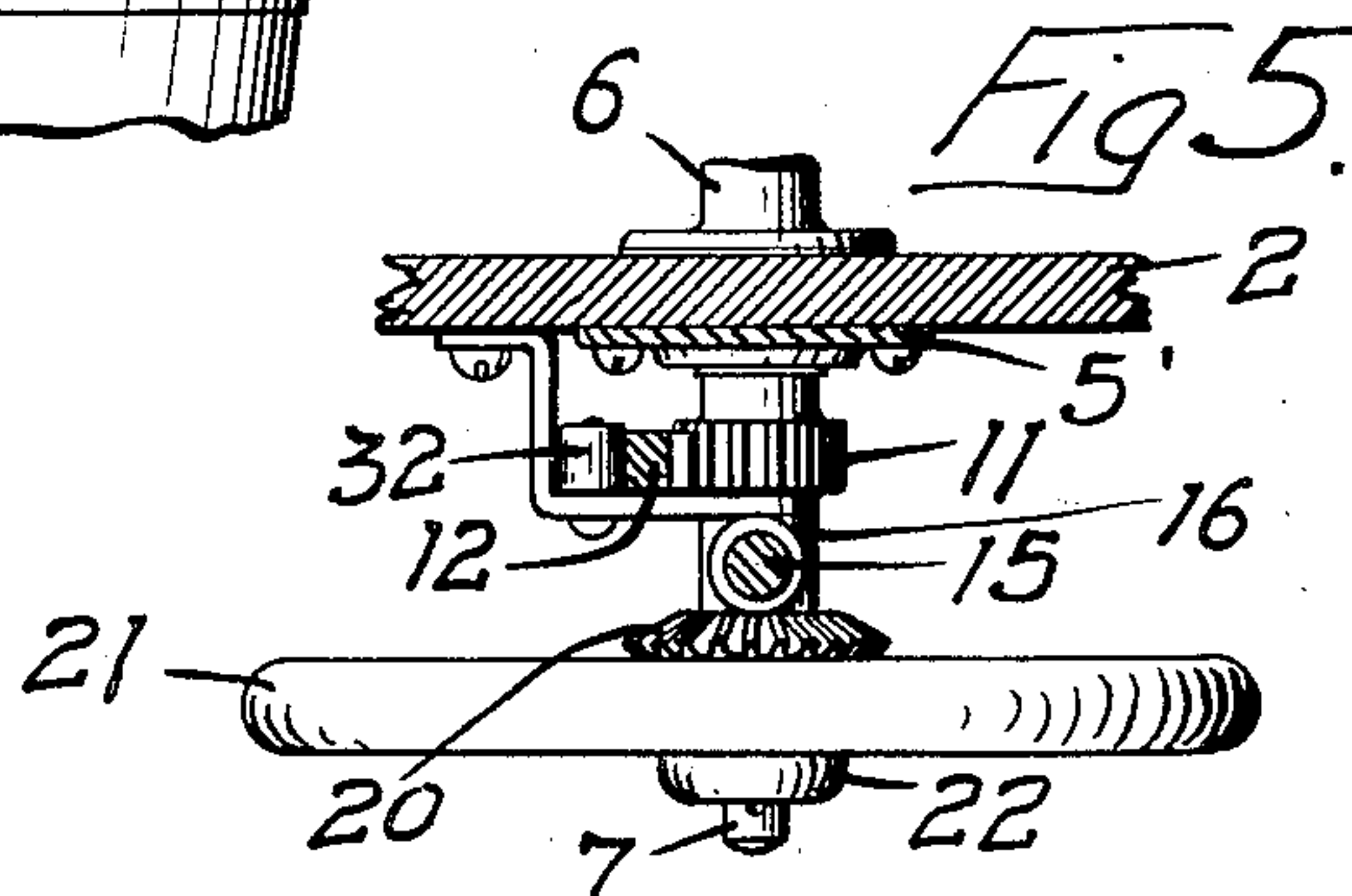
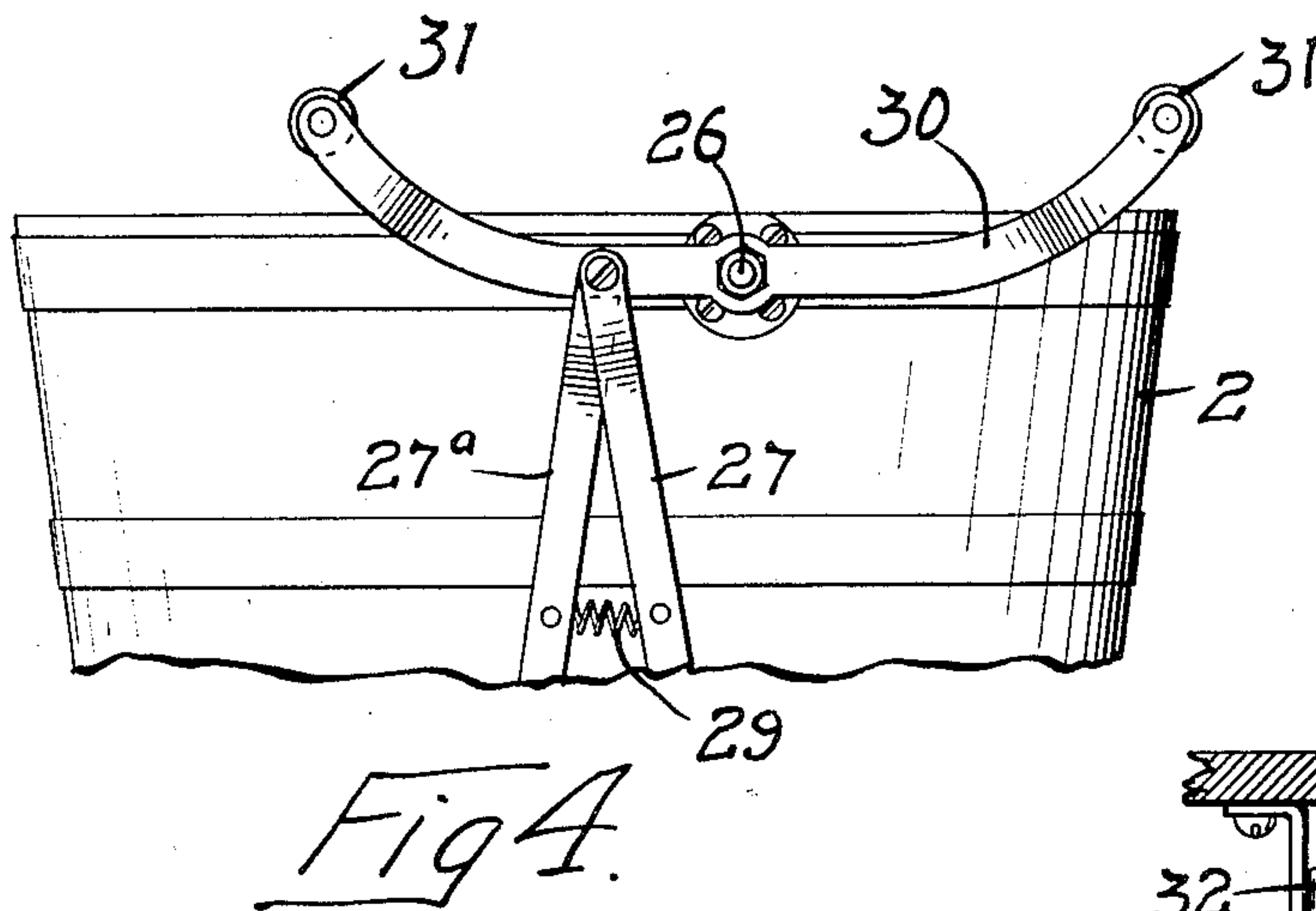
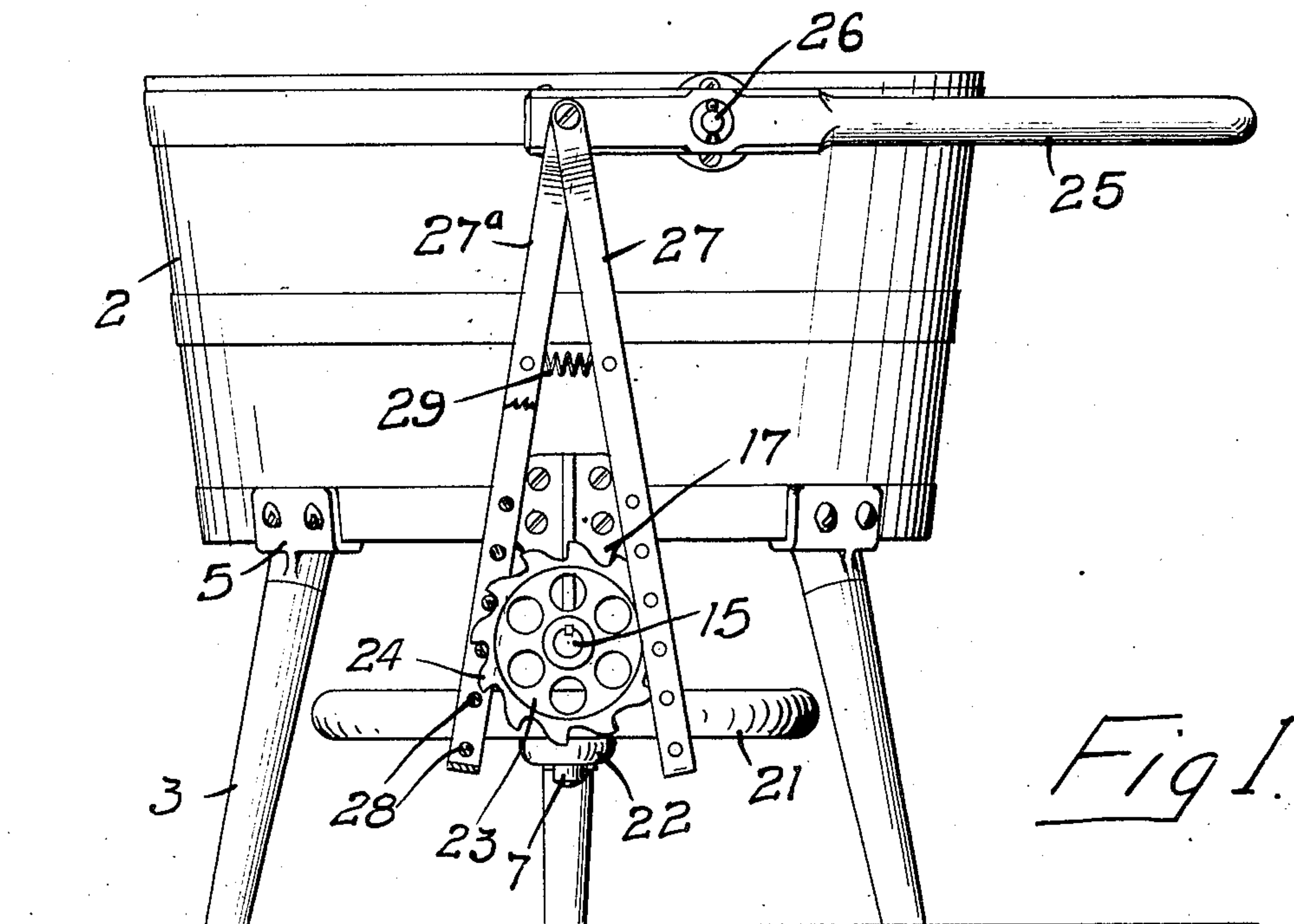


W. C. FAWKES.
GEARING FOR WASHING MACHINES.
APPLICATION FILED AUG. 17, 1908.

917,032.

Patented Apr. 6, 1909.
2 SHEETS—SHEET 1.



WITNESSES
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UNITED STATES PATENT OFFICE.

WILBERT C. FAWKES, OF MINNEAPOLIS, MINNESOTA.

GEARING FOR WASHING-MACHINES.

No. 917,032.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed August 17, 1908. Serial No. 448,955.

To all whom it may concern:

Be it known that I, WILBERT C. FAWKES, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful
5 Improvements in Gearing for Washing-Machines, of which the following is a specification.

My invention relates to washing machines of the type wherein the tub is stationary, and
10 is commonly designated as a momentum washer.

The object of my invention, is to provide an easy running machine, and one which will be simple in construction and not likely to
15 get out of order.

A further object, is to provide a machine in which there will be no dead centers to interfere with the starting of the machine.

In the accompanying drawings forming
20 part of this specification, Figure 1, is a side elevation of a washing machine embodying my invention, Fig. 2, is a vertical sectional view of the same, Fig. 3, is a bottom view, the fly wheel being partially broken away to
25 illustrate the driving mechanism, Fig. 4, is a detailed view of a modified construction of the operating lever, Fig. 5, is a detailed sectional view showing a portion of the driving mechanism.

30 In the drawing, 2 represents a tub of ordinary type supported on legs 3 which fit within sockets 4 provided in castings 5 secured to the bottom of the tub.

6 is a hollow standard centrally mounted
35 in the tub and 7 is a shaft within said standard and projecting above and below the same. The upper end of said shaft is secured to a sleeve 8 which has a ball-bearing 9 on the upper end of said standard and incloses said
40 standard and supports a rubber head 10 a suitable distance above the bottom of the tub. A pinion 11 is secured on the shaft 7 below the tub and meshes with a rack bar 12 that is connected to a crank pin 13, eccentrically mounted on a beveled gear 14, that is
45 carried by a plate 5'. A shaft 15 has bearings at one end in a block 16 on the shaft 7 and at its other end in a bracket 17 depending from said tub. A gear 18 is mounted on
50 said shaft, and meshes with the gear 14 and a pinion 19 is also mounted on said shaft and engages a gear 20 carried by a fly-wheel 21 loosely mounted on the shaft 7 and resting on a ball-bearing 22 thereon. A drive wheel 23
55 is secured on the outer end of the shaft 15 and has a series of teeth 24. A lever 25 is

pivoted at 26 on the upper portion of the tub, and bars 27 and 27^a are pivoted at their upper ends on said lever, and are provided with a series of pins 28 to engage the teeth 24 being
60 ing yieldingly held in contact with said teeth by a spring 29. One of the bars depends on one side of the wheel, and the other on the other side, and consequently, as the lever 25 is oscillated, the bars will be reciprocated
65 vertically and a revolving movement will be imparted to the wheel 23 and its shaft.

In Fig. 4, I have shown a slight modification which consists in providing a curved lever 30 centrally pivoted and having handles 31 at each end. The person operating
70 the lever, stands in front of it with a hand on each end thereof, and upon rocking the lever, the bars connected therewith, will be reciprocated and the toothed wheel re-
75 volved. Sufficient momentum will be obtained through the use of the fly-wheel to insure a uniform continuous movement of the rubber head. An anti-friction roller 32 is provided on one side of the rack bar 12 to
80 form a guide therefor, and hold it in engagement with the teeth of the pinion. In the operation of the machine, the pins 28 will engage the square faces of the teeth 24, and as one bar is transmitting power from the
85 operating lever to the shaft, the other bar will be sliding over the teeth of the wheel preparatory to engaging the teeth on the return stroke of the lever. One bar is therefore operative while the other is idle, and a
90 continuous motion results from their engagement with the toothed wheel.

I claim as my invention:

1. In a machine of the class described, a shaft, a pinion secured thereon, a rack bar
95 engaging said pinion, a pivoted gear having a crank pin whereon said rack bar is mounted, a horizontal shaft, a gear thereon meshing with said pivoted gear, a pinion secured on said horizontal shaft, a fly wheel loosely
100 mounted on said first named shaft and geared to said pinion, and means for driving said horizontal shaft.

2. In a machine of the class described, a vertical shaft, a horizontal shaft having a
105 driving connection with said vertical shaft, a wheel secured on said horizontal shaft and having a series of teeth, a pivoted lever, bars pivoted at their upper ends on said lever and depending one on each side of said wheel
110 and having a series of pins to engage the teeth of said wheel, one of said bars slipping

over the teeth of said wheel while the pins of said other bar are in working engagement therewith, substantially as described.

3. In a machine of the class described, the
5 combination with a shaft and a pinion secured thereon, of a rack bar engaging said pinion, a pivoted gear having a crank pin whereon said rack bar is mounted, a horizontal shaft, a gear thereon meshing with said
10 pivoted gear, a pinion secured on said horizontal shaft, a fly wheel loosely mounted on said first named shaft and geared to said pinion, a wheel secured on said horizontal shaft and having a series of teeth, a pivoted
15 lever, bars pivoted at their upper ends on said lever and depending one on each side of said wheel and having a series of pins to engage the teeth of said wheel, one of said bars slipping over the teeth of said wheel while
20 the pins of the other bar are in working engagement therewith.

4. In a machine of the class described, a

vertical shaft, a pinion secured thereon, a horizontal shaft having a driving connection with said pinion, a pinion secured on said
25 horizontal shaft, a fly wheel loosely mounted on said first-named shaft and geared to said horizontal shaft pinion, and means for driving said horizontal shaft.

5. In a machine of the class described, a
30 shaft, a pinion secured thereon, a rack-bar engaging said pinion, a pivoted gear having a crank pin whereon said rack bar is mounted, a horizontal shaft, a gear secured thereon and meshing with said pivoted gear, and
35 a fly wheel having a driving connection with said horizontal shaft.

In witness whereof, I have hereunto set my hand this 10th day of August 1908.

WILBERT C. FAWKES.

Witnesses:

RICHARD PAUL,
C. G. HANSON.