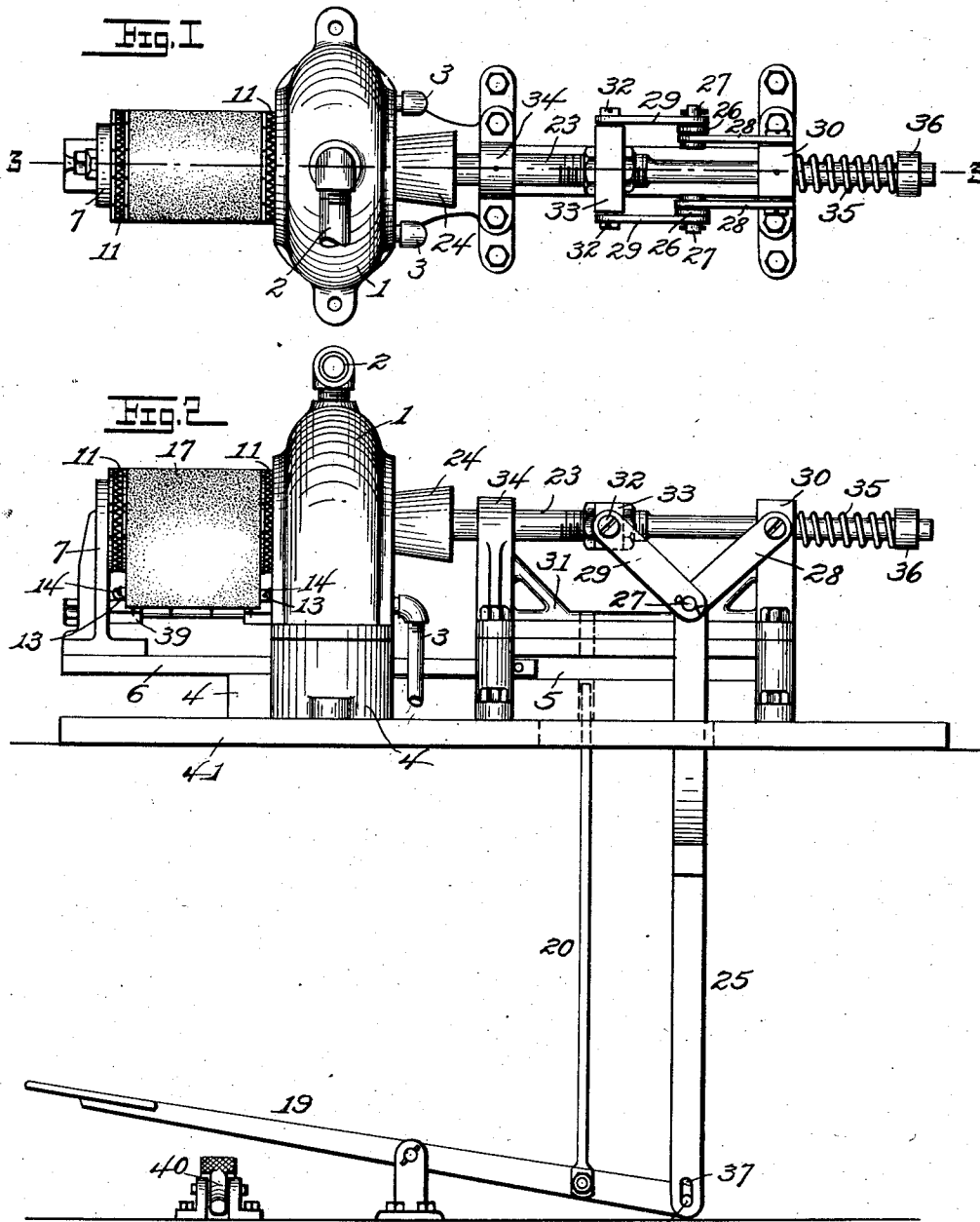


C. A. SMITH.
LAUNDRY PRESSING MACHINE.
APPLICATION FILED APR. 30, 1910.

1,010,697.

Patented Dec. 5, 1911.

2 SHEETS—SHEET 1.



WITNESSES:
J. E. Arthur
Bruce Morris.

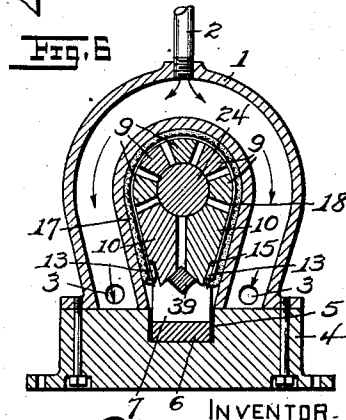
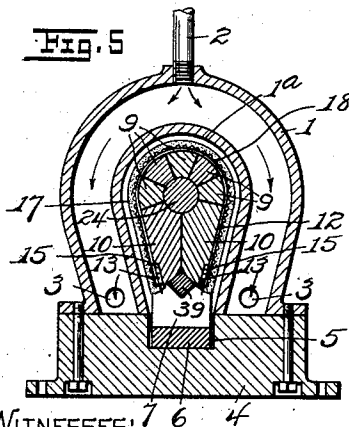
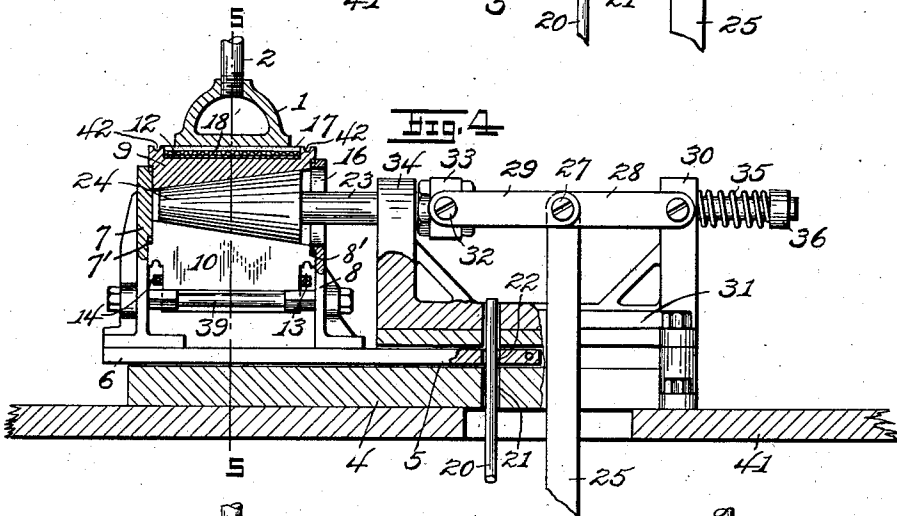
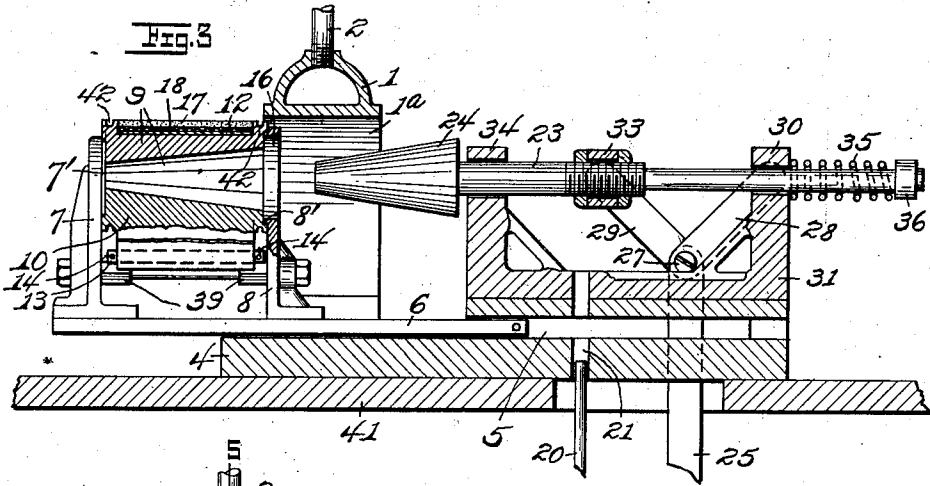
INVENTOR
Carlos A. Smith
By
H. E. Dunlap
ATTORNEY:

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Bruce Morris.

FIG. 7

INVENTOR.
Carlos A. Smith
BY
H. E. Amick
ATTORNEY.

UNITED STATES PATENT OFFICE.

CARLOS A. SMITH, OF BELLAIRE, OHIO.

LAUNDRY PRESSING-MACHINE.

1,010,697.

Specification of Letters Patent.

Patented Dec. 5, 1911.

Application filed April 30, 1910. Serial No. 558,745.

To all whom it may concern:

Be it known that I, CARLOS A. SMITH, a citizen of the United States of America, and resident of Bellaire, county of Belmont, and State of Ohio, have invented certain new and useful Improvements in Laundry Pressing-Machines, of which the following is a specification.

This invention relates to a pressing and shaping machine adapted for laundry use.

The primary object of the invention is to provide a simple and conveniently-operated machine of the class mentioned whereby cuffs, whether attached or detached, and other similar articles may be pressed and shaped at a single operation.

A further object is to simplify and structurally improve that class of laundry ironing or pressing machines employed for pressing and shaping cuffs, neck-bands, and the like.

With these and other objects in view, the invention accordingly consists in the particular construction, arrangement and combination of parts which will be exemplified in the construction hereinafter set forth, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a top plan view of the invention; Fig. 2 is a side elevation of the same; Fig. 3 is a longitudinal sectional view of the same taken on the line 3—3, Fig. 1, showing the expansible work-holder and the mandrel in non-operative relation at opposite sides of the steam-chest; Fig. 4 is a view similar to Fig. 3, showing the device in pressing position; Fig. 5 is a transverse sectional view, the section being taken on the line 5—5, Fig. 4, showing the position of the parts prior to the expansion of the work-holder into pressing relation with the steam-chest; Fig. 6 is a similar view, showing the work-holder expanded into pressure-exerting position; Fig. 7 is a detail view showing a retractile coil spring.

Referring to said drawings, in which like designating characters distinguish like parts throughout the several views—1 indicates a hollow saddle-shaped chest, which will hereinafter be termed a steam-chest, although it may be heated as well by hot water or hot air as by steam. The heating agent is conducted into the chest through a pipe 2, and is discharged therefrom through pipes 3. A plain curved interior face 1^a is provided on

said steam-chest, the curvature of said face being substantially that desired for the finished article. Said chest is mounted upon a stationary base 4 which has a longitudinal runway 5 therein which extends between the separated members of said chest. In said runway is slidably mounted the base-plate 6 of a work-holder which is adapted for co-operating with the steam-chest 1 for pressing articles mounted upon said holder. Said work-holder comprises a pair of oppositely disposed supports 7 and 8 which respectively have upon their adjacent faces circular bosses 7' and 8' about which are fitted the shouldered ends of a plurality of segments 9 and 10 which together constitute an expansible head. Registering grooves 42 provided in the segments adjacent to their ends constitute an annular channel at each end of the expansible head in which is mounted an endless coil-spring 11 by means of which said segments are maintained in proper relation to each other and are normally held collapsed with their shoulders in engagement with said bosses 7' and 8'. The lowermost segments 10 are of greater vertical width than the segments 9 and have their adjacent faces coinciding in a vertical line when in normal position, as is clearly shown in Fig. 5.

A saddle-plate 12 of flexible sheet metal closely embraces the outer faces of the segments 9 and 10, terminating at its opposite ends adjacent to the lower, or free, edges of said segments 10. Fixed to each of said ends on the inner face of the saddle-plate is a longitudinal bar 13 whose ends project outward beyond the edges of the plate. A transversely directed retractile coil spring 14 unites the ends of the bars 13 at opposite ends of the work-holder for normally maintaining said segments 10 in the position shown in Fig. 5. Said bars are received in and are movable in recesses 15 provided in the outer faces of the segments 10.

The upper end of the support 8 has an eye 16 therein concentric with the boss 8', and registering with said eye is the larger end of a tapered socket provided in the expansible head, the segments 9 and 10 having their inner faces so shaped that, when they occupy their normal positions, such a socket will be formed.

The expansible head has an outer pad or fabric covering 17 upon which the cuffs or other articles to be pressed are mounted, and

preferably interposed between said covering and the saddle-plate 12 is a woven wire netting or wire fabric 18 designed to hold the covering 17 out of contact with said saddle-plate and thus to admit of the ready escape down the surface of the latter of such moisture as passes through said covering. The saddle-plate 12 not only serves as a friction-plate, allowing the embraced segments to freely move with respect to each other when the head is expanded, but also to prevent the wire fabric 18 and covering 17 from being pressed into the interstices between the segments during the pressing operation.

When the work to be acted upon is mounted upon the work-holder, the base-plate 6 forming a part of the latter is forced inward along the runway 5 until it occupies a position within the embrace of the steam-chest 1, as shown in Fig. 4. Then, upon the depression of a treadle 19, a locking-member 20 is elevated through an opening 21 in the base 4 and through a then registering opening 22 in the slidable base 6, for locking the work-holder in a stationary position. At the same time, suitable mechanism interposed between said treadle and a horizontally disposed mandrel 23 is actuated to move the latter forward and to thrust its cone-shaped head 24 into the socket of the expansible head, expanding the latter into coöperative pressing relation with the face 1^a of the steam-chest. The interposed mechanism herein depicted comprises a vertically movable rod 25 pivoted at its lower end to said treadle and terminating in a yoke at its upper end. Each of the yoke terminals 26 is pivotally connected to a pivot-pin 27 upon which are pivoted the adjacent ends of toggles or links 28 and 29, the former being pivoted at its opposite end to a stationary bearing-member 30 forming a part of a mandrel-support 31. The opposite ends of the links 29 are pivoted upon trunnions 32 carried by a cross-head 33 which is adjustably mounted upon the mandrel 23. When the treadle occupies its normal position, the links 28 and 29 occupy a downwardly inclined position, as shown in Fig. 3, and when said treadle is depressed, said links are forced into a substantially horizontal alined position, thrusting said mandrel forward in its bearings 30 and 34 for expanding the expansible head.

A coil-spring 35 interposed between the outer face of the bearing 30 and a collar or head 36, carried by the mandrel serves to return the latter to its normal position when the treadle is released. The mandrel being withdrawn from the expansible head, the work-holder is moved forward by hand and the work removed therefrom.

A slot 37, provided in the lower end of the rod 25 and through which the pivot-pin 38

carried by the treadle projects, permits the locking member 20 to be elevated into locking position prior to the time that the mandrel is actuated to move forward.

A bar 39 has its opposite ends fixed in the oppositely disposed supports 7 and 8 and directly underlies the free edge of the segments 10. Said bar may be rectangular in cross-section, or it may have ends rectangular in cross-section, as shown in the drawings. Said bar is so mounted that each of its upper faces is inclined at an angle of 45 degrees and coincides with the lower similarly inclined lower edge of the adjacent segment 10. Thus, as will be apparent, when said segments are forced downward by the expanding action of the head 24 of the mandrel, they will be caused to separate, as shown in Fig. 6 and to thus exert laterally-directed pressing force against the steam-chest.

When the mandrel and connected parts assume expanding relation with the expansible head, they are held in such position by the frictional engagement of the mandrel head 24 with said expansible head. A pivoted lever 40, which constitutes an ordinary type of treadle "kick-off", is provided at a suitable point, the same being adapted to initially move the treadle for returning the parts of the expanding device to normal inoperative position.

The device constituting the invention described is preferably mounted upon a supporting frame or table 41, as shown.

It will be obvious that various alterations may be made in the construction and arrangement of the parts constituting my invention, as defined by the appended claims, without departing from the general spirit or scope thereof and without sacrificing any of the advantages thereof. For instance, it is readily apparent that various mandrel-operating mechanisms differing from that herein shown and described would readily suggest themselves to the skilled mechanic. Hence, I would have it understood that I do not desire to limit myself to the precise construction and arrangement of parts so depicted and described.

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

1. A laundry pressing machine, comprising a steam-chest, a slidable work-holder comprising segments adapted to be expanded into pressing relation to said chest, and a horizontally disposed mandrel having a single conical head for expanding said work-holder.

2. A laundry pressing machine, comprising a steam-chest, a slidably mounted work-holder comprising segments adapted to be expanded into pressing relation to said chest, and a mandrel operating in alinement with

said work-holder and having a single conical head for expanding the latter.

3. A laundry pressing machine, comprising a table, a stationary steam-chest mounted on said table, a work-holder adapted to be moved horizontally into and out of the embrace of said chest, and means operating in alinement with said work-holder for expanding the latter into pressure-exerting relation with said chest.

4. A laundry pressing machine, comprising a steam-chest, a segmental work-holder, a support for said work-holder adapted to be moved into and out of the embrace of said chest, means for locking said support in position with the work-holder within the embrace of said chest, and means for expanding said work-holder into pressure-exerting relation to said chest.

5. A laundry pressing machine, comprising a saddle-shaped steam-chest, an expansible work-holder adapted to be moved into and out of the embrace of said chest, and a longitudinally movable mandrel in alinement with said work-holder for expanding the latter into pressure-exerting relation with said chest, said mandrel having a single conical head.

6. A laundry pressing machine, comprising a saddle-shaped steam-chest, an expansible work-holder adapted to be moved into and out of the embrace of said chest, means for locking said work-holder within said embrace, and means for expanding said work-holder into pressure-exerting relation with said chest.

7. A laundry pressing machine, comprising a saddle-shaped steam-chest, an expansible work-holder adapted to be moved into and out of the embrace of said chest, and

mechanism including a locking means for said work-holder whereby the latter is expanded.

8. The combination with a steam-chest of an expansible work-holder adapted to cooperate with said chest, said work-holder comprising a plurality of segments, means for normally maintaining said segments in their retracted position, a saddle-plate embracing said segments, a fabric covering for said saddle-plate, and means for moving said segments with relation to each other for exerting pressure against said chest.

9. The combination with a saddle-shaped steam-chest, of a similarly-shaped expansible work-holder adapted to be moved longitudinally into and out of the embrace of said chest, said work-holder comprising a plurality of segments, means for normally maintaining said segments in their retracted position, and means including a locking device for said work-holder whereby said segments may be uniformly thrust outward in expanded coöperative relation to said chest.

10. The combination with a saddle-shaped steam-chest, of an expansible saddle-shaped work-holder adapted to coöperate with said chest, said work-holder comprising a plurality of segments, means for normally maintaining said segments in their retracted position, a covering for said segments which includes a flexible saddle-plate, and means for uniformly thrusting said segments outward in expanded relation.

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

CARLOS A. SMITH.

Witnesses:

EDMUND C. WHITEHEAD,
H. E. DUNLAP.