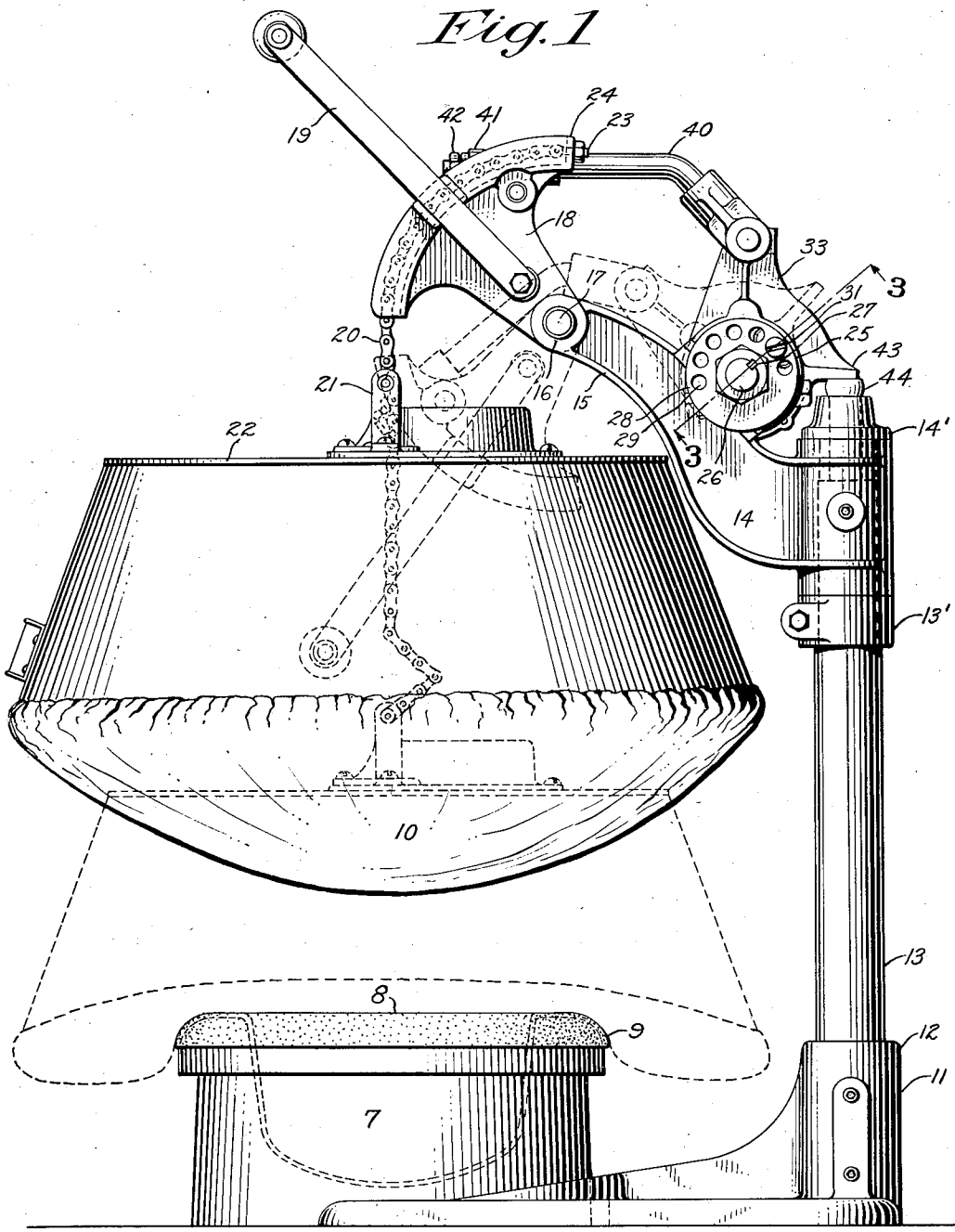
Sept. 10, 1935. P. SCHULTZE 2,014,210

HAT BRIM FLANGING MACHINE

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Fig. 1



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Fig. 2

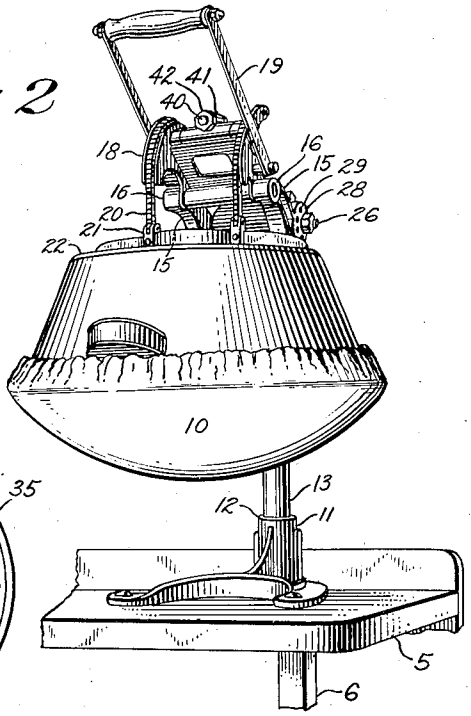


Fig. 4

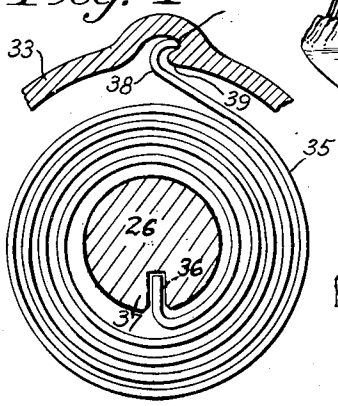
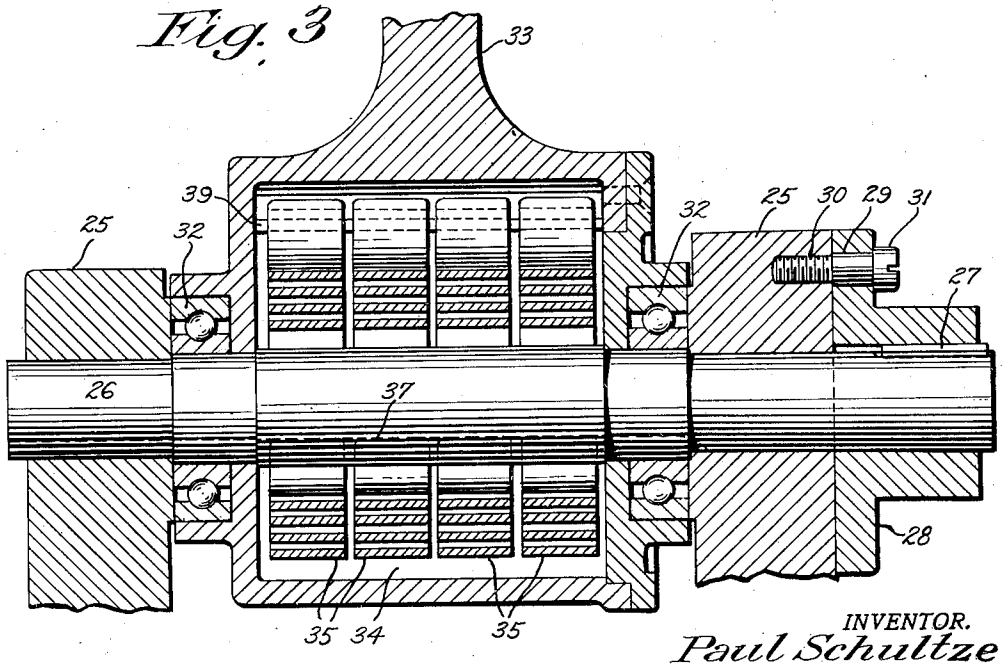


Fig. 3



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UNITED STATES PATENT OFFICE

2,014,210

HAT BRIM FLANGING MACHINE

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Application March 12, 1934, Serial No. 715,167

8 Claims. (Cl. 223—14)

This invention relates to improved means for flanging the brims of hats and in part includes a sand bag, so-called, which is adapted to be raised and lowered to engage the undersurface of the hat brim and press it down upon and in a way to conform to a hat block of the desired shape. The invention resides more particularly in means for supporting the sand bag in both its raised and lowered position and likewise in the simplified and practical means employed for lowering and raising the sand bag to and from the hat.

Heretofore more or less complicated means have been employed, including rocker members, lever and weights, for counterbalancing the weight of the sand bag, or other form of pressure and heat applying means, to permit it to be raised and lowered, but all of these so far as I am aware are objectionably heavy, bulky and roomy, and are more or less laborious to operate.

It is the purpose of my invention therefore to produce a relatively small hat brim flanging machine that is simple in construction and easy to operate and which can readily be supported upon a bench upon which a battery of the machines may be supported in close proximity to the hatter's working bench, thus saving him unnecessary steps while operating the machine.

The invention further consists in the novel features of construction, the combination of elements and arrangement of parts which will be pointed out in the description to follow and then summed up in the appending claims.

In the accompanying drawings in which is shown one of other possible embodiments of the invention

Fig. 1 shows a side elevation of my improved hat brim flanging machine, and a removable block supporting a hat therein to be flanged;

Fig. 2 shows a front perspective view of the same machine on a somewhat smaller scale;

Fig. 3 shows upon an enlarged scale a longitudinal section taken on line 3—3 of Fig. 1, through the supporting bracket, a spring actuated arm mounted thereon, and shaft secured to said bracket; and

Fig. 4 shows upon a somewhat reduced scale one of the springs shown in Fig. 3, enclosed in the rocker arm and connecting the arm and shaft.

The machine includes a suitable sand bag within which a quantity of sand is provided, forming a flexible bottom, along with a suitable electric heating unit, the bag being so proportioned and supported as to engage and provide a uniform yielding pressure upon a hat brim when supported on a hat block positioned beneath the sand bag.

Referring in detail to the characters of reference marked upon the drawings, 5 indicates a portion of a work bench upon which my hat flanging machine is mounted. 6 indicates a part of the frame for supporting the bench and 7 represents a commercial form of hat block upon which the hat 8 is positioned, preparatory to the engagement of its brim portion 9 by the sand bag 10, see dotted lines in Fig. 1.

As before suggested, this bag is filled with sand and kept heated in any suitable manner, as by means of an electric heating unit, not shown. The bag is adapted to be lowered on and raised from the underface of the brim, as in the operation of flanging the same. In practice the bag is usually allowed to remain in its lowered position several minutes, long enough in fact to thoroughly warm and press the brim into a shape conforming to that of the block on which it is mounted.

11 represents a base frame member that is adapted to be secured to a bench, table or the like, in any suitable manner, as by means of screws as shown, see Fig. 2, and includes a vertical cylindrical socket 12 in which the lower end portion of a post 13 is supported. Upon the upper end portion of this post is secured a collar 13' and upon it and the post is mounted a frame member 14 which is adapted to swing horizontally, the swinging movement being effected by a slight pull in either direction, better to facilitate the hand operations on the hat when the sand bag is not in use. A thimble 14' is fitted in the upper end of the sleeved base portion of the frame to enclose the same and provide a socket for a rubber cushioning member 44, the purpose of which will again be referred to. This frame member 14 is in the form of a forked arm upon which the several operative parts of the machine, including the sand bag, are supported. It includes two extended arms 15—15, the end portions of which are disposed in substantially parallel relation and form aligned bearings 16 in their outer end portions that support a fixed shaft 17. A sector 18 is mounted between these two arms upon this fixed shaft and is adapted to be moved down and up with the help of springs later to be referred to, from the position shown in full lines in Fig. 1 to that shown in dotted lines and vice versa, by the manipulation of the handle 19 that extends forward in reach of the

operator, and whereby he may raise and lower the bag.

The sand bag, see Fig. 1, is flexibly supported through chains 20—20, the lower ends of which are attached to the shackles 21 secured to the metal top portion 22 of the bag and the upper ends to the I-bolts 23 which are supported in an upwardly disposed flange 24 of the sector. These I-bolts, by reason of their threaded nuts mounted thereon, serve as a means for suitably adjusting the position of the sand bag with respect to the hat and block located therebetween.

The arms of the frame 14 include two spaced-apart aligned bearings 25—25, see Fig. 3 in which a shaft 26 is adjustably mounted. This shaft is keyed as at 27 to a disk 28, which together with the shaft may be rotated, and is provided with a series of holes 29 which are brought to register with the single tapped hole 30 in the associated bearing 25 and whereby the shaft and its disk may be set, and fixed in relation to the bearings by the screw 31 that is adapted to be placed through a selected hole of the disk and secured in the tapped hole.

Each of the bearings 25—25 are provided with an inwardly extended cylindrical bearing portion 32 upon which is rockably mounted a spring actuated rocker arm 33 whose hub portion is hollow, forming a closed chamber 34 to accommodate a series of coiled springs 35. The inner ends 36 of these springs are suitably bent at a right angle and seated in a slot 37 of the fixed shaft 26 while the outer ends 38 of the springs are also bent at a right angle and engage a shouldered portion 39 on the inner cylindrical wall of the rocker arm so that a spring tension is provided as between the fixed shaft and the movable arm. The tension of the springs upon the arm, as before suggested, being susceptible of adjustment as by means of the shifting of the disk and the changing of the screw 31 into the different holes of the disk.

The forked end of a connecting rod 40 is hingedly connected to the upwardly disposed end portion of the rocker arm 33 while the other end is threaded, and positioned in a sleeve 41 of the upper central portion of the sector 18, a nut 42 being provided for the threaded end of the rod whereby the latter may be adjusted with respect to the sleeve in a way to provide additional adjustment for raising or lowering the sand bag. The rocker arm is further provided with a rearwardly extended lug 43 which serves to engage a suitable bumper 44 mounted in the top end of the post 13 so that when the mechanism is tripped or released by the operator from the position shown in dotted lines, and allowed to rise up to its normal position, said lug will strike the bumper forming a stop and retain the parts in a fixed upper position.

The relative position of the several cooperating hinged joints as between the supporting bracket, the rocker arm, the segment and connecting members is such as to allow the springs within the rocker arm to hold them and the sand bag in a raised position, but which yields to the hatter's operation or pull upon the lever when it is desired to lower bag to the dotted position. In this position, the connected parts which in a sense form a toggle are retained or held against the action of the spring, leaving the weight of the bag free to lay upon the hat brim. On the other hand, when it is desired to remove the hat, the operator simply pulls out slightly upon the handle in a way to unlock the toggle formed by the parts, whereupon the springs immediately carry the bag to its upper position of rest.

From the foregoing, it will be seen that the machine is not only simple in construction, but likewise very easy to operate.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A hat brim flanging machine comprising a frame, a sector mounted to swing thereon, a sand bag, means connecting the sector and sand bag, spring means connected with the frame, an arm enclosing the spring and mounted to swing upon and with respect to the frame, means connecting the arm and sector, and means for operating the sector to raise and lower the bag.

2. A hat brim flanging machine comprising a frame, a sector mounted to swing thereon, a sand bag suspended therefrom, a shaft journaled in the frame, a disk secured to the shaft and adapted to be adjusted with respect to the frame, springs encircling the shaft having one end connected thereto and the other attached to the arm to provide a tension therefor, and means connecting the arm and sector.

3. A hat brim flanging machine comprising a frame, a sector mounted to swing thereon and having two spaced-apart grooves, a sand bag, a pair of chains connecting the sector and sand bag one laying in each of the said grooves, a swinging arm, spring means connecting the frame and arm, means connecting the arm and sector, means for operating the latter to lower and raise the sand bag, the said sector connecting means and spring being so proportioned, mounted and connected with respect to the swinging arm and its axis as to form a toggle to lock the bag in both raised and lowered positions.

4. A hat flanging machine comprising a frame including an arm, a sector hinged to swing thereon, a sand bag, flexible means connecting the sector and sand bag, a swinging arm, connections between the arm and sector adapted to engage the fulcrum of the sector in a manner to lock the bag in its lowered position, means providing a tension on the arm to hold the sector and bag in a raised position, and a handle for operating the sector to lower and raise the sand bag.

5. A hat brim flanging machine comprising a frame including a pair of arms, a swinging sector mounted therebetween, a sand bag flexibly suspended from the sector, a swinging arm also mounted between the arms of the frame, adjustable means connecting the sector and swinging arm, means connected with the swinging arm providing a tension for the latter, and means for adjusting said tension.

6. A hat flanging machine comprising a frame including a support and arm to swing thereon, a sector mounted to swing in the arm, a sand bag flexibly suspended from the sector, a shaft secured in the arm, springs encircling the shaft having one end connected thereto, means connecting the sector and spring, and means for operating the sector.

7. A hat brim flanging machine comprising a support, a laterally swinging frame, a spring-actuated swinging arm mounted therein and adapted to normally rest against the support, a sector mounted in the swinging frame to swing in the same direction with the swinging arm, adjustable means connecting the arm and sector, a hat block, a sand bag and flexible means for suspending it from the sector, and means for op-

erating the sector, and means for automatically locking it in a lowered position against the action of the spring-actuated arm.

8. A hat brim flanging machine comprising a support, a laterally swinging frame, a spring-actuated swinging arm mounted therein and adapted to normally rest against the support, a sector also mounted in the swinging frame and adapted to swing in the same direction with the swinging arm, a sleeve swiveled in the sector, means for adjustably connecting the spring-actuated swinging arm and sleeve, a hat block, and means for operating the sector and locking it in a lowered position against the action of the spring-actuated arm.

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