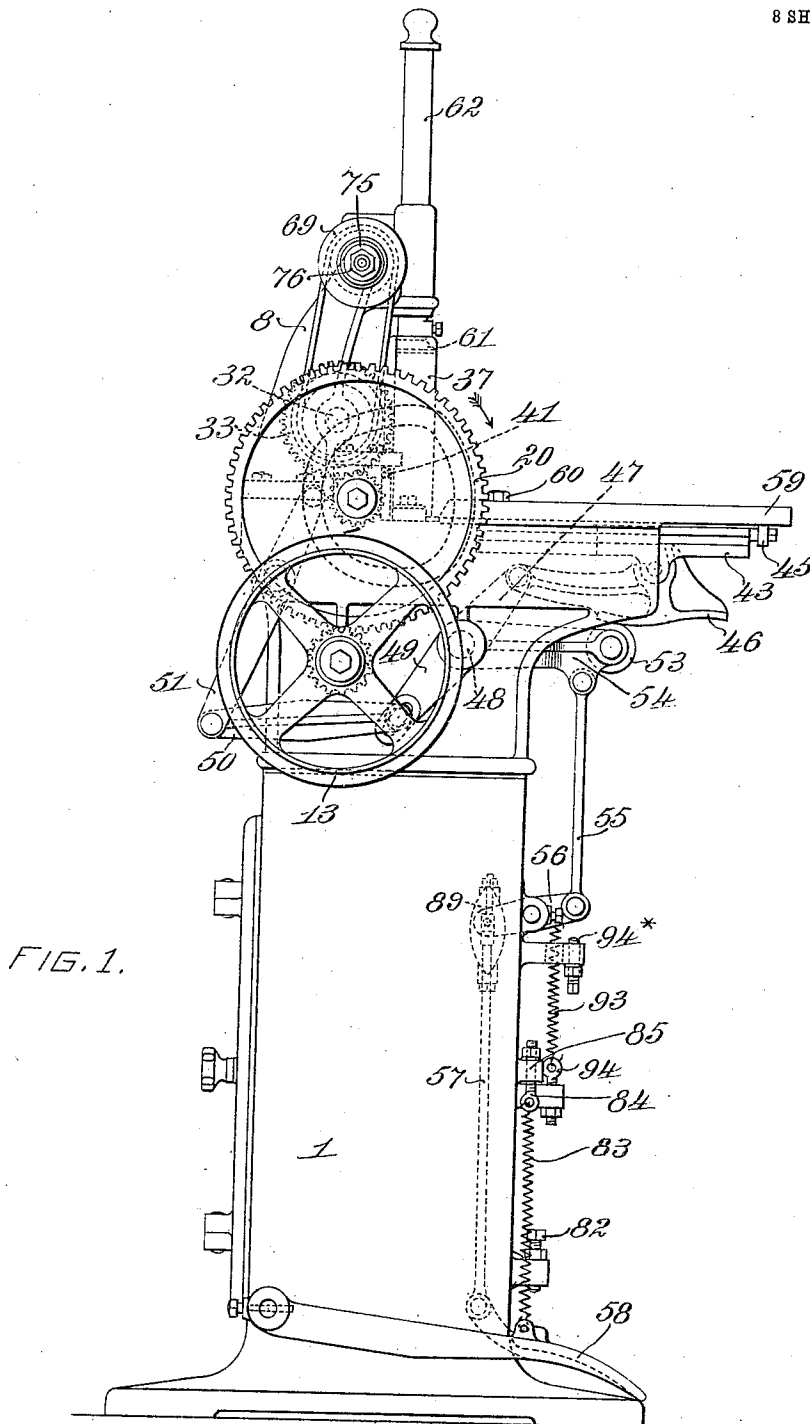


J. R. SCOTT.
LEATHER SKIVING MACHINE.
APPLICATION FILED OCT. 5, 1901.

961,736.

Patented June 14, 1910.

8 SHEETS—SHEET 1.



WITNESSES

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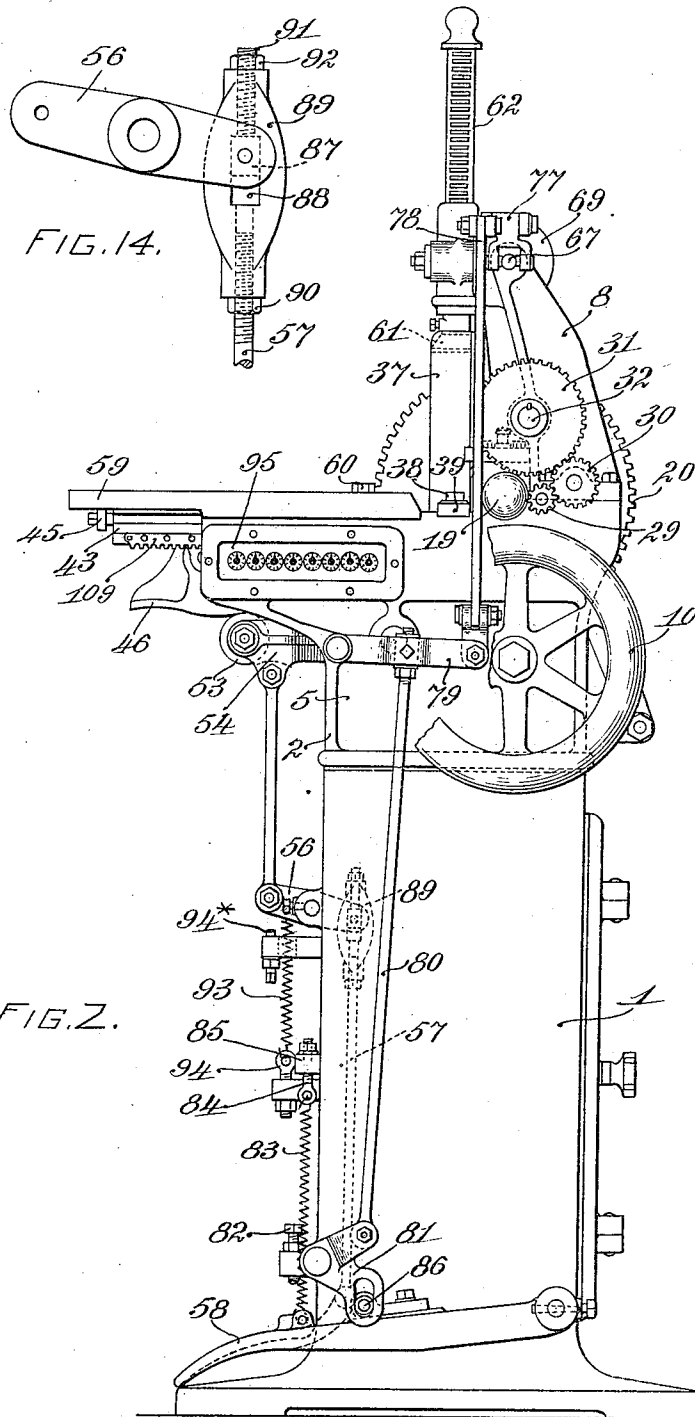
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8 SHEETS—SHEET 2.



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8 SHEETS—SHEET 3.

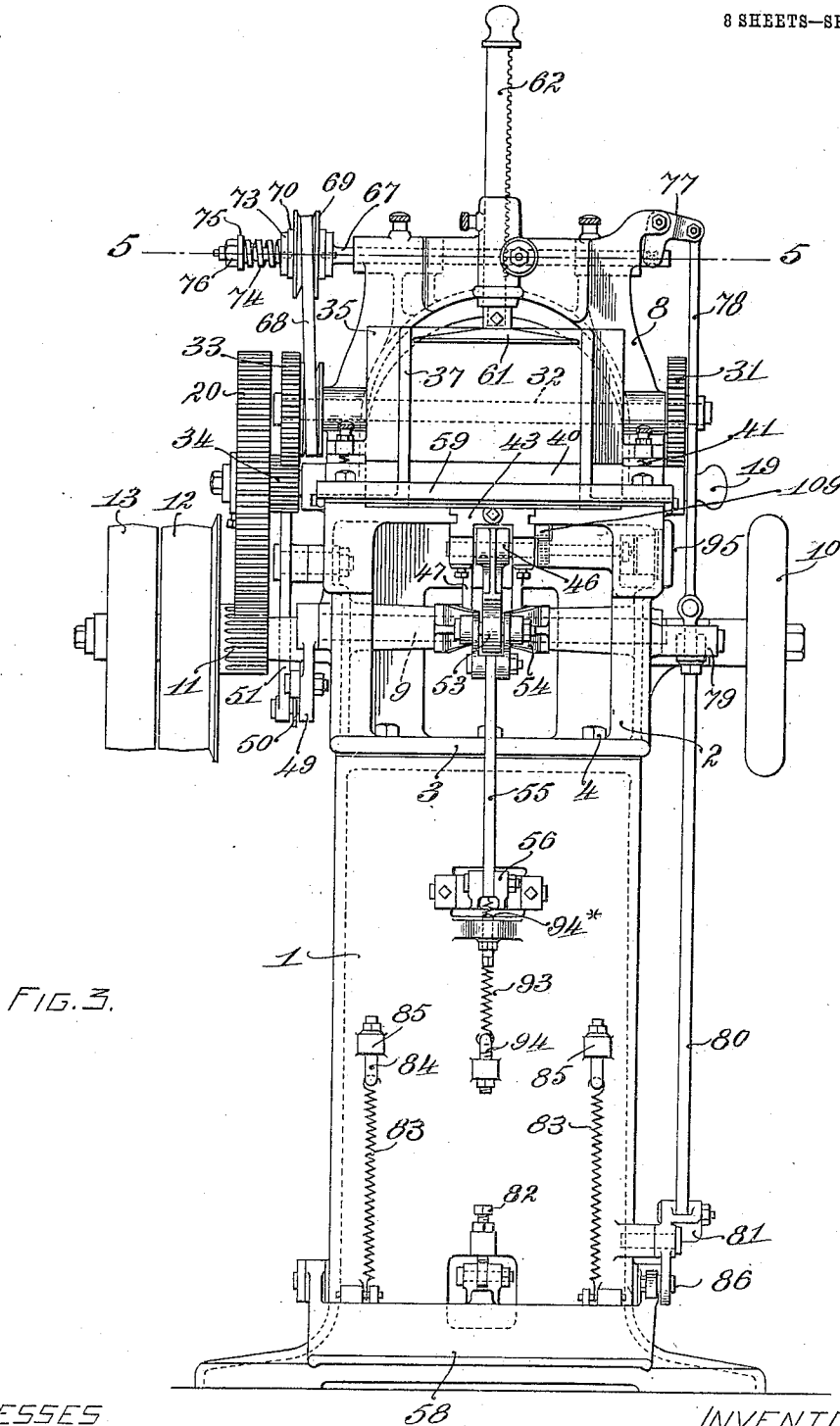


FIG. 3.

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8 SHEETS—SHEET 4.

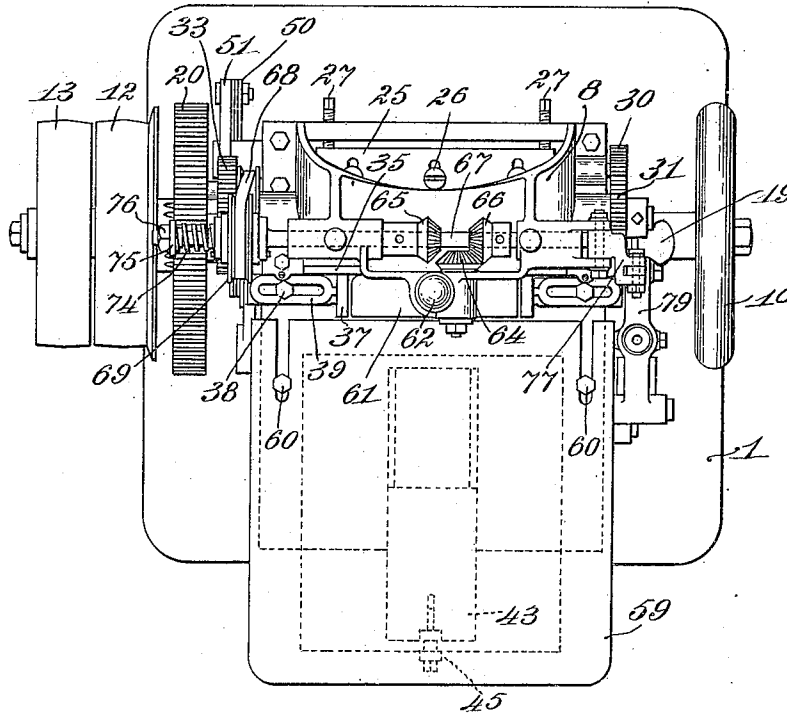


FIG. 4.

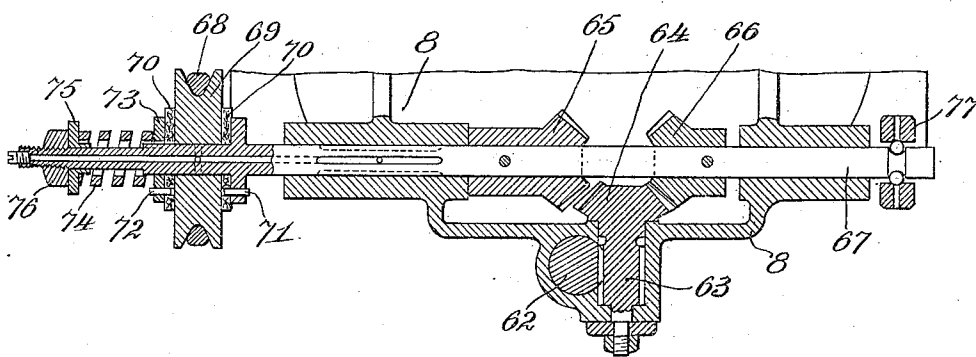


FIG. 5.

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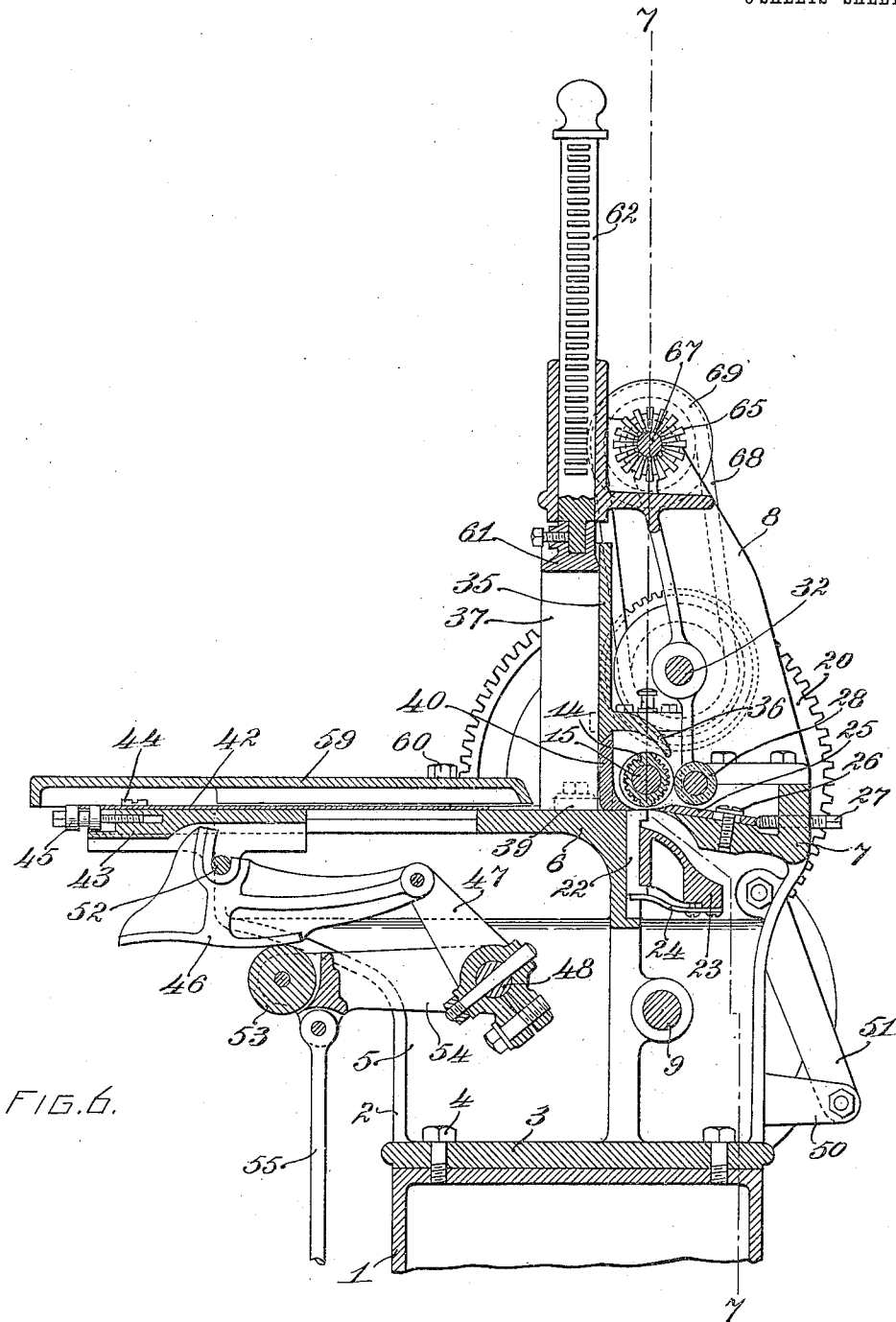
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8 SHEETS—SHEET 6.



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8 SHEETS—SHEET 6.

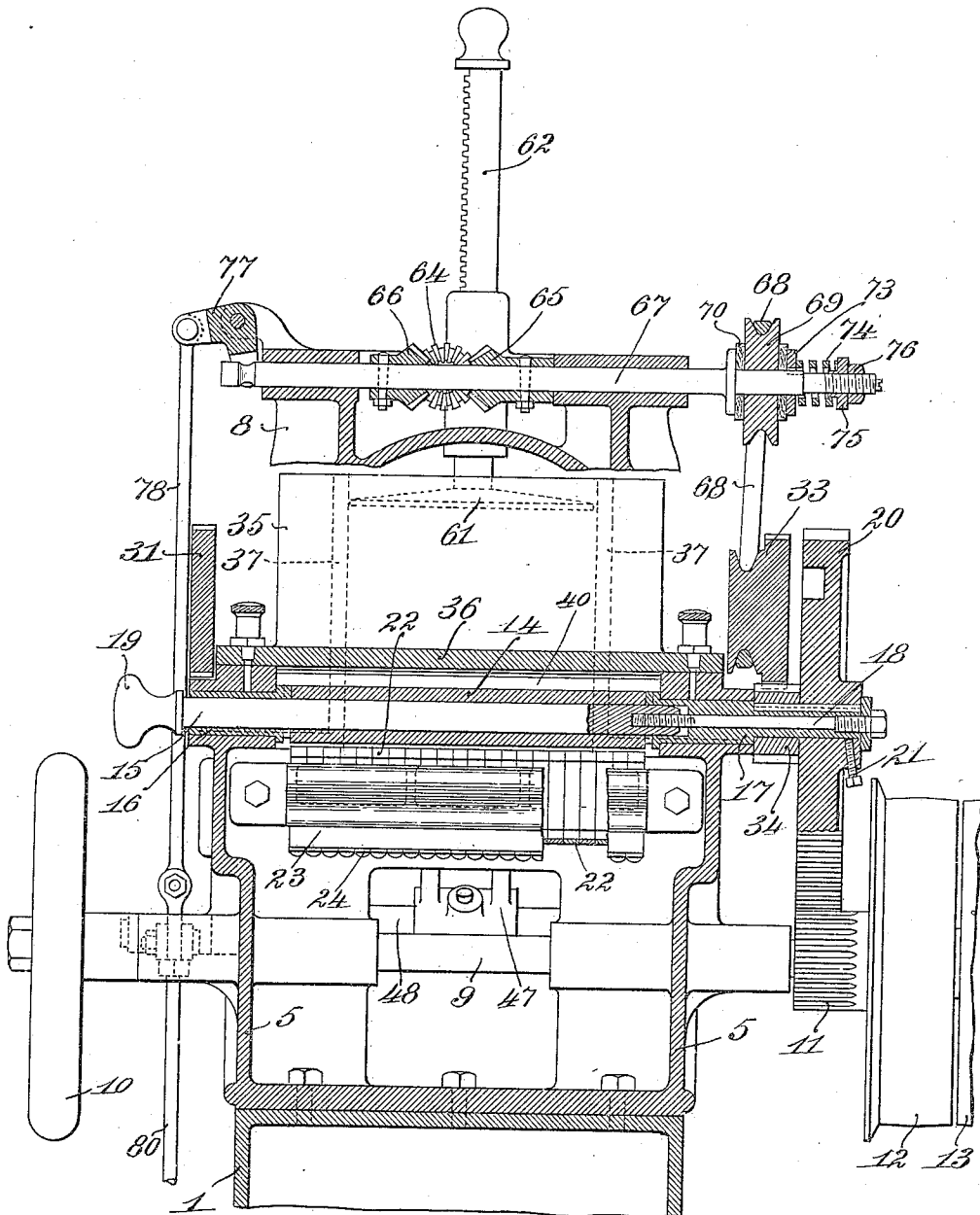


FIG. 7.

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8 SHEETS—SHEET 7.

FIG. 8.

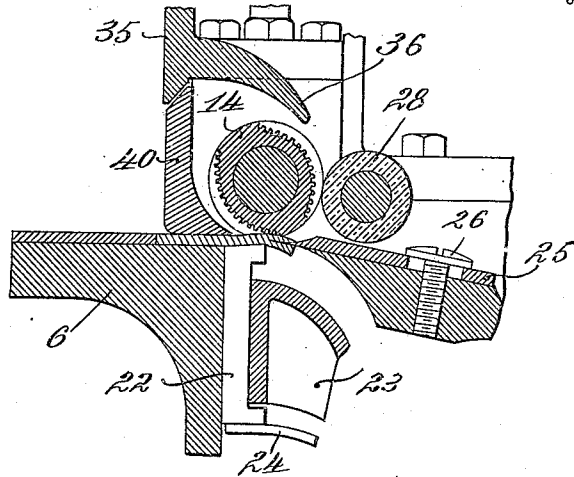


FIG. 9.

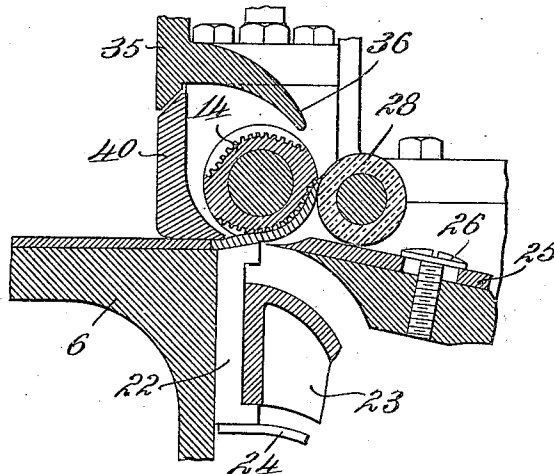
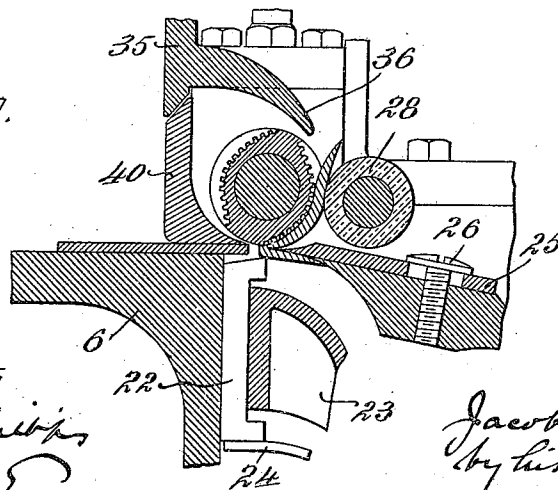


FIG. 10.



WITNESSES

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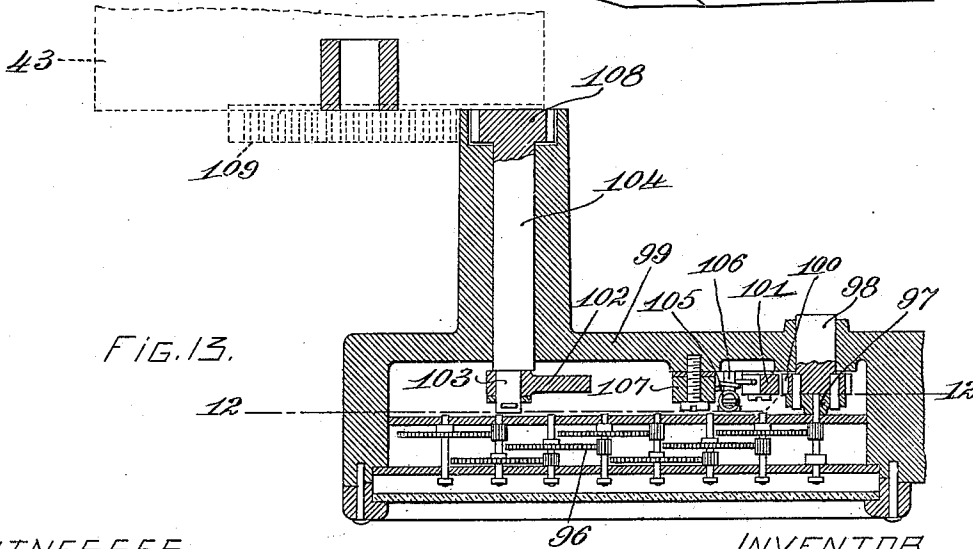
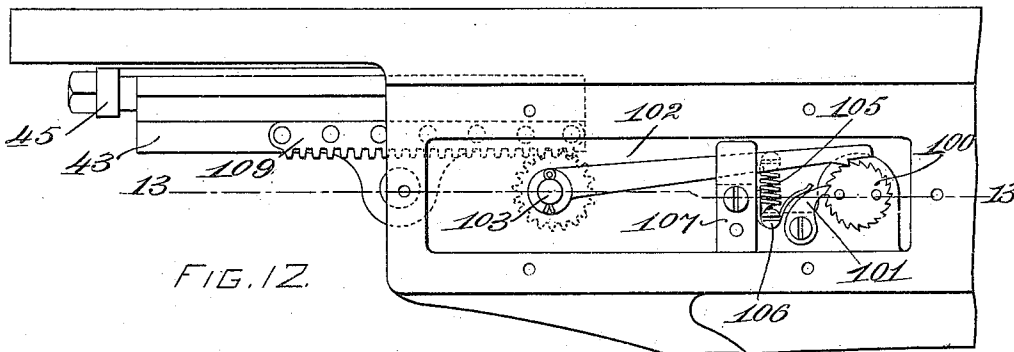
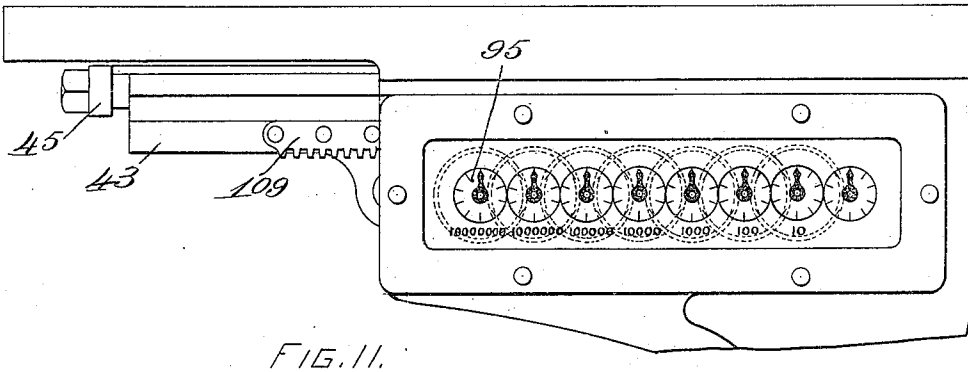
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961,736.

Patented June 14, 1910.

8 SHEETS—SHEET 8.



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UNITED STATES PATENT OFFICE.

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LEATHER-SKIVING MACHINE.

961,736.

Specification of Letters Patent. Patented June 14, 1910.

Application filed October 5, 1901. Serial No. 77,730.

To all whom it may concern:

Be it known that I, JACOB R. SCOTT, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Leather-Skiving 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 leather skiving machines for skiving articles of leather such as boot or shoe counters, box toe pieces, and the like.

The object of the invention is generally to improve the construction and mode of operation of leather skiving machines and more particularly to render such machines more efficient as to the quality and quantity of the work produced, more durable, and more completely automatic in their operation.

The invention is intended primarily as an improvement on certain leather skiving machines heretofore devised by me and forming the subject-matter of prior applications for Letters Patent, the particular machine to which the illustrated embodiment of the present invention has been applied being disclosed in Patent No. 760,025, dated May 17, 1904. It is to be understood, however, that my invention is not limited to the machine shown nor to any particular type of machine nor, except as specifically defined in the claims, is it limited to any particular construction or arrangement of parts.

The machine disclosed in the application above referred to is provided with a die roller and with a pressure device for holding a blank in the die cavity during the skiving operation, said pressure device consisting of a roller provided with a yielding surface. While this pressure roller acts satisfactorily to perform its intended function, the material of which the yielding surface is composed soon disintegrates under the strain to which it is subjected and becomes cut and torn so as to be unfit for use. The surface of the roller is also often cut and injured by contact with the skiving knife in case the knife is improperly or carelessly adjusted. Frequent replacement of the pressure roller or renewal of its yielding surface is therefore required.

A feature of my invention consists in pro-

viding a leather skiving machine provided with a die roller, with an improved pressure device which will perform the function of holding the blank in the die cavity during the skiving operation with even greater certainty than the pressure roller of the machine disclosed in my prior application and the life of which will be practically co-extensive with that of the machine. This improved pressure device consists of a plurality of independently yielding members arranged side by side longitudinally of the roller. Preferably these members are arranged in contact with each other so that the surface which contacts with the blank is practically continuous and every portion of the blank is acted upon as the blank passes between the die roller and pressure device.

I am aware that it has been proposed to provide a leather skiving machine comprising a die roller with a plurality of independently movable spring-pressed levers or fingers for holding the blank in the die cavity. These levers were not, however, arranged side by side but were separated from each other by interposed toothed feeding disks of metal. The levers were therefore necessarily thin and rapidly wore away as did also the metal feeding disks. This necessitated the frequent adjustment of the springs which acted on the levers and the frequent replacement of the levers and the feeding disks. Moreover, in this construction difficulty was experienced in causing the blank to be held firmly against the bottom of the die. In a construction embodying my invention the members of the pressure device are not separated by intervening parts but are arranged side by side and can be made of sufficient width to prevent wear. Also a sufficient extent of the blank can be acted upon to insure its being held against the bottom of the die during the skiving operation. My improved pressure device in addition to being indestructible may be arranged to allow the knife to be set nearer the line of contact of the die roller and pressure device with the blank than is the case when a pressure roller is employed.

In all leather skiving machines provided with a die roller and a pressure device that portion of the blank which passes between the skiving knife and the die roller tends to force the edge of the knife away from

the periphery of the roller and it often happens that by the time the rear edge of the blank has reached the knife the edge of the knife has been appreciably displaced.

5 In all such machines with which I am familiar the die roller alone is depended upon to deliver the blank from the bite of the die roller and skiving knife and as a result the rear end of the blank usually becomes
10 wedged between the die roller and skiving knife and the blank is delivered by the succeeding blank as it is fed to the skiving knife. The knife edge which has been forced away from the periphery of the die roller thus has no opportunity to return to proper position and the leading edge of the succeeding blank is skived to too great a thickness. To obviate this defect of prior skiving machines, a feature of my invention consists in providing a leather skiving
20 machine with means for delivering a skived blank from the bite of the die roller and skiving knife. While any means for accomplishing this result is within the purview of my invention broadly considered, as
25 tending to simplicity of construction and efficiency of operation I prefer to employ means acting on the blank in the rear of the line of contact of the die roller and
30 pressure device, the best form of said means at present known to me being a roller arranged to cooperate with the die roller.

It is desirable in a machine for skiving blanks of leather that means be provided
35 for indicating the number of blanks which pass through the machine as thereby the number of articles produced by the machine can be readily ascertained at any time and the rate at which the machine is working accurately determined. Also the number of articles produced can be used as a basis in determining the selling price or rental of the machine. I have accordingly provided the machine illustrated in the
45 drawings accompanying this application with a register which is so constructed and so arranged with relation to the other parts of the machine as to be actuated with certainty at such time and at such time only
50 as a blank is passed through the machine. This register when combined and arranged with other parts of a leather skiving machine, as hereinafter described and claimed, constitutes a feature of my invention.

55 Other features of my invention consist in certain devices and combinations of devices hereinafter described and claimed, the advantages of which will be obvious to those skilled in the art.

60 In addition to the features above referred to, the machine illustrated in the drawings and hereinafter specifically described is provided with a follower arranged to act upon a pile of blanks in a blank-receiving hopper, and with mechanism for actuating the

follower which possesses certain novel features of invention which form the subject-matter of the claims of Patent No. 777,550, dated December 13, 1904.

The preferred form of my invention is 70 illustrated in the accompanying drawings in which—

Figure 1 is a view in side elevation of a counter skiving machine embodying the same; Fig. 2 is a view in side elevation of the machine shown in Fig. 1 looking in the opposite direction; Fig. 3 is a view in end elevation looking from the right of Fig. 1; Fig. 4 is a plan view; Fig. 5 is a detail sectional view taken on the line 5—5 of Fig. 3 illustrating the mechanism for actuating the follower; Fig. 6 is a longitudinal sectional view of the upper portion of the machine; Fig. 7 is a sectional view taken on the line 7—7 of Fig. 6; Figs. 8, 9 and 10
85 are detail sectional views illustrating the operation of the machine in skiving a blank; Fig. 11 is a view in side elevation of the register and its actuating mechanism; Fig. 12 is a view similar to Fig. 11, the portions of the register below the dotted line 12—12 of Fig. 13 being removed; Fig. 13 is a sectional plan view on the line 13—13 of Fig. 12 and Fig. 14 is a detail view of the connection between a lever and rod which form
95 a portion of the means for throwing the feeding mechanism out of operation.

Referring to the drawings, 1 indicates a suitable hollow standard or base which supports the frame 2 of any suitable construction
100 for supporting the operating parts. The frame 2 as shown consists of a base plate 3 through which the bolts 4 pass which secure the frame to the standard 1, side plates 5, cross-webs 6 and 7 connecting the
105 side plates 5 and a yoke 8 bolted to the side plates at the delivery end of the machine and extending upward and inward over the center of the machine. A driving shaft 9 is journaled in the lower portion of the
110 frame 2 and has secured thereto at one end a hand wheel 10 and at the other end a pinion 11 and a driving pulley 12. A pulley 13 is mounted on the shaft 9 beside the driving pulley 12 and rotates freely thereon.
115

14 designates the die roll which, as shown, is of the same construction as the die roll shown in my prior application above referred to and is removably mounted in the same manner. As in the machine disclosed
120 in said application this die roll is provided with two die cavities whose greatest length extends longitudinally of the roller and the construction by which the roller is mounted is such that the roller can be placed in the
125 machine in a position to bring either die cavity into cooperative relation with the feeding mechanism. The die cavities are of different depths so that by adjusting the position of the roller the machine can be
130

used to satisfactorily skive blanks of different thicknesses without substituting a new roller. The die roller is supported by a shaft 15 between a sleeve 16 journaled in a bearing block in the upper portion of one of the side plates 5 of the frame and a short shaft 17 journaled in a bearing block in the upper portion of the other side plate 5, the end of the shaft 17 next to the die roller being bored axially to form a sleeve similar to the sleeve 16. The shaft 15 extends axially through the sleeve 16, the roller 14 and into the sleeve formed by the shaft 17 and is held in position by means of a screw-threaded rod 18, which passes through the shaft 17 longitudinally and has a screw-threaded engagement with the end of shaft 15. By this construction the shaft 15 can be rotated by means of the hand knob 19 at the outer end of the shaft to disengage the shaft from the screw-threaded rod 18 and then withdrawn to allow the removal of the die roll 14 from the machine. In order to cause the die roll to revolve with the shaft 17, and the sleeve 16 to revolve with the die roll, and also to enable the die roller to be placed in the machine so as to bring either of the die cavities in proper relation to the feeding mechanism, the ends of the die roll are slotted to receive projections from flanges on the adjacent ends of the sleeve 16 and shaft 17. The shaft 17 is driven from the pinion 11 on the driving shaft through a gear 20 secured to the reduced outer end of the shaft by means of screw 21 which meshes with the pinion 11.

The improved pressure device which I have provided for holding the blank in the die cavity during the skiving operation is shown as consisting of a series of vertically movable slides 22 mounted side by side in a recess in the vertical face of the cross-web 6 of the machine frame and held in such recess by a block 23 bolted to the cross-web. The slides 22 are off-set at their upper and lower ends so that the movement of the slides is limited in both directions by the contact of the off-sets with the block 23. Each slide rests upon a separate leaf spring 24 which forces the slide toward the die roller with sufficient force to hold the blank firmly in contact with the bottom of the die cavity and permits each slide to yield independently. The upper ends of the slides are in contact with each other so that the pressing surface formed by the upper ends of the slides is practically continuous.

The skiving knife is indicated at 25 and is secured to the upper surface of the cross-web 7 by means of screws 26 passing through slots in the knife. Screws 27, passing through the vertical portion of the web 7 and bearing against the rear edge of the knife serve as a means for adjusting the position of the knife or as stops for insuring

the correct position of the knife when it is replaced after removal. It will be noted that no portion of the pressure device extends to the rear of the cutting edge of the skiving knife and that consequently the knife can be adjusted to bring its cutting edge in close proximity to and substantially in line with the line of contact of the die roller and pressure device with the blank. The blank is thus acted upon by the knife at the point where it is firmly held in the die cavity by the pressure device and has no tendency to rise from the die as is the case when the edge of the knife is situated at some distance from such line of contact.

The means for delivering the blank from the bite of the die roller and skiving knife which I have illustrated in the drawings consists of a roller 28 preferably provided with a yielding surface, such as rubber, which is arranged at the rear of the line of contact of the die roller and pressure device with the blank and coöperates with the die roller in delivering the blank from the bite of the die roller and skiving knife and discharges the blank from the machine. The roller 28 rotates with a peripheral speed greater than the peripheral speed of the die roller, and in the machine shown in the drawings I have provided means for imparting a positive rotation thereto. This means consists of a pinion 29 mounted on the end of the roller shaft (see Fig. 2) which meshes with a pinion 30 which in turn meshes with a gear 31 secured to one end of a shaft 32 journaled in the yoke 8 of the frame. To the other end of the shaft 32 is secured a gear 33 which meshes with a pinion 34 secured to the shaft 17 (see Figs. 3 and 7).

The horizontal portion of the cross-web 6 of the machine frame forms a feed table over which the blanks are fed to the die roller and pressure device. Located above the feed table is a hopper for holding a pile of blanks, said hopper as shown comprising a front wall 35 from which a flange projects by means of which the front wall is supported on the top of the bearing blocks for the sleeve 16 and shaft 17. Between these bearing blocks the flange is bent downwardly over the die roller to form a guard 36 to prevent the blank from passing backward over the top of the die roller. Said hopper also comprises side walls 37 which are adjustably secured to the feed table by means of bolts 38 passing through slots in the lateral extensions 39 of the side walls. Located below the front wall 35 and forming a continuation thereof is a vertically movable plate 40 beneath which the blanks are fed to the die roller and pressure device and which acts as a presser for holding the blank against the feed table and also as a guard for preventing more than one blank being fed forward at a time. This plate is

held in position between the bearing blocks for the sleeve 16 and shaft 17 and the side walls 37 and is yieldingly pressed toward the feed table by coiled springs 41 as is clearly shown in Figs. 1 and 3. The upward movement of the plate 40 is limited by adjustable stop screws 41*, whereby the plate is positively prevented from rising high enough to permit the passage of more than one blank thereunder.

The feeding mechanism which I have illustrated for feeding the blanks from the hopper is somewhat similar to that disclosed in my prior application above referred to and comprises a feed slide 42 arranged to reciprocate over the feed table 6. This feed slide is secured to a block 43 by screws 44 passing through slots (not shown) in the feed slide and can be adjusted thereon by means of a screw 45 having a screw-threaded engagement with the block and being provided with a flange which passes through an opening in the feed slide. The block is mounted in suitable guideways and is reciprocated by means of a link 46 which is pivotally connected to a yoke 47 secured to a rock shaft 48 journaled in the side plates 5 of the frame. The rock shaft 48 has secured thereto an arm 49 (see Fig. 1) which is connected by means of a link 50 to the lower end of a lever 51, the upper end of which is provided with a roll which engages a cam groove in the face of gear 20. As in the machine disclosed in my prior application the connection between the feed slide and its actuating mechanism is such that the feeding mechanism can be thrown out of operation to stop the feeding of blanks without stopping the machine, some of the advantages of this arrangement being that thereby the jar and strain of the parts incident to starting and stopping the machine is avoided and the operation of the machine can be readily and quickly controlled by the operator. The construction for accomplishing this result is as follows:—The link 46 is provided with an open-ended slot, which receives a pin 52 extending between lugs projecting downwardly from the block 43. The link 46 rests upon a roll 53 which is journaled between the arms of a yoke 54 loosely pivoted upon the rock shaft 48. The yoke 54 is connected by means of a rod 55 to one end of lever 56 pivoted to the base 1, the other end of the lever 56 being connected as will be hereinafter described to a rod 57, the lower end of which is pivotally connected to a treadle 58. The above-described construction is such that when the treadle 58 is depressed the roll 53 is raised into a position to cause the pin 52 to remain in the slot in the link 46 during the reciprocation of the link and when the treadle is raised the roll 53 is lowered sufficiently to allow the pin 52 to be disengaged from the slot in the

link 46. One wall of the slot in the link 46 extends into a position to contact with the pin 52 both when the link is raised by the roll 53 and also when it is allowed to drop while the other wall of the slot extends into a position to engage the pin 52 only when the link is in its raised position. By this construction the feed slide 42 always stops in its forward position when the roll 53 is lowered to disengage the link from the block 43.

In order to prevent the blanks in the hopper being displaced during the backward movement of the feed slide a guard plate 59 is secured to the frame of the machine and extends over the feed slide in close proximity thereto. This guard plate also serves as a table to support the blanks preparatory to their being placed in the hopper. The means for securing the guard plate to the frame of the machine consists of bolts 60 (see Fig. 4) which pass through slots in the guard plate, whereby the guard plate can be adjusted to allow blanks of different widths to be placed in the hopper.

61 indicates a follower for maintaining the pile of blanks in position to allow the blanks to be fed successively from the hopper, which is actuated by mechanism which may be described as follows:—The follower is secured by means of a set screw to the lower end of a rod 62 mounted to slide in a guideway formed in the upper portion of the yoke 8 of the frame. This rod is provided with a series of rack teeth which mesh with the teeth of a pinion 63 journaled in the yoke 8 of the frame as is clearly shown in Fig. 5. Formed integral with the pinion 63 is a beveled gear 64 with which either of two oppositely disposed beveled gears 65 and 66 secured to a shaft 67 are arranged to engage. The shaft 67 is mounted to rotate and slide in bearings in the yoke 8 of the frame and is rotated from the shaft 32 by means of a belt 68 passing over a pulley formed integral with the gear 33 and over a pulley 69 frictionally mounted upon a shaft 67. The pulley 69 is mounted upon the shaft 67 between two friction disks 70, one of which is held from rotation independently of the shaft by means of a pin 71 connecting it with a flange on the shaft, and the other of which is connected by a pin 72 to a washer 73 surrounding the shaft. A coiled spring 74 surrounding the shaft and interposed between the washer 73 and a washer 75 presses the washer 73 and friction disk connected therewith against the pulley 69 and the pulley 69 against the other friction disk. A nut 76 screwed on the end of shaft 67 and bearing against the washer 75 serves as a means for adjusting the friction. As a means for lubricating the bearings of the shaft adjacent the pulley 69, the shaft is provided with a series of shallow

rectangular grooves at this point for retaining the lubricating oil, and as a means for lubricating the pulley 69 on the shaft 67, the end of the shaft is bored axially to form an oil receptacle which communicates by suitable openings with one or more of the shallow grooves above referred to and with the bearing surface of the pulley.

The above-described construction is such that when the beveled gear 66 is in engagement with beveled gear 64 as shown in the drawings the follower is actuated to press the pile of blanks toward the feed table and maintain the blanks in proper position to be acted upon by the feeding mechanism, and when the beveled gear 65 is in engagement with the beveled gear 64 the follower is actuated in a direction to allow a new supply of blanks to be placed in the hopper. The frictional connection in the mechanism for actuating the follower formed by frictionally mounting the pulley 69 on the shaft 67 causes the follower to be pressed against the pile of blanks with a constant pressure depending upon the adjustment of the friction device and keeps the follower in contact with the pile of blanks at all times. The frictional connection also enables the follower to be rapidly raised from the pile of blanks when the action of the actuating mechanism is reversed by moving the shaft 67 in a direction to disengage the beveled gear 66 from the beveled gear 64 and bring the beveled gear 65 in engagement therewith, the pulley 69 rotating without driving the shaft 67 when the follower has reached the limit of its upward movement. The frictional connection also allows the follower to be raised and lowered by hand if desired.

For moving the shaft 67 longitudinally to bring the beveled gears 65 and 66 into engagement with the beveled gear 64 a bell crank lever 77 pivoted to yoke 8 of the machine frame is provided, one arm of the bell crank being forked to receive the end of shaft 67 and being connected thereto so as to move the shaft longitudinally while permitting it to rotate by balls seated at the inner ends of holes bored through the sides of the yoke and engaging a groove in the end of the shaft; the other arm of the bell crank 77 is connected by a rod 78 to an arm 79 pivoted to one of the side plates 5 of the frame which is connected by means of a rod 80 and bell crank lever 81 to the treadle 58.

The treadle is normally held in raised position against a stop 82 by coiled springs 83 secured to the treadle and to bolts 84 adjustably secured in lugs 85 projecting from the base 1 of the machine, and when the treadle is in this position the shaft 67 is held in its position to the left, as viewed in Fig. 7, with bevel gear 65 in mesh with bevel gear 64. Also the roll 53 is in its lowest position and the feed slide 42 is disconnected from its ac-

tuating mechanism. When the treadle 58 is depressed the shaft 67 is moved to bring the bevel gear 66 in mesh with bevel gear 64 and the roll 53 is raised to connect the feed slide to its actuating mechanism. In order to insure that the bottom blank of the pile in the hopper shall be in position to be fed forward at the first actuation of the feed slide, the shaft 67 is moved to bring the bevel gear 66 in mesh with bevel gear 64 before the roll 53 is raised, whereby the follower is caused to contact with the pile of blanks before the feeding mechanism is thrown into operation. Also when the treadle is raised the roll 53 is lowered to throw the feeding mechanism out of operation before the shaft 67 is moved to disconnect the bevel gear 66 from the bevel gear 64 in order to insure that a blank shall be fed from the pile at the last actuation of the feed slide. These results are attained by means of the connections between the bell crank 81 and the treadle 58 and between the rod 57 and the lever 56. The connection between the bell crank 81 and the treadle 58 consists of a pin 86 which projects from the treadle 58 through a slot in the bell crank 86. The shape of this slot is such that during the first portion of the downward movement of the treadle the bell crank is swung on its pivot by the contact of the pin 86 with the side of the slot, and during the last portion of the downward movement of the treadle the pin travels in the slot without actuating the bell crank. The connection (see Fig. 14) between the rod 57 and the lever 56 consists of a rectangular block 87 to which the end of the lever 56 is pivotally connected and which is mounted in a slot 88 in a block 89 at the upper end of the rod 57. The upper end of the rod has a screw-threaded connection with the block 89 and the block is locked in position by means of a locking nut 90. The slot 88 allows a sufficient amount of lost motion between the rod 57 and the lever 56 to enable the rod 57 to move during that portion of the movement of the treadle 58 during which the bell crank 81 is actuated without turning the lever 56. As a means for limiting the amount of lost motion between the rod 57 and the lever 56 a screw-threaded rod 91 is provided in the upper end of the block 89 which projects into the slot 88 and is locked in adjusted position by means of a locking nut 92. The lever 56 is actuated by the treadle 58 through the rod 57 during the downward movement of the treadle only, a coiled spring 93 being provided for actuating the lever 56 to lower the roll 53 during the upward movement of the treadle, said spring being connected to the lever and to a bolt 94 adjustably secured in a projection on the base 1 of the machine frame. An adjustable stop 94* limits the movement of lever 56.

In the construction above described, it will be seen that so long as the treadle 58 is in its raised position the feeding slide is disconnected from its actuating mechanism, and that when the treadle 58 is depressed the feed slide is not connected to its actuating mechanism until the bottom blank of the pile in the hopper is in a position to be fed forward when the feed slide is actuated. The bottom blank of the pile is also held in position to be fed forward by the feed slide until the feed slide is disconnected from its actuating mechanism. Each time the feed slide is actuated, therefore, a blank is fed through the machine and the number of reciprocations imparted to the feed slide determines accurately the number of blanks passed through the machine and the number of articles produced. In order to indicate the number of articles produced by the machine, I have accordingly provided a register arranged to be actuated by the feed slide. The indicating dials of this register are shown at 95 in Fig. 2 and the construction of the register and the connections through which the hands are actuated from the feed slide are illustrated in detail in Figs. 11, 12 and 13. The hands are mounted on suitable shafts which are connected by a train of gearing indicated at 96 in Fig. 13. The shaft upon which the unit hand is mounted is provided with a flanged collar 97, which is secured by pins to a short shaft 98 journaled in a casing 99 secured to or forming a portion of the machine frame. A ratchet wheel 100 is secured to or formed integral with the shaft 98 and is engaged by a spring-pressed dog 101 which holds the ratchet wheel in position. The ratchet wheel 100 is actuated by means of a pawl 102 which is mounted upon a crank pin 103 at the end of a short shaft 104 and is held in contact with the teeth of the ratchet wheel 100 by means of a coiled spring 105 which is secured to the pawl and to a pin or screw 106, projecting from the casing 99. The lateral movement of the pawl is prevented by means of a guideway formed in a block 107 secured to the casing 99. A pinion 108 is secured to or formed integral with the inner end of the shaft 104 and a rack 109 is secured to the sliding block 43, which carries the feed slide, and meshes with the pinion 108. By this construction the shaft of the unit hand of the register is positively advanced a step at each complete feeding movement of the feed slide.

The operation of the machine above described briefly stated is as follows:—So long as the driving belt remains on the pulley 12 the die roller, delivery roller, and the shaft 32 are rotated continuously. While the treadle 58 is held in its raised position against stop 82 by means of the springs 83

the lever 56 is held against its stop 94* by the spring 93, the roll 53 is in its lowest position and the feed slide is disconnected from its actuating mechanism. Also the shaft 67 is held in its position to the left as viewed in Fig. 7, the beveled gear 65 is in mesh with beveled gear 64 and the follower 61 is in its raised position, the pulley 69 rotating on the shaft 67. When the treadle 58 is depressed the bell crank 81 is swung on its pivot and through the rod 80 lever 79, rod 78, and bell crank 77 moves the shaft 67 to the right as viewed in Fig. 7, thereby moving beveled gear 65 out of mesh with beveled gear 64 and moving beveled gear 66 into mesh with beveled gear 64. The shaft 67 is now rotated by the pulley 69 and the follower 61 is pressed against the pile of blanks in the hopper and forces the lowermost blank against the feed slide which at this time is in its advanced position. During the continued downward movement of the treadle 58 and after the follower 61 has been brought into contact with the pile of blanks, block 89 comes in contact with the block 87 in the slot 88 and actuates the lever 56 to raise the roll 53 and connect the feed slide to its actuating mechanism. During its backward movement the feed slide is removed from beneath the pile of blanks and the lowermost blank is pressed into contact with the feed table 6. As the feed slide advances it engages the rear side of the lowermost blank and feeds the blank beneath the spring-pressed plate 40 of the hopper which holds the blank down against the feed table during its passage to the die roller and pressure device. As the blank passes between the die roller and pressure device its leading edge registers with the edge of the die cavity and the blank is firmly pressed against the die roller by the pressure device. The feed slide acts upon the blank during its entire passage between the die roller and the pressure device so that a positive feed movement is imparted to the blank and any danger of the blank being displaced with relation to the die cavity is avoided. The first portion of the die cavity recedes from the pressure device and in order to insure that the blank will be forced into the die cavity and firmly seated against the bottom thereof, the mechanism for actuating the feed slide is arranged to impart thereto a speed somewhat greater than the peripheral speed of the die roller while the first portion of the blank is passing between the die roller and pressure device. This movement of the feed slide acts to bend the blank into the die cavity so that it will be firmly held against the bottom of the die cavity by the pressure device. In order to cause the feed slide to feed blanks of different widths the connection between link 50 and the arm 49 is made adjustable as is clearly shown in Fig. 1.

The blank passes from the die roller and pressure device between the die roller and the delivery roller 28 which coöperates with the die roller in delivering the blank from the bite of the die roller and skiving knife and discharges the blank from the machine. The edge of the skiving knife, if forced away from the periphery of the die roller by the wedging action of the blank, is thus allowed to return to its normal position before the next blank is brought into contact therewith. The blanks are fed through the machine so that the edge of the blank which forms the upper edge of the counter when in position in a completed shoe, is presented first to the skiving knife. This edge is thus skived to the exact thickness required and the upper portion of the counter produced is perfect. The bottom edge of a counter is lasted in the manufacture of a shoe and it is immaterial whether this edge is skived to a somewhat greater thickness by the movement of the edge of the skiving knife away from the die roller or not. For all practical purposes, therefore, the articles produced by the machine are perfect. When it is desired to place a new supply of blanks in the hopper the treadle 58 is allowed to rise. During the first portion of the upward movement of the treadle, the block 89 is moved upwardly and the lever 56 is actuated by the spring 93 to lower the roll 53 and disconnect the feed slide from its actuating mechanism. After the lever 56 contacts with its stop 94* the pin 86 on the treadle actuates the bell crank lever 81 and through the connections hereinbefore described moves the shaft 67 to disengage beveled gears 66 and 64 and bring beveled gear 65 into mesh with beveled gear 64. The follower 61 is thus raised after the feed slide has been disconnected from its actuating mechanism. A new supply of blanks is then placed in the hopper and the treadle 58 depressed, when the cycle of operations above described is repeated.

Having thus described my invention, I claim as new and desire to secure by Letters Patent.

1. A leather skiving machine, having, in combination, a die roller provided with a die cavity, a pressure device for holding a blank in the die cavity consisting of a plurality of independently yielding members arranged side by side longitudinally of the roller, in close juxtaposition to each other, a skiving knife arranged to act on the blank while held in the die cavity, and feeding means acting continuously on the blank during its entire passage between the die roller and pressure device, substantially as described.

2. A leather skiving machine, having, in combination, a die roller provided with a die cavity, a pressure device for holding a

blank in the die cavity consisting of a plurality of independently yielding slides arranged side by side longitudinally of the roller in close juxtaposition to each other, a skiving knife arranged to act on the blank while held in the die cavity, and feeding means acting continuously on the blank during its entire passage between the die roller and pressure device, substantially as described.

3. A leather skiving machine, having, in combination, a die roller provided with a die cavity, a pressure device for holding a blank in the die cavity, a feed slide acting on the blank during substantially its entire passage between the die roller and pressure device, and means for actuating the feed slide, substantially as described.

4. A leather skiving machine, having, in combination, a die roller provided with a die cavity, a pressure device for holding a blank in the die cavity consisting of a plurality of independently yielding members arranged side by side longitudinally of the roller and coöperating therewith to seat the blank against the bottom of the die cavity, and feeding mechanism acting on the blank during substantially its entire passage between the die roller and pressure device, substantially as described.

5. A leather skiving machine, having, in combination, a die roller provided with a die cavity, a pressure device for holding a blank in the die cavity, a skiving knife, and means for delivering a skived blank from the bite of the die roller and skiving knife, substantially as described.

6. A leather skiving machine, having, in combination, a die roller provided with a die cavity, a pressure device for holding a blank in the die cavity, a skiving knife, and means acting on the blank in the rear of the line of contact of the die roller and pressure device for delivering a skived blank from the bite of the die roller and skiving knife, substantially as described.

7. A leather skiving machine, having, in combination, a die roller provided with a die cavity, a pressure device for holding a blank in the die cavity, a skiving knife, and a roller coöperating with the die roller for delivering a skived blank from the bite of the die roller and skiving knife, substantially as described.

8. A leather skiving machine, having, in combination, a hopper, a follower acting on a pile of blanks in the hopper, a feed slide, actuating mechanism therefor, mechanism for actuating the follower to maintain the pile of blanks in proper position with relation to the feed slide, a register, connections between the register and feed slide for actuating the register, and means under the control of the operator for throwing the mechanism for actuating the follower into

operation and thereafter connecting the feed slide to its actuating mechanism, substantially as described.

9. A leather skiving machine, having, in
5 combination, a hopper, a follower acting on
a pile of blanks in the hopper, a feed slide,
actuating mechanism therefor, mechanism
for actuating the follower to maintain the
pile of blanks in proper position with rela-
10 tion to the feed slide, a register, connections
between the register and feed slide for ac-
tuating the register, means under the con-
trol of the operator for throwing the mech-
anism for actuating the follower into opera-
15 tion and thereafter connecting the feed slide
to its actuating mechanism, and for discon-
necting the feed slide from its actuating
mechanism and thereafter throwing the
mechanism for actuating the follower out
20 of operation, substantially as described.

10. A leather skiving machine, having, in
combination, a die roller, a pressure device,
a feed slide, actuating mechanism therefor,

a register, and means for actuating the reg- 25
ister comprising a shaft, connections be-
tween the shaft and feed slide for actuating
the shaft, a crank pin on the shaft, a pawl
mounted on the crank pin and a ratchet
wheel engaged by the pawl, substantially as
described. 30

11. A leather skiving machine, having, in
combination, a die roller, a pressure device,
a feed slide, actuating mechanism therefor,
a register, and means for actuating the reg- 35
ister comprising a shaft, a pinion on the
shaft, a rack meshing therewith movable
with the feed slide, a crank pin on the shaft,
a pawl mounted on the crank pin and a
ratchet wheel engaged by the pawl, substan- 40
tially as described.

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

JACOB R. SCOTT.

Witnesses:

HORACE VAN EVEREN,
ALFRED H. HILDRETH.