

No. 864,119.

PATENTED AUG. 20, 1907.

W. L. BRIDGES.
LONG HORN CHEESE CUTTER.
APPLICATION FILED MAR. 15, 1906.

2 SHEETS—SHEET 1.

Fig - 1 -

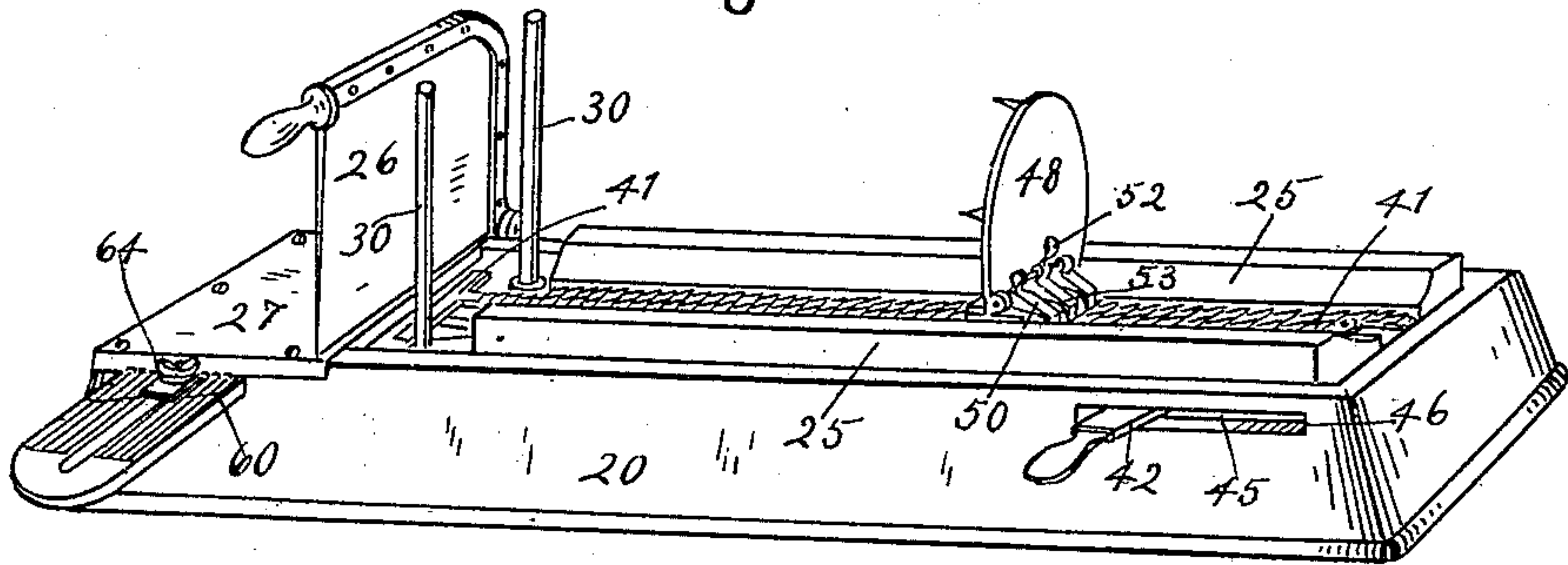


Fig - 2 -

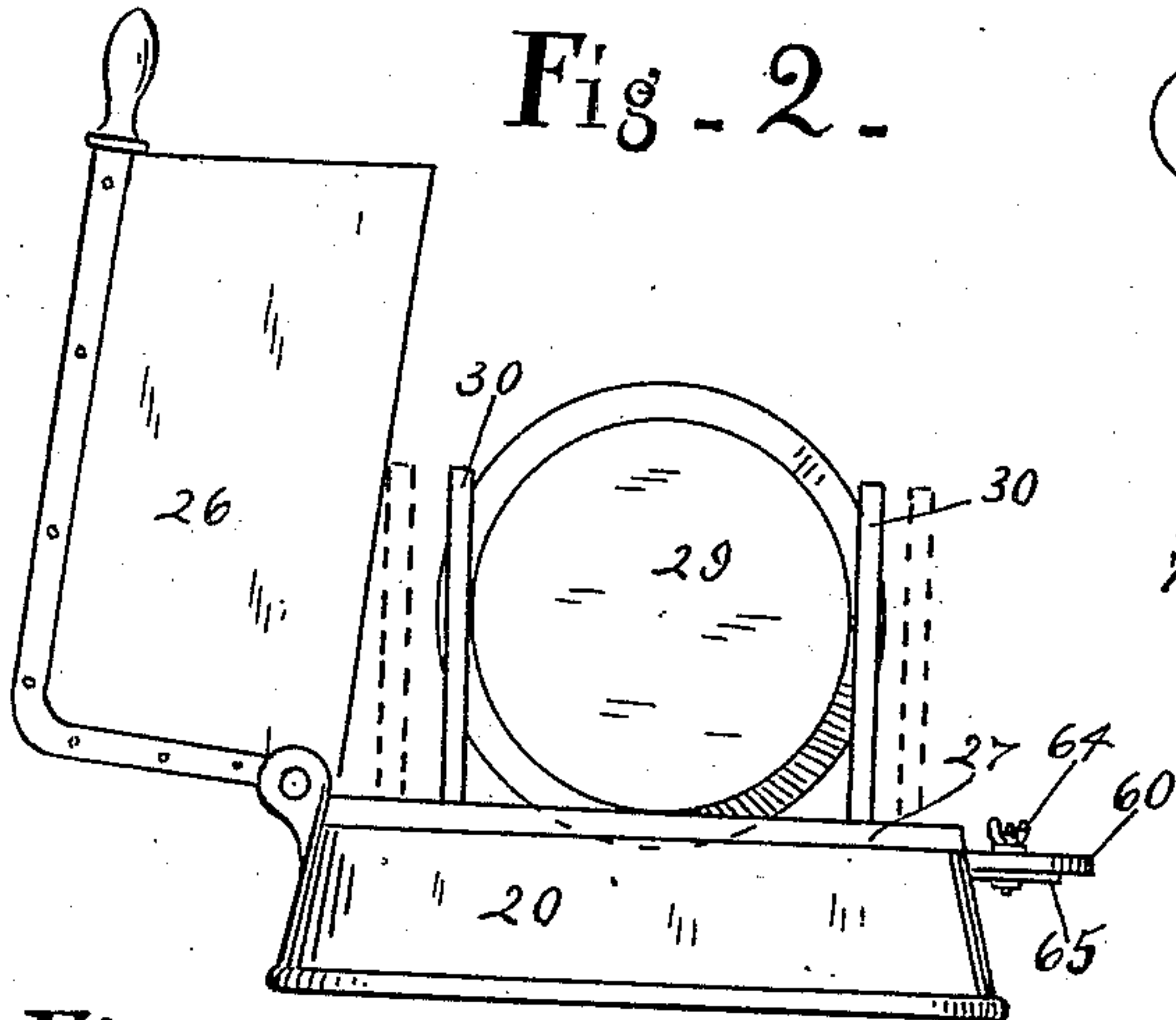


Fig - 3 -

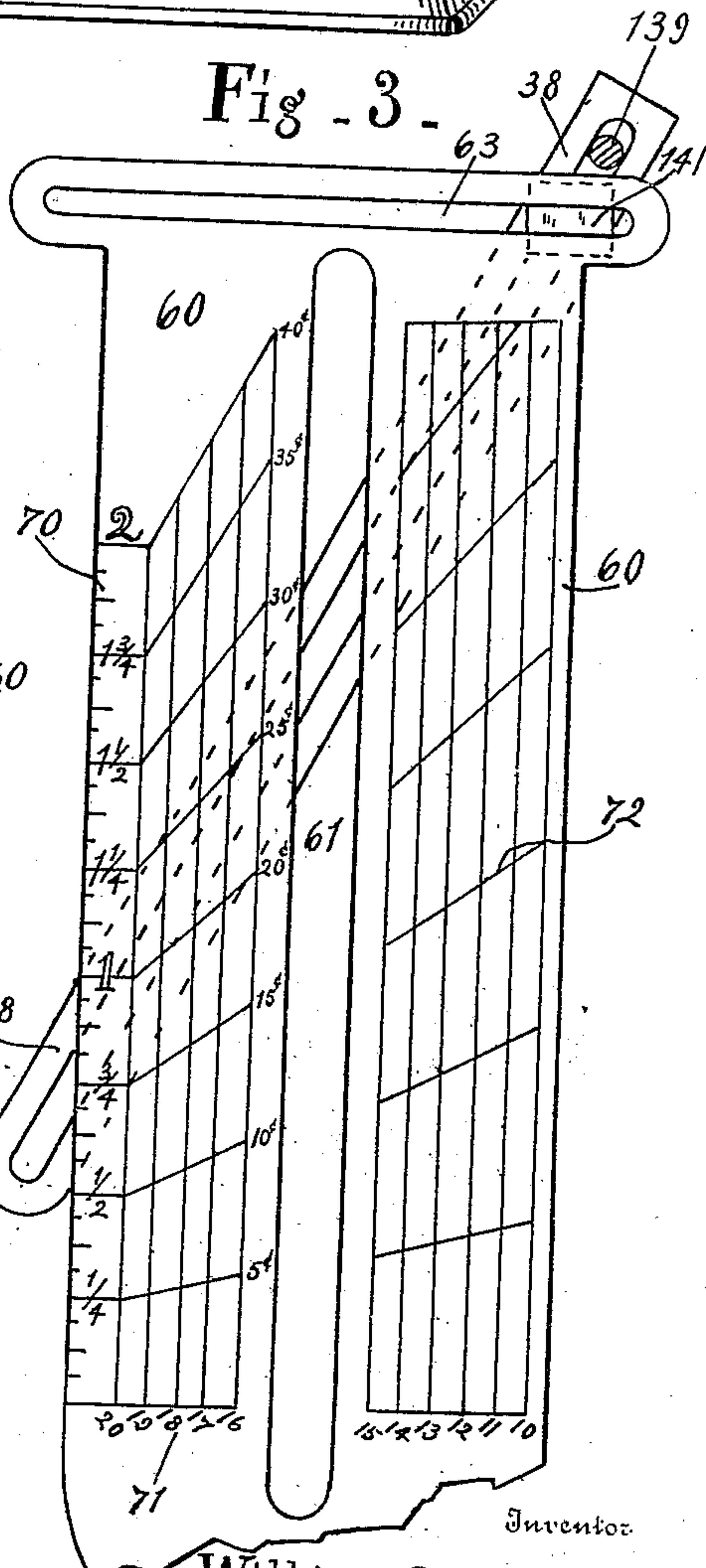


Fig - 9 -

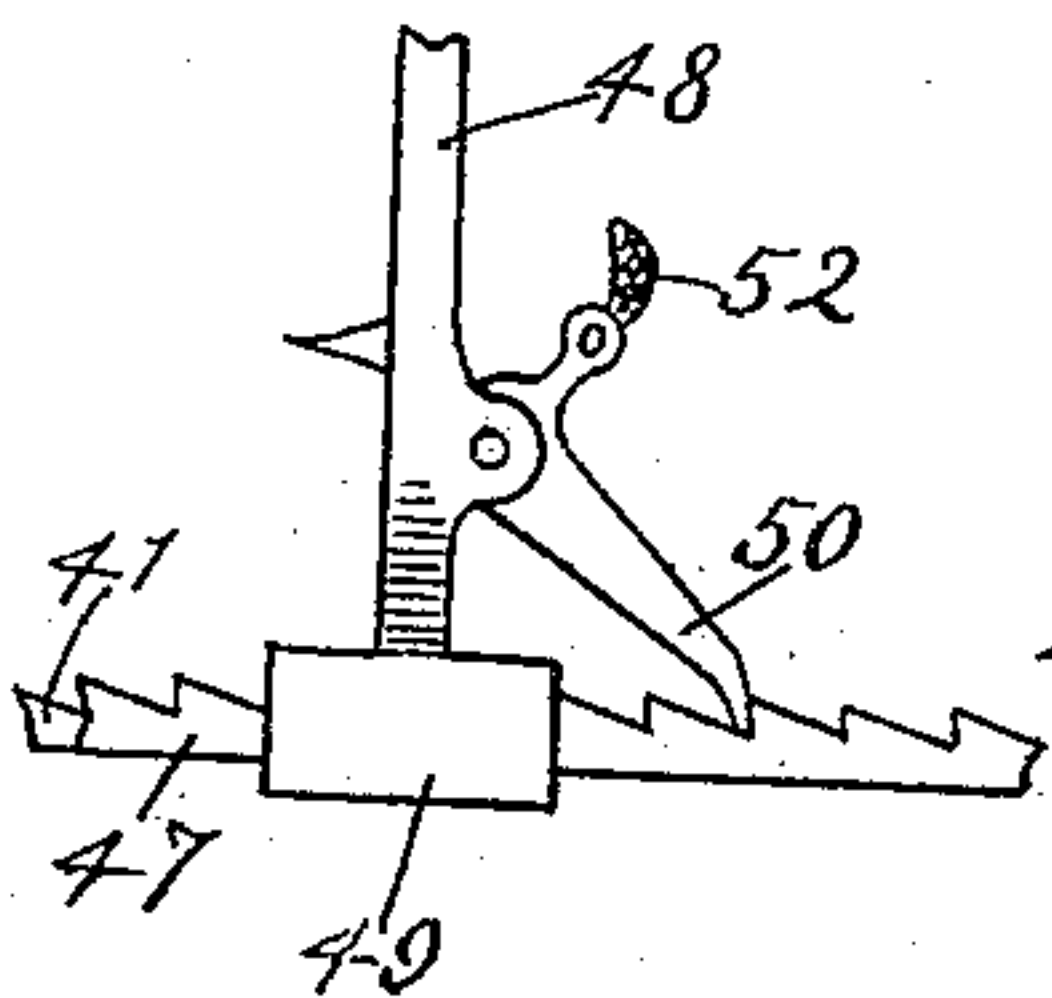


Fig - 10 -

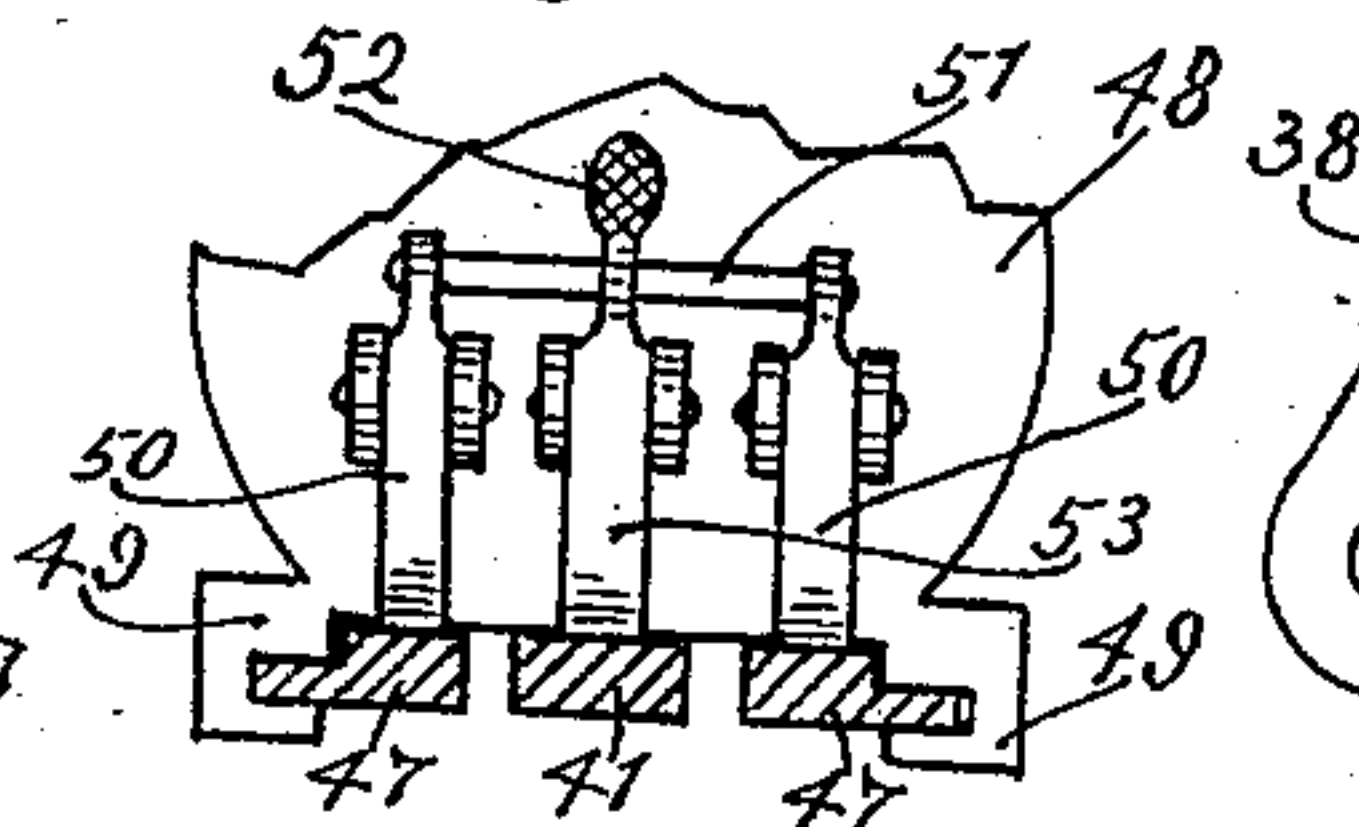


Fig - 11 -

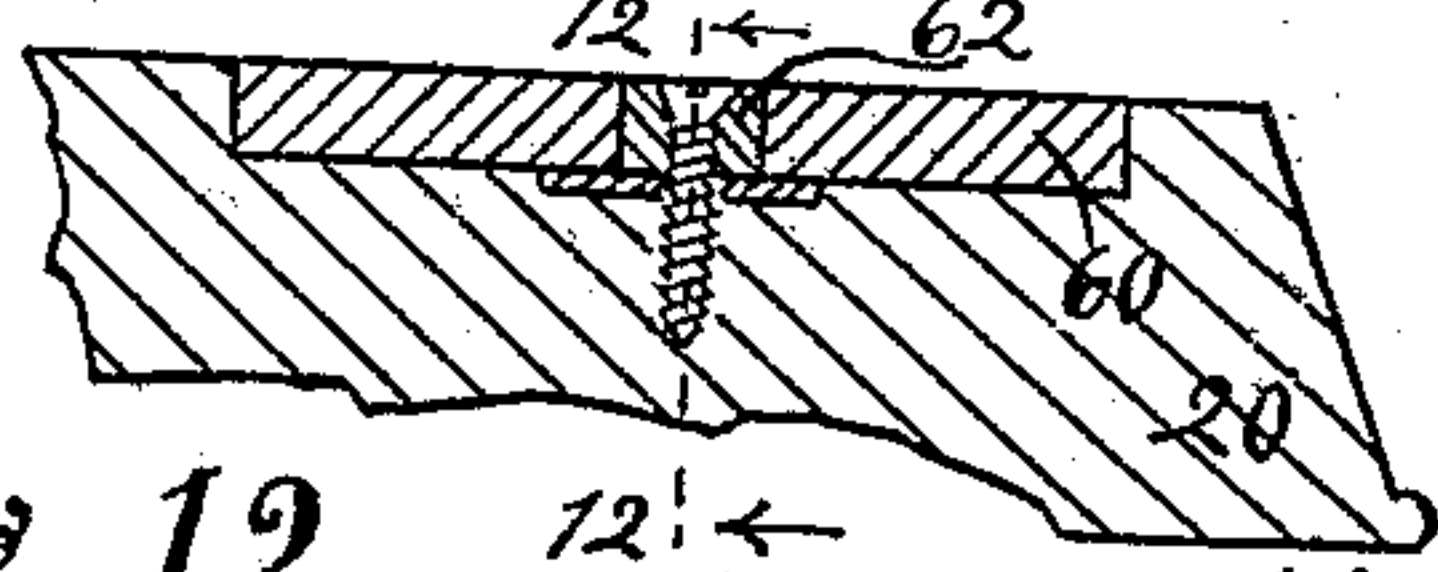
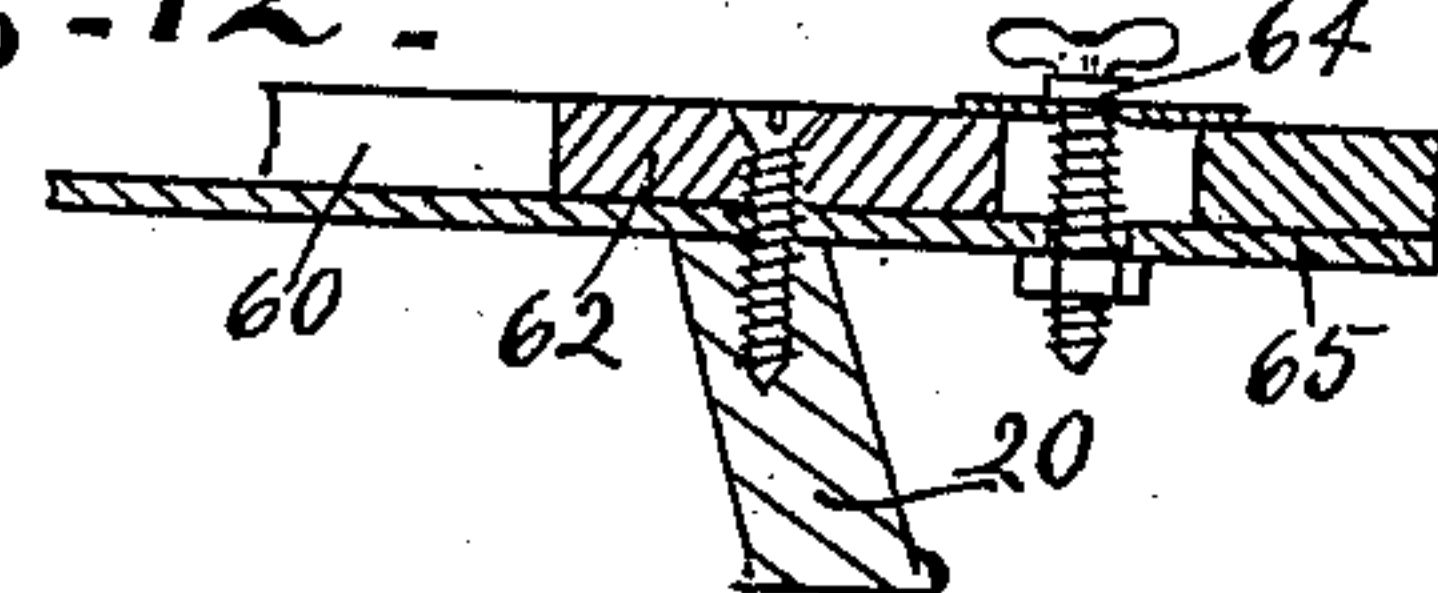


Fig - 12 -



Witness
W. M. Gentile.
N. Allmonq.

Inventor
William L Bridges

By V. H. Forwood.
Attorney

No. 864,119.

PATENTED AUG. 20, 1907.

W. L. BRIDGES.
LONG HORN CHEESE CUTTER.
APPLICATION FILED MAR. 15, 1906.

2 SHEETS—SHEET 2.

Fig. 4.

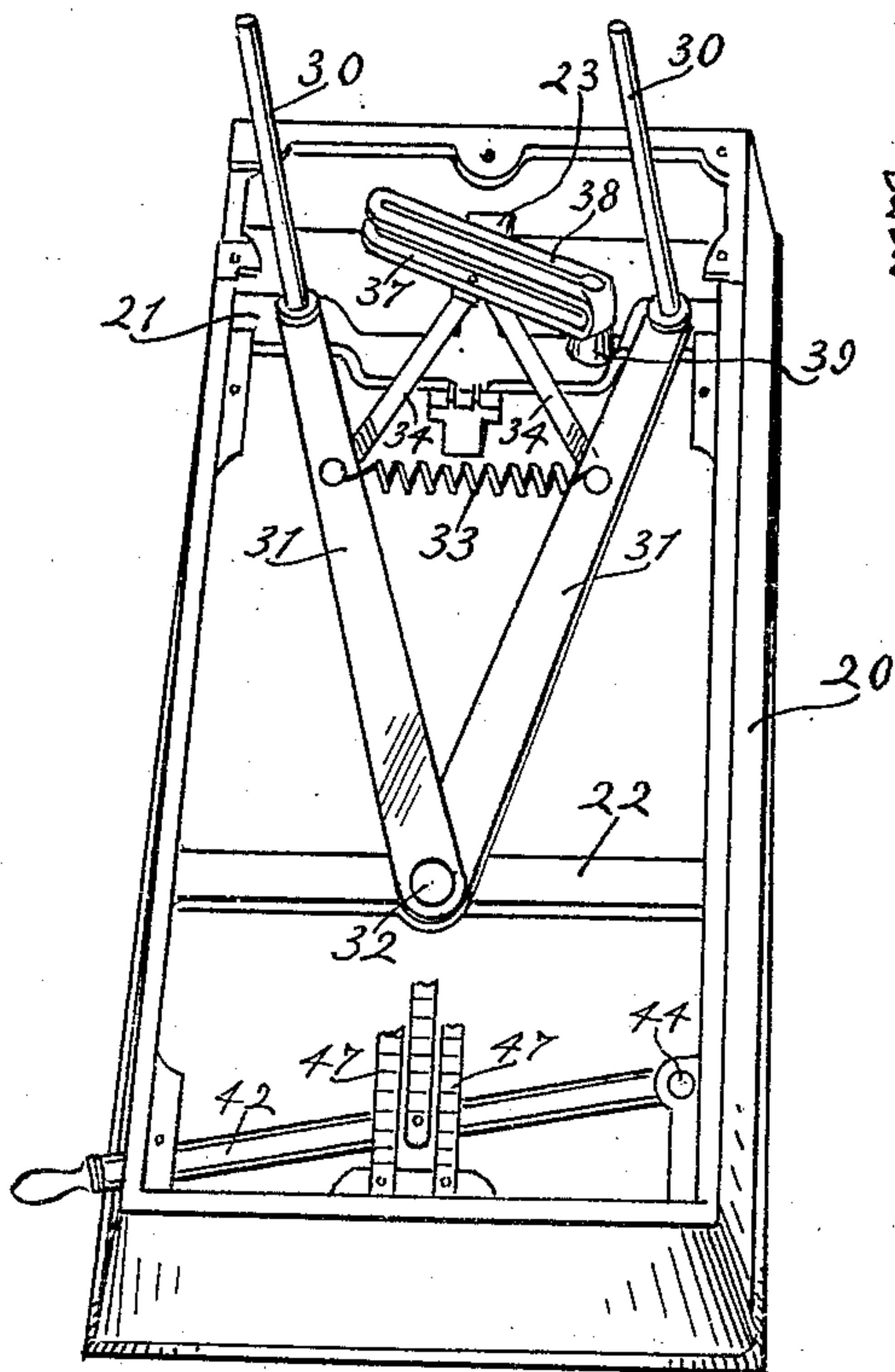


Fig. 5.

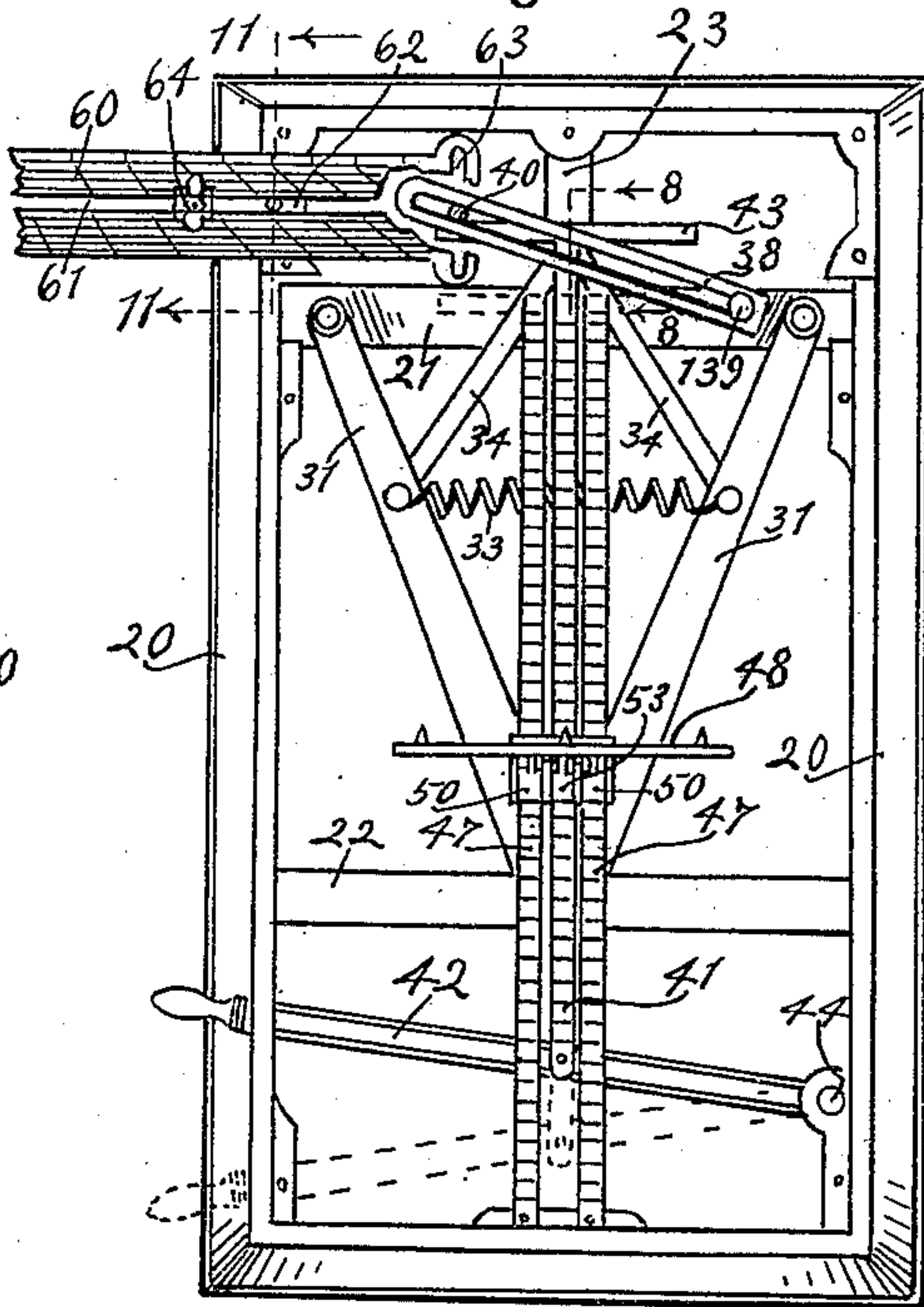


Fig. 6.

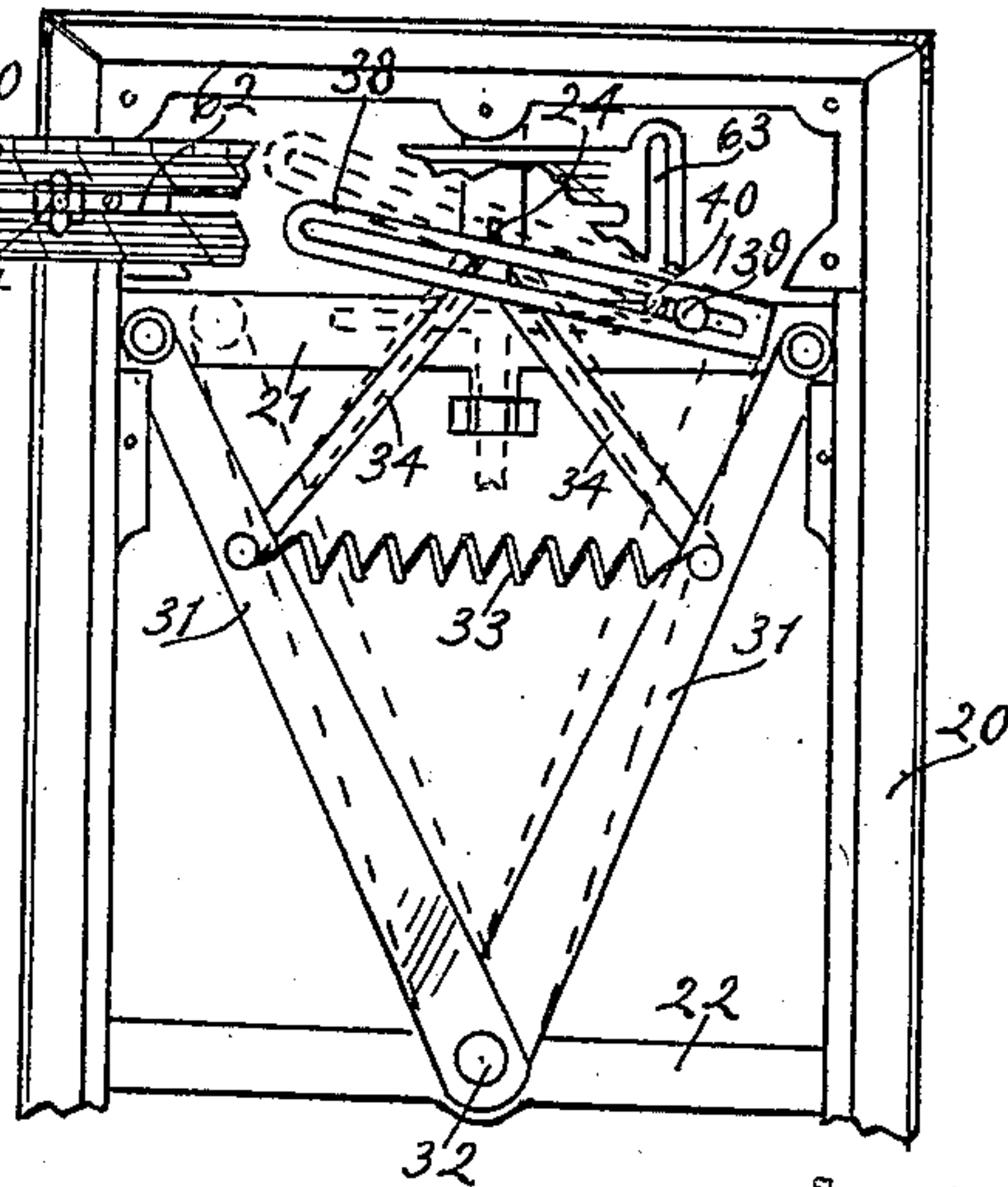


Fig. 7.

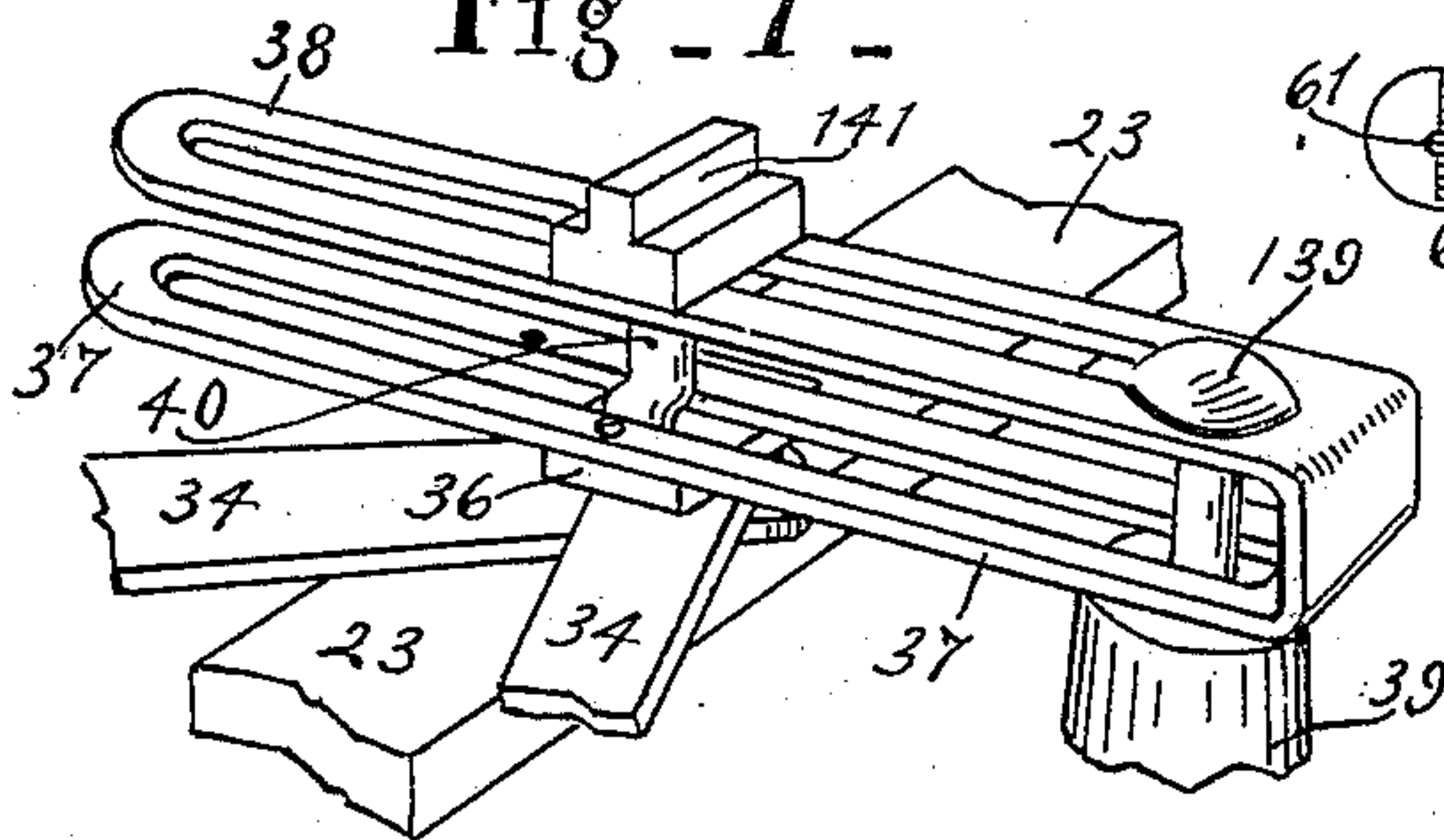
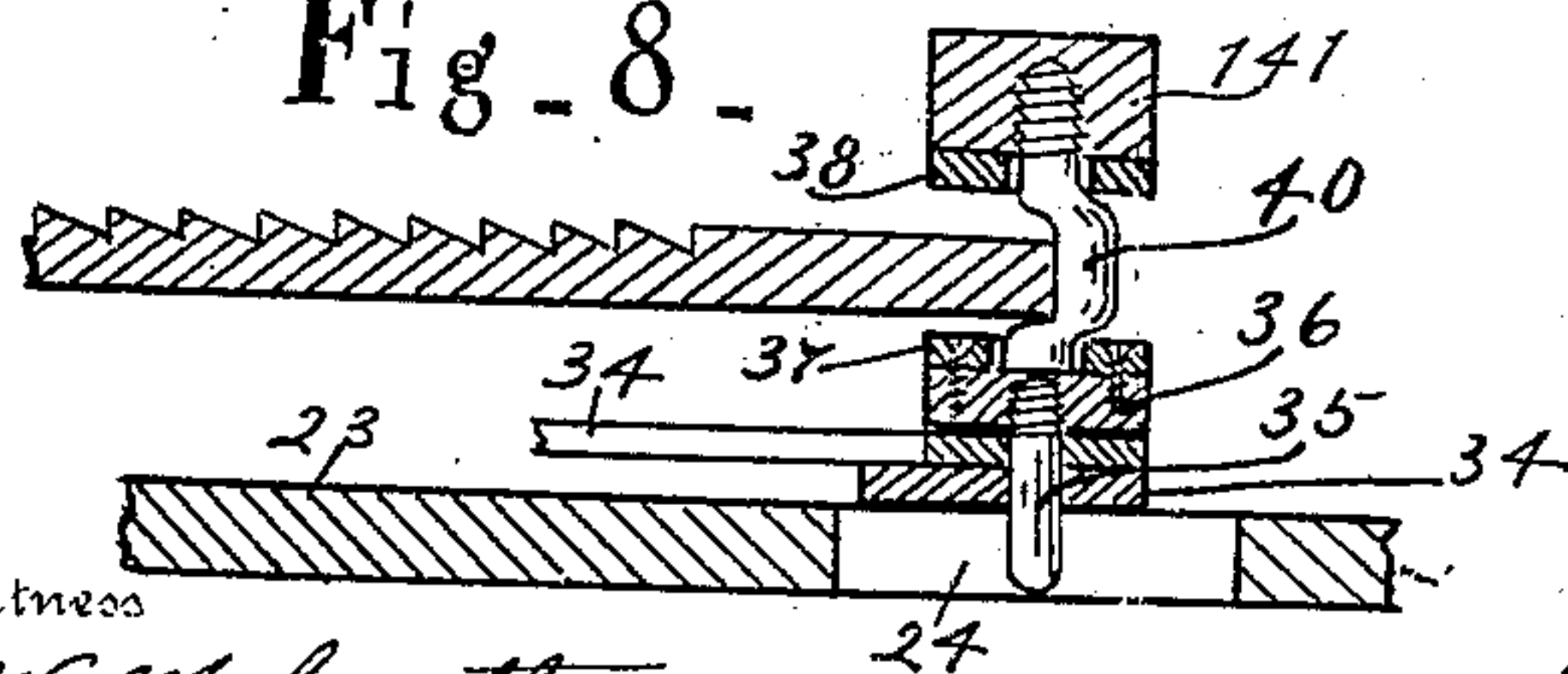


Fig. 8.



Witness

W. M. Gentle.

N. Allmon.

Inventor
William L Bridges.

By J. H. Woodward

Attorney

UNITED STATES PATENT OFFICE.

WILLIAM L. BRIDGES, OF INDIANAPOLIS, INDIANA.

LONG-HORN-CHEESE CUTTER.

No. 864,119.

Specification of Letters Patent.

Patented Aug. 20, 1907.

Application filed March 15, 1906. Serial No. 306,131.

To all whom it may concern:

Be it known that I, WILLIAM L. BRIDGES, of Indianapolis, county of Marion, and State of Indiana, have invented a certain new and useful Long-Horn-Cheese Cutter; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like letters refer to like parts.

The object of this invention is to provide an improvement in devices for cutting "long horn" or other tapering cheeses or the like into portions of uniform weight or value, regardless of the diameter or taper of the various cheeses.

One important new feature is means actuated and therefore regulated by the diameter of the cheese as it is fed intermittently to the knife for controlling the extent of the feeding movement at each stroke of the actuating lever so that cheeses of varying diameters will be cut into pieces of uniform weight or value. To this end adjustable means for stopping the actuating lever in its movement so as to vary the extent of the feeding movement is automatically regulated by the diameter of the cheese at the cutting point. Combined with the foregoing is additional means for varying the position of the adjustable stop so the device will cut portions of the desired weight, or value from cheeses of varying diameters.

These and the other features of the invention will be understood from the accompanying drawings and the following description and claims.

Figure 1 is a perspective view of the cheese cutter. Fig. 2 is a front elevation thereof with the knife thrown back and a changed position of the stop adjusting rods being shown by dotted lines. Fig. 3 is a plan view of the scale plate, and its connection with the means for adjusting the stop, a part of said plate being broken away. Fig. 4 is a perspective view of the base and part of the mechanism therein, for adjusting the stop, parts being broken away. Fig. 5 is a plan view of the frame of the machine showing the means for feeding the cheese and regulating the adjustable stop for limiting the stroke of the lever, the starting position of the cheese feeding means being shown by dotted lines. Fig. 6 is the same as the front end of Fig. 4 with the scale plate added and showing a different adjustment from what appears in Fig. 4, parts being broken away. Fig. 7 is a perspective view of the stop and means for mounting and changing it and some associated parts, some of said parts being broken away. Fig. 8 is a vertical section through parts of the machine on the line 8—8 of Fig. 5. Fig. 9 is a detail showing the ratchet feeding mechanism in side elevation, parts being broken away. Fig. 10 is the same in rear elevation, parts being in section. Fig. 11 is a vertical section on line 11—11 of Fig. 5. Fig. 12 is a vertical section on line 12—12 of Fig. 11.

The rectangular base 20 is provided as appears in Figs. 4 and 5 with two cross bars, 21 near the front end and 22 toward the rear end. A longitudinally extending bar 23 is provided centrally at the front end, being secured to the frame and to the middle of the cross bar 21 and having a longitudinal slot 24 in it. Longitudinal cheese supporting bars 25 are secured to the frame, as shown in Fig. 1, one being at each side and at right angles to the knife 26. There is a plate 27 on which the cheese drops as it is cut.

The cheese is fed longitudinally along the frame to the knife which cuts slices diametrically of the cheese. A long horn cheese is usually slightly tapering. In Fig. 2 the cheese 29 is larger at its rear end than at its front end.

The cheese is placed between two vertical rods 30 mounted in the ends of horizontal bars 31 pivoted at 32 to the cross bar 22. These bars are drawn towards each other by the spring 33 so that the rods 30 will hug the cheese as it comes to the knife and these rods are as close to the knife as is practical. To each bar 31 there is pivoted between its ends a bar 34 extending forwardly, the two forward ends of said bars 34 being pivoted together by the pin 35, seen in Fig. 8. This pin 35 extends into the slot 24 of the bar 23 of the frame 20 and reciprocates longitudinally therein. The pin is secured in a small block 36 that is fastened to the under side of a slotted stop adjusting bar 37. There is also another slotted adjusting bar 38 above and parallel with 37. As shown in Fig. 7 these two slotted stop adjusting bars are made out of one piece of metal bent midway and riding loosely on the pin 139 on the post 39 secured to the bar 21 of the frame. To accomplish this the cross bar 21 is depressed midway, as shown in Fig. 4.

The adjustable stop 40 for limiting the varying throws of the adjusting lever is a pin secured at its upper end in the block 141 and extending through the two slotted bars 37 and 38 and riding upon the lower bar 37, so that said stop is longitudinally slidable along said bars 37 and 38.

The stop 40 limits the movement of the cheese-cutting rack bar 41 that is longitudinally movable by the actuating lever 42. Said rack bar 41 has a T-bar or cross bar 43 that engages the stop 40 in its various positions. The lever 42 is pivoted to the frame at 44 and extends through a slot 45 in the frame. The end wall 46 of said slot is the stationary stop for limiting the backward throw of the lever and is the starting point for the lever. The adjustable stop 40 limits the movement of the lever in the upper direction toward the front of the machine.

There are two stationary rack bars 47 beside the moving rack bar 41, one being on each side as shown in Fig. 5. The follower 48 is mounted loosely on these stationary rack bars 47 by means of a sleeve 49, as seen

in Fig. 9. The pawls 50 pivoted at the rear of said follower engage the stationary rack bars and prevent backward movement of the follower. The two pawls 50 of the stationary rack bars are connected by a rod 51 so that they may be released simultaneously by the finger piece 52 on the middle pawl 53, mounted on the follower and that engages the moving rack bar. Said finger piece 52 is not connected with the rod 51 but merely engages and moves said rod when said finger piece is actuated, thus causing the release of all three pawls 50 and 53.

When the lever 42 is moved forward it moves the middle rack bar 41 forward until that rack bar is stopped by the stop 40. Such forward movement of the rack bar 41 through the pawl 53 moves the follower and therefore, the cheese forward to the same extent as the rack bar 41. The lever 42, when moved backward to the dotted line position shown in Fig. 5, carries the rack bar back with it but not the follower, it being held in place by the pawls 50. If it is desired to move the follower back, it is done by hand, the finger piece 52 being actuated, and that releases all three of the pawls from the rack bars so that the follower can be slipped back to any desired place.

The adjustable stop 40 is further adjustable by means of a scale plate 60 that is horizontally and transversely slidable through a slot in the frame of the machine, as appears in Figs. 1, 2, 5 and 11. It is provided with a central slot 61 extending longitudinally and a guide block 62 fits loosely in said slot 61 as shown in Fig. 11, said guide block being secured to the frame. At its inner end said bar has a transverse slot 63 through which the top rib of the block 141 extends and reciprocates. The inner end of the scale plate lies above the slotted bar 38 that is shown in Figs. 5 and 7. The scale plate is clamped in set position by the clamp 64 shown in Fig. 12 in detail, said clamp having a screw that passes down through the base plate 65 that is horizontally mounted on the main base 20 as shown in Fig. 12.

On the scale plate there is a weight scale 70 along the left hand edge with numerals indicating pounds and fractions of pounds. There is a transverse scale 71 indicating selling prices per pound and there are graduation lines 72 running from said two scales and intersecting to indicate where to set the scale plate to cut slices of the desired weight or value.

In operation the cheese is placed on the device and the scale plate 60 adjusted so that at a stroke of the lever 42 it will cut a slice of the desired weight or value, say one pound or fifteen cents worth. The scale for this purpose is set so the edge of the frame will be immediately over the scale plate and constitute the indicator, as seen in Fig. 1, and will register with the intersections of the lines from the weight and the price per pound numerals. This adjustment of the scale bar will modify and regulate during the cutting of such a cheese the extent of movement of the actuating lever 42 so that it will cut pieces of the desired weight or value providing the cheese is of uniform diameter; but when the cheese tapers, as it is fed through between the rods 30, it will further adjust the position of the stop 40 automatically so that the machine will cut pieces of the desired weight or value at each stroke of the lever, from a tapering cheese.

What I claim as my invention and desire to secure by Letters Patent is:

1. In a device for cutting a tapering cheese or like article into portions, a cutter, means for feeding the article to the cutter, and means actuated by the longitudinal surface of the article for regulating the extent of movement of said feeding means.

2. In a device for cutting a tapering cheese or like article into portions, a cutter, means for intermittently feeding the article to the cutter, and means actuated by the longitudinal surface of the article for regulating the extent of the intermittent movements of said feeding means.

3. In a device for cutting a tapering cheese or like article into portions, a cutter, means for intermittently feeding the article to the cutter, an adjustable stop for limiting the extent of the movements of said feeding means, and means actuated by the longitudinal surface of the article for adjusting the position of said stop.

4. In a device for cutting a tapering cheese and the like into portions, a frame adapted to receive a longitudinally extending tapering cheese, a knife operative transversely of said frame for cutting the cheese into portions, means for intermittently moving the cheese longitudinally toward the knife, an adjustable stop for limiting the movement of said actuating means, and means engaging and actuated by the sides of the cheese as it is moved toward the knife for adjusting the position of said stop.

5. In a device for cutting a tapering cheese and the like into portions, a frame adapted to receive a longitudinally extending tapering cheese, a knife operative transversely of said frame for cutting the cheese into portions, means for intermittently moving the cheese longitudinally toward the knife, an adjustable stop for limiting the movement of said actuating means, a pair of laterally movable rods extending up at the two sides of the cheese and in engagement therewith, and means actuated by the lateral movement of said rods for adjusting said stop.

6. In a device for cutting a tapering cheese and the like into portions, a frame adapted to receive a longitudinally extending tapering cheese, a knife operative transversely of said frame for cutting the cheese into portions, means for intermittently moving the cheese longitudinally toward the knife, an adjustable stop for limiting the movement of said actuating means, a pair of laterally movable rods extending up at the two sides of the cheese and in engagement therewith, spring controlled means tending to move said rods toward each other and means actuated by the lateral movement of said rods for adjusting said stop.

7. In a device for cutting a tapering cheese and the like into portions, a frame adapted to receive a longitudinally extending tapering cheese, a knife operative transversely of said frame for cutting the cheese into portions, means for intermittently moving the cheese longitudinally toward the knife, an adjustable stop for limiting the movement of said actuating means, a pair of bars pivoted to the frame of the device at one end, a rod extending upward from the end of each bar so as to be in engagement with the sides of the cheese a spring tending to draw said bars toward each other, and means pivotally connected with said bars and actuated thereby for adjusting the position of said stop.

8. In a device for cutting a tapering cheese and the like into portions, a frame, a knife for severing the cheese into portions, a cheese actuating means movable intermittently toward the knife at a right angle thereto, an adjustable stop for limiting the extent of the movements of said cheese by engaging said cheese actuating means, a guide for said stop arranged obliquely to said cheese actuating means, and a scale controlled plate movable at a right angle to said cheese actuating means for moving said stop along said guide to adapt the machine for cutting portions of the desired weight or value from cheeses of varying diameters.

9. In a device for cutting a tapering cheese and the like into portions, a frame, a knife, means for moving the cheese toward the knife intermittently that includes a

rack bar extending to a right angle to the knife and having on it a cross bar, an adjustable stop for engaging said cross bar to limit the movements of the rack bar, a guide for said stop arranged obliquely to said rack bar, and a scale plate adjustable at a right angle to said rack bar with a slot that is parallel with the line of movement of said rack bar and into which said stop extends for loosely engaging said stop whereby said slotted portion of the scale bar and said oblique guide cooperate for adjusting the stop to enable the device to cut portions of the desired weight or value from cheeses of varying diameters.

10. In a device for cutting a tapering cheese and the like into portions, a frame, a knife operating transversely of the frame, means for supporting the cheese at a right angle to the knife and longitudinally of the frame, a rack bar extending at a right angle to the knife, a transverse bar on one end, means moved by said rack bar for moving the cheese toward the knife, a hand lever extending transversely of the frame for actuating said rack bar, a stationary stop for limiting the movement of said lever in one direction, an adjustable stop that engages the transverse bar on the rack bar for limiting the movement of the hand lever in the other direction, a guide for said adjustable stop that is oblique to said rack bar, and scale controlled means movable at a right angle to said rack bar for moving said stop along said guide.

11. In a device for cutting a tapering cheese and the like into portions, a frame, a knife, means for intermittently moving said cheese toward the knife, an adjustable stop for limiting the intermittent movement of said cheese actuating means, means actuated by the longitudinal surface of the cheese as it is moved toward the knife for adjusting said stop, and a scale controlled means for adjusting said stop. 30

12. In a device for cutting a tapering cheese and the like into portions, a frame, a knife, means for intermittently moving said cheese toward the knife, an adjustable stop for limiting the intermittent movement of said cheese actuating means, means actuated by the longitudinal surface of the cheese as it is moved toward the knife for adjusting said stop, a scale controlled means that cooperates with said cheese controlled means for adjusting said stop, and means for setting the scale controlled means in one position, while fixed portions of the weight or value are being cut. 40 45

In witness whereof, I have hereunto affixed my signature in the presence of the witnesses herein named.

WILLIAM L. BRIDGES.

Witnesses:

HELEN B. MCCORD,
NELLIE ALLEMONG.