

J. E. REMPE.  
GEARING FOR WASHING MACHINES.  
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997,851.

Patented July 11, 1911.

Fig. 1.

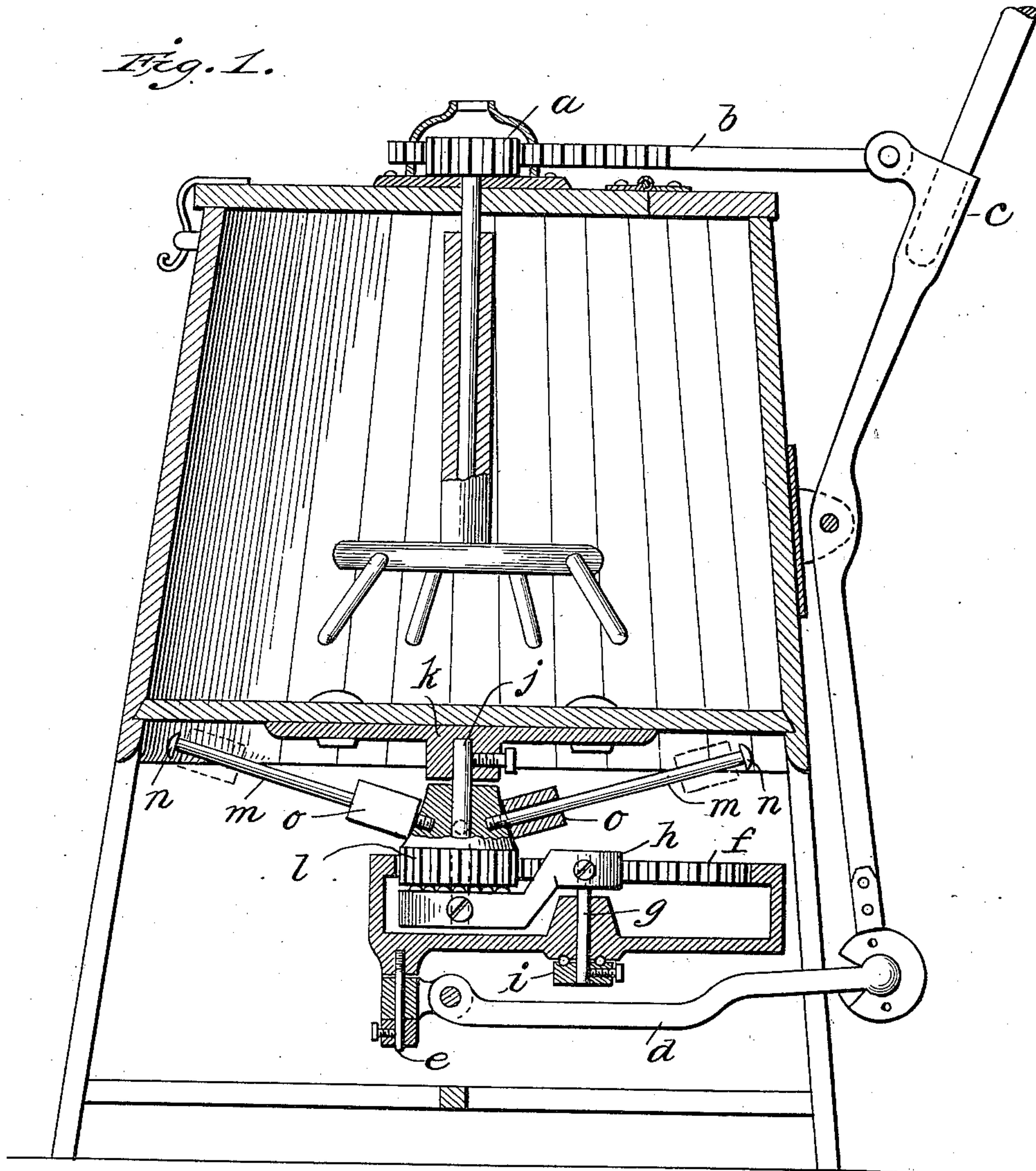
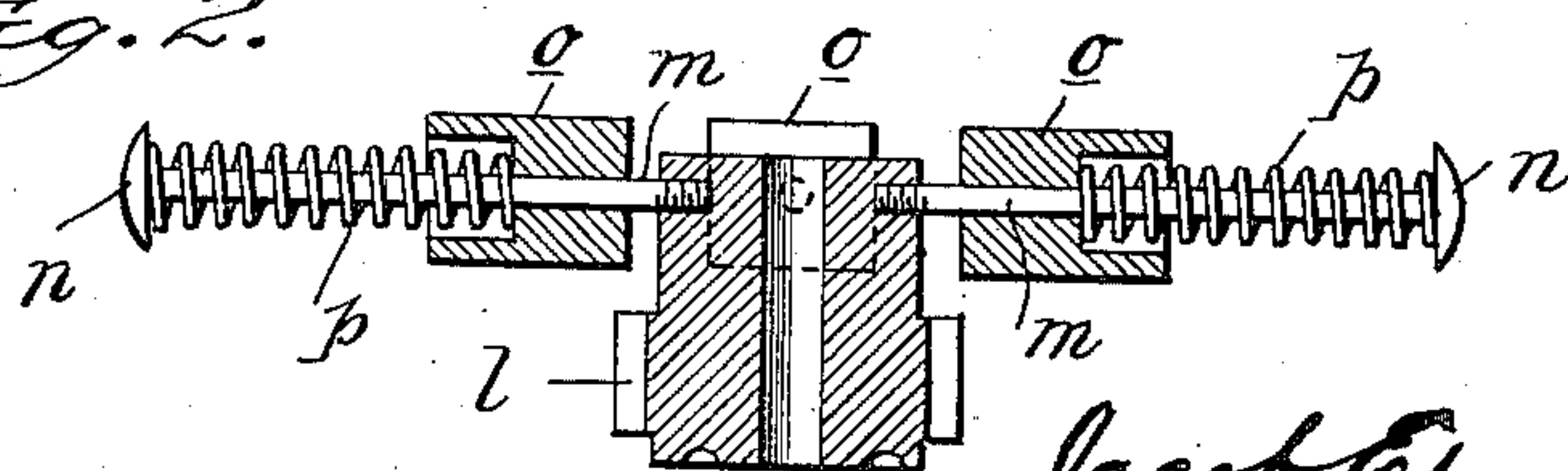


Fig. 2.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## GEARING FOR WASHING-MACHINES.

997,851.

Specification of Letters Patent.

Patented July 11, 1911.

Application filed August 12, 1908. Serial No. 448,218.

*To all whom it may concern:*

Be it known that I, JACOB EDWARD REMPE, a citizen of the United States of America, and a resident of Kankakee, in the county of Kankakee and State of Illinois, have invented certain new and useful Improvements in Gearing for Washing-Machines and other Implements, of which the following is a full and clear specification, reference being had to the accompanying drawing, in which—

Figure 1 is a vertical sectional view showing my invention applied to an agitator washing machine; and, Fig. 2 is a vertical sectional view showing a modified form of a fly-wheel.

This invention has reference to the gearing for operating the stirrer or dolly shaft of an alternating rotary washing machine or other implement and the object of this special improvement is to improve and simplify the speed governing and steadying devices, as more fully hereinafter set forth.

Referring to the drawing annexed by reference characters, *a* designates the usual pinion on the implement shaft, *b* the rack bar adapted to operate the same, and *c* the operating lever pivoted on the side of the tub and having a depending extension connected by a universal joint to a pitman *d*. This pitman *d* extends under the tub and is connected by a universal joint to a wrist-pin *e* depending from a gear wheel *f*. This gear wheel is journaled on a vertical stub-shaft *g* rigidly depending from an arm *h* and is supported in a horizontal position upon a collar *i* attached to the lower end of said shaft *g*.

The arm *h* is attached rigidly to the lower extremity of the shaft *j* and is radially arranged with respect thereto. The shaft *j* depends rigidly from a casting *k* fastened to the bottom of the tub and is arranged centrally with respect to the tub. On this shaft *j* is journaled a fly or governor wheel the lower end of whose hub carries a pinion *l*. The hub of this fly-wheel is supported upon a suitable ball or other bearing upon the rigid arm *h*, and the pinion *l* meshes with the teeth of the gear *f*, the teeth of this latter gear being internally located.

The fly-wheel may be of any type but I prefer the novel type shown which consists of a series of radial arms *m* attached to the hub and inclining upwardly and outwardly

and whose outer ends are provided with heads *n* and each of which carries a loosely sliding weight *o*. When the gearing is at rest these weights *o* normally slide inwardly by gravity until they abut against the hub and when the fly-wheel is rotated these weights are thrown outwardly by centrifugal force until they abut against the heads *n*. This form of fly-wheel is advantageous in that it is easy to start while at the same time the sliding of the weights to the outer ends of the rods after the mechanism has been speeded up to the desired speed insures the advantage of the ordinary heavy rim fly-wheel. This fly-wheel is also advantageous in that it insures a quick stopping of the mechanism by reason of the fact that as soon as the speed diminishes slightly the weights automatically run back toward the center of the wheel and thus quickly diminish the momentum imparted to the gearing by the fly-wheel.

Instead of inclining the weight-guides upwardly to insure their automatic return to the center I may extend them horizontally outwardly as shown in Fig. 2 and provide light springs *p* for automatically returning them to the hub. When these springs are employed it is desirable that the outer ends of the weights be recessed sufficiently, as shown, to receive the compressed springs and thus avoid crushing the springs. In each form of fly-wheel it is obvious that suitable buffers may be employed, if desired, at the inner as well as the outer ends of the guides, to cushion the blows of the weights.

It will be observed that when the lever is operated the internal gear will be rotated in a horizontal plane and that this motion will be communicated to the fly-wheel thus imparting a rapid rotation to the fly-wheel and in that way contributing to the ease of operation of the dasher or other implement in the vessel, in the well-known manner. It will be observed that this arrangement of gearing is advantageous not only because the internal gear forms a safety guard for both gears and also because the internal gear is driven in the same direction as the fly-wheel, whereby a material reduction in atmospheric resistance is obtained.

It will be observed that if it is desired to do so the outer ends of the fly-wheel may be connected by an annular rim or band in or



der to brace and strengthen them against being bent or twisted in the transportation and handling of the machine.

It will be observed also that other modifications of the gearing may be made without departing from the spirit of the invention and that therefore I do not desire to be limited to the exact construction shown and described.

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

1. In combination with a support and means for imparting an alternating rotary  
15 movement to an implement, power-storing mechanism consisting of a shaft depending from the support, a radial arm rigidly attached to said shaft, a fly-wheel journaled on said shaft and supported on said arm  
20 and a pinion carried on the lower end of its hub, a shaft depending from the outer end of said arm and a supporting collar carried at its lower end, an internally toothed gear journaled on this latter shaft and supported  
25 on said collar and being in mesh with the aforesaid pinion, a wrist pin depending

from said internally toothed gear, a pitman pivotally connected at one end to said depending wrist-pin and at its other end with the implement operating mechanism. 30

2. In combination with an upper support, a shaft depending therefrom and mechanism for operating the same embodying a lever, a pinion and means connecting the lever and the pinion, a power-storing mechanism operated by said lever and consisting  
35 of a shaft, a fly-wheel journaled thereon a pinion affixed to the fly wheel, a radial arm attached to the shaft of the fly-wheel and adapted to support the fly-wheel, an  
40 internal gear meshing with said pinion and journaled upon the outer end of said arm, and means connecting this internal gear with the aforesaid lever, for the purpose set  
45 forth.

In testimony whereof I hereunto affix my signature in the presence of two witnesses this 10 day of August 1908.

JACOB EDWARD REMPE.

Witnesses:

FRANK O. SCHNEIDER,  
GEO. C. SCHNEIDER.

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