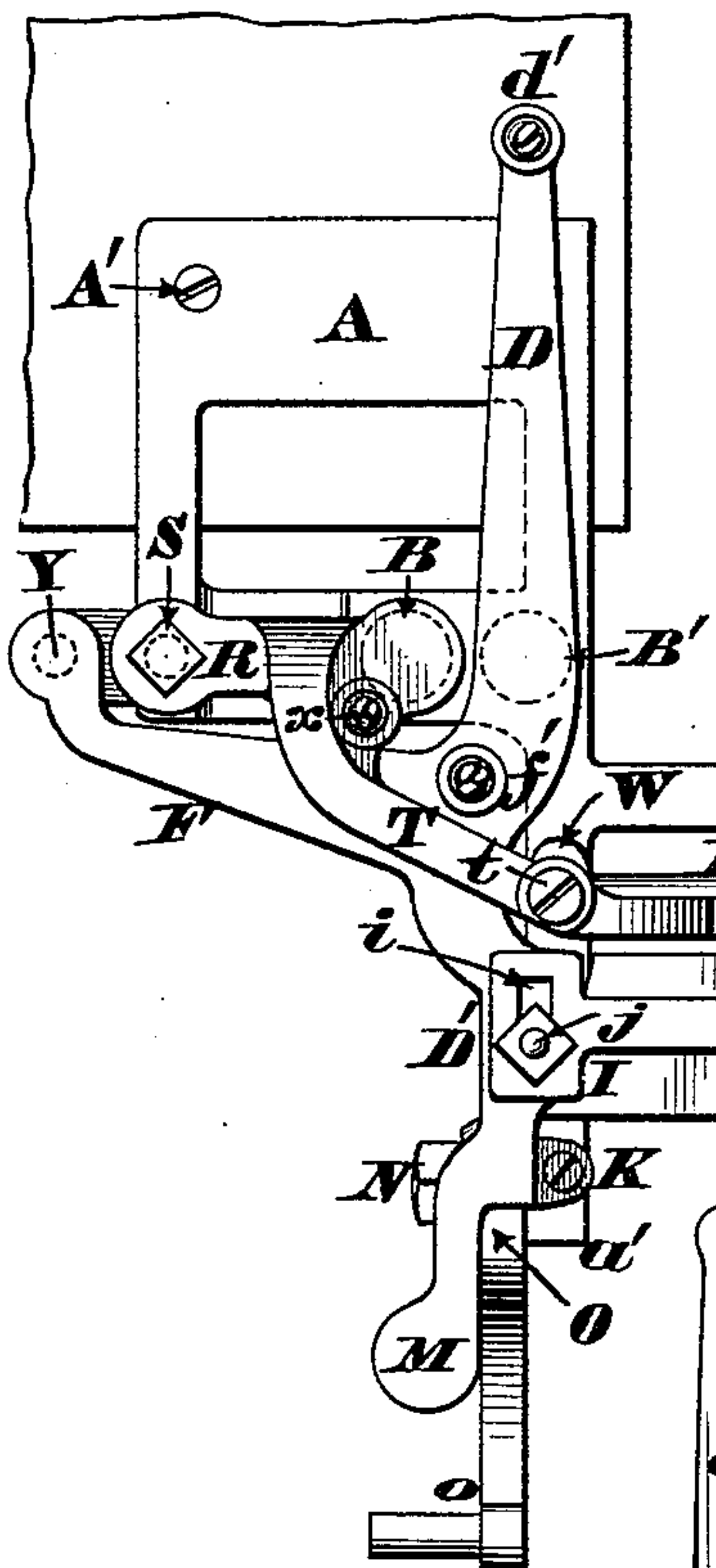


FIG. 2.

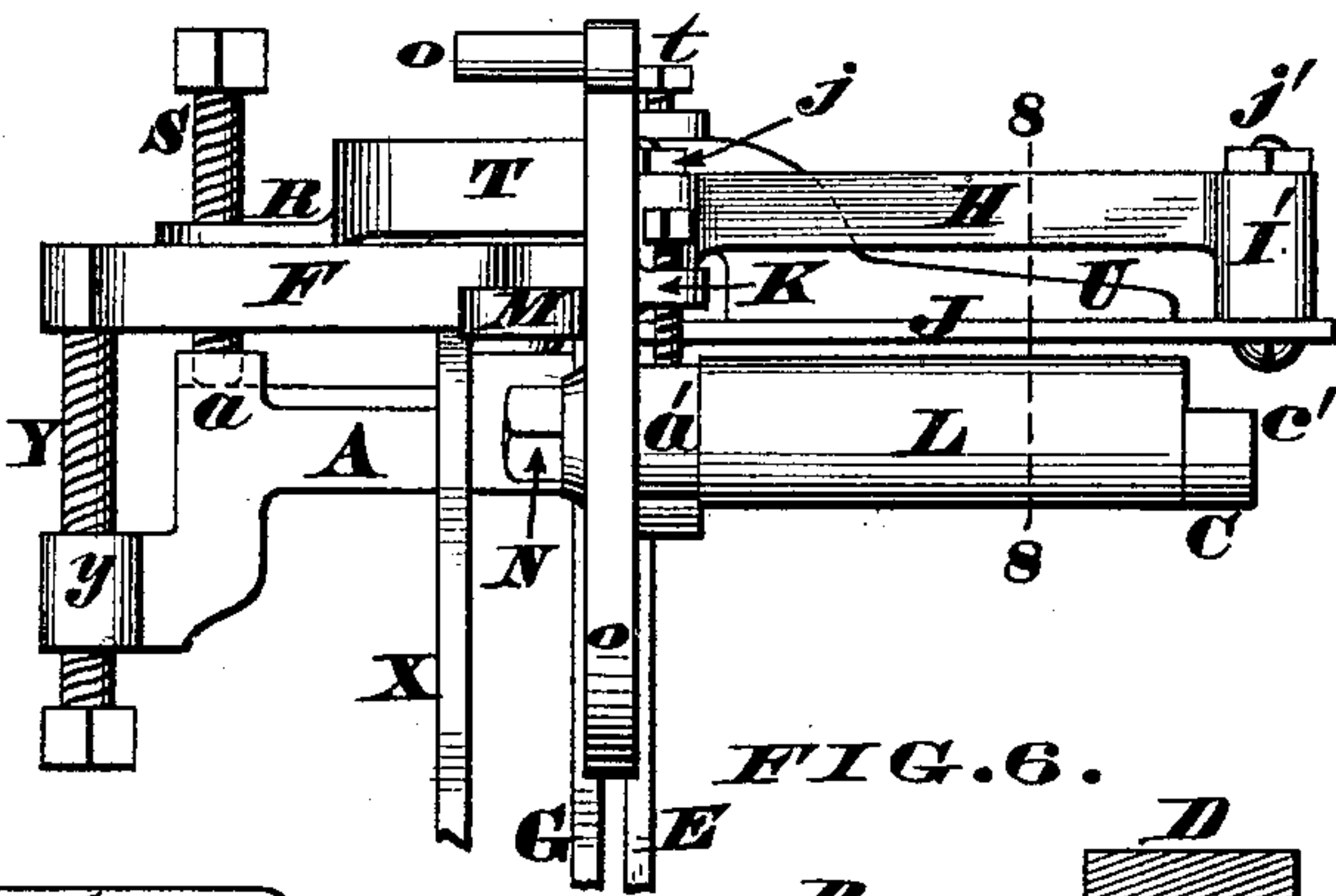


FIG. 6.

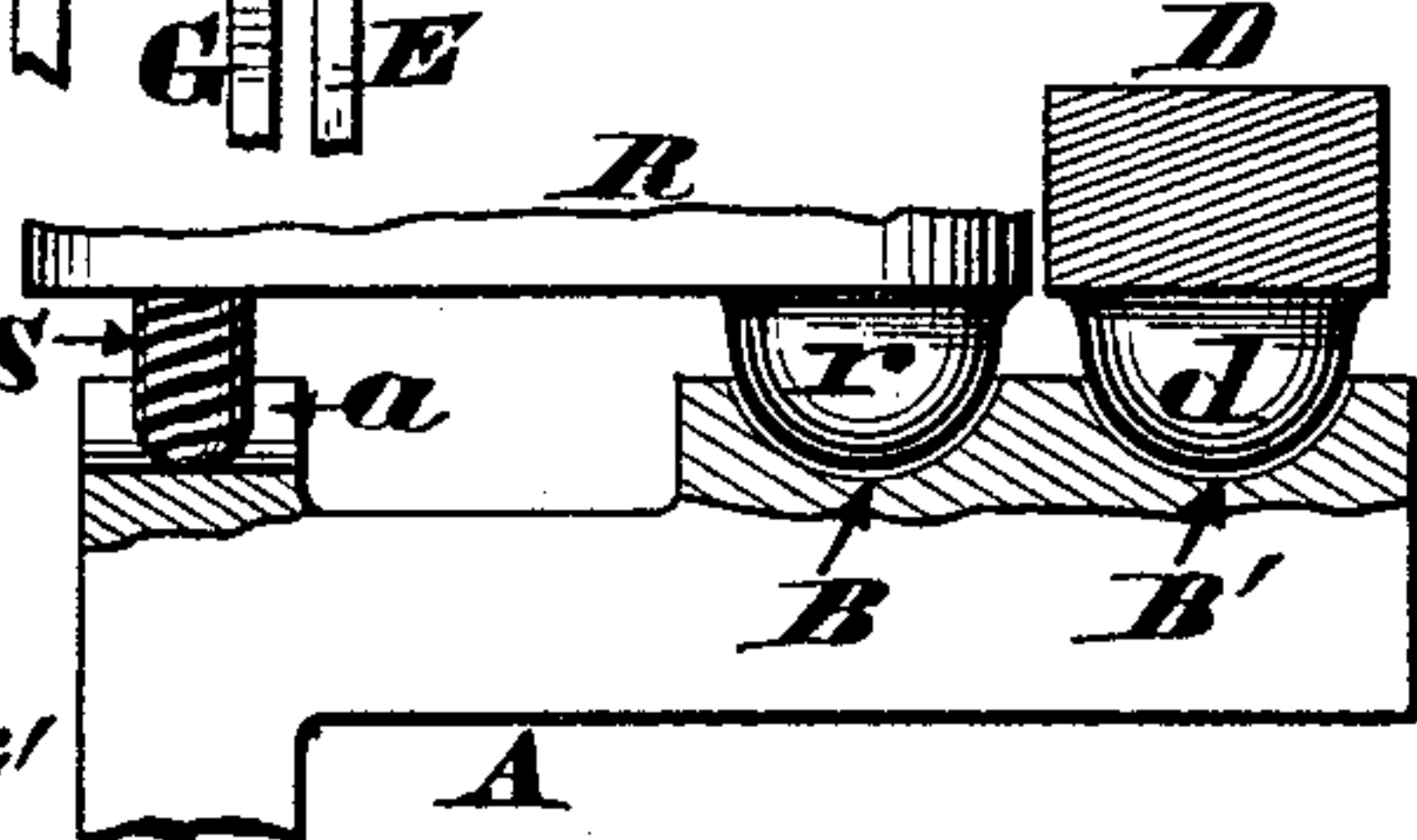


FIG. 4.

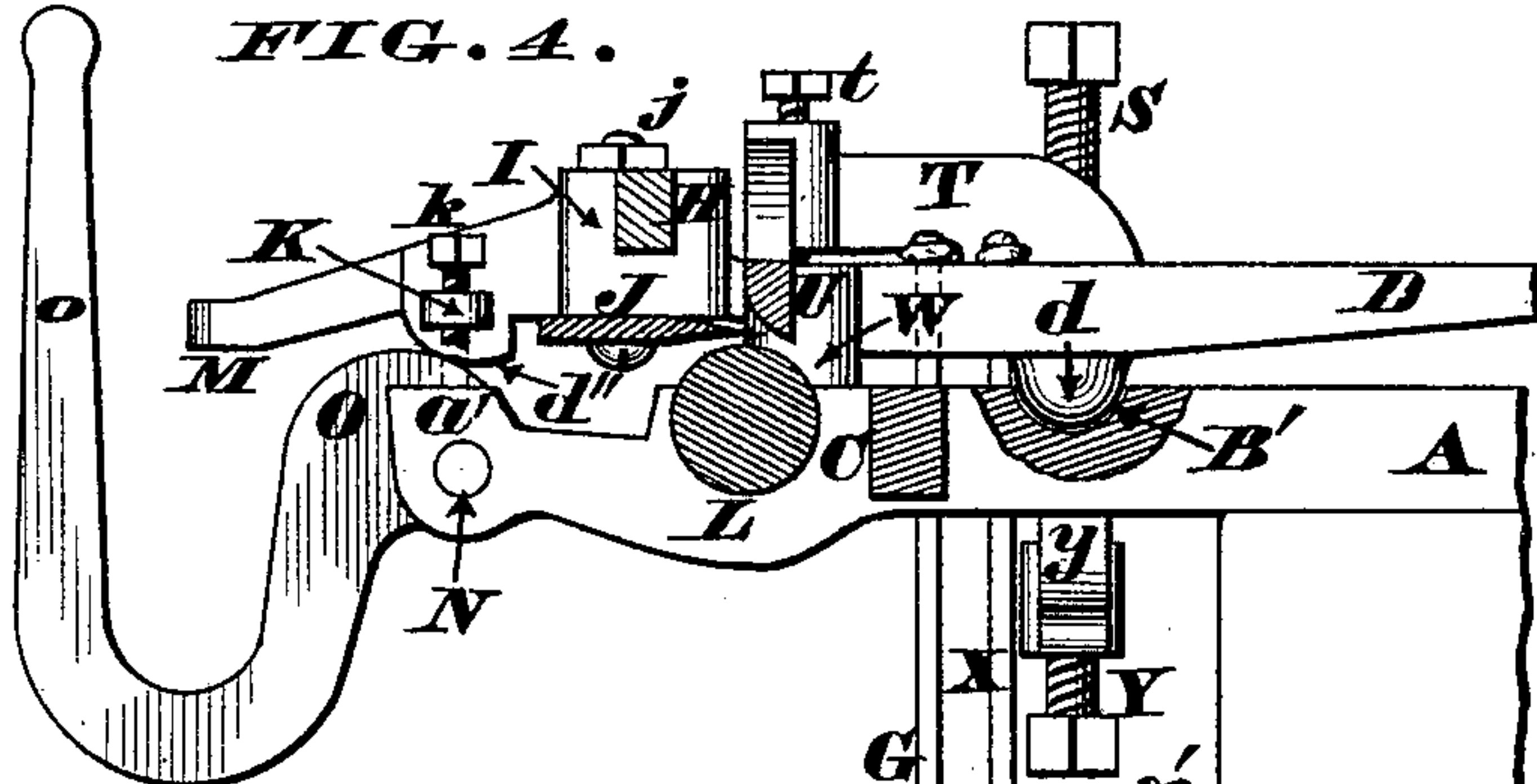


FIG. 7.

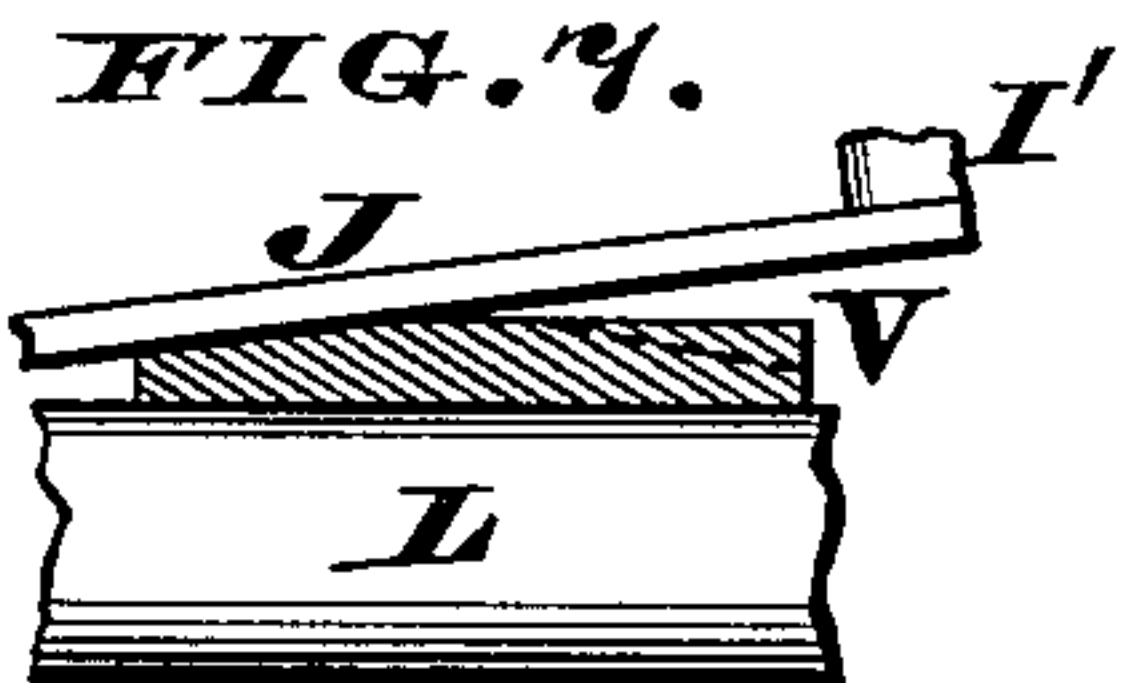


FIG. 3.

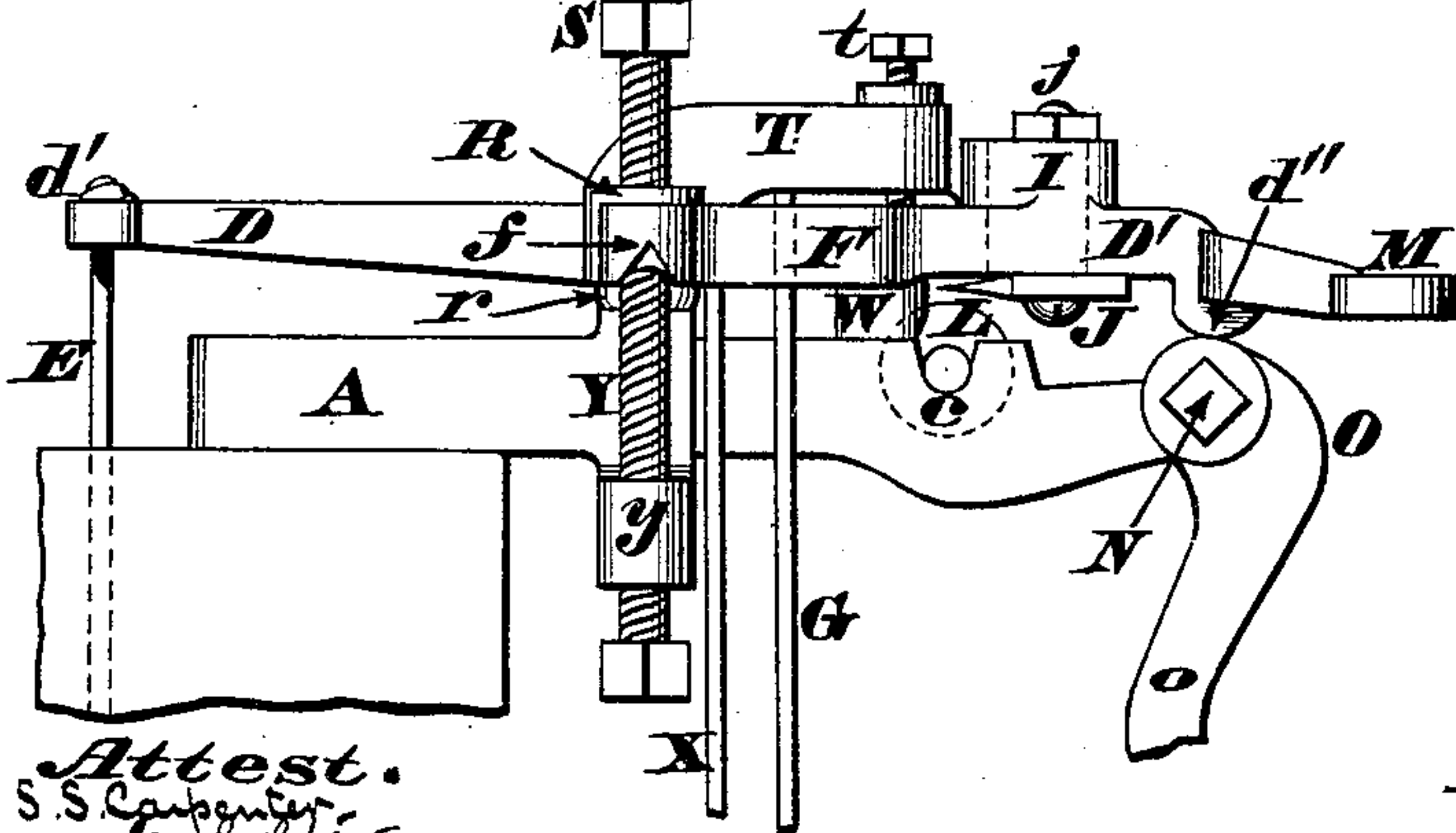
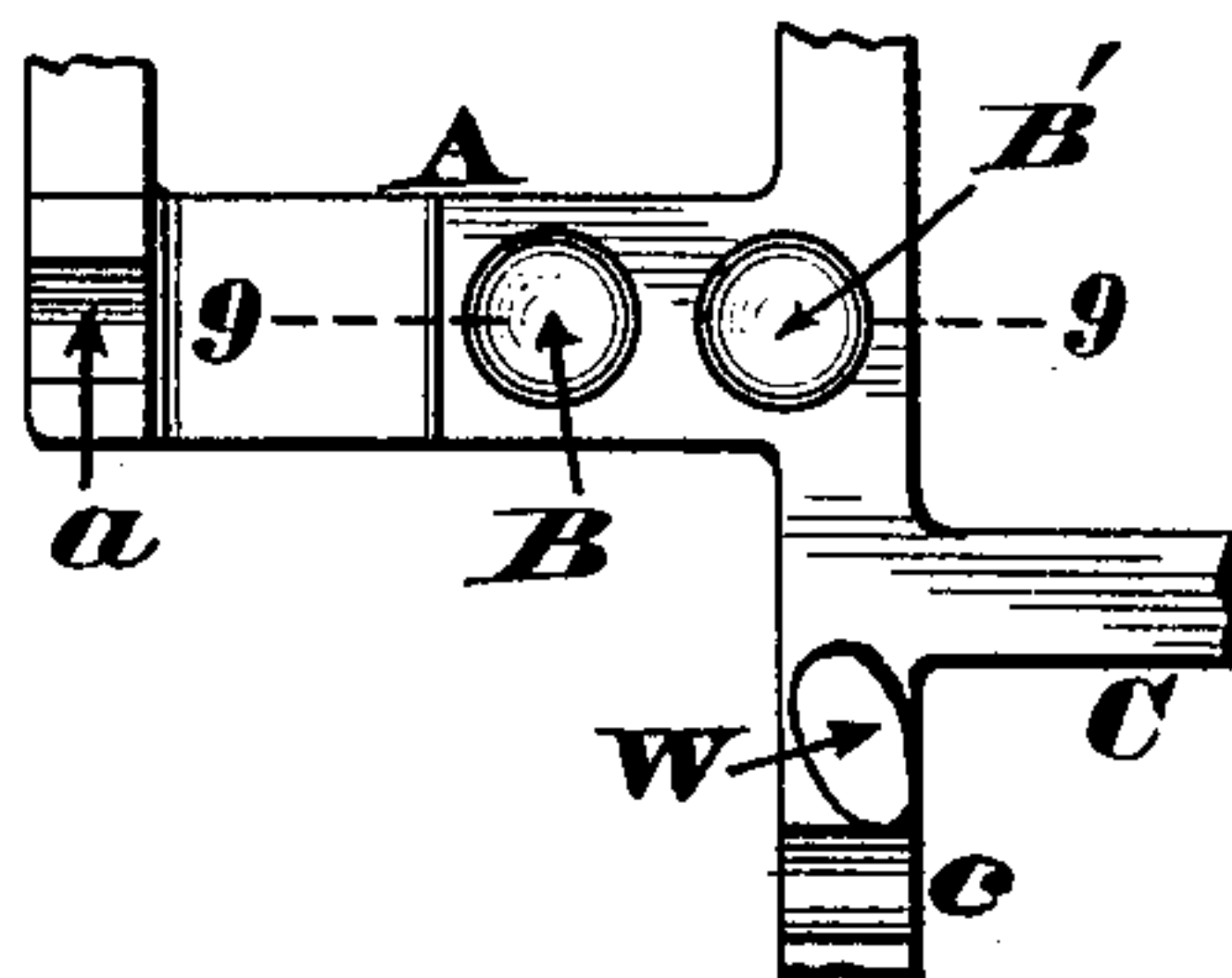


FIG. 5.



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SILAS H. RANDALL, OF WYOMING, OHIO, ASSIGNOR OF ONE-HALF TO JAMES D. RANDALL, OF SAME PLACE.

LEATHER-SKIVING MACHINE.

SPECIFICATION forming part of Letters Patent No. 391,190, dated October 16, 1888.

Application filed May 22, 1888. Serial No. 274,712. (No model.)

To all whom it may concern:

Be it known that I, SILAS H. RANDALL, a citizen of the United States of America, residing at Wyoming, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Leather-Skiving Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to those machines which are used for skiving or shaving off a portion of the flesh side of leather straps, and my improvements comprise a novel combination of devices that enable the strap or other
15 piece of leather to be trimmed in three different ways, to wit: When the knife-lever of the machine is arranged in a certain manner, the strap can be trimmed to a uniform thickness from end to end, but by properly adjusting an
20 eccentric or other regulator the strap can be gradually reduced in thickness as it is drawn forward. Another simple adjustment of the lever causes the knife to bevel the strap in order that it may be thinner at either or both
25 edges, as more fully described hereinafter.

In the annexed drawings, Figure 1 is a plan of my improved leather-skiving machine. Fig. 2 is a front elevation of the same. Fig. 3 is a side elevation of the machine, the eccentric-lever being swung down. Fig. 4 is
30 a vertical section of the machine taken at the line 8 8 of Fig. 2, the aforesaid lever being swung up. Fig. 5 is a plan of a portion of the main frame or bed-plate of my machine. Fig.
35 6 is an enlarged vertical section of a portion of the machine, said section being taken at the line 9 9 of Fig. 5. Fig. 7 is a diagram showing the manner of setting the machine for beveling the edge of a strap.

40 The main frame or bed-plate A is attached to a table or work-bench at A', and is provided with a V-shaped socket, a, a pair of pits or sockets, B B', a side frame, C, and a front bearing, a'. Seated within the socket B' is a
45 ball-bearing, d, on the under side of a lever, D, the rear end of the latter having an eye, d', to which is attached a connection, E, that may be operated by a treadle arranged so as to be the most convenient for the workman.
50 Projecting laterally from this lever is a branch,

F, the end of which has on its under side a V-shaped socket, f, an eye, f', being made about at the junction of said branch and lever. Engaged with this eye f' is a connection, G, the lower end of which is fastened to a
55 spring, g. (Seen only in Fig. 4.) Lever D extends forwardly, as at D', and has a bar or lateral projection, H, provided with enlargements I I, slotted, respectively, at i i', to admit bolts j j', wherewith the flat knife or cut-
60 ter J is secured in place and adjusted as occasion requires. These members D D' F H constitute what I designate the "knife-lever" of the machine, which lever is free to rock
65 both from front to rear and from side to side on the ball and socket joint B' d. The lever projection D' has a lug, K, provided with a set-screw, k, that rests upon the bearing a', as indicated by the dotted lines in Fig. 4, and
70 thus prevents the knife J coming in contact with the roller L, the latter being journaled in the bearings c c' of the side frame, C. Furthermore, this projection D' has a thumb-piece, M, for raising and lowering the knife-lever independently of the eccentric.
75

d'' is a swell or rounded rib on the under side of this extension or projection D'. (See Figs. 3 and 4.) Pivoted to bearing a', as at N, is a cam or eccentric, O, operated by a lever, o.

Located behind the lever branch F is a
80 rocker, R, provided at one end with a ball, r, that rests within socket B, the opposite end of said rocker having a screw, S, tapped in it. The point of this screw rests in the V-shaped bearing a of the main frame, as more clearly
85 seen in Fig. 6. Rocker R has an arm, T, which arm projects over the lever branch F without coming in contact therewith, as more clearly seen in Fig. 3. Arm T runs obliquely forward, as seen in Fig. 1, and is then bent down
90 and extended parallel with the axis of roller L, thereby affording a presser-bar, U, which maintains the strap snugly in contact with said roller, the bend of said arm being shown in Fig. 2. If desired, an anti-friction roller
95 may be journaled on this bar U. Tapped into the arm T at its junction with the bar U is a screw, t, resting upon a lug, W, projecting upwardly from the main frame of the machine. This lug is located near the end of the roller
100

L, and its rear edge is rounded off, so as to serve as a guide for the strap when it is drawn forward against the knife.

Rocker R has an eye, x , to which is fastened one end of a coupling, X, the lower end thereof being attached to a spring, x' . (Seen in Fig. 4.)

Y is an adjusting-screw engaged with a lug, y , of the main frame, the point of said screw being inserted in the socket f of the branch lever F, as more clearly seen in Fig. 3.

From the above description it is evident that the knife-lever D D' F H has a triangular bearing at the points d d' f , and as the coupling G is attached to this lever at a place within said triangle the tension of spring g maintains said lever securely in any position to which it may be adjusted. In most cases, however, the screw Y is turned until said lever assumes such a position as will cause the knife J to be parallel with the roller L, as seen in Fig. 2, the distance between these members J and L being determined by the adjustment of the cam O or its equivalent regulator. If a thick strap is to be "skived," this cam or eccentric is turned up a sufficient distance, and as the swell d'' rests upon said cam it is apparent that the portion D' F H of the knife-lever is elevated accordingly, thereby affording the desired clearance between the cutter J and roller L. The strap is then inserted in the machine after first raising the knife-lever or passing said strap in at the right-hand side of the machine, the presser-bar U holding the work evenly upon the roller. The operator now draws the work through the machine, the strap proper passing between the knife and roller, while the "skive" or shaving cut from the flesh side of the leather is discharged between said knife and the lateral projection H. After being thus drawn through the machine the skived strap will be uniformly thick from end to end; but in some cases it is necessary to gradually reduce the thickness of the strap toward one end, which act can be readily accomplished by a slow and almost continuous lowering of the cam O, so as to cause a corresponding dropping of the front portion of the knife-lever. Consequently the knife is gradually brought nearer and nearer to the roller, and the trailing end of the strap is thus shaved down until it is as thin as desired.

To bevel a strap, the screw Y is run down within the lug y until the knife-lever assumes such a canted or inclined position as to bring the cutter J to the angle seen in Fig. 7, or to any other desired angle, and as the strap V is drawn through the machine, with the edge of the work bearing against the guide W, the flesh side of the leather is chamfered off. The strap is now reversed, or turned end for end, and its opposite side is at once beveled at the same angle, as indicated by the dotted lines in said illustration. The knife-lever can be raised in front at any time independently of the cam movement by simply pushing up against the thumb-piece M, or depressing the treadle to

which the coupling E is attached, although this last expedient is preferred, because it leaves the workman's hands at liberty to attend to the machine. The presser-bar attachment R T U has three bearings, S r t , when there is no work in the machine, and as the coupling X is fastened to said bar within the triangle formed by these bearings the tension of spring x' maintains said attachment very securely in its normal position; but when a piece of work is inserted in the machine the strap takes the place of the screw t as a point of contact, and the eye x of the attachment is so located as to be still included in the new triangle thus formed by the points S r and the strap. In all cases, however, this attachment must be so adjusted by the screw S as to cause the bar U to be parallel with the upper surface of roller L, in order that the stress of spring x' may hold the strap smoothly upon said roller, and said attachment must have its bearings solely upon the main frame.

The screw t acts as a stop that prevents the bar U striking against the roller L when there is no work in the machine. Finally, the knife-lever when raised comes in contact with the arm T, thereby slightly lifting the latter and rocking it on its bearings.

I claim as my invention—

1. The combination, in a leather-skiving machine, of a main frame, A, bearing a strap-supporting roller, L, a lever, D, rocking upon said frame upon an axis contained by a vertical plane parallel to the axis of roller L, and having a knife, J, above said roller, and rising from the main frame, a screw, Y, upon which the lever D rocks and by which its axis is tilted, substantially as herein described.

2. The combination, in a leather-skiving machine, of a main frame, A, bearing a strap-supporting roller, L, a lever, D, rocking upon said frame upon an axis contained by a vertical plane parallel to the axis of roller L, and having a knife, J, above said roller, and a set-screw by which the motion of lever D upon its axis is limited, substantially as herein described.

3. The combination, in a leather-skiving machine, of a main frame provided with a roller and an adjustable presser-bar attachment, a knife-lever carrying the cutter and supported upon the main frame, and a cam wherewith said knife-lever is adjusted, substantially as described.

4. The combination, in a leather-skiving machine, of a main frame provided with a roller, a knife-lever carrying a cutter and mounted upon tripod-bearings of the main frame, a spring-connection for maintaining said lever in its normal position, and a cam for adjusting the lever, substantially as described.

5. The combination, in a leather-skiving machine, of a main frame provided with a roller, an adjustable presser-bar attachment supported upon tripod-bearings of the main frame, a knife-lever carrying a cutter and mounted upon tripod-bearings of the main frame, and

spring-connections for maintaining said bar and lever in their normal positions, substantially as described.

5 6. The combination, in a leather-skiving machine, of a main frame provided at one side with a roller which supports the piece of work, a lever rocking on said frame upon an axis which is always contained by a vertical plane parallel to the axis of the roller, a lateral projection from said lever, which projection overhangs the roller and has a knife fastened underneath it, a cam or equivalent adjusting device that raises and lowers said lever, whereby the knife cuts either a thick or thin skive, and 10 a set-screw or equivalent adjusting device, whereby the inclination of the lever-axis is changed and the knife made to bevel the edge of the piece of work, substantially as herein described.

20 7. In a leather-skiving machine, the tilting knife-lever D D', having a lateral bar, H, to the origin and free end of which is fastened a knife, for the purpose described.

25 8. The combination, in a leather-skiving machine, of a main frame, A, bearing a strap supporting roller, L, a lever, D, rocking upon said frame upon an axis contained by a vertical plane parallel to the axis of roller L, and having a knife, J, above said roller, and a presser-

bar attachment that rocks upon the main frame 30 upon an axis always contained by a vertical plane parallel to the axis of roller L, said attachment being provided with an arm, U, that overhangs said roller, for the purpose described. 35

9. The combination, in a leather-skiving machine, of a main frame provided at one side with a roller that supports the strap, a rocking lever mounted upon said frame and having a lateral projection overhanging said roller, a 40 knife secured underneath said lateral projection, a set-screw, Y, wherewith said lever is tilted, and a stop-screw, k, for the purpose herein described.

10. The combination, in a leather-skiving 45 machine, of a main frame, A, bearing a strap-supporting roller, L, a lever, D, rocking upon said frame upon an axis contained by a vertical plane parallel to the axis of roller L, and having a knife, J, above said roller, and a cam 50 by which the motion of lever D upon its axis is adjusted, for the purpose described.

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

SILAS H. RANDALL.

Witnesses:

JAMES H. LAYMAN,
S. S. CARPENTER.