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C. R. STAKE.

MANGLE.

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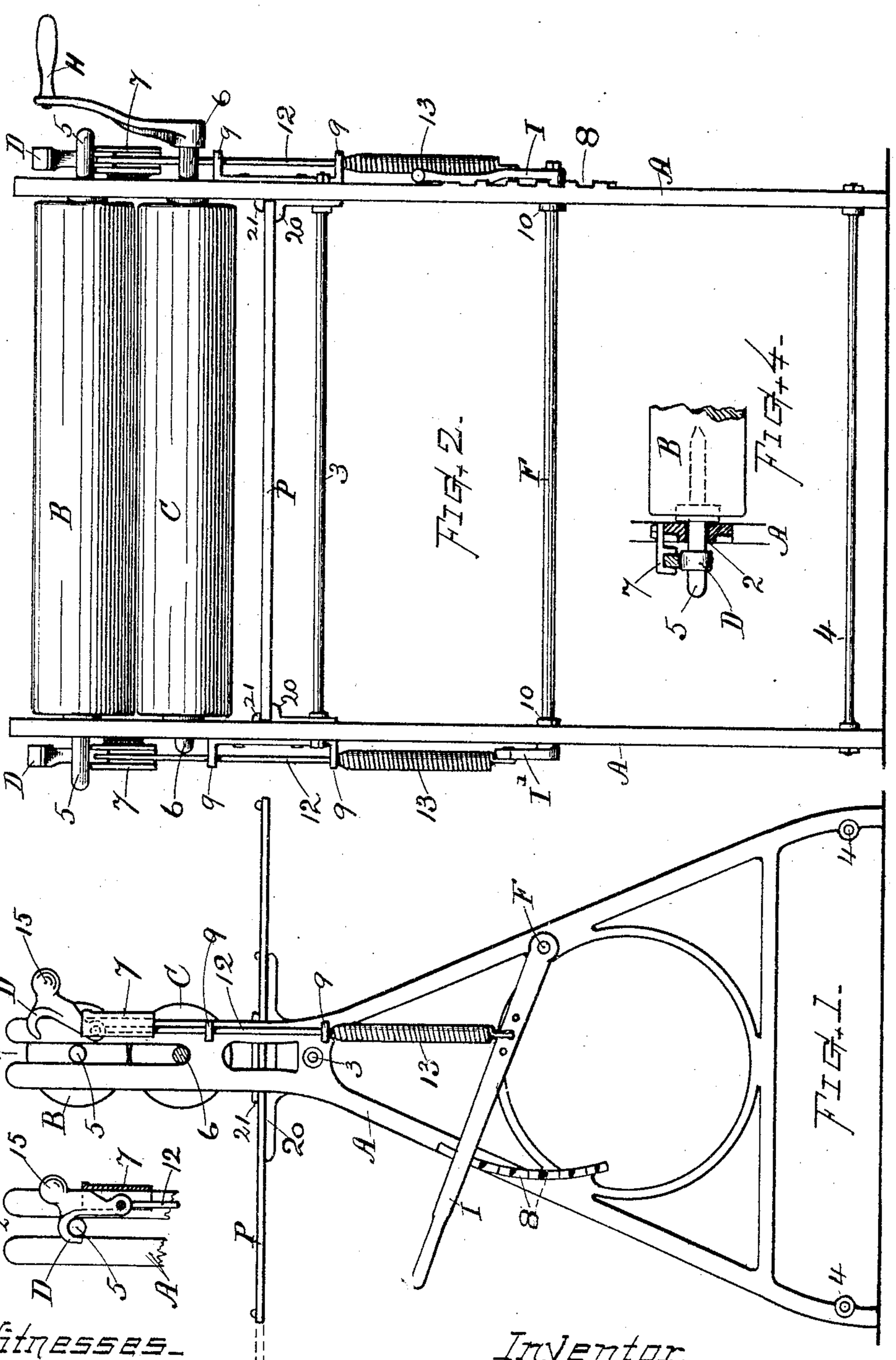

FIG. 2.

FIG. 4.

FIG. 5.

FIG. 1.

Witnesses—

Fred N. Flinn.

Simons & King

Inventor—

Charles Robert Stake

By Chas. A. Burleigh

Attorney.

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UNITED STATES PATENT OFFICE.

CHARLES ROBERT STAKE, OF WORCESTER, MASSACHUSETTS.

MANGLE.

SPECIFICATION forming part of Letters Patent No. 785,770, dated March 28, 1905.

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To all whom it may concern:

Be it known that I, CHARLES ROBERT STAKE, a subject of the King of Sweden and Norway, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Mangle, of which the following, together with the accompanying drawings, is a specification sufficiently full, clear, and exact to enable persons skilled in the art to which this invention appertains to make and use the same.

The object of my present invention is to provide a simple, inexpensive, and efficient mangle for family uses.

I attain this object by the mechanism illustrated in the accompanying drawings, wherein—

Figure 1 represents an end view of a mangle embodying my invention. Fig. 2 represents a front view of the same. Fig. 3 is a fragmentary section showing the automatic hook; and Fig. 4 is a fragmentary plan view at one end of the roll, the slotted end of the frame being shown in section. In Fig. 1 the crank is omitted for clearness of illustration.

Referring to the drawings, A denotes the metal standing end frames provided with upwardly-extending open slots 2 and united across by suitable girths or rods 3 and 4 at the center and near the foot.

B and C indicate the mangling-rollers, formed of hard wood or other suitable material and provided with extended axles 5 and 6, that loosely fit within the slots 2, whereby the rollers are confined to rotate in proper alinement with each other.

D and D indicate depressible hooks adapted for locking over the axles 5 of the top roller. Said hooks are respectively arranged to move up and down in guides 7, attached to the frame and having parallel flanges for supporting the hook.

F indicates a rocker-shaft journaled on the frame at 10 and having an arm I′ fixed on one end and a hand-lever I fixed on its other end, said hand-lever projecting at the front of the frame and being engageable with latch-lugs 8 for its retention at various positions of adjustment.

The hooks are respectively connected with the lever I and arm I′, each by a rod 12 and a coiled wire spring 13, uniting the end of the rod and lever-arm, thus forming a yieldable connection by which the hooks are raised and depressed as the hand-lever is moved.

Each draft-hook D is formed with a preponderant rearwardly-extended head 15, which tends to overbalance and throw the hook automatically out of alinement with the roller-axle 5 when the hook is elevated above the guide, (see Fig. 1,) a notch in the rear side of the hook permitting the hook to move out of alinement. The upper wall of this notch is inclined, so that when the hook is drawn downward within its guide 7 the hook, by the contact of its inclined back surface therewith, is caused to swing forward automatically and lock over the axle of the roller. (See Fig. 3.) The connection-rod 12 is fitted to slide in eye-pieces 9, fixed on the frame, which retain it in upright slidable position for direct endwise movement.

Adjacently below the pair of mangling-rollers there is provided a table or flat board P, which is supported in horizontal guides or between flanges 20 and 21, formed on or attached to the inner sides of the frame in a manner that permits sliding adjustment through the frame, so that the table can be used at a central position or with the greater portion of it projected at either the front or the rear of the roller alinement. Suitable stop-studs are provided near the edges of the table-board to prevent it from escaping from the supporting-guides.

The roll B, which is preferably about two and one-half feet, more or less, in length and about three or four inches, more or less, in diameter, can be readily lifted from the open slots 2 and replaced as desired.

In the operation the articles to be mangled are wound around the roll B. This is conveniently done by spreading them flat upon the table, placing the roller thereon, and rolling them onto it. In the case of small articles, such as collars and cuffs, a sheet of plain cloth may be used to hold them to the roller. The roller is then placed in the slots 2 upon the bottom roller C and the hand-lever depressed and latched under one of the lugs.

As the hooks descend they automatically swing forward and lock over the axles 5 of the roller B, and the further depression of the lever puts the yielding pressure of the springs 13 into effect for pressing the top roller against the roller C. The attendant then by turning the crank H rolls the articles between the rollers and continues the mangling operation to as thorough an extent as desired. When completed, the lever is released and lifted, and the hooks D swing back, leaving the roller free to be taken out and the articles discharged therefrom. If desired, the work or articles can be run onto the rolls from the table while the latter is drawn out or adjusted to project at one side of the central plane of the machine. Then the table can be slid through the frame or adjusted to project at the other side of the central plane, and the articles can be run off or delivered from the rolls upon the table at such opposite position.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a mangle, a removable top mangling-roller having its axles loosely confined within open slots formed in the frame; in combination with pivoted overbalanced draft-hooks adjacent to the slots, means for automatically engaging the hooks with the roller-axles when the hooks are depressed and for permitting them to be moved out of alinement with the axles when the hooks are elevated, and suitable actuating means for raising and yieldably depressing said hooks.

2. In a mangle, in combination with the removable mangle-roller having extended axles, of the axle-engaging hook formed with a preponderant head that tends to throw the hook rearward, an incline on the body of said hook, and a hook-guiding device that forces the hook forward over one of the roller-axles when the hook is depressed; and means for operating the hook.

3. The combination, of the frame provided with upright open slots and horizontal table-supporting guides, the mangling-rollers having their axles mounted in said slots, the upper roller readily removable therefrom, the table supported adjacently below said rollers, means for applying pressure on said rollers consisting of a tiltable hook, a guide supporting said hook, a connection-rod, a spring, and a hand-lever, and means for retaining the lever at position of adjustment, substantially as set forth.

4. The combination with the mangle-roller axle, the slotted frame, the axle-engaging hook and the operating-lever, of the flanged hook-guiding device, the coiled spring connected with said lever, the rod connecting said spring with the hook, and stationary guide-eyes fixed on the frame and supporting said rod for direct endwise movement.

5. A mangle comprising the connected end frames formed with upwardly-extending open slots, a pair of rollers having projecting axles that are removably supported within said slots, depressible hooks that automatically engage and disengage the top roller-axles, guides for said hooks, a rocker-shaft provided with a hook-actuating arm and a latchable hand-lever, yieldable connections uniting said arm and lever with the respective hooks, means for latching the lever, and a slidable table beneath said rolls.

Witness my hand this 9th day of April, 1904.

CHARLES ROBERT STAKE.

Witnesses:

CHAS. H. BURLEIGH,

HERMAN QUIST.