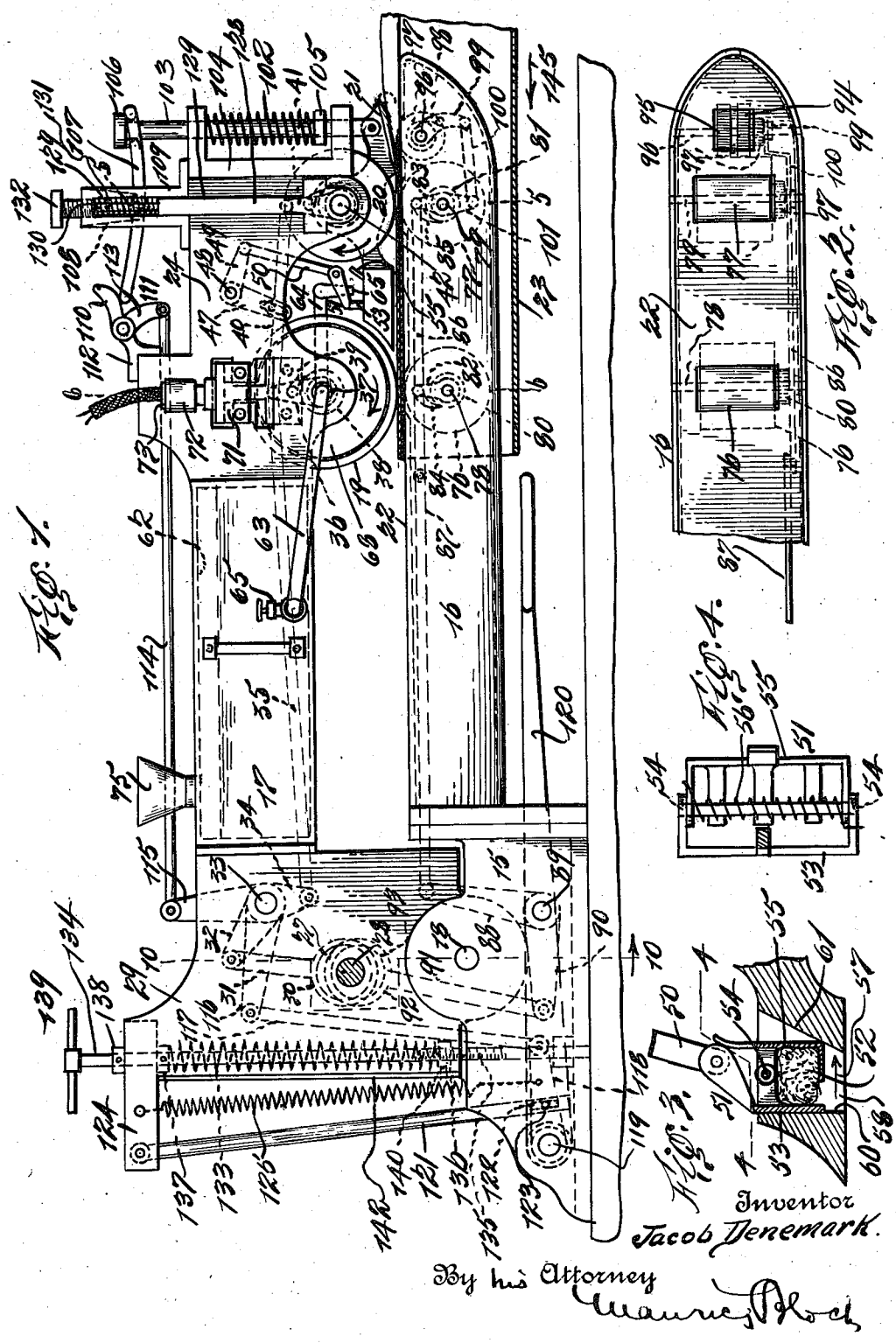
Dec. 18, 1923. 1,477,547

J. DENEMARK

SEAM PRESSING MACHINE

Filed July 8, 1921 4 Sheets-Sheet 1



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SEAM PRESSING MACHINE

Filed July 8, 1921 4 Sheets-Sheet 2

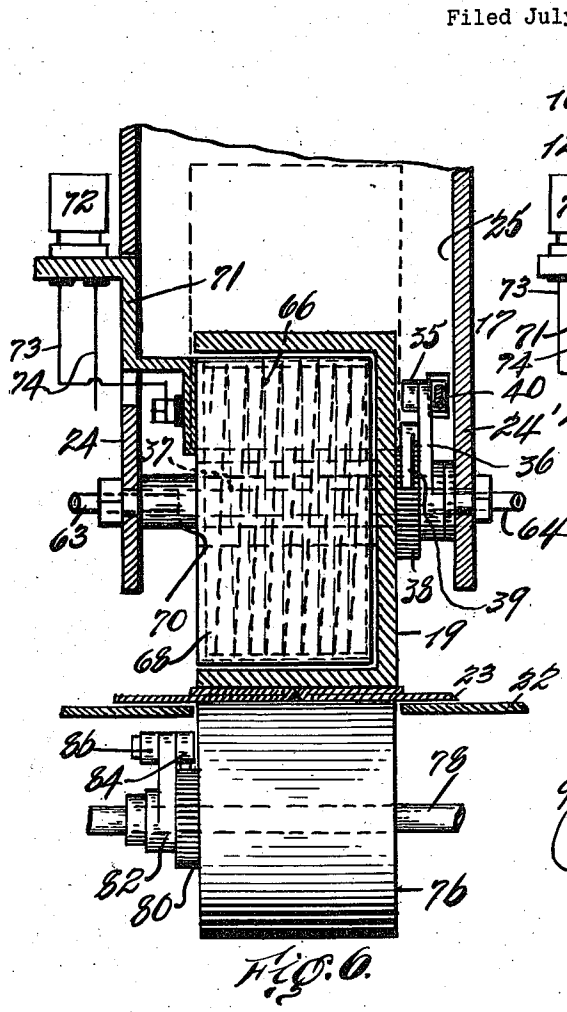


Fig. 6.

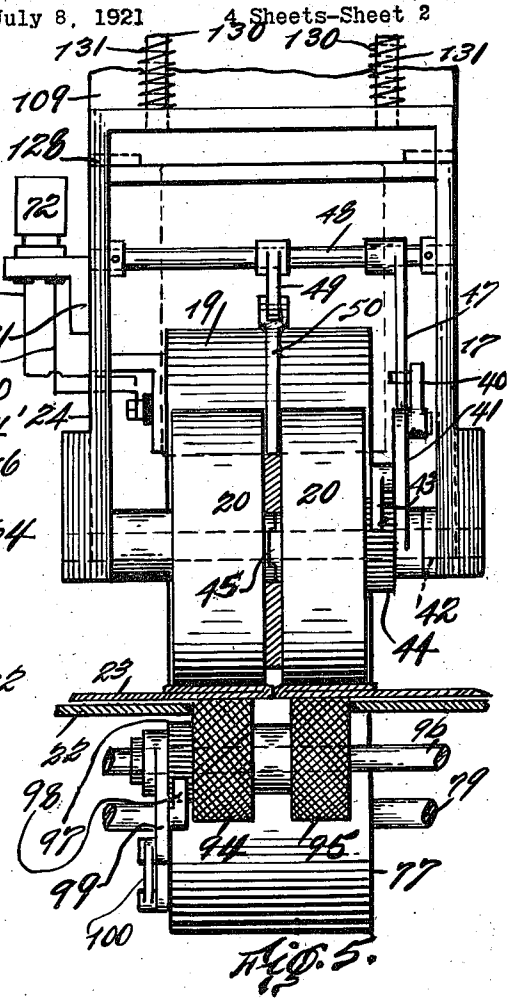


Fig. 5.

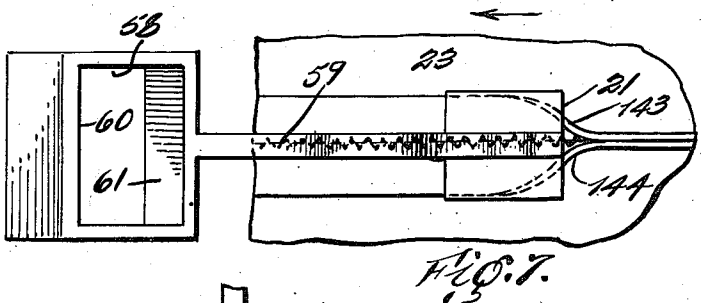


Fig. 7.

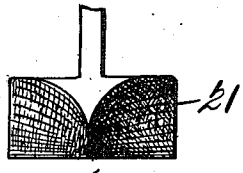


Fig. 8

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SEAM PRESSING MACHINE

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Fig. 9.

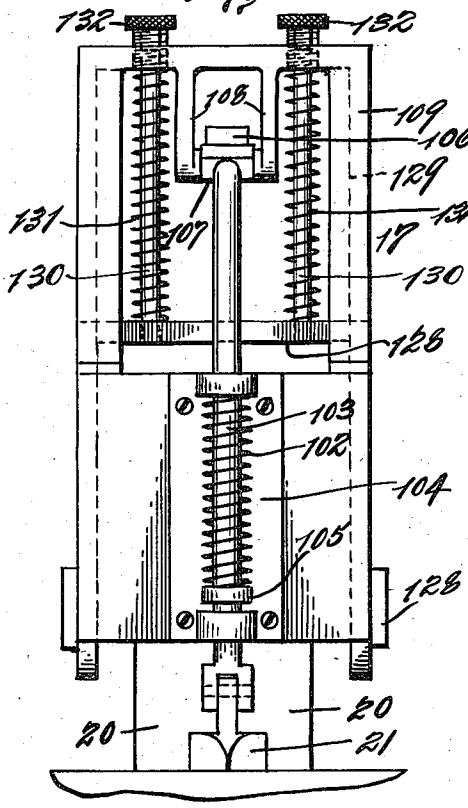
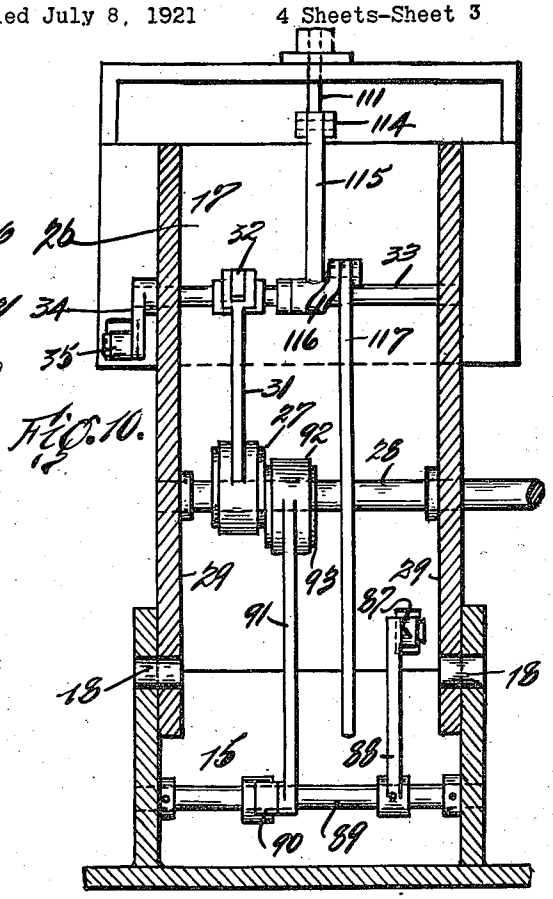


Fig. 10.



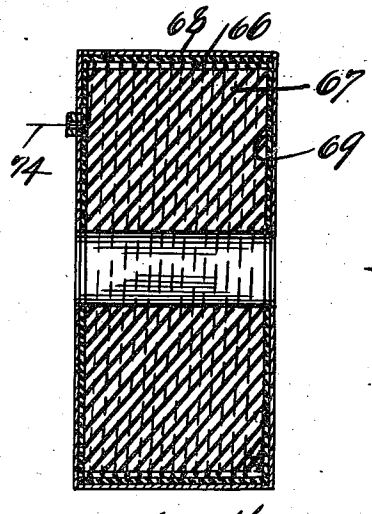
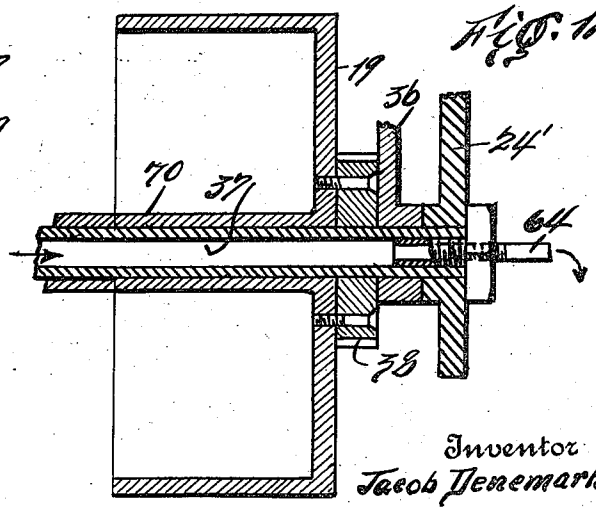


Fig. 11.

Fig. 12.



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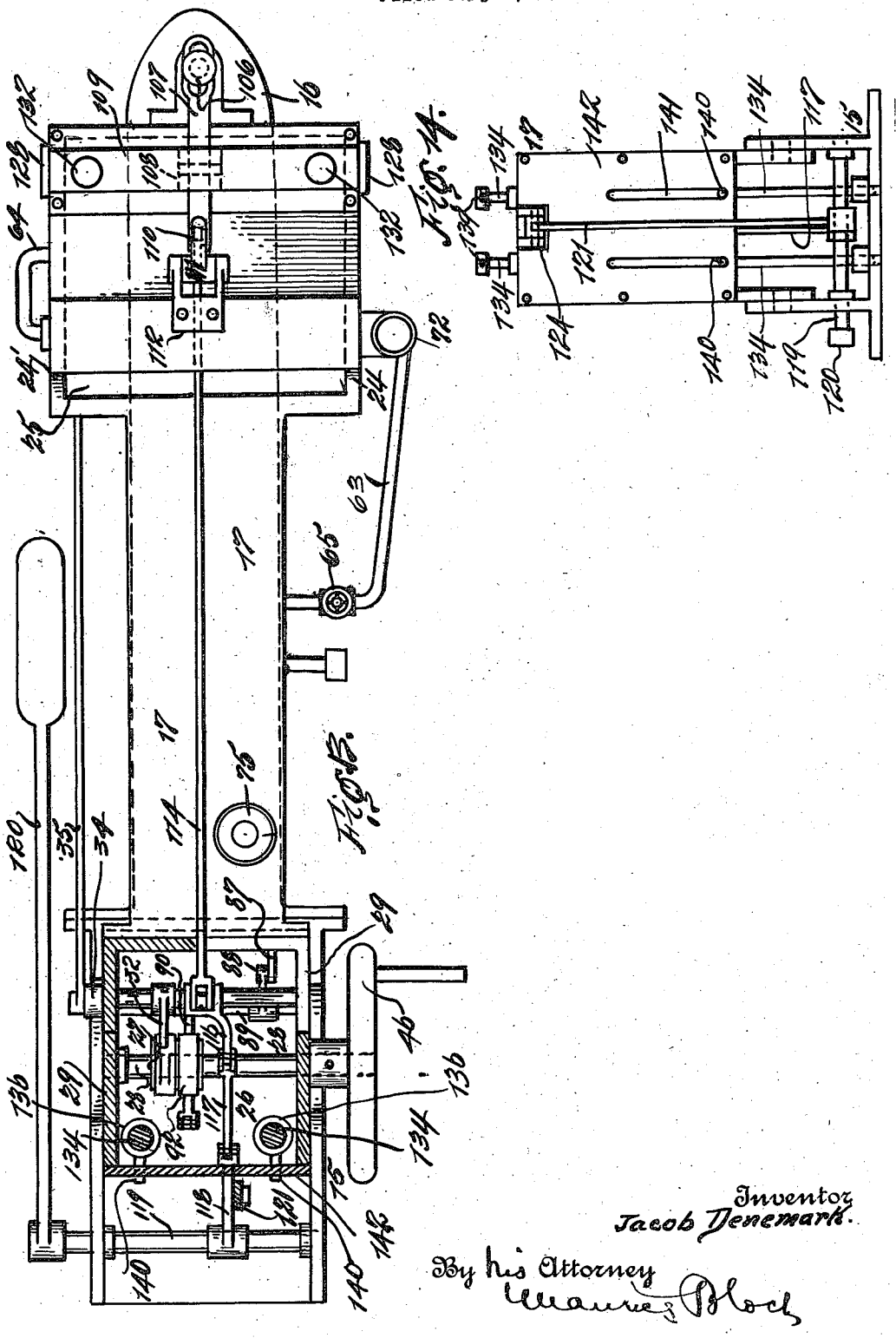
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SEAM PRESSING MACHINE

Filed July 8, 1921 4 Sheets-Sheet 4



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Patented Dec. 18, 1923. 1,477,547

UNITED STATES PATENT OFFICE.

JACOB DENEMARK, OF TRENTON, NEW JERSEY.

SEAM-PRESSING MACHINE.

Application filed July 8, 1921. Serial No. 483,184.

To all whom it may concern:

Be it known that I, JACOB DENEMARK, a resident of Trenton, Mercer County, State of New Jersey, and a citizen of Russia, have invented certain new and useful Improvements in Seam-Pressing Machines, of which the following is a specification.

This invention relates to improvements in pressing machines, particularly machines for pressing seams of garments, one of the objects of my invention being to provide a machine that will effectively press the seams of sleeves, trouser-legs or the like. To carry out my invention, I have provided a machine having means over which a sleeve, trouser-leg or the like, can be slipped whereby a seam can be pressed by direct contact with the pressing element, in this instance, a rotary iron. My improved machine includes automatically operated feeding devices and other features which will be explained.

I will now proceed to describe my invention in detail, the novel features of which I will point out in the appended claims, reference being had to the accompanying drawing, wherein:—

Fig. 1 is a side elevation of my improved pressing machine;

Fig. 2 is an enlarged plan view of the outer end of the work supporting arm or horn;

Figs. 3 and 4 are detail views illustrating the dampening device;

Fig. 5 is an enlarged fragmentary sectional view, the section being taken on a line 5—5 in Fig. 1;

Fig. 6 is a similar view, the section being taken on a line 6—6 in Fig. 1;

Fig. 7 is a detail plan view of the holder for the dampening device and its associated seam guide and spreader, a portion of a piece of goods, having a seam, being also indicated;

Fig. 8 is a detail end view of the seam guide and spreader, which also acts as a presser foot;

Fig. 9 is an enlarged face view of the head which carries the pressing elements;

Fig. 10 is an enlarged sectional view, the section being taken on line 10—10 in Fig. 1;

Fig. 11 is a sectional detail view of a form of electrical heater which I may use;

Fig. 12 is a similar view of the main pressing element;

Fig. 13 is a top plan view of the device as illustrated in Fig. 1, certain parts being omitted; and

Fig. 14 is an end view, on a reduced scale, of the rear end of the head of the machine, certain parts being omitted.

As herein embodied, my invention consists of a base member 15 which has connected thereto an arm or horn 16, and a head 17, the head being pivotally connected to the base at 18 in order that the pressing elements 19 and 20, and presser foot 21 can be moved away from the working or top surface 22 of the arm 16, for the insertion of work to be pressed, said work being indicated by 23. Both the pressing element or roller 19, and pressing element or roller 20, are pivotally supported by the side walls 24, 24′ of the bifurcated portion of the head 17, said bifurcated portion being indicated by 25. The pivoted end of head 17 is also bifurcated at 26 to permit of the installment of the mechanism to operate rollers 19 and 20 as well as other elements to be described. During a pressing operation, rollers 19 and 20 will be operated, step by step, in a rotary direction by means of an eccentric 27 on shaft 28 carried by the walls 29 of the bifurcated end 26 of the head 17. The eccentric 27 carries a strap 30 having a rod 31 connected to an arm 32 on shaft 33 which is rotatably supported by walls 29 and carries at one of its ends an arm 34. The arm 34 has connected thereto one end of a link 35 the forward end of said link being connected to a rock arm 36 on hollow trunnion 37 for the pressing roller 19 (see Fig. 12). Roller 19 carries a ratchet 38 engaged by pawl 39 on arm 36. To rock-arm 36 is also connected one end of link 40, the other end of link 40 being connected to a rock-arm 41 on trunnion 42 for the pressing roller 20 (see Fig. 5). The rock-arm 41 carries a pawl 43 which engages a ratchet-wheel 44 carried by one of the rollers 20. As can be seen in Fig. 5, the rollers 20 are separated and are rotatably connected by a clutch device, indicated by 45 in Fig. 5. Both the rollers 20 are rotatable upon the trunnion 42 which is non-rotatable (in this instance). When shaft 28 is rotated, by means of the hand-wheel 46 or otherwise (see Fig. 13) arms 36 and 41 will be rocked, whereby rollers 19 and 20 will be rotated in the direction

of the arrows in Fig. 1. The rotary motion of the rollers will be intermittent, which is obvious. Intermediate its ends, link 40 engages the arm 47 on a shaft 48 which also carries another arm 49. The arm 49 has connected thereto one end of a link 50 which at its lower end is connected to a squeezing frame 51 carrying a sponge 52. The squeezing frame 51 consists of a yoke member 53 having pivotally connected thereto at 54 a rack 55 which supports the sponge 52. A spring 56, which surrounds the pivotal support 54, tends to force the rack 55 in the direction of the arrow 57, or in other words, tends to open the jaw formed by the yoke and rack. The frame 51 is mounted within pocket 58 formed in the enlarged end of the swiveled frame 59 upon which the presser-foot 21 is located (see Fig. 7). One wall of the pocket 58 is vertical as indicated by 60, the other wall being inclined as indicated by 61. The yoke 53 bears against the vertical wall and the rack 55 against the angular wall. During the operation of the rollers 19 and 20, arm 47, shaft 48 and arm 49 will be rocked, whereby frame 51 will be raised and lowered. When frame 51 is lowered (it being indicated in its normal position in Fig. 1), the rack 55 will be forced toward the yoke 53, thereby squeezing the sponge 52, whereby water will be forced out of the sponge (the sponge being maintained wet during a pressing operation) and onto the goods being pressed, or rather the seam being pressed. When the frame 51 is raised upwardly, the rack 55 will move away from the yoke 53, allowing the sponge to expand and absorb more water. The water for the sponge is drawn from a tank 62 (Fig. 1), carried by the head 17. The water from the tank 62 passes through a duct 63, hollow trunnion 37, for the roller 19, thence through a duct 64 having a spout 65 located over the sponge 52. The duct 63 includes a valve 65 to control the flow of the water. The flow of water through the trunnion 37 prevents same from becoming heated to an extent that would cause the roller 19 to stick. The roller 19 is heated by an electrical resistance coil 66 carried by a block of insulation 67 mounted within a casing 68 lined by insulating material 69. The block 67 fits over the elongated hub 70 on roller 19. The casing 68 does not come into contact with the roller 19. The casing will be held stationary by a bracket 71 which is fastened to the wall 24 of the head 17 (see Figs. 5 and 6). The bracket 71 carries a socket 72 to receive a plug which is connected by a cable to a source of electrical supply. The socket 72 will be connected to coil 66 by line wires 73 and 74. Water will be poured into tank 62 through a suitable spout 75. To cooperate with rollers 19 and 20, I provide arm 16 (which is hollow) with rotatably supported rollers 76 and 77 carried by shafts 78 and 79 carried by the walls of the arm 16. The shafts 78 and 79 carry ratchet wheels 80 and 81 and also rock-arms 82 and 83. The rock-arm 82 carries a pawl 84 engaging ratchet 80, and rock-arm 83 a pawl 85 engaging ratchet 81. The arms 82 and 83 are connected by a link 86 which extends beyond arm 82 and is connected to a link 87 which at its opposite end is connected to an arm 88 carried by a shaft 89 mounted in the walls of the base 15. The shaft 89 carries a second arm 90 connected by a link 91 to a strap 92 for an eccentric 93 on shaft 28. When shaft 28 is actuated to operate rollers 19 and 20, rollers 76 and 77 will be likewise operated in unison therewith.

During the operation of rollers 19, 20, 76 and 77, feed rollers 94 and 95 will be also operated to feed the goods to the rollers 19, 20, 76 and 77. The feed rollers are carried by a shaft 96 carrying a ratchet 97 engaged by a pawl 98 on an arm 99 also carried by shaft 96. The arm 99 is connected by a link 100 to the extension 101 of arm 83 on shaft 79; hence, when rollers 19, 20, 76 and 77 are operated, feed rollers 94 and 95 will also operate to feed the goods to the pressing rollers. The feed rollers 94 and 95 cooperate with the presser-foot 21. In other words, the presser-foot acts to hold the goods in contact with the knurled surface of the feed rollers, a spring 102 acting to force the presser foot downwardly. The presser-foot 21 is carried by a vertically movable post 103 suported by a bracket 104 carried by the head of the machine. The spring 102 surrounds the post 103 and bears upon a collar 105 carried by said post. The upper end of post 103 carries a head 106 engaged by the slotted outer end of a lever 107 pivoted to a bracket 108 carried by the guide-frame 109 mounted on head 17. The inner end of lever 107 bears against an arm 110 of a bell crank lever 111 pivoted to bracket 112 carried by head 17. The other arm 113 of lever 111 is connected to one end of a link 114 extending backwardly and attached at its rear end to a lever arm 115, loosely mounted on shaft 33. The lever arm 115 has associated therewith a second arm 116 connected by a link 117 to an arm 118 carried by a rock-shaft 119 mounted on the base 15. The rock shaft 119 carries a lever 120 which acts to raise the presser-foot 21 and also move head 17 upon its pivot 18 to raise rollers 19, 20 off the goods or away from the work-plate to remove goods which have been pressed or for the positioning of goods to be pressed. To rock the head 17 upon its pivot 18, I provide a link 121 having a slot 122 at its lower end engaging a pin 123 carried by arm 118 (Fig. 1). The

upper end of link 121 is connected to a bracket 124 carried by head 17. The presser foot 21 may be raised by operating lever 120 slightly, at which time pin 123 will move longitudinally of slot 122 without operating link 121. To swing the head upon its pivot 18, lever 120 will be depressed sufficiently to cause pin 123 to contact with bottom wall of slot 122. A continued movement of lever 120 will result in raising the outer end of head 17 to raise rollers 19 and 20 off the goods or away from the workplate 22. To maintain lever 120 in raised position, I provide a spring 125 which is secured at one end to bracket 124 and at the other end to the lever arm 118.

The trunnion 42 for rollers 20 is supported by a frame 128 slidably mounted in slots 129 in head 17. The upper end of frame 128 engages slots 129 in guide-frame 109. The frame 128 carries posts 130, each post carrying a spring 131 which at one end bears against frame 128 and at the other end against adjustable nipples 132. The tension of the springs 131 can be raised by adjusting the nipples 132. The springs 131 act to force rollers 120 against the goods during a pressing operation.

To adjust the working pressure of roller 19, I provide springs 133, each spring being carried by a post 134 extending upwardly from base 15 (Fig. 1). Each post 134 is threaded at 135 and carries, at its threaded portion, a nut 136; one end of each spring 133 bears against a nut 136 and the other end against a collar 137 carried by each post. Each post carries a second collar 138 bearing against the upper surface of the adjacent portion of the head 17. The posts 134 are rotatable and carry handles 139. When posts 134 are rotated, nuts 136 will move up or down, according to direction of rotation, whereby the tension of springs 133 will be increased or decreased. To prevent rotation of the nuts, I provide each nut with a pin 140 engaging a slot 141 in the plate 142 located at the rear of head 17.

To press a seam, the head 17 will be raised by operating lever 120, after which the goods, should it be a sleeve, will be slipped over the arm 16, the seam portion of the sleeve being positioned in line with the presser foot 21, as indicated in Fig. 7. After the goods have been posftioned, the head will be lowered, causing the presser foot to force the goods against the feed rollers 94 and 95, the seam members being separated, as indicated by 143 and 144 in Fig. 7, to cause the presser foot to lie between said members. When shaft 28 is operated, the goods will be fed in the direction of the arrow 145 (Fig. 1), and under rollers 19 and 20. During a pressing operation, the roller 19 will be heated by the electrical heating coil 66, the seam being dampened by water from sponge 52. The manner of operating the parts referred to has been hereinbefore set forth.

The rollers 20 act to spread the seam or to preliminarily press same, the actual pressing being accomplished by the heated roller 19, after the goods have been dampened. With my improved machine, the seam is first spread; then preliminarily pressed; then dampened, and finally pressed by a heated pressing element, the preliminary pressing or flattening rollers being cold. In practice, the roller 19 will be forced against a seam by greater pressure than roller 20. Roller 20 acts to flatten the spread seam members while roller 19 presses the flattened seam members.

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

1. In a pressing machine, a support for the goods to be pressed, a rotatable pressing roller arranged to bear against the goods, means to intermittently operate the roller, dampening means arranged to apply water to the portion of the goods to be pressed, and means operable by the operating mechanism for the roller to control the application of water to the goods.

2. In a pressing device, a support for the goods to be pressed, a preliminary pressing roller, a heated final pressing roller, means to simultaneously impart to said rollers a step by step rotary motion, a dampening element located between said rollers, and means operable by the operating mechanism for the rollers to control the operation of the dampening element.

3. In a pressing device, a support for the goods to be pressed, a head pivotally supported above the support, a rotatable pressing roller carried by the head, a spring to force the roller against the support, a second roller slidably supported by the head, and a spring to force the slidable roller against the support independently of the spring that acts upon the first named roller.

4. In a pressing device, a support for the goods to be pressed, a head pivotally supported above the support, a rotatable pressing roller carried by the head, a spring to force the roller against the support, a second roller slidably supported by the head, a spring to force the slidable roller against the support independently of the spring that acts upon the first named roller, a presser foot adjacent the last named roller, and a spring to force the presser foot against the support.

5. In a pressing device, a support for the goods to be pressed, a head located above same, a pressing roller carried by the head, a hollow trunnion supporting same, a tank for water, a duct connecting said tank and hollow trunnion, an outlet for the water

which passes through the trunnion, and means to heat the roller.

6. In a pressing device, a support, a hollow trunnion carried thereby, a hollow pressing roller carried by the trunnion, a heating device within the roller, and means to cause cold water to pass through the trunnion during the operation of the pressing roller.

7. In a pressing device, a support, a hollow trunnion carried thereby, a pressing roller carried by the trunnion, means to heat same, a dampening device adjacent the pressing roller, and means to cause cold water to flow through said trunnion and into the dampening device during the operation of the pressing roller.

8. In a pressing device, a rotatable pressing roller, a dampening device adjacent thereto consisting of a plurality of movably connected members, a sponge located between said members, means to introduce water into the dampening device, means to rotate said roller, and means associated with the operating means for the roller to operate the dampening device to compress the sponge to cause water to flow therefrom.

9. In a pressing device, a rotatable pressing roller, a dampening device adjacent thereto consisting of a plurality of movably connected members, a sponge located between said members, means to introduce water into the dampening device, means to rotate said roller, means associated with the operating means for the roller to operate the dampening device to compress the sponge to cause water to flow therefrom, a flattening roller, and means also associated with the operating means for the pressing roller to operate the flattening roller intermittently.

10. In a pressing device, a base member, a work support, a head pivotally supported thereby, a pressing roller carried by the head, a presser foot also carried by the head, a lever to move the head upon its pivot to cause the pressing roller to be raised off the work support, and means operated by the lever to raise the presser foot without moving the head upon its pivot.

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