

F. MITCHELL.
 RAZOR STROPPING MACHINE.
 APPLICATION FILED DEC. 14, 1910.

997,575.

Patented July 11, 1911.

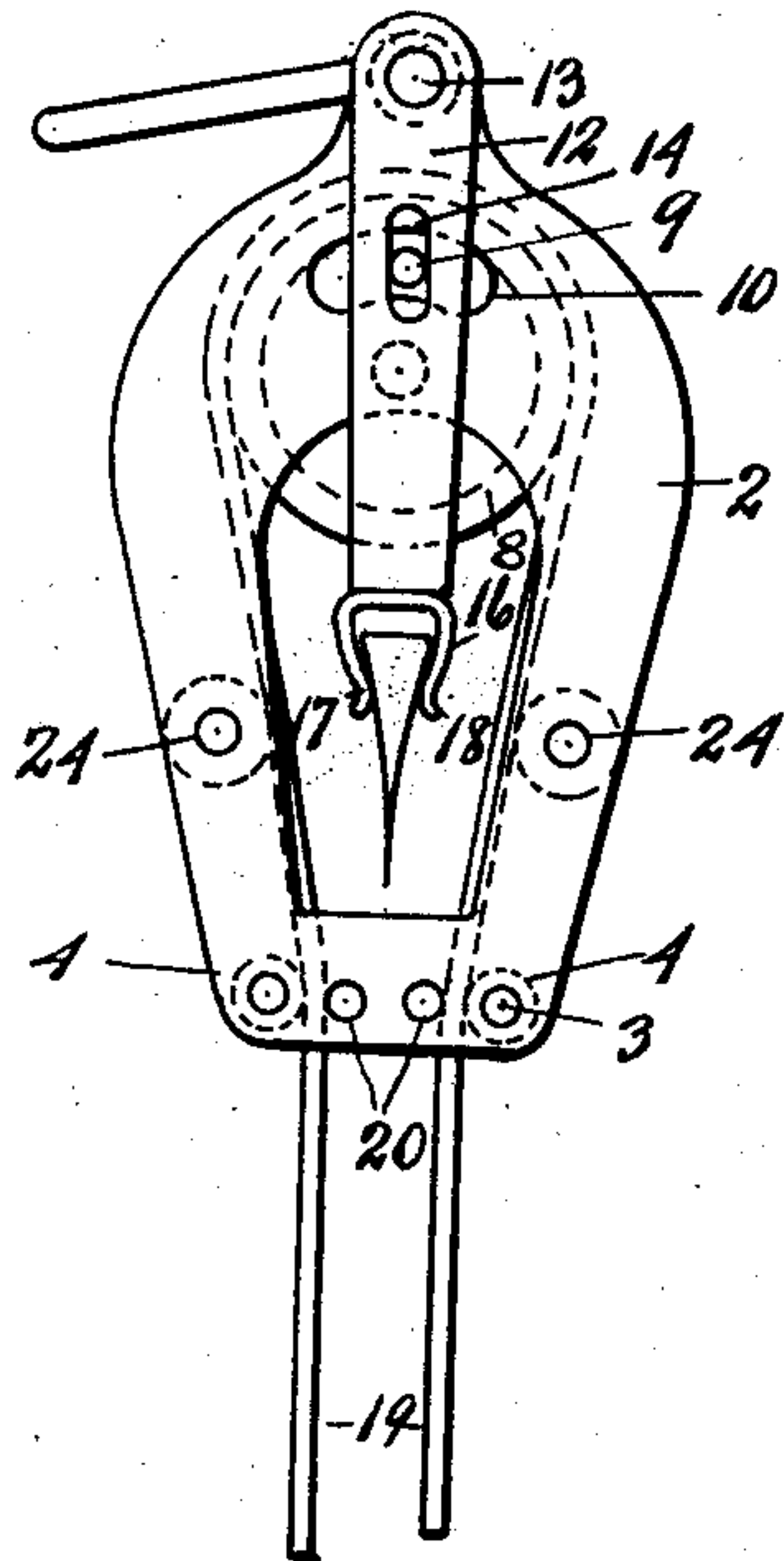


Fig. 1.

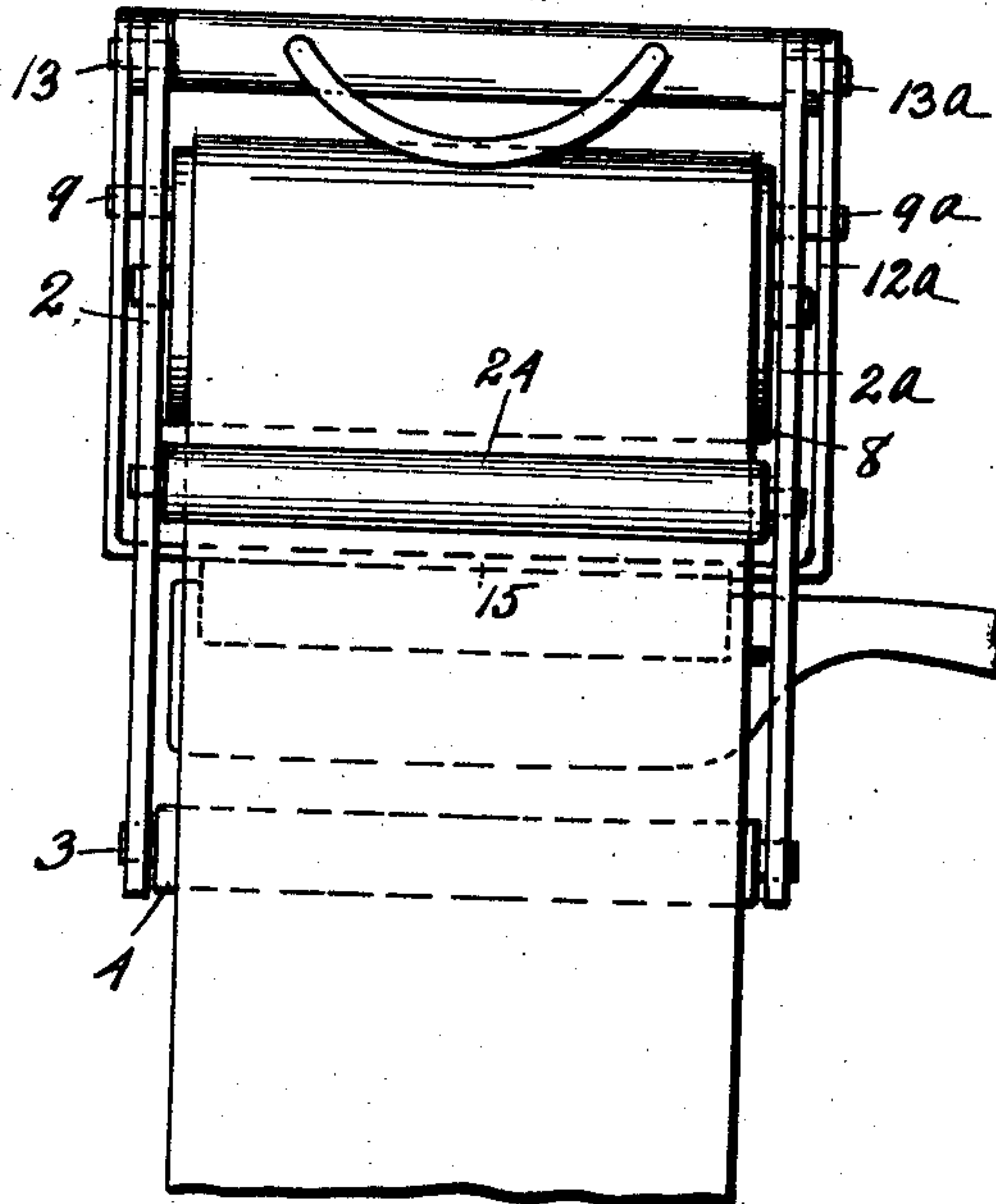


Fig. 2.

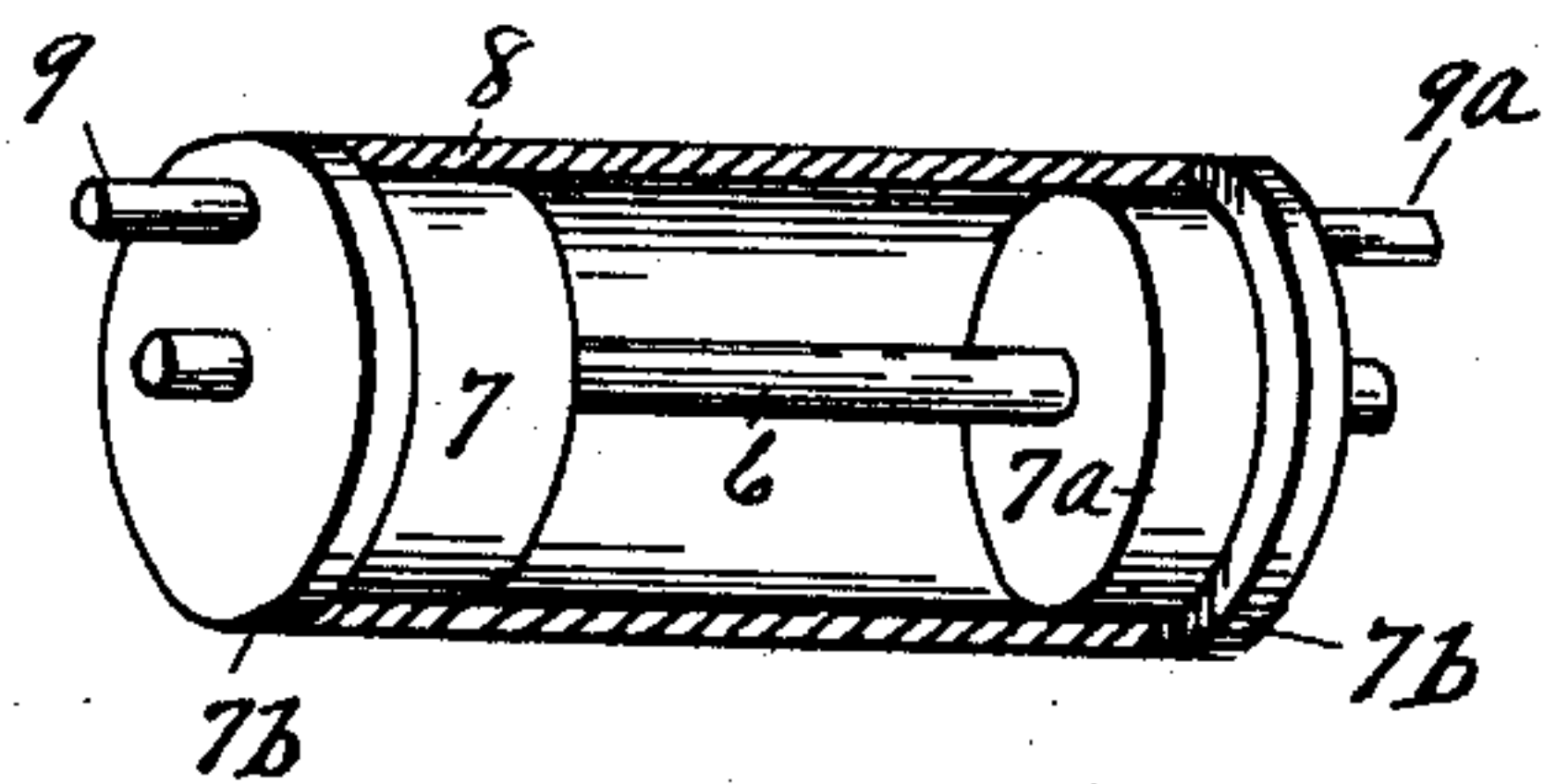


Fig. 3.

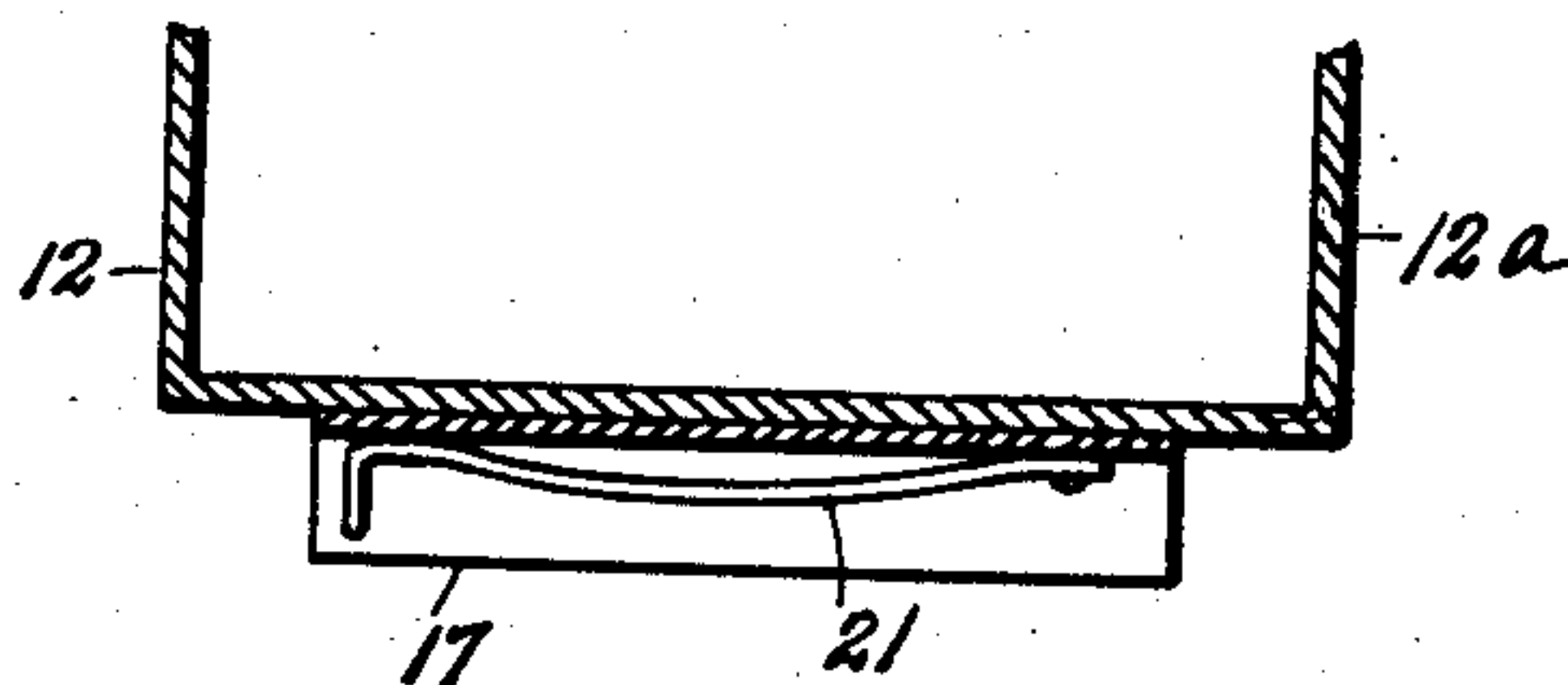


Fig. 4.

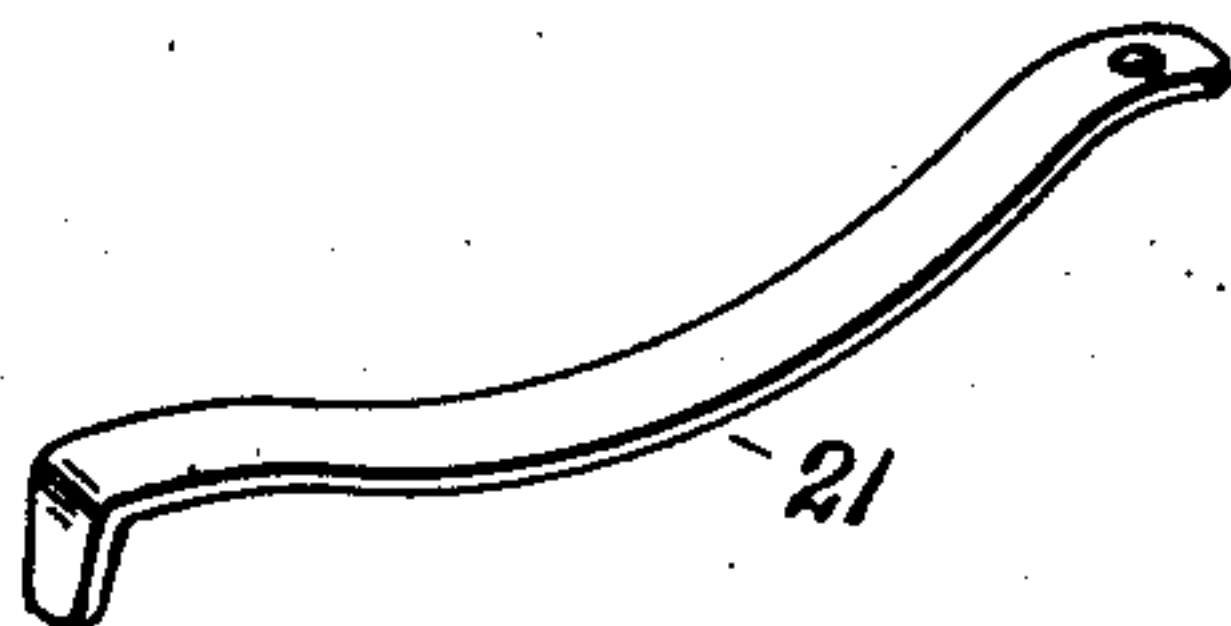


Fig. 5.

Witnesses

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FLOYD MITCHELL, OF JACKSON, MICHIGAN.

RAZOR-STROPPING MACHINE.

997,575.

Specification of Letters Patent.

Patented July 11, 1911.

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To all whom it may concern:

Be it known that I, FLOYD MITCHELL, a citizen of the United States, residing at Jackson, county of Jackson, State of Michigan, have invented a certain new and useful Improvement in Razor-Stropping Machines, and declare the following to be a full, clear, and exact description of the same, such as it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to razor stropping machines.

It has for its object an improved construction of such machine in which provision is made to hold the edge of the razor blade in contact with the outgoing run of a razor strop that is drawn to and fro through the frame of the machine, the blade of the razor being held with the proper tension to insure the right polishing or sharpening effect on the blade, and with provision by which on the reverse movement of the strop through the frame of the machine the razor immediately and automatically swings over to contact with the now outgoing run of the strop.

In the drawings:—Figure 1, is an end elevation of the machine. Fig. 2, is a side elevation. Fig. 3, is a perspective partly in section showing the means for shifting the razor blade. Fig. 4, is a sectional elevation showing the frame and the sub-frame in which the razor blade is held. Fig. 5, shows a spring used in the sub-frame.

The frame is made with end members 2 and 2^a which are joined by bars or rods 3 upon which are anti-friction rollers 4 against which the strop engages in its reciprocating movement through the frame. In the frame is journaled a rock shaft member 6 upon the ends of which are large crank hubs 7 and 7^a that support a short tube 8 which turns upon the hubs 7 and 7^a as an axis. The hub members 7 and 7^a with their shaft 6 are pivotally mounted in frame members 2 and 2^a; a crank pin 9 projects from the end of each hub member through a slot 10 in each end frame member. The crank pin 9 engages in a lever arm 12 pivotally connected to the frame by pivot 13 and adapted to swing on its pivot under the actuating action of the pin 9 which engages through a slot 14 in the arm 12. The lever member 12 has a companion lever 12^a which engages

pin 9^a on the crank hub 7^a; the two levers 12, 12^a are connected by a cross bar 15 to which is secured a clip 16 to hold the razor blade or a razor blade holder (not shown) in which a thin piece of steel, such as is commonly used for safety razors, may be slipped. The clip frame is provided with a spring 21 that holds the razor blade or other included article pressed outward against the spring lips 17 and 18 of the clip. The strop 19 passes through the frame between pins 20 and anti-friction rollers 4 on the one side against anti-friction rollers 24, thence around the tubular member 8 and under the anti-friction rollers 24 and 4 on the opposite side and out from the frame. Preferably, a small margin along one or both edges of the strop runs on the rims 7^b of the hubs 7 and 7^a.

When tension is put on either end of the strop, it may, because of the frictional engagement of the strop with the tube 8, cause the tube 8 to rotate on its own axis, and the tube 8 rotating on its axis because of its frictional contact with the hubs 7 and 7^a, or by the run of the strop on the rim 7^b of the hub or the frictional engagement and the engagement of the strop with the rim in cooperation, causes the hub members 7 and 7^a to oscillate to the limit of their throw in either direction, which throw is determined by the engagement of the crank pin 9 and the lever arm 12. The lever arm 12 which controls the clip in which the razor blade is held swings over and holds the blade against the out-running strop bringing the edge of the blade into contact therewith and polishing and sharpening the blade. Immediately on the transmission of tension to the opposite end of the strop the reverse action of all the parts takes place, the blade swings over against the now out-running end of the strop making it impossible for the blade at any time to so engage the strop as to cut it and bringing the blade into such engagement with the strop at all times that it produces the proper sharpening movement. The anti-friction rollers 4 and 24 are so located with respect to the end of the arm 12 that the proper angle for sharpening the blade is brought about.

What I claim is:—

1. A razor stropping machine, having in combination a side member having a slot, a shaft journaled in said side member and provided with a hub, a tube adapted to fric-

tionally rotate on said hub, a crank attached to said hub and adapted to reciprocate in said slot, a strop passed over said tube and returned, a lever having a razor holder, pivoted to said side member, connected to said crank between said place of pivoting and the holder and adapted thereby to oscillate the holder between the two runs of the strop, substantially as described.

10 2. A razor stropping machine, having in combination a side member, a shaft journaled therein having a hub provided with a rim, a tube frictionally rotatable on said hub and having a periphery substantially registering with the periphery of the hub rim, a razor holder, a strop passed over said tube and returned, a portion of the side of the strop bearing on the hub rim and mechanism connecting said hub to said holder whereby the rotation of the hub oscillates the holder between the two runs of the strop, substantially as described.

25 3. A razor stropping machine, having in combination a side member, a shaft journaled therein and having a hub provided with a rim, a tube rotatable on said hub and having a periphery registering with the periphery of the hub rim, a razor holder, a strop passed over said tube and returned,

a portion of the strop bearing on the hub rim and mechanism connecting said hub to said holder whereby the rotation of the hub oscillates the holder between the two runs of the strop, substantially as described.

4. A razor stropping machine, having in combination a side member having a slot, a shaft journaled in said side member provided with a hub, said hub having a rim, a tube adapted to rotate on said hub and having a periphery adapted to register therewith, a crank attached to said hub adapted to reciprocate in said slot, a strop passed over said tube and returned, having a portion running on said rim, and thereby adapted to rotate said hub and crank, a lever having a razor holder, pivoted to said side member, connected to said crank between said place of pivoting and the holder, and adapted thereby to oscillate the holder between the two runs of the strop, substantially as described.

In testimony whereof, I sign this specification in the presence of two witnesses.

FLOYD MITCHELL.

Witnesses:

CHARLES F. BURTON,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents Washington, D. C."