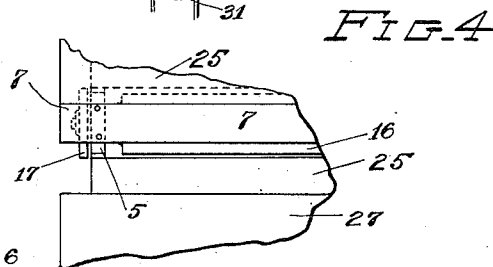
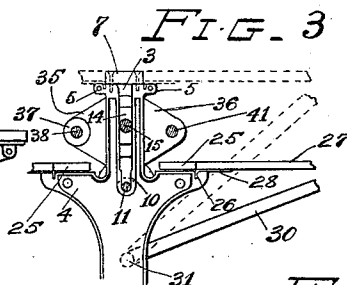
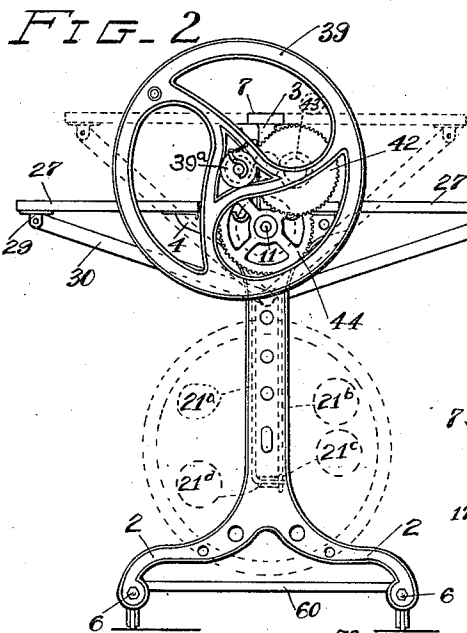
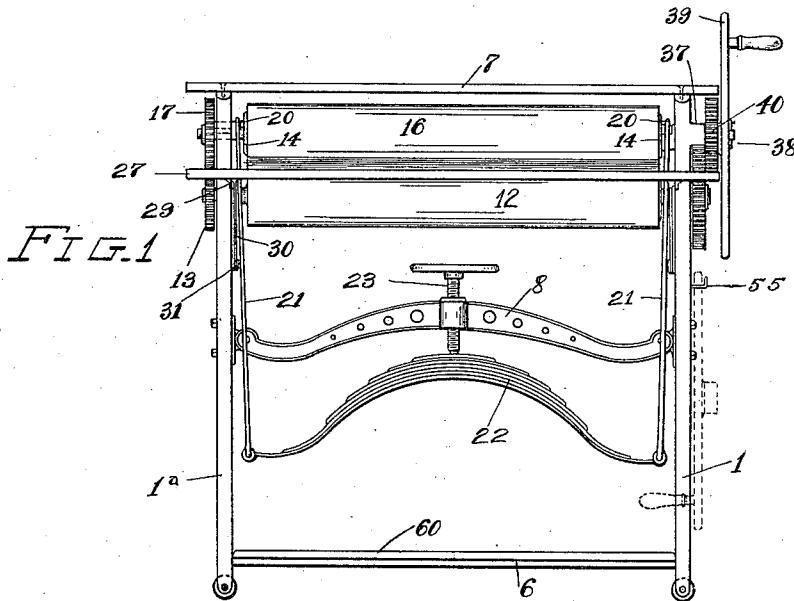


V. KRAL, F. M. VACHA & V. CAP.
MANGLE.

APPLICATION FILED OCT. 3, 1911.

1,059,619.

Patented Apr. 22, 1913.



Witnesses:

Alice B. Moore
Chas. Elvatt

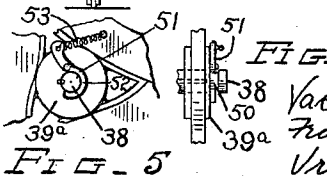


FIG. 6 Inventors,
Vaclav Kral,
Frank M. Vacha, and
Vratislav Cap
By Hull & Smith Attys.

UNITED STATES PATENT OFFICE.

VACLAV KRAL, FRANK M. VACHA, AND VRATISLAV CAP, OF CLEVELAND, OHIO.

MANGLE.

1,059,619.

Specification of Letters Patent.

Patented Apr. 22, 1913.

Application filed October 3, 1911. Serial No. 652,590.

To all whom it may concern:

Be it known that we, VACLAV KRAL, FRANK M. VACHA, and VRATISLAV CAP, citizens of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Mangles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to a class of devices known as mangles or devices for easily and rapidly smoothing out and pressing that class of laundried articles known as flat work, and has for its object the production of a device of this class which, in simplicity, durability, ease of operation, and convertibility shall be particularly adapted for domestic use. It is a well known fact that many house-wives would employ a machine of this character but for the room which it necessarily occupies when not in use.

Among the objects of this invention is the provision of a machine of this type, which, when not performing the fundamental purpose of its existence, can be converted into a very strong and satisfactory table, all the machine parts being housed within the area of the table top, thus permitting its use for some purpose at all times.

Other advantages of this invention relate to the details of construction and arrangement of parts whereby the above named objects are obtained.

In the drawings accompanying and forming part of this specification, we have illustrated one embodiment of our invention, the same being that embodiment in which we prefer to use the same, although it will be understood that this showing is illustrative merely, and that we do not propose to limit ourselves to the exact features of construction and arrangement shown therein.

In these drawings; Figure 1 is a front elevation of the complete machine; Fig. 2 a side elevation of the same showing it as adjusted for use as a mangle, the dotted lines indicating the position thereof when arranged for use as a table; Fig. 3 is a detail view of a portion of the upper end of the right hand standard shown in Fig. 1, the gearing being omitted; Fig. 4 a plan view of the machine parts being broken away; and Figs. 5 and 6 are detail views illustrating the method of securing the fly wheel to its shaft.

Describing the parts by reference characters, 1 and 1^a indicate respectively the right and left hand upright standards which support the operating parts of our improved mangle, said standards being preferably forked at their lower ends to provide the branches 2—2 as shown in Fig. 2. The upper end of these standards are formed with vertical slots 3, and the sides of said standards are formed with brackets 4—4 and 5—5, the tops of the latter brackets being substantially flush with the top of the standards, and the brackets 4—4 being of greater lateral extent than the brackets 5—5 and disposed a considerable distance therebelow. The standards 1 and 1^a are securely fastened together at their lower ends by means of stay rods 6—6 preferably secured to the ends of the branches and at their upper ends by a narrow cross piece 7, preferably of wood, and bridging the upper ends of the slots 3. Intermediately between their ends these standards are also preferably connected together by means of a yoke 8 which may conveniently be formed of cast iron, the function of which will be later described.

The lower end of the slot 3 is preferably reduced as at 10 to form a bearing for the shaft 11 of the lower roller 12 of the mangle, said shaft 11 carrying at its farther end a gear wheel 13. Slidably mounted in each of the slots 3 above the reduced portion thereof is a bearing block 14 in which is journaled the shaft 15 which carries the upper roll 16 of the mangle and is provided at its farther end with a gear wheel 17 similar to and meshing with the gear wheel 13. The rollers 12 and 16 may be made of hard wood or other suitable material, and their ends are spaced a short distance inward from the standards 1 and 1^a as shown in Fig. 1. The upper surfaces of the blocks 14 are formed at the point inside the standards 1 and 1^a with shallow grooves as illustrated in Fig. 1, and in these grooves are fitted stirrups 20—20 having depending shanks 21—21. As illustrated in Fig. 2 the shank portion of each stirrup comprises a pair of straight parallel rods 21^a and 21^b, one of said rods being formed with a terminal eye 21^c, and the other being formed with a right angularly turned end 21^d adapted to enter said eye and be retained therein by a cotter pin. Secured to said stirrup shanks, as by being looped about the portion 21^a thereof, is a semi-elliptic leaf

spring 22, having the central portion thereof engaged by a set screw 23 carried by the yoke 8 whereby the pressure of the mangle rolls may be varied.

5 Firmly secured to the brackets 4—4 at each side of the roller 12 is a stationary cross-piece 25—25 which serves to guide the work to the rollers and to receive it therefrom, the upper surface thereof being slightly
10 below the upper surface of the roller 12 as shown in Figs. 1 and 3. The width of the bracket 4 is slightly greater than that of the board 25 whereby a narrow shoulder is left at each side of the machine, and said shoulder
15 is formed with a notch 26. The brackets 5—5 also extend laterally a greater distance than the cross piece 7 and are likewise formed with notches as shown in Fig. 3. These shoulders are for the reception of the feeding and receiving platforms 27—27, each of
20 which consists of a smooth surfaced board or plate of the same thickness and length as the cross piece 7, and having at their inner edges the down-turned hooks 28 adapted to engage the notches 26, and the notches in the brackets 5. Pivotaly secured to lugs or
25 brackets 29 carried near the outer edges of these platforms are braces 30, the inner ends of which are pivoted to the frame standards 1 and 1^a at 31. When the machine is arranged for operation, the plat-
30 forms 27—27 are supported by the brackets 4 as illustrated in full lines in Figs. 2 and 3. When it is no longer desired to employ the machine as a mangle, the platforms are dis-
35 connected from the brackets 4 and attached to the brackets 5 as illustrated in dotted lines in Figs. 2 and 3. The length of the braces 30 and their point of attachment is
40 such that they will support the platforms 27 truly horizontal both in operative and inoperative positions.

For operating the rollers we employ the mechanism now to be described. Formed
45 on the sides of the standard 1 between the brackets 4 and 5 are other brackets 35 and 36, the bracket 35 being formed at its outer end with an outwardly projecting boss 37 carrying a stud 38. Journaled on this stud
50 is a fly wheel 39 having secured immediately inside the hub thereof a pinion 40. Carried by the bracket 36 is a stud 41 on which is sleeved a gear wheel 42 meshing with the pinion 40 and carrying on its inner face a
55 smaller pinion 43, which in turn meshes with a gear wheel 44 secured to the end of the shaft 11, above mentioned. In order to permit the removal of the fly wheel when the device is being used as a table, we prefer
60 to secure it to the stud 38 by the expedient shown in Figs. 5 and 6. According to this expedient the end of the stud 38 is formed with a groove 50, and to the hub 39^a of the wheel is pivoted a latch 51 having a curved
65 part 52 adapted to enter said groove. This

latch is maintained in engagement with the groove by means of a spring 53 and can easily be detached therefrom upon occasion, thus permitting the ready removal of the fly-wheel. When not in use, the fly wheel
70 can be conveniently hung upon a hook 55 secured to one of the standards of the machine as shown in dotted lines in Figs. 1 and 2.

By referring to Fig. 2 it will be seen that
75 the width of the cross pieces 25 is such as to bring their outer edges beyond the edges of the gear train. It is, therefore, possible to make the platforms 27 of the same length as the cross piece 7, thus producing a table
80 top of perfectly regular shape and one that overhangs all of the working parts of the machine. It will also be seen that the machine can be dismantled with great facility by merely removing the fly wheel 39, gear
85 42, and cross piece 7, and disconnecting the stirrups from the spring 22. The rollers can then be lifted freely from their slots.

For purposes of storage a shelf 60 can conveniently be supported by the stay rods
90 6—6.

Having thus described our invention, what we claim and desire to secure by Letters Patent is:—

1. In a device of the character described,
95 in combination, a pair of upright standards having their upper ends slotted, horizontal rollers journaled in said standards, gear wheels for driving said rollers located out-
100 side of said standards, a cross piece connecting the upper ends of said standards and bridging the slots therein, said cross piece being of sufficient length to cover the gears at each side of said standards, cross pieces
105 connecting said standards at each side of said rollers, the upper surfaces of said last cross pieces being not higher than the point of contact of said rollers, and the outer edges of said last cross pieces projecting
110 outwardly from said standards beyond said gears, platform members having their length substantially equal to the length of said first cross piece, means for securing the inner
115 edges of said platform members at the sides of either said first mentioned or said last mentioned cross pieces, and braces secured to said standards and to said platform mem-
120 bers and adapted to maintain the latter substantially horizontal in both of the said positions of adjustment.

2. In a device of the character described, in combination, a pair of up-right standards, a pair of horizontal rollers journaled in said standards, gearing outside of said standards and adapted for the operation of said rollers,
125 a cross piece connecting the upper ends of said standards, the length of such cross piece being sufficient to entirely cover said gears, shoulders carried by said standards at each side of said cross piece, other
130

cross pieces connecting said standards at each side of said rollers, the upper surfaces thereof being not higher than the meeting point of said rollers, and the length
5 of such last-mentioned cross pieces being such as to permit them to fit inside of said gears, shoulders at the outer sides of said last mentioned cross pieces, platform members adapted to rest upon either of said
10 shoulders with their top surfaces in substantial alinement with the upper surface of the adjacent cross piece, the length of said platform being substantially equal to that of said first mentioned cross piece, and braces

connected to said standards and to said platform members, said braces being adapted to maintain said platforms substantially horizontal when in contact with either of said shoulders.

In testimony whereof, we hereunto affix our signatures in the presence of two witnesses.

VACLAV KRAL.
FRANK M. VACHA.
VRATISLAV CAP.

Witnesses:

Mrs. H. L. MACH,
HENRY L. MACH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."