Sept. 29, 1925. 1,555,558

J. DENEMARK

PRESSING MACHINE

Filed March 6, 1925 4 Sheets-Sheet 1

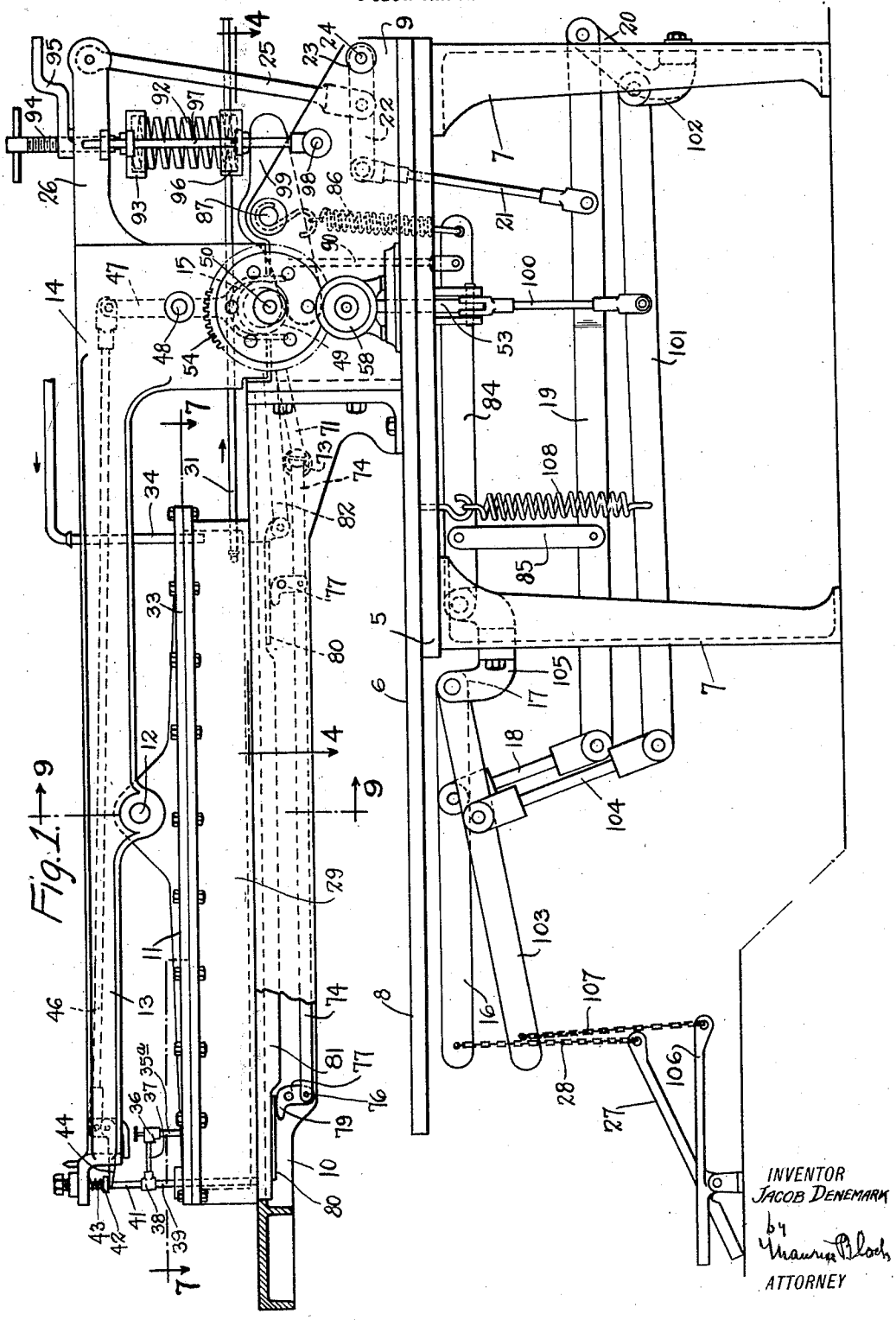


Fig. 1.

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PRESSING MACHINE

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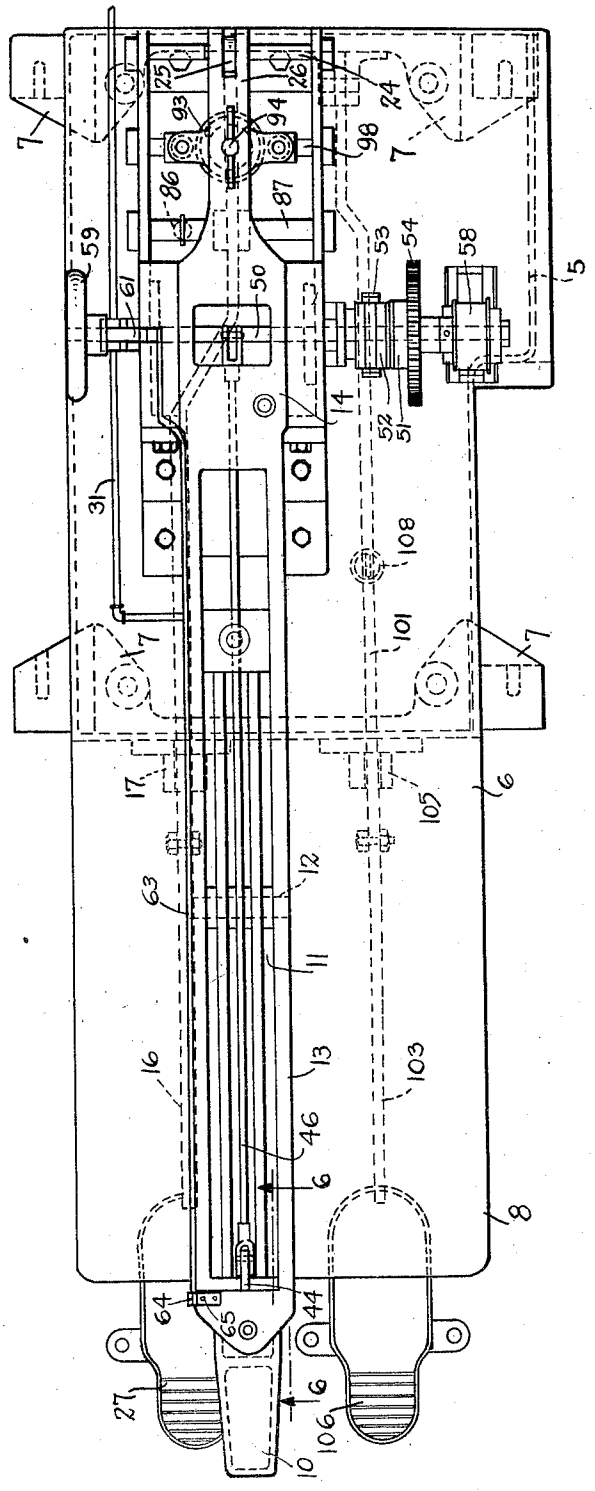


Fig. 2.

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PRESSING MACHINE

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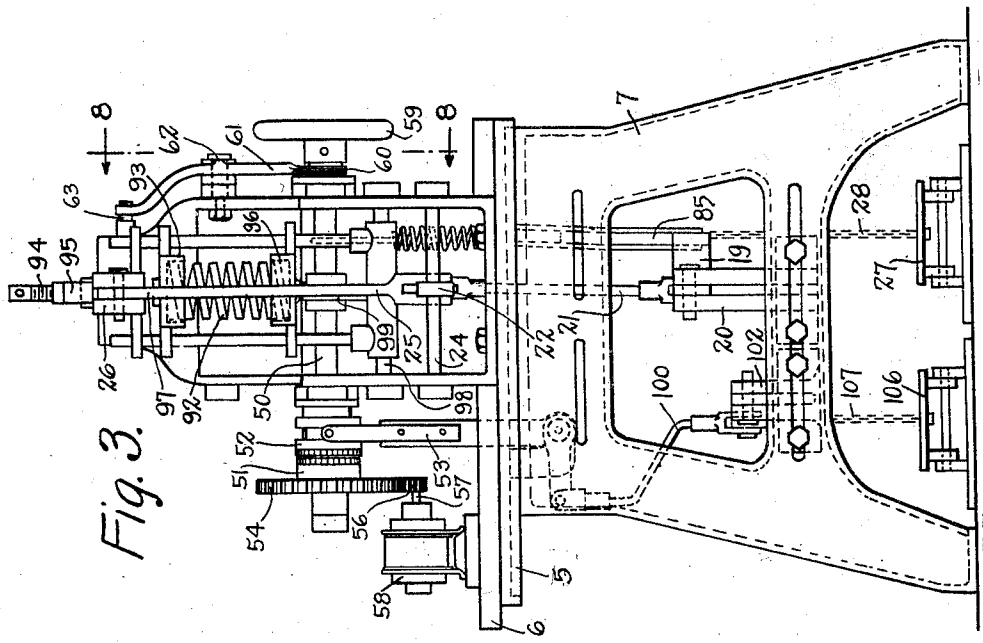


Fig. 3.

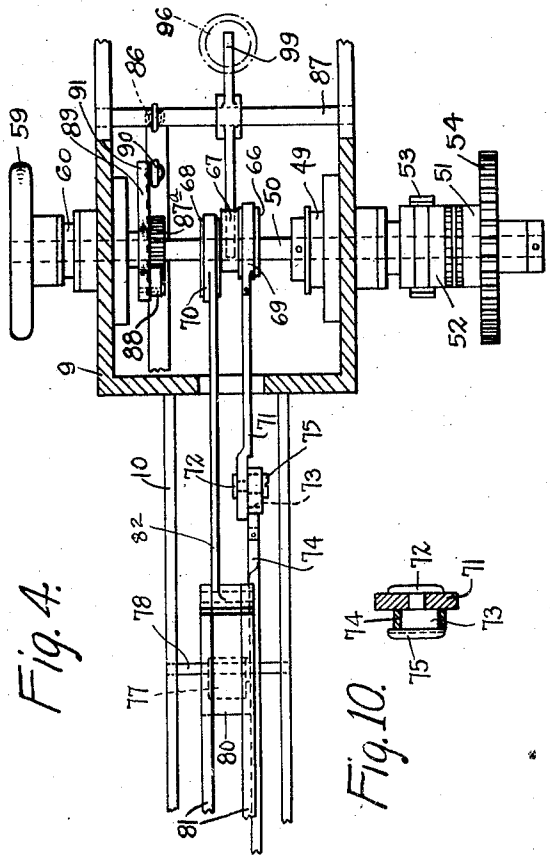


Fig. 4.

Fig. 10.

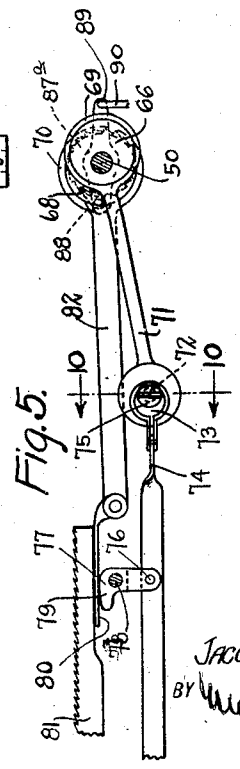


Fig. 5.

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PRESSING MACHINE

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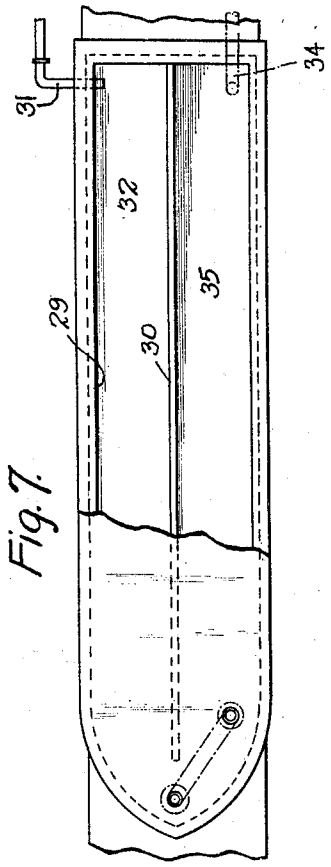


Fig. 7.

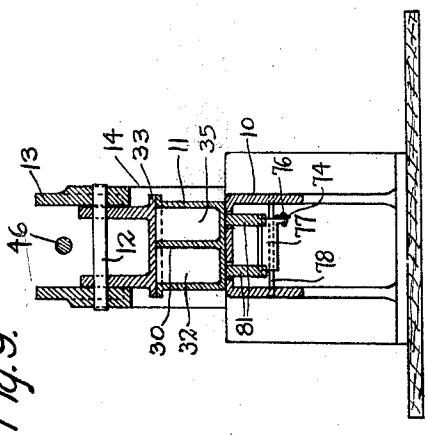
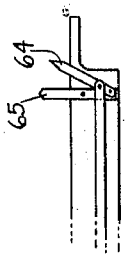


Fig. 9.



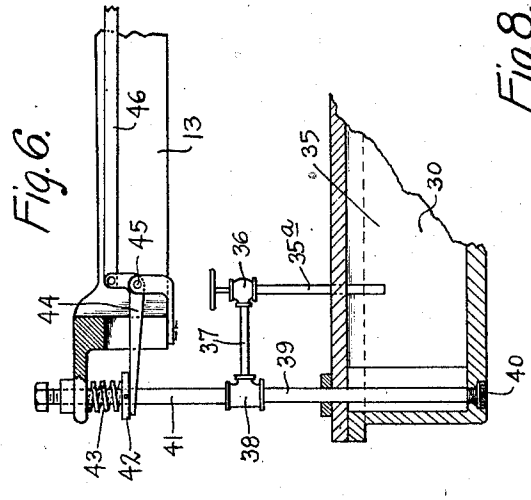


Fig. 6.

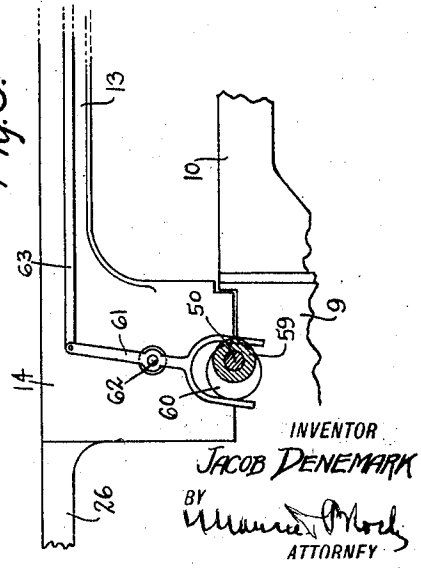


Fig. 8.

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Patented Sept. 29, 1925. 1,555,558

UNITED STATES PATENT OFFICE.

JACOB DENEMARK, OF TRENTON, NEW JERSEY.

PRESSING MACHINE.

Application filed March 6, 1925. Serial No. 13,557.

To all whom it may concern:

Be it known that I, JACOB DENEMARK, a citizen of the United States of America, residing at Trenton, Mercer County, State of New Jersey, have invented certain new and useful Improvements in Pressing Machines, of which the following is a specification.

This invention relates to pressing machines and in particular to a machine used in the pressing of seams during the process of clothing manufacture.

An object of the invention is to provide a pressing machine which will feed the goods to be pressed automatically beneath a pressing iron, will apply pressure to said iron, and one which will steam and dry the goods during the pressing operation.

A further object is to provide a visual indicator which shows the operator when the feed bars are above the surface of the table, so that the machine when cut off from the power operating member may be adjusted by the operator to bring the feed bars below the base so that the goods may be drawn out of the machine without damaging or marring the same.

A still further object of the invention is to provide a machine in which the vertical throw of the feed bars may be adjusted to compensate for goods of various thicknesses.

A still further object of the invention is to provide a compact efficient machine which will automatically feed goods to be pressed beneath an iron, and one in which the parts will be so arranged that the steam is admitted to the goods intermittently and the iron is heated by the steam, a part of which is arranged to moisten the goods just before the same is pressed.

Referring to the drawings wherein I have shown a preferred embodiment of my invention;

Figure 1 is a view in side elevation of a machine constructed in accordance with my invention,

Figure 2 is a top plan view of the machine as seen in Figure 1,

Figure 3 is a rear end view of the machine in elevation,

Figure 4 is an enlarged partial section taken on the line 4—4 of Figure 1 showing the operating mechanism carried by the power shaft, including the feed bar arrangement,

Figure 5 is a side view in sectional elevation of the mechanism as shown in Figure 4,

Figure 6 is an enlarged section taken on the line 6—6 of Figure 2 showing the steam valve operating mechanism,

Figure 7 is a section taken on the line 7—7 of Figure 1 showing the construction of the iron and the arrangement of the steam inlets and outlets,

Figure 8 is a section taken on the line 8—8 of Figure 3, a part of the forward end of the machine being also shown to illustrate the indicator,

Figure 9 is a section taken on the line 9—9 of Figure 1 showing the construction of the supporting arm, iron, and base; and

Figure 10 is a section taken on the line 10—10 of Figure 5.

Referring to the drawings in detail 5 indicates a table comprising a top 6 and supporting legs 7, the forward part of the table being extended as at 8 to provide a support for the overhanging goods being pressed.

The table top 6 has attached at the rear thereof a housing 9 to the front of which is secured the base 10 which projects forwardly and forms a pressing base upon which the iron 11 is normally adapted to rest, the iron being pivotally held as at 12 in the arm 13 which is formed integrally with, and constitutes a part of the iron support 14, the body of which is hollow and has its sides pivotally associated as at 15 with the housing 9, so that the support 14 can be rocked about its pivot point to raise and lower the iron from the base 10. This raising and lowering movement is carried out through the medium of a lever 16 which is pivoted to a bracket 17 carried on the forward table leg 7 to which is attached a tie rod 18 which connects with another lever 19 extending rearwardly to its pivot point in a bracket 20 on the rear leg 7. Adjacent its bracket connection, the lever 19 is connected as by a tie rod 21 to a link 22, the rear end of which is pivoted as at 23 on a bar 24 connecting the sides of the housing 9, and the link carries the lower end of a rod 25 the upper end of which connects with the extended portion 26 of the iron support 14. A suitable pedal 27 is used to operate the lever 16 through the connecting chain 28. Any pressure upon the pedal therefore will cause the iron to be raised off the base 10, so that

the goods can be drawn from beneath the iron.

The iron is composed of a hollow chamber portion 29 having a mid-rib 30 extending longitudinally thereof and ending adjacent the front wall of the iron to provide a passageway through which the steam passes. One side of the iron is provided with an outlet 31 opening out of the compartment 32, while the top plate 33 of the iron which is pivoted to the arm 13 is provided with a steam inlet 34, the steam passing through a suitable hose from a source of supply. The steam travels from the inlet 34 along the compartment 35 and into compartment 32 and through the outlet 31 thus setting up a circulation which keeps the iron hot. The front of the iron on the top thereof is provided with a vertical pipe 35ª which extends into the iron, the pipe at its upper end carrying a valve 36 which controls the flow of steam through a pipe 37 which connects valve 36 with a normally closed valve 38, the latter being disposed on a vertical pipe, 39, the lower end of which is secured in the bottom of the iron against a small baffle 40 having openings therein. This allows the goods to be properly moistened by the steam before passing rearwardly, it being understood that the steam is emitted at a point adjacent the front of the iron. The stem 41 of the valve 38 extends upwardly through a suitable opening in the front of the arm 13 and carries beneath and spaced from said arm a collar 42, there being interposed between the collar and the arm, a spring 43, which normally maintains the valve 38 closed.

The collar 42 is engaged by the forked end of a bell-crank 44 which is pivoted in the arm 13 as at 45 and is operated through a rod 46 which extends through said arm 13 rearwardly to engage the upper end of a cam operated lever 47 which is pivoted at its mid-portion as at 48 to the support 14, while its lower end is bifurcated to fit around an eccentric cam 49.

The cam 49 is secured to the power shaft 50 which passes through the housing 9 and carries therebeyond the clutch members 51 and 52, the latter of which is movable through the medium of a lever 53 hereinafter referred to, and the member 51 of which carries a gear 54. The gear 54 is operated by the pinion 56 which is secured to the motor shaft 57, the motor 58 being mounted upon the table. The shaft 50 on the opposite end, which extends beyond the housing 9 carries a fly wheel 59 and an eccentric cam 60, the latter being capable of operating a lever 61 pivoted as at 62 to the housing 9 and attached at its upper end to the longitudinal link 63 which operates a vertical indicator 64 pivoted on the front part of the arm 13 and in position to register with a fixed marker 65 at times, depending upon the position of the feed bars to be hereinafter referred to.

The power shaft 50 within the housing (Figures 4 and 5) carries a plurality of eccentric cam members 66, 67 and 68, the cams 66 and 68 carrying the strap members 69 and 70 respectively, the extended portion 71 of the strap 69 holding in its outer end a headed pin 72 having an eccentric portion 73 thereon which carries the end of a feed bar raising lever 74 the eccentric portion being provided with a slotted head 75. The pin 72 is frictionally held in the portion 71 of the strap 69, and when adjustment of the lever 74 is desired the slotted head 75 is turned thereby turning the eccentric portion 73 to shorten the overall length of the strap 69 and lever 74.

To the lever 74 are pivoted as at 76 the bell-cranks 77 which are pivoted on cross bars 78 in the base 10, the horizontally disposed feet 79 of the bell-cranks engaging and supporting the plates 80 to the upper side of which are secured the spaced feed bars 81, having their upper longitudinal edges serrated whereby the goods may be drawn rearwardly through the machine upon a rearward movement of the feed bars. In the position shown in Figure 1 the feed bars 81 are flush with the upper surface of the base 10. The feed bars are reciprocated through the medium of the strap extension 82 which is part of the eccentric strap 70 operated by the eccentric cam 68, the extension 82 being pivotally connected as at 83 to the rear feed bar plate 80.

It is evident therefore that a reciprocating motion imparted to the lever 74 will, through the bell cranks 77 raise the feed bars above the surface of the base. A reciprocating movement of the strap extension 82, imparts a reciprocatory movement to the feed bars 81 which slide on top of the horizontal foot portions 79. The lever 74 is advanced and then the feed bars are retracted, the advance causing the feed bars to move above the surface of the table to grip the goods between the base 10 and the iron 11 and a retractile movement of the feed bars causing the feeding of the goods through the machine, in a step by step motion.

When a pressing operation has been completed, the machine is stopped, and sometimes the feed bars are above the surface of the base 10. If the goods were drawn on they would tear or be marked and so I have provided a visual indicator which shows when the feed bars are above or below the base 10.

As shown in Figure 8 when the indicator 64 is at its forward position the feed bars are below the surface of the table or base 10 and the goods can be safely drawn out of

the machine; when the indicator is in register with the marker the feed bars are above the base and in order to bring them below the base, I make use of a manual adjustment which comprises a lever 84 pivoted to the forward leg 7 of the machine above the lever 19 and connected thereto by a link 85 the free end of the lever being yieldably held in horizontal position by a spring 86 suspended from a brace bar or rod 87 connecting the sides of the housing 9. To the power shaft 50 there is fixed a ratchet wheel 87^a over which travels the pawl 88, the same being pivoted to a rock lever 89 which is mounted loosely on shaft 50 and is rocked by a depending rod 90 pivoted to its extended free end 91. The rod 90 at its lower end is pivoted to the lever 84. It is evident that a pressure on the foot lever 27 will move the levers 19 and 84 downwardly to cause a throw of the ratchet pawl 88 which carries the ratchet wheel 87^a with it and thus turns the shaft 50 to position the feed bars below the surface of base 10.

In order to provide for the goods being thoroughly pressed, I apply pressure to the extended portion 26 of the iron support 14 whereby the iron is pressed firmly on the table or base 10, through the medium of a coiled spring 92 held between two cups the upper of which 93 is pivotally connected with the lower end of an adjusting screw 94 which is threaded through the extension 26 and a lock nut 95 whereby the tension on the spring 92 can be varied. The upper cup 93 and lower one 96 are slidably carried on the oppositely disposed rods 97 which pass through the extension 26 and at their lower ends are pivotally carried on the cross bar 98. The under side of the lower cup 96 is engaged by one end of a rocker 99 which is pivoted on rod 87 and has its opposite end extending beneath and engaging the cam 67 previously referred to. The cam is so cut that it will force the end of the rocker down when the feed bars are above the surface of the table and travelling rearwardly, so that the iron will press the goods firmly during travel through the machine. Downward pressure on the pedal 27 will, as before described raise the iron off the base 10, but the spring 92 will normally press the iron firmly against the base 10.

In order to control the power applied to the machine by the throw of the clutch member 52 which is performed by the lever 53 I connect the latter, through the medium of a tie rod 100 with a longitudinally disposed lever arm 101 beneath the table pivoted at one end to a bracket 102 held on the rear leg of the table, the free end being connected with an auxiliary lever 103 by a rod 104. The lever 103 is pivoted to a bracket 105 held on the front leg of the table and is operatively connected to a pedal 106 by a chain 107. To start the machine the pedal 106 is therefore pressed downwardly against the action of spring 108 which extends between the bottom of the table and the lever 101.

It will be evident that I have provided an efficient and durable pressing machine, which will handle the material at high speed and which will also guard against damage to the goods when the same is to be drawn from the machine. Also I have provided a machine in which the goods are moistened intermittently and fed by a step by step motion through the machine to be thoroughly pressed.

Having described my invention what I claim is:—

1. A pressing machine comprising a base, an iron adapted to rest on said base to press goods interposed between said base and said iron, feed bars in said base, means for operating said feed bars vertically and longitudinally to cause longitudinal movement of the goods through the machine, and an eccentric member for adjusting the vertical movement of said feed bars to compensate for varying thicknesses of goods.

2. A pressing machine comprising a base, an iron adapted to rest on said base to press goods interposed between the base and the iron, feed bars in said base, means for imparting to said feed bars a vertical and a longitudinal movement, and an eccentric member associated with said vertical movement imparting means for limiting the vertical movement of the feed bars to compensate for goods of varying thicknesses.

3. In a pressing machine, a base, feed bars operable in said base to feed the goods to be pressed through the machine, means for raising the feed bars above said base, means for imparting a retractile movement to said bars while they are held above said base, and an adjustable eccentric member in said feed bar raising means whereby the feed bars can be raised varying distances above said base to compensate for different thicknesses of goods.

4. In a pressing machine, a base, an iron adapted to rest thereon, spaced feed bars in said base, plates connecting said feed bars, bar raising members in said base adapted to engage said plates to support the bars, a power shaft, an eccentric on said shaft, means connecting said eccentric and said bar raising members whereby the latter are operated, and an adjustable member in said connecting means for shortening the distance between said raising members and the eccentric whereby a variable raising distance is imparted to said feed bars.

5. In a pressing machine, a head, an iron carried in said head, a base upon which the iron is adapted to rest, feed bars in the base beneath the iron and operable to a position

above the surface of said base, and means for visually indicating the position of said feed bars.

6. In a pressing machine, a base, an iron adapted to rest on said base, feed bars in the base, means for raising the feed bars above said base to grip goods interposed between the iron and the base, means for varying the amount said feed bars can be raised above the base, and means for visually indicating whether the feed bars are above or below the surface of said base.

7. In a pressing machine, a head, a base, an iron suspended from said head and adapted to rest on said base, feed bars in said base, means for imparting a vertical and a longitudinal movement to said bars, means for varying the amount of vertical movement imparted thereto, and an indicator for showing the position of the feed bars relative to the upper surface of said base.

8. In a pressing machine, a power driven shaft, a pressing iron, a base upon which the iron is adapted to rest, a feed bar in said base operated from said power shaft whereby the same will have a reciprocating movement above and below the surface of said base, and an operator operated auxiliary means associated with said shaft whereby when the driving power is cut off from the shaft the feed bars may be moved to a position below the surface of the base.

9. In a pressing machine, a base, feed bars operable above and below the surface of said base for causing movement of goods through the machine, a power operated shaft for actuating said feed bars, means for cutting off the power used to drive said shaft, an operator operated ratchet mechanism associated with said power shaft whereby the latter can be rotated after the driving power thereof has been cut off to bring the feed bars to rest in position below the surface of said base.

10. In a pressing machine, a pivoted support, an iron held in said support, a base upon which the iron is normally adapted to rest, a housing associated with said base, a power shaft in said housing, a cam on said shaft, a spring member connecting said support and said housing, whereby a normal pressure of the iron against the base is maintained, a rock arm pivoted in said housing having one end engaging said cam and the other end engaging said spring member, whereby when the cam is revolved, the pressure of the iron on said base is periodically increased, and a foot lever for raising the iron off the base against the action of said spring member.

11. In a pressing machine comprising a base, feed bars in the base and operable to a position above the surface of said base, and means for visually indicating the position of said feed bars.

12. In a pressing machine, a base, feed bars operable to positions above and below said base surface, means for varying the distance said feed bars can operate above said base, and means for visually indicating whether the feed bars are above or below the surface of the base.

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