Feb. 12, 1929. 1,701,847

G. L. HEDGES

WASHING MACHINE

Filed Dec. 24, 1923 2 Sheets-Sheet 1

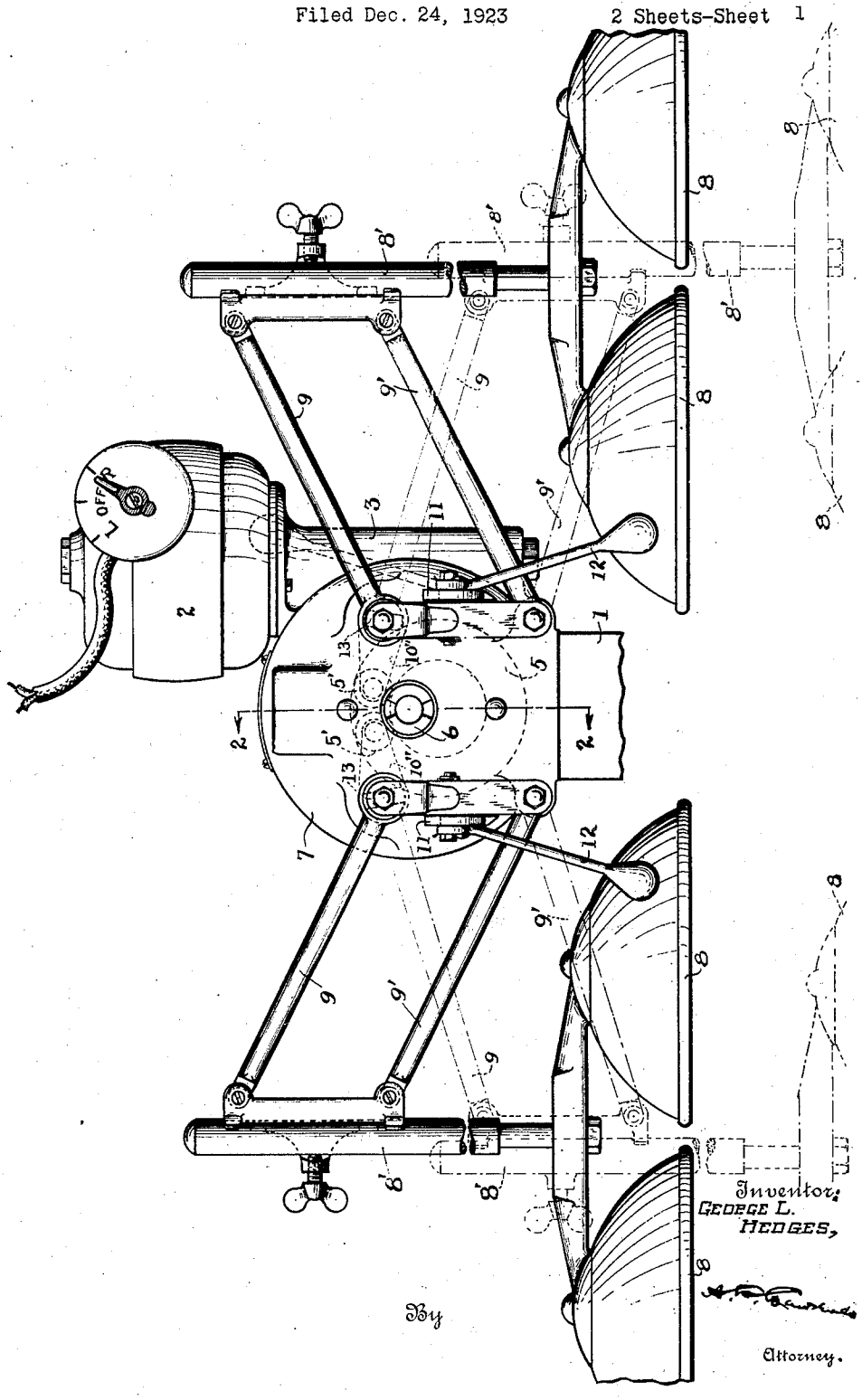


FIG. 1.

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FIG. 3.

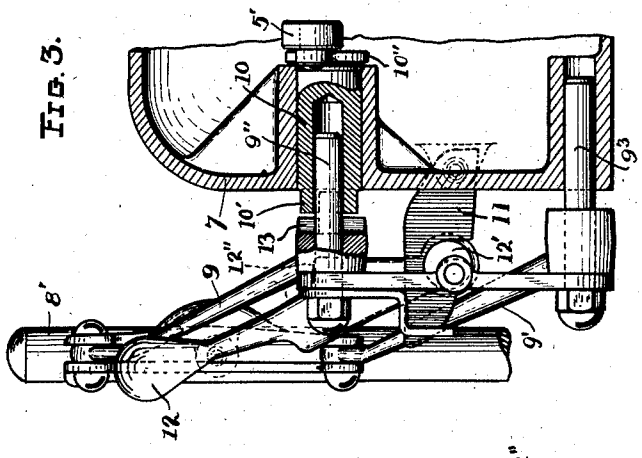


FIG. 5.

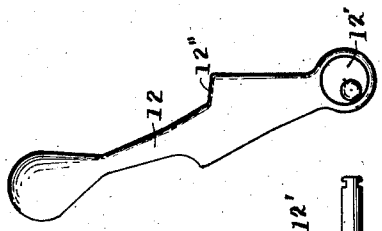


FIG. 4.

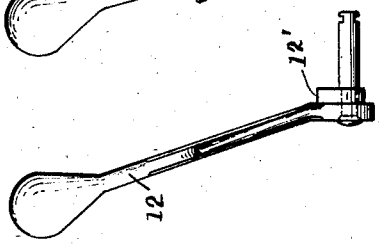
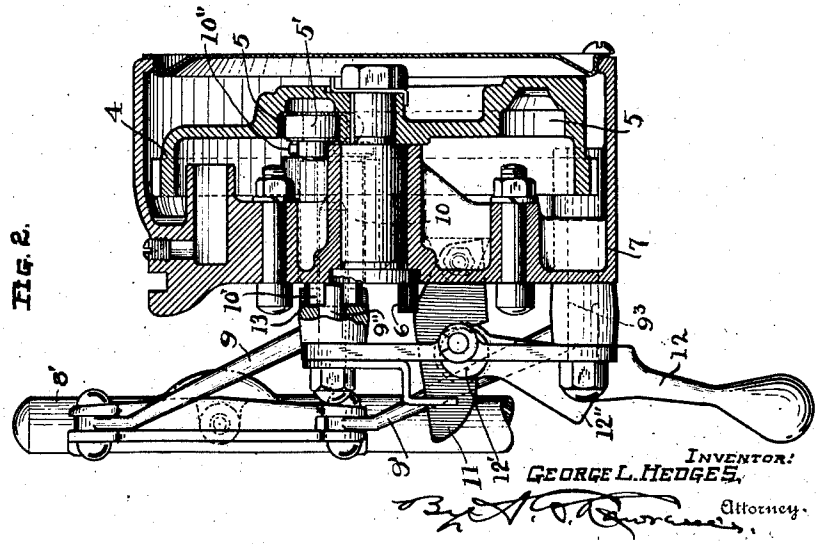


FIG. 2.



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UNITED STATES PATENT OFFICE.

GEORGE L. HEDGES, OF CLEVELAND, OHIO, ASSIGNOR TO THE P. A. GEIER COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

WASHING MACHINE.

Application filed December 24, 1923, Serial No. 682,494, and in Canada August 31, 1923.

My invention relates to improvements in washing machines and more particularly to the actuating mechanism of a pounder type of washing machine, whereby the pounder mechanism may be readily applied to, detached from, or operatively disengaged with respect to the actuating unit.

My improvements are especially adapted for washing machines employed in connection with stationary wash tubs, and more particularly adjacent stationary tubs, whereby the pounder mechanism of one or both devices may be connected or disconnected at pleasure with the electrically-driven power unit that is semi-permanently affixed at the rear of said tub structure. This feature is desirable, if not necessary, in order to free the opening of the tub for the manual handling of the article to be cleansed.

The features and advantages of my improvements may best be explained by making reference to the accompanying sheets of drawings illustrating the preferred embodiment of my invention, wherein:

Figure 1 is a view of the improved mechanism fully assembled except for an optional wringer attachment; shown in front elevation with working positions of the pounder mechanism in dotted lines;

Fig. 2 being an enlarged vertical section on line 2—2, Fig. 1, with the parts in driving position;

Fig. 3 being a similar fragmentary section with the pounder mechanism operatively disengaged;

Fig. 4 is a side view and Fig. 5 a rear view of the cam and operating lever for controlling the position of the device.

Throughout the several figures of the drawings I have employed the same character of reference to indicate similar parts.

At the rear of the standard 1, shown broken away, there is provided an electric motor 2 bolted upon the top of a worm-gear casing 3 and directly driving the specialized type of gear 4 and eccentric cam 5, as best shown in Fig. 2. The protruding shaft is provided with a clutch member 6 that may be used to drive any desired mechanism, such as a clothes wringer adapted to co-operate with the pounder devices now to be described.

The gear casing 7 is shown equipped with two such pounder mechanisms positioned for use upon adjacent tubs and adapted to be operated by a common eccentric cam 5. These devices are symmetrically alike, but are removably and independently adjustable and operable, as desired. Each pounder mechanism comprises vacuum cups 8 carried upon an adjustable standard 8′ from the free ends of the parallel actuating arms 9, 9′. The extended axes 9″, 9^3 are respectively adapted to fit within the sockets provided therefor in the sleeve 10 and the lower portion of the gear case, as shown in Fig. 3, whereby the pounder mechanism may be removably mounted either in its operative position of Fig. 2, or its inoperative position of Fig. 3.

A latch 11 is adapted to accommodate the cam 12′ of the actuating lever 12, when the former is in its retaining position, while said cam is readily freed by lifting the latch, so that the entire pounder mechanism may be removed from the casing whenever desired. By depressing the lever 12 to its downward position the clutch members 10′ and 13, respectively provided upon the sleeve 10 and the rear of arm 9, are interlocked for the actuation of the associated pounder. This is accomplished by the action of cam 12′ within recessed latch 11 through retracting the vertical member or yoke connecting the sliding supports or spindles 9″, 9^3, from the position of Fig. 3 to that of Fig. 2. The sleeve 10 is rearwardly provided with an arm 10″ and a terminal roller 5′ riding within the recessed cam face 5, whereby a reciprocatory movement is imparted to the pounder mechanism; its extreme positions being shown approximately in full and dotted lines, Fig. 1 of the drawings.

Whenever the pounder mechanism is to be rendered inoperative its lever 12 is elevated to the position shown in Fig. 3, thereby rotating its cam 12′ within the recess of the latch 11 and causing the outward movement of the device sufficiently to free the clutch members 10′ and 13. Moreover, the shoulder 12″ engages beneath the arm 9 when brought to its elevated position and serves to maintain said arms and vacuum cups in their full line position of Fig. 1. The pounder device thus is bodily moved out of operative relation with the driving mechanism, but it is supported by said lever and the slidable spindles 9″, 9^3, as shown in Fig. 3.

From the foregoing it will be appreciated that either or both of the pounder mechanisms may be applied to the power unit as desired, and that either or both of them may be operated independently or concurrently in adjacent stationary tubs (not shown) as conditions may require. Furthermore, the freest access to the tubs is attainable at a moment's notice simply by raising the retaining latches and removing the pounder mechanisms from the casing, or either of them. The bodily movement of the devices for freeing their respective clutches through the rotation of the cam provides the simplest mode of rendering the pounder mechanisms temporarily inoperative, afforded by means that are not liable to get out of order as with other clutch devices.

Having now described the preferred embodiment of my invention, I claim as new and desire to secure by Letters Patent, the following:

1. In apparatus of the class described, the combination with an actuating unit comprising a motor and oscillatory mechanism, of a working member removably attachable thereto, comprising an oscillatory arm, an actuating lever and controlled cam mechanism adapted to move the arm bodily and engage and disengage said arm operatively with its oscillatory mechanism.

2. In apparatus of the class described, the combination with oscillatory mechanism, of an oscillated arm adapted to be removably applied thereto, a latch attachable to the arm for regulating its position, a supporting pin fitting within the oscillatory mechanism, a control lever and a cam actuated thereby for operatively engaging and disengaging the arm with said oscillatory mechanism.

3. In apparatus of the class described, the combination with a power unit, comprising a motor device and an actuating cam driven thereby, of two oscillated members positioned for successive actuation by the cam, two removable arms adapted respectively to be applied thereto; each arm having a supporting pin fitting within an oscillated member, an engaging clutch for operatively connecting the arm with said member, a control lever, a retaining latch attachable to the arm for regulating its position and a cam associated therewith for independently controlling the arm.

4. In apparatus of the class described, the combination with oscillatory mechanism, of a pivoted arm removably attachable thereto, two supporting pins adapted to enter the oscillatory mechanism and its frame respectively, a clutch, a retaining latch attachable to the arm for regulating its position, and a control lever adapted to engage and disengage the clutch.

5. In apparatus of the class described, the combination with a motor device, a geared cam member actuated thereby, an oscillated clutch member connected for actuation by the cam, a supporting member, an oscillated arm having a coacting clutch member, and a control lever adapted to move the arm bodily and engage and disengage said clutch members alternatively, whereby the arm may be operatively controlled.

In testimony whereof I do now affix my signature.

GEORGE L. HEDGES.