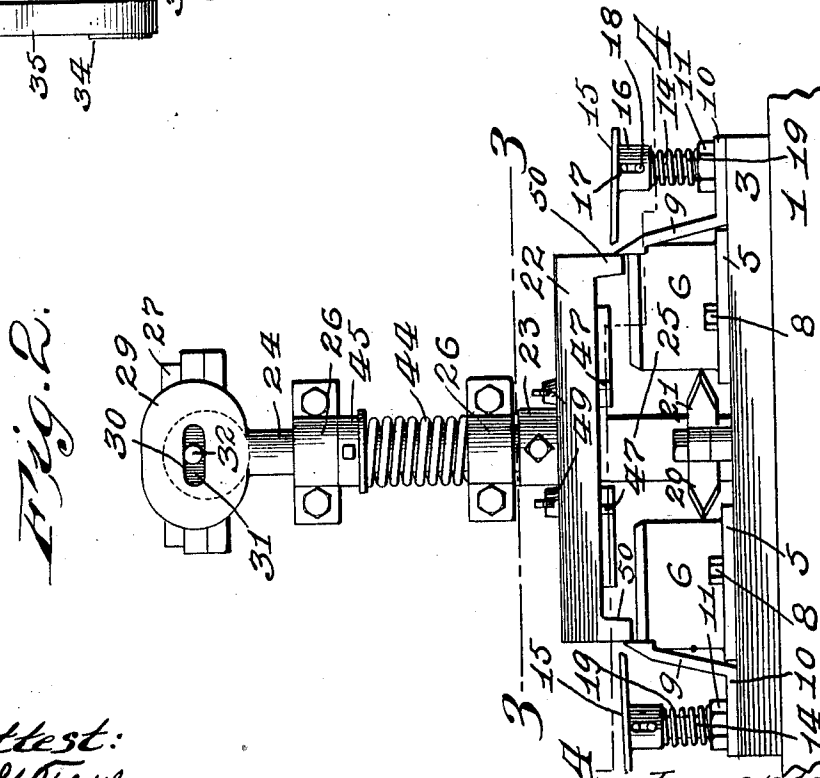
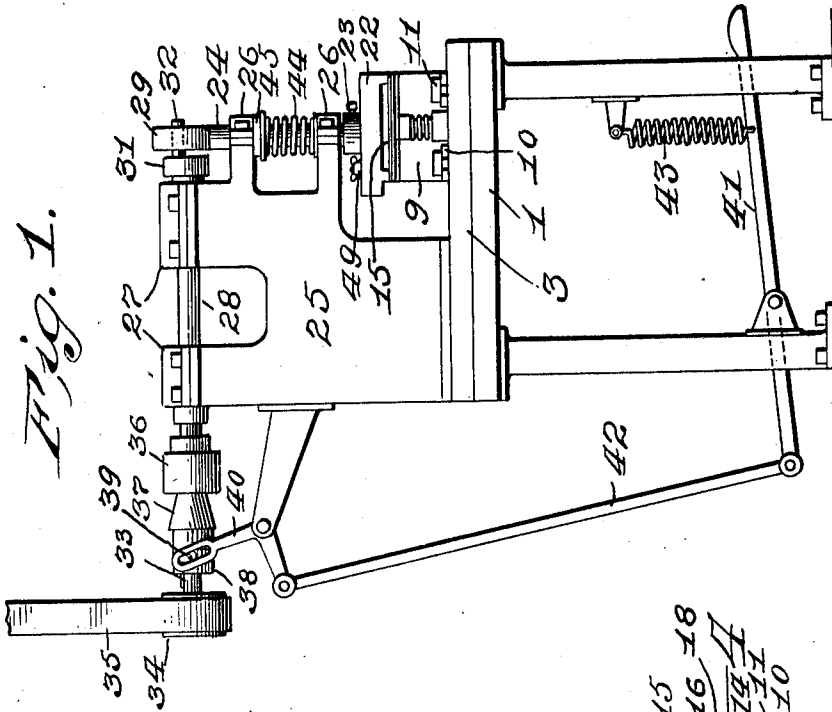


J. L. KENNEDY.
LIFT CUTTING MACHINE.
APPLICATION FILED OCT. 24, 1910.

1,003,965.

Patented Sept. 19, 1911.

2 SHEETS—SHEET 1.



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Fig. 3.

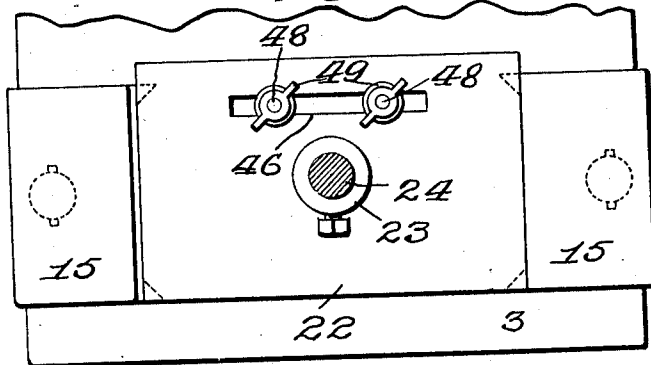


Fig. 4.

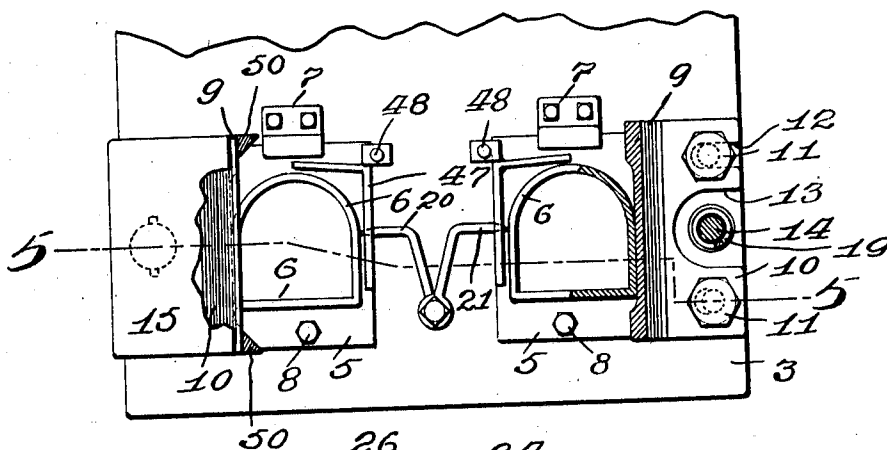
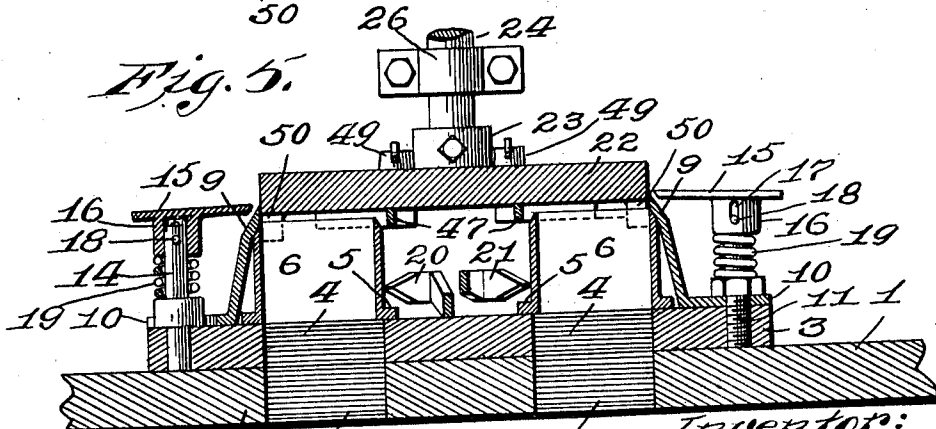


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN L. KENNEDY, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO BERNHARD G. BECKER, OF ST. LOUIS, MISSOURI.

LIFT-CUTTING MACHINE.

1,003,965.

Specification of Letters Patent. Patented Sept. 19, 1911.

Application filed October 24, 1910. Serial No. 588,872.

To all whom it may concern:

Be it known that I, JOHN L. KENNEDY, a citizen of the United States, and resident of St. Louis, Missouri, have invented certain new and useful Improvements in Lift-Cutting Machines, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in lift cutting machines, the object of my invention being to construct a machine employing stationary dies, with their cutting edges disposed upwardly, which cooperate with a mechanically moved pressure plate arranged to press the leather downwardly over the dies in such manner that the lifts will be formed in the dies and passed downwardly through the dies.

A further object of my invention is to provide stock cutting straight-edge knives adjacent to the lift cutting dies whereby a section of the stock approximating the side of lift desired is obtained, which stock cutting dies are vertically alined with a portion of the lift cutting die so that there is no waste of stock at this point of the section of stock. And a still further object of my invention is to provide, between the pair of lift cutting dies, knives arranged to separate the waste, that is the material of the section of stock surrounding the lift cutting dies.

With the above purposes in view my invention consists in certain novel features of construction and arrangement of parts as will be hereinafter more fully described, pointed out in the claims and illustrated by the accompanying drawings, in which—

Figure 1 is an end elevation of my complete machine; Fig. 2 is an enlarged, front elevation of the machine proper, a portion only of its support or bench being shown; Fig. 3 is a sectional plan taken on the line 3—3 of Fig. 2; Fig. 4 is a sectional plan taken approximately on the line 4—4 of Fig. 2; and Fig. 5 is a vertical, sectional elevation taken on the line 5—5 of Fig. 4.

Referring by numerals to the accompanying drawings: 1 designates the table upon which the machine is supported.

2—2 designate openings formed through the top of the table.

3 designates the base plate of the ma-

chine, having openings 4 therein coincident with the openings 2 in the table top. This base may be secured in any common manner (not shown) to the table top.

Arranged over the openings 4 are the die base plates 5 which, as shown, have openings therethrough surrounded by the upwardly projecting walls of the dies 6, the upper margins of which are beveled from their inner faces downwardly and outwardly.

The base plates 5 of the dies are secured in place by the stops 7, portions of which overhang the base plate and the margins of the plates opposite those margins engaged by the stops are secured by the lag screws 8 which are threaded in the base 3. By this means different base plates having thereon dies of different sizes may be applied to the machine as required to cut different sized lifts. It should be understood in this connection that the openings 2 and 4 are of a size sufficient to accommodate the largest size of lift to be cut by the machine.

As shown, the machine is adapted to be fed from two sides, there being two cutting dies operable in conjunction with a single pressure plate.

Secured to the right of the right hand die and to the left of the left hand die are the straight-edge knives 9, which extend transversely of the machine a sufficient length to cut the largest size of stock. Each of these knives 9 is provided with a base extension 10 which is secured to the base 3 by means of the threaded bolts 11, there being slots 12 formed in the base to permit lateral movements of the knives 9 as required to readily attach them to the base. The cutting edges of these knives 9 are disposed upwardly as are the cutting dies and are beveled from their extreme upper margins downwardly and outwardly. The points or cutting edges of these knives are positioned to vertically aline with the cutting edges of the portions of the cutting edges of the dies 6 alining with the straight-edge knives.

The base portions 10 of the knives 9 are each provided with cut away portions 13, and secured in the base 3 surrounded by said cut away portions are the uprights 14, arranged over which uprights are the stock lifting plates 15 which, as shown, have their inner margins somewhat higher than their outer margins. These plates are each provided with a downwardly projecting sleeve

16 arranged to embrace the uprights 14. Through the wall of each sleeve there are slots 17 through which project the pins 18, carried by the uprights. These lifting plates are each held to their upward limits of movement by extensile coil springs 19.

Positioned between the cutting dies 6 are the knives 20 and 21 which, as shown, have their cutting edges disposed lengthwise of the base 3. These knives are for the purpose of cutting the waste or that portion of the stock not utilized in forming the lifts, the waste being thus separated so that it may be drawn from the forward and rearward sides of the machine. As shown, these knives are provided with double cutting edges whereby they may be reversed.

The pressure plate designated by the numeral 22 is of a length sufficient to reach from the extreme cutting edges of the dies 6 and is provided with a centrally located sleeve 23 whereby it may be secured to the vertically reciprocating shaft 24.

25 designates a frame having bearings 26—26 in which the shaft 24 is mounted and bearings 27—27 in which the driven shaft 28 is mounted. On the upper end of the shaft 24 there is a head 29, having a horizontally disposed slot 30. Carried by the shaft 28 is a disk 31 on the outer face of which is the eccentrically arranged wrist pin 32 projecting through the slot 30 on the upright shaft 24.

33 designates a shaft upon which there is located a pulley 34 and embracing the pulley there is a belt 35 connecting with any suitable source of power.

Arranged upon the shaft 28 and fixed for rotation therewith is a clutch member 36 arranged to coact with a clutch member 37, carried by the shaft 33, the clutch member 37 arranged to slide lengthwise of the shaft 33.

Non-rotatably secured to the shaft 33 to the rear of the member 37, is a collar 38 having projecting laterally therefrom a pin 39 which is embraced by the slotted arm 40 of a bell crank lever, the opposite end of the lever being connected with the pedal 41 by means of the rod 42, the pedal being held to its elevated position by means of the spring 43, which also serves to hold the clutch member 37 normally out of frictional engagement with the clutch member 36.

For normally holding the pressure plate elevated, when the clutch members are disengaged, I have provided the spring 44 which impinges between the lowermost bearing 26 and a collar 45, carried by the upright shaft 24, this spring being of sufficient strength to raise the shaft 24 and slotted head 29 to rotate the disk 31 and the shaft carrying it, so that the wrist pin 32 will be at its uppermost limit of movement.

As shown in Fig. 3 of the drawings, the

pressure plate is provided with a slot 46 whereby stops, such as 47, may be carried on the underneath face of the pressure plate. As shown, the stops consist of two arms, one of which is arranged to limit the insertion of the stock to be cut and the other arm of which is inclined so as to form a guide for the stock. Each of the stops carries a threaded, vertical extension 48 which projects through the slot 46 and is embraced by a winged nut 49. By this means the stops may be adjusted lengthwise of the machine in order to accommodate them to different sized lifts to be cut.

Projecting downwardly from each corner of the pressure plate 22 is a triangular-shaped guide 50 arranged to engage with the inside face of the cutting knife 9 whereby the pressure plate is held to operate in a true position over the cutting dies.

In the practical operation of the machine, assuming the cutting members to be arranged in duplicate as shown, a piece of stock to be cut is placed over each of the lifting plates 15 and moved to a position engaging one of the stops 47. The operator then causes the pressure plate 22 to be moved downwardly, whereupon the pieces of stock will be first severed by the knives 9 into sections of sufficient sizes to form lifts. A continued movement of the pressure plates forces the severed sections downwardly over the cutting dies 6, the lifts cut being held in the dies and the waste, or that portion of the material of the sections on the outside of the die, will be cut so that it may be readily removed from the machine by the knives 20 and 21. After the lifts have thus been cut and the waste severed so that it may be removed the pressure plate is moved upwardly, the stock being elevated, by the spring pressure of the plates 15, to positions so that they may be readily moved over the knives 9 and dies 6 for a second operation. In this manner the operation may be continued.

I claim:

1. In a machine of the class described, a support having openings therethrough, a pair of dies, with their cutting edges upward, positioned over said openings, a mechanically operated pressure plate arranged over said dies, and stock cutting knives arranged in a plane over the cutting edges of the dies.

2. In a machine of the class described, a base, having openings therethrough, hollow dies positioned over said openings with their cutting edges upward, knives located transversely of the machine, the cutting edges of which vertically aline with a portion of the cutting edge of the dies, and a mechanically operated pressure plate arranged over said dies.

3. In a machine of the class described, the

combination with the base having an opening therethrough, a hollow die, having its cutting edge upward, secured over said opening, a stock cutting knife vertically
5 alining with one of the edges of the cutting die, a mechanically operated pressure plate, and an adjustable stop carried by the pressure plate.

4. In a machine of the class described, a
10 knife arranged transversely of the machine for cutting the stock supplied to the machine in sections, a hollow die, having its cutting edge upward, arranged in such position relative the knife that a portion of its
15 cutting edge vertically alines with the cutting edge of the knife, a pressure plate arranged over the die, and a knife arranged for the separation of the material of the section surrounding the die.

5. In a machine of the class described, a 20 base, having openings therethrough, hollow dies secured to the base over said openings, having their cutting edges upward, fixed knives extending transversely of the machine for severing stock supplied to the 25 machine in sections, knives arranged between the dies for severing the waste from the stock, a mechanically operated pressure plate, and yielding plates for lifting the stock so that it may ride over said fixed 30 knives for severing the stock in sections.

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

JOHN L. KENNEDY.

Witnesses:

E. L. WALLACE,
N. G. BUTLER.

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