T. J. WINANS.

GEARING.

APPLICATION FILED MAR. 13, 1908.

913,652.

Patented Feb. 23, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

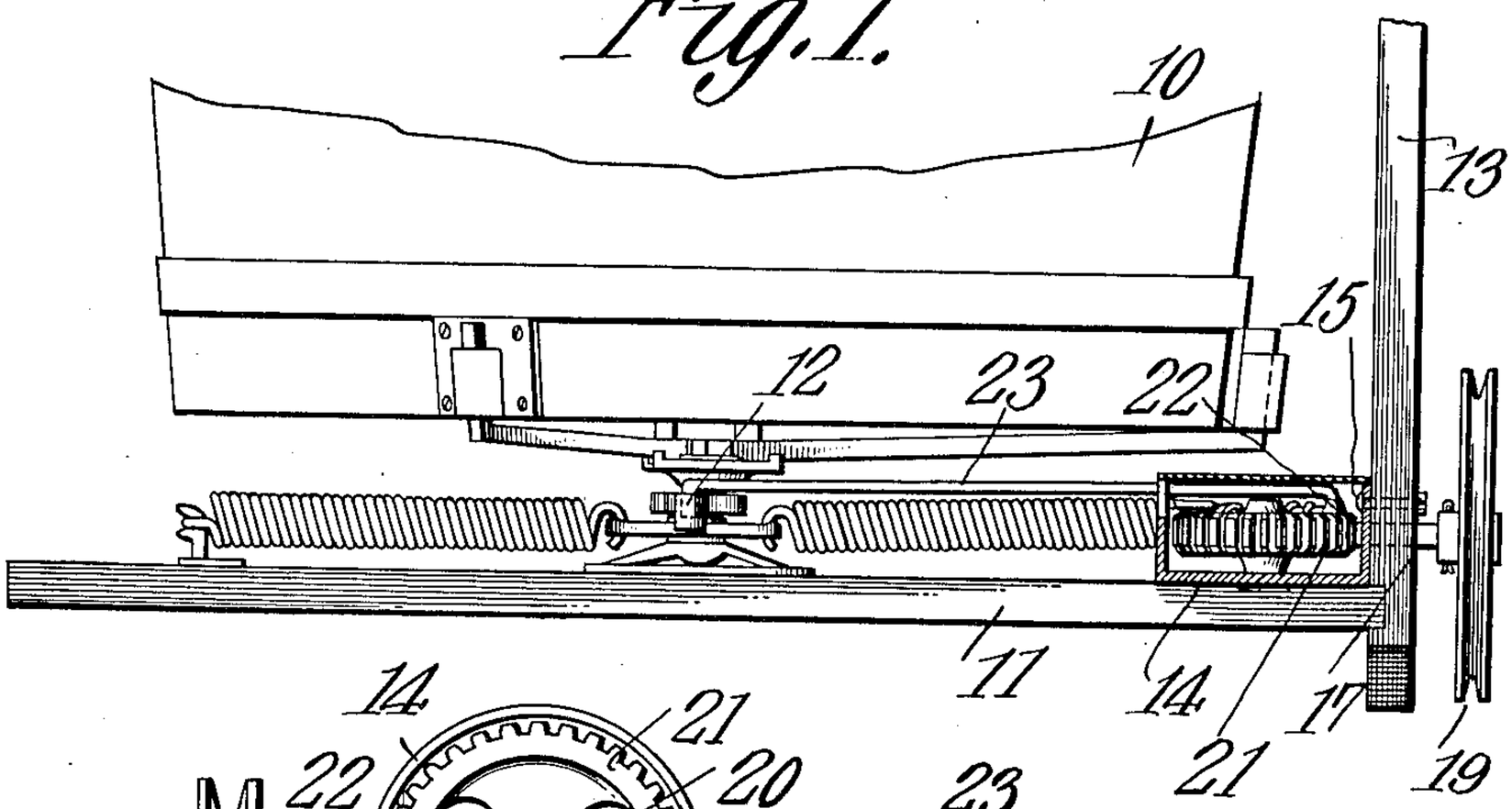


Fig. 2.

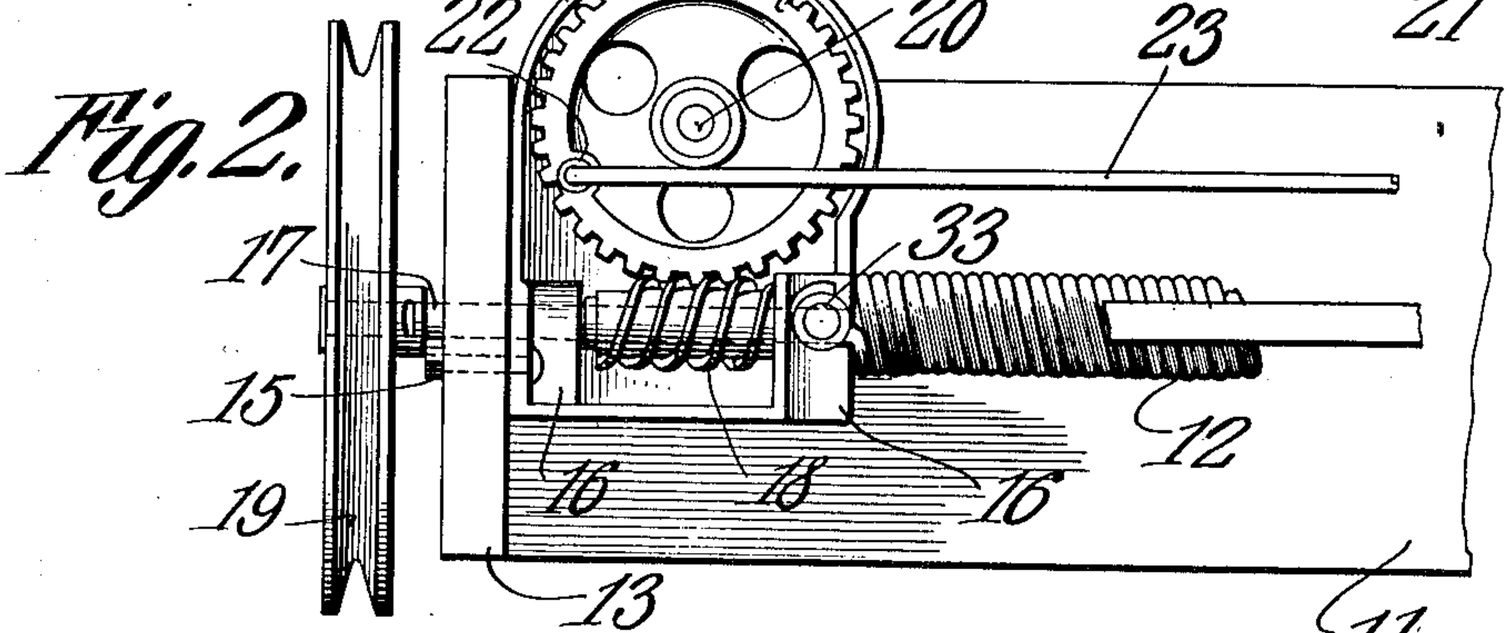
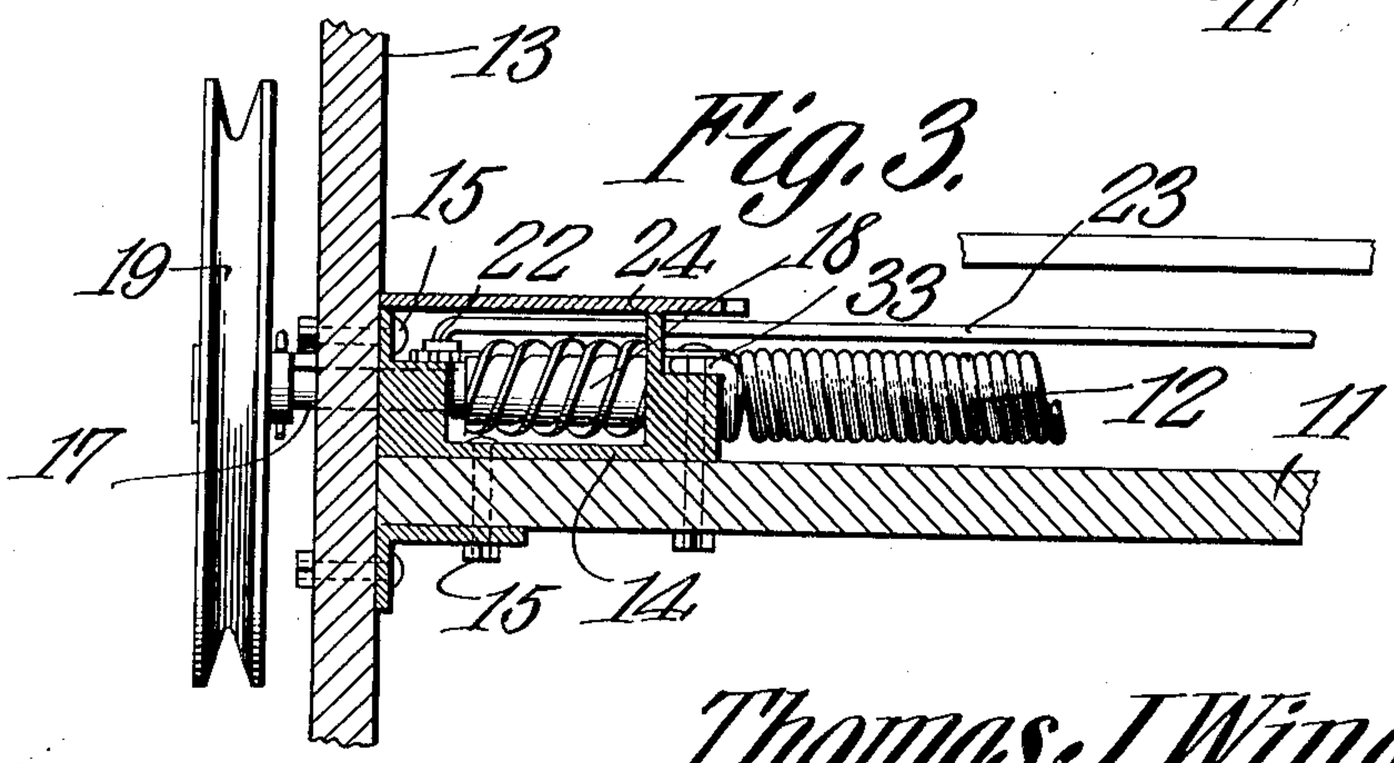


Fig. 3.



Witnesses

E. J. Stewart

W. L. Ellis

Inventor

Thomas J. Winans

By Cushman & Co

Attorneys

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2 SHEETS—SHEET 2.

Fig. 4.

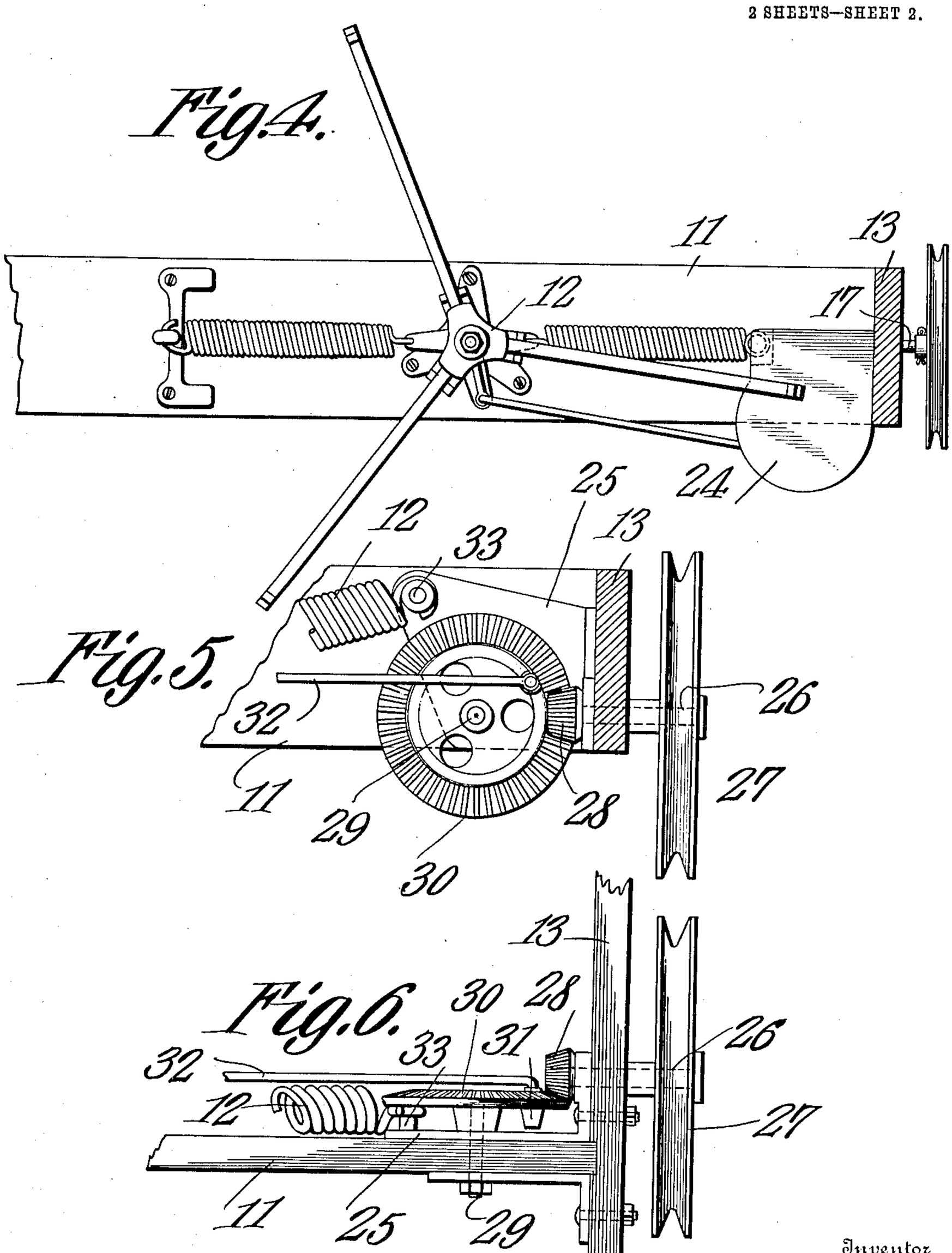

Fig. 5.

Fig. 6.

Witnesses

E. C. Plaisant

W. Wallace

Inventor

Thomas J. Winans.

By Cushman & Co

Attorneys

UNITED STATES PATENT OFFICE.

THOMAS J. WINANS, OF BINGHAMTON, NEW YORK, ASSIGNOR TO THE NINETEEN HUNDRED WASHER COMPANY, OF BINGHAMTON, NEW YORK.

GEARING.

No. 913,652. Specification of Letters Patent. Patented Feb. 23, 1909.

Application filed March 13, 1908. Serial No. 420,860.

To all whom it may concern:

Be it known that I, THOMAS J. WINANS, a citizen of the United States, residing at Binghamton, in the county of Broome and State of New York, have invented a new and useful Gearing, of which the following is a specification.

The invention relates to gearing, especially to gearing for that type of washing machine wherein the clothes receiver is arranged for oscillation.

The object of the invention is to provide an improved means of driving an oscillating clothes receiver, and at the same time to utilize a portion of that means for the purpose of strengthening the framework of the machine.

A further object of the invention is to do away with the multiplicity of bevel gears and the like that are customarily used in machines of this character wherein the operating handle or pulley is located at some distance from the oscillating mechanism and provide a simple and direct form of connection between the operating handle on the pulley and the oscillating mechanism.

The invention consists of a single pair of intermeshing gears mounted in a bracket or casing in such position on the machine that the bracket acts as a bracing between two of the frame members.

The invention further consists of certain novel features of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and specifically claimed.

In the accompanying drawings:—Figure 1 is a partial side elevation of a washing machine equipped in accordance with this invention. Fig. 2 is a detail plan view thereof with the casing cover removed. Fig. 3 is a detail section of Fig. 2. Fig. 4 is a plan view of Fig. 1 with the tub removed. Fig. 5 is a detail plan view of a modified form of the device. Fig. 6 is a side elevation of Fig. 5.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

The numeral 10 indicates a clothes container which may be of any desired kind, as it forms no part of the present invention. This clothes container is mounted for oscillatory movement on a frame member 11 by means of a suitable mechanism indicated at 12. It is to be understood that although there is here shown a special form of such mechanism it is not desired to confine the present invention to the use of this form, but any other is equally well adapted to be used in this connection. Connected to the member 11 of the frame is a frame member 13 and a gear casing 14 is mounted in the angle of the frame members and arranged by suitable connections therewith, here shown as bolts 15, to act as a brace or bracket for said members.

In the form of the device shown in Figs. 2 and 3, bearings 16 are formed in this casing, and a shaft 17 is mounted therein. A worm 18 is held upon said shaft to rotate therewith. The shaft 17 is arranged to project through the casing and the member 13 and has mounted upon the outer end thereof operating means here shown as a pulley 19. It is obvious that this pulley may be replaced by a crank handle, if desired. A second shaft 20 is supported in suitable bearings and carries a worm wheel 21 mounted thereon and meshing with the worm 18. A crank arm hub 22 is formed in the gear 21 and a crank arm 23 is held therein, the outer end of said arm being connected with the operating mechanism 12. A cover 24 is provided for the rear casing to protect the gears from water and exposure, the casing being cut away to permit the passage therethrough of the crank arm 23. In the form of the device illustrated in Figs. 5 and 6, the casing before referred to is shown replaced by a bracket 25, and this bracket is secured to the frame members as in the previous case.

Mounted on the bracket 25 is a shaft 26 carried in suitable bearing therein, and this shaft is provided with operating means 27, as in the other form of the device, the shaft projecting through the member 13 for that purpose. A bevel pinion 28 is mounted on the inner end of this shaft. A shaft 29 is held in a suitable bearing in the bracket and carries a gear 30 meshing with a pinion 28. A crank arm hub 31 is formed in this gear for the reception of the crank arm 32, which is connected in the usual manner to the operating mechanism 12. Both the bracket 25 and casing 14 are provided with a suitable pin 33 arranged to receive one end of the spring. It is obvious that the bracket 25 may be provided with extended sides and a

suitable cover, or that the casing 14 may be modified to receive the bevel gear instead of the worm wheel.

It will be seen that in the operation of this device, the connection between the crank arm and the driving pulley is as direct as possible, but one pair of gears being interposed and this being necessary in order to convert rotary motion in a vertical plane of the pulley to oscillating motion in a horizontal plane of the tub.

It will further be obvious that while in this description gear casing 14 is referred to, yet the same in its relation to the members 11 and 13 of the frame will constitute the bracket as fully as will the other form of the device.

What is claimed is:—

1. In a washing machine, an oscillating member a frame comprising members in angular relation, a bracket arranged to fit one of the angles and attached to the adjacent members, bearings formed on said bracket, shafts held in said bearings, gears on said shafts, means attached to one of said shafts to operate its gear, and a pitman connecting the other gear and the oscillating member.

2. In a washing machine, a reciprocating element, a support therefor, a frame comprising a bottom member carrying said support and a side member in substantially rectangular relation therewith, a bracket secured to said members to brace the same together, bearings formed on said bracket, a shaft carried in said bearings extending through said side member, a second shaft, a driving gear on the first shaft, a driven gear on the second shaft, operating means on the first shaft, a crank pin hub on the second gear, a crank arm attached to the driven gear, and means to connect said crank arm to said reciprocating element.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

THOMAS J. WINANS.

Witnesses:

HARRY L. BARKER,

WALLACE H. SOUTHWORTH.