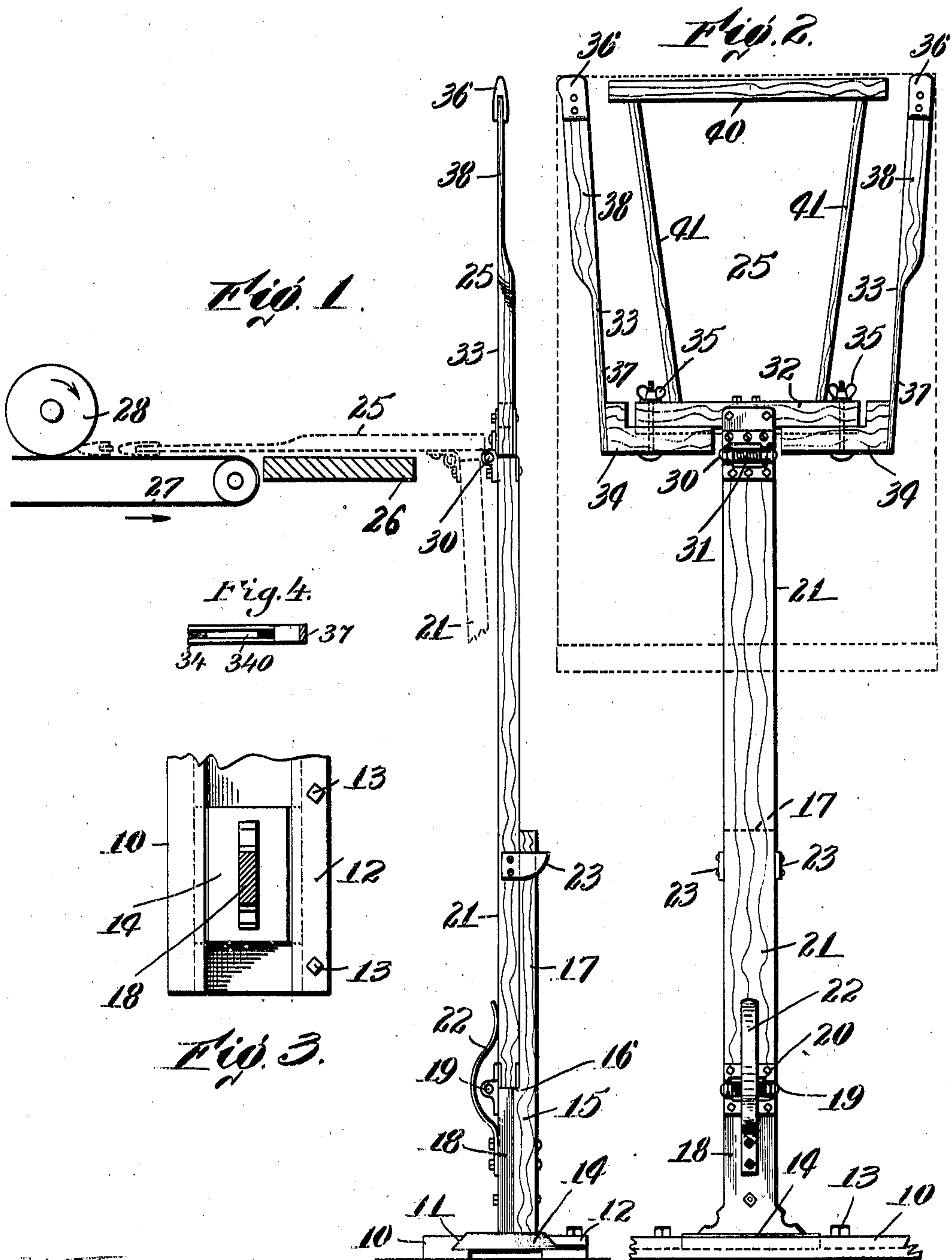


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MACHINE FOR FEEDING ARTICLES TO MANGLES.
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UNITED STATES PATENT OFFICE.

ANDREW BURNS, OF RYE, NEW YORK.

MACHINE FOR FEEDING ARTICLES TO MANGLES.

No. 916,839.

Specification of Letters Patent.

Patented March 30, 1909.

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To all whom it may concern:

Be it known that I, ANDREW BURNS, a citizen of the United States, residing at Rye, in the county of Westchester and State of New York, have invented a new and useful Machine for Feeding Articles to Mangles, of which the following is a specification.

This invention relates to a device for supplying and feeding articles to mangles and similar machines. Although it is capable of general use, it is particularly applicable as a pillow-case turner; that is, to supply pillow-cases to mangles. It can be used, however, for other articles as shirts for example which have a somewhat similar shape.

The principal objects of the invention are to provide a simple, inexpensive, and convenient construction which can be applied to substantially any mangle without altering the form or construction of the mangle, and can be adjusted along the front of the mangle and which normally will assume a convenient position in which the operator can apply the pillow-cases or the like with means whereby a support for the pillow-cases, etc. can be turned down on the table and moving apron of the mangle and pushed forward so that the first roll can take the article from it; also to provide means whereby the support will immediately spring back to normal position ready for the application of another article without any further attention on the part of the operator; means whereby the holder or support may be adjusted to take different sizes of pillow-cases or the like; means whereby the said articles can be removed very easily by the first roll and traveling apron; and to provide several features of construction which will be pointed out hereinafter.

Further objects and advantages of the invention will appear elsewhere in this specification.

Reference is to be had to the accompanying drawings which show a practical embodiment of the invention, and in which—

Figure 1 is a side elevation thereof showing diagrammatically a few elements of a mangle to indicate how the invention may be used in connection therewith. Fig. 2 is a front elevation of the same, Fig. 3 is a sectional view showing the bottom adjustment in plan and Fig. 4 is a plan of a detail.

Although as stated above this invention is capable of general use, it is shown as embodying a form particularly applicable as a pillow-

case turner. In this form it is provided with a base 10 which is fixed to the floor, and is provided with a dove-tail groove 11. On one or both sides, as desired, this dove-tail groove has a removable cap 12 fixed in position by bolts 13 or the like, so that the adjustable foot 14 of the device can be moved along in dove-tail groove and clamped in any adjusted position by screwing down the bolts. On this foot is supported an upright standard 15 which has a horizontal shoulder 16 part way up on one side, and an upwardly extending part 17 projecting above it. On the rear of the standard below the shoulder 16 is a projection 18 extending upwardly from the foot 14 and to which the standard is secured so as virtually to form a part thereof. The top of this projection forms a continuation of the shoulder 16. On the rear of the projection 18, and near the shoulder is a pivot-pin 19 provided with a spring 20 of any ordinary or desired construction, and pivotally connected with it is a bar 21 which is normally held by said spring in contact with the upwardly extending part 17 and supported on the shoulder 16 at its lower end. If desired, a second spring 22 may be employed to assist in this action, the form of this spring, shown in the drawings being such as to provide a better leverage on the bar than the spring 20 would afford. It will be seen that the bar can be tipped over to the dotted line position shown in Fig. 1, and that the spring or springs will return it to the position shown in full lines. Guides 23 are provided for keeping the bar in proper position with respect to the upright portion 17 of the standard and taking any side strain off the springs. It will be understood that one or more springs may be employed, and in fact that any other means for accomplishing the same result may be used for this purpose.

At its top the bar 21 carries a support or frame 25 in such a way that it is movably mounted with respect to the bar, and can be swung downwardly as indicated in dotted lines in Fig. 1, so that the swinging motion of the bar will carry it forward. This motion results in placing an article held by this support on the table 26 of the mangle, and in contact with the moving apron 27. A second motion, namely that of the bar 21 brings the whole thing farther back so that the apron and first roll 28 can take the pillow case or the like from the support into the

machine. For the purpose of carrying the support 25 in this way the upper end of the bar is preferably provided with a pivot-pin 30 and a spring 31 of any ordinary or desired construction connected with a cross-bar 32 which constitutes the bottom of the frame. This forms a yielding connection permitting the operation just described, and normally returning the frame automatically to the vertical position shown in full lines when the attendant releases it.

The frame 25 is provided with a pair of arms 33 which are adjustably connected with the cross-bar 32 by being mounted on slides 34 which may be moved out and in and which are held in adjusted position by bolts passing through slots 340 and thumb-nuts 35 or in any desired manner. These arms preferably diverge from each other so that their outer ends form the extreme dimension of the frame. These arms are preferably provided with end pieces 36 of aluminum or other metal or the like tapered down to a thin edge at the top. The arms are also provided with two parts 37 and 38. The part 37 of each arm is fixed to the end of the slide 34 and is comparatively thin and flat and located in a plane perpendicular to the plane of the cross-bar 32. This permits a slight yielding action of the arms outwardly and inwardly so that they do not have to be adjusted to a very fine degree of accuracy. At the same time these parts of the arms being wide as shown in Fig. 1, they serve to give the necessary strength at this point. The arms are then curved outwardly and flattened in the other direction so that the parts 38 allow the arms to slightly yield transversely at their outer ends and give strength to resist an inward or outward thrust. It is to be observed that the plane of the parts 38 of the arms is parallel to the plane of the cross-bar 32, and to the plane of a central cross-bar 40 which is rigidly connected with the cross bar 32 by rods 41. In fact these elements 32, 38, 40 and 41 are preferably in the same plane the whole forming a flat structure, so that an article like a pillow case can be mounted as indicated in dotted lines in Fig. 2 on the support. The cross-bar 40 is located mid-way between the end pieces 36 and its edge is preferably substantially in alignment with their front or upward edges. It is of a general wedge shape substantially like the end pieces 36 shown in Fig. 1, being sharpened down to a thin edge for the same purpose as the end-pieces 36.

In operation the foot 14 is adjusted along the base 10 until it is brought to proper position, and then the foot is clamped to the base. The arms 33 are then adjusted outwardly or inwardly so that their upper ends 36 are at the proper distance apart to accommodate the particular pillow-case or other article with which the invention is to be used.

The operator places the pillow-case over the frame as indicated in dotted lines in Fig. 2 and then pushes the frame down and forward as indicated in dotted lines in Fig. 1. This brings the end of the pillow case in position to be taken by the apron 27 and roll 28 so that the article is removed from the frame and carried into the mangle. It will be observed that the wedge-shaped construction of the end pieces 36 and the cross-bar 40 is such that the pillow case or the like will be in proper position and condition for this operation to take place. When the operator releases the frame it will spring back to the full line position shown in Fig. 1.

It is to be observed that this is an exceedingly simple and inexpensive device which can be supported independently of the mangle and which will operate in connection with any kind of a mangle without altering the latter in any way. It is readily adjustable to accommodate articles of various characters and to place it at any desired position along the front of the mangle. Moreover the base 10 may extend throughout the length of the mangle and any desired number of these devices may be placed upon it so that the mangle can be made to take several articles at once and to operate on separate articles at different portions of its rolls.

While I have illustrated and described a practical embodiment of the invention, I am aware that many modifications may be made therein by persons skilled in the art without departing from the scope thereof as expressed in the claims. Therefore, I do not wish to be limited to the details of construction herein shown and described, but

What I do claim is:—

1. A device for feeding articles to mangles, comprising a supporting frame pivotally mounted, yielding means for swinging the frame into an upright position on its pivot, and means whereby the frame may be moved forward bodily when in horizontal position.

2. In a device of the class described, the combination of a supporting frame, with means whereby said frame may be swung from a vertical to a horizontal position and moved forward horizontally while in horizontal position, and yielding means for returning the frame to a vertical position.

3. The combination with a mangle having a moving apron, and a roll cooperating therewith, of a foot adjustable with respect to said roll, a standard supported by said foot, and a support connected with said standard and movable to a position in which an article supported thereby may be engaged by the apron and roll and taken thereby from the support.

4. The combination with a mangle having a moving apron, and a roll cooperating therewith, of a base mounted adjacent to said

mangle, a foot adjustable along said base to any desired position with respect to said roll, a standard supported by said foot, and a support for pillow cases or the like yieldingly connected with said standard.

5. In a device for feeding articles to mangles, the combination of a standard, a bar pivotally mounted thereon, a spring for normally holding said bar upright, a support pivotally mounted on the top of said bar, and yielding means for holding said support in line with the bar.

6. In a device for feeding articles to mangles, the combination of a movable standard, a bar pivotally mounted thereon, a spring hinge for normally holding said bar in a substantially upright position, a support pivotally mounted on the top of said bar, and a spring hinge for normally holding said support in an upright position.

7. In a device for feeding articles to mangles, the combination of a standard, a bar pivotally mounted thereon, yielding means for normally holding said bar upright, a support pivotally mounted on the top of the bar, yielding means for normally holding said support upright in line with the bar, and a horizontal table over which said support is adapted to move horizontally.

8. In a device for feeding articles to mangles, the combination of a standard having a shoulder and a part projecting upwardly from one side of said shoulder, a bar pivotally mounted at the top of said shoulder and adapted to rest thereon against said upwardly extending part, and a frame movably connected with the top of said bar.

9. In a device for feeding articles to mangles, the combination of a standard having a shoulder and a part projecting upwardly from one side of said shoulder, a bar pivotally mounted at the top of said shoulder and adapted to rest thereon against said upwardly extending part, a guide for guiding the motion of the bar with respect to said upwardly extending part, resilient means for normally holding the bar against said upwardly extending part, and a frame movably connected with the top of said bar.

10. In a device for feeding articles to mangles, the combination of a standard having a shoulder and a part projecting upwardly from one side of said shoulder, a bar pivotally mounted at the top of said shoulder and adapted to rest thereon against said upwardly extending part, a support movably connected with the top of said bar, a spring for normally holding the bar against the upwardly extending part of the standard, and a spring hinge for connecting the top of the standard with said support and normally holding the latter in vertical position.

11. In a device for feeding articles to mangles, the combination of a swinging bar, a support pivotally connected with the top of

the bar, and a spring for normally holding the support in a certain position with respect to the bar, said support comprising a pair of laterally adjustable arms.

12. A device for feeding articles to mangles, comprising a swinging cross-bar, slides connected with the opposite ends of said cross bar, means for holding said slides in adjusted positions, and arms extending from said slides.

13. In a device for feeding articles to mangles, the combination with a swinging cross-bar, of a pair of slides adjustably mounted thereon, and arms mounted on the ends of said slides, said arms diverging from each other and having metallic wedge shaped tips.

14. The combination with a swinging cross-bar, of a pair of slides adjustably mounted thereon, and arms mounted on said slides, said arms each consisting of two portions, a lower portion located in a plane transverse to the plane of the cross-bar, and an upper portion located in a plane parallel with the plane of the cross-bar.

15. In a device for feeding articles to mangles, the combination of a cross-bar, a pair of arms adjustably connected therewith, the outer ends of said arms being in the same plane as the cross-bar, and a central supporting cross-bar located between the outer ends of said arms and in the same plane.

16. The combination of a cross-bar, a pair of arms adjustably connected therewith, the outer ends of said arms being in the same plane as the cross-bar, and a central supporting wedge shaped cross-bar fixed to the first cross-bar and located between the outer ends of said arms and in the same plane.

17. A device for feeding articles to mangles comprising a pair of adjustable arms and a fixed cross bar between the outer ends thereof.

18. A device of the class described comprising a pivoted cross bar bodily movable to and from the mangle, arms extending outwardly therefrom and diverging from each other, and a cross bar located between the outer ends of said arms and out of contact therewith, the ends of the arms and the second cross bar being wedge shaped.

19. A device for feeding articles to mangles comprising a pivoted cross bar, arms extending outwardly therefrom and diverging from each other, and a cross bar located between and substantially even with the outer ends of said arms, and supported from the first named cross bar independently of the arms.

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses.

ANDREW BURNS.

Witnesses:

LOUIS W. MORRELL,
HAROLD SICKLES.