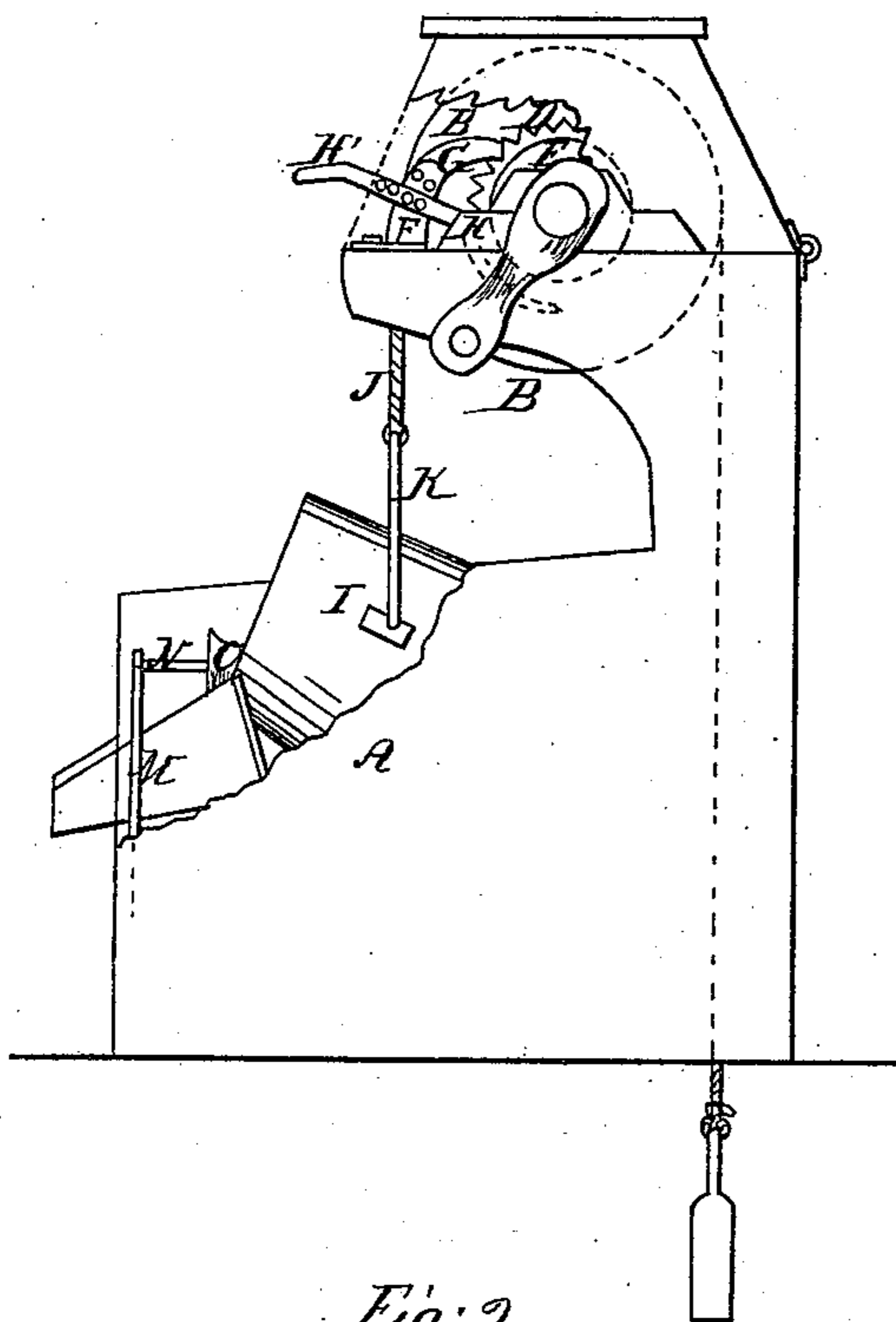


*J. W. Wheeler*  
*Water Elevator.*

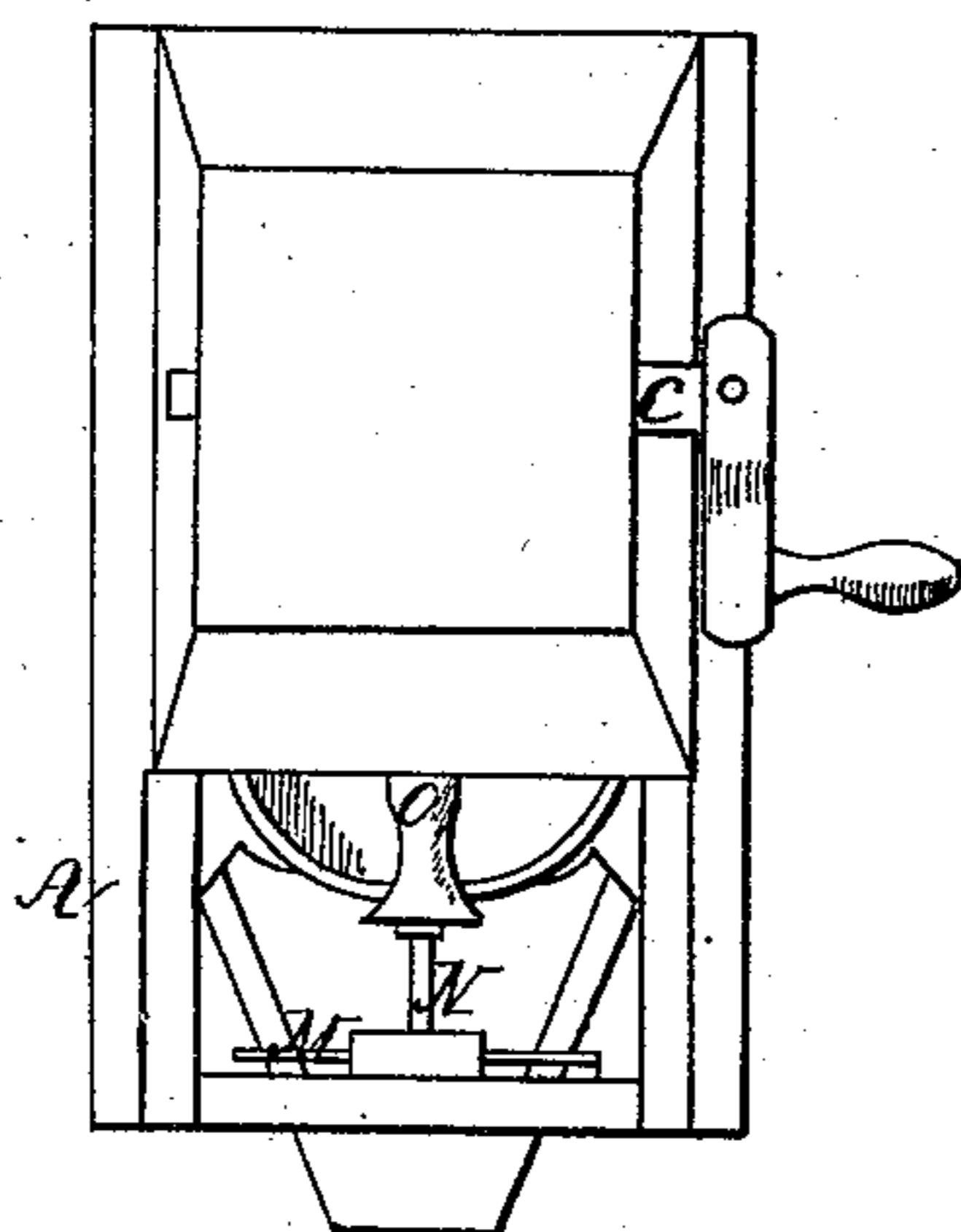
*N<sup>o</sup> 95,545.*

*Patented Oct. 5, 1869.*

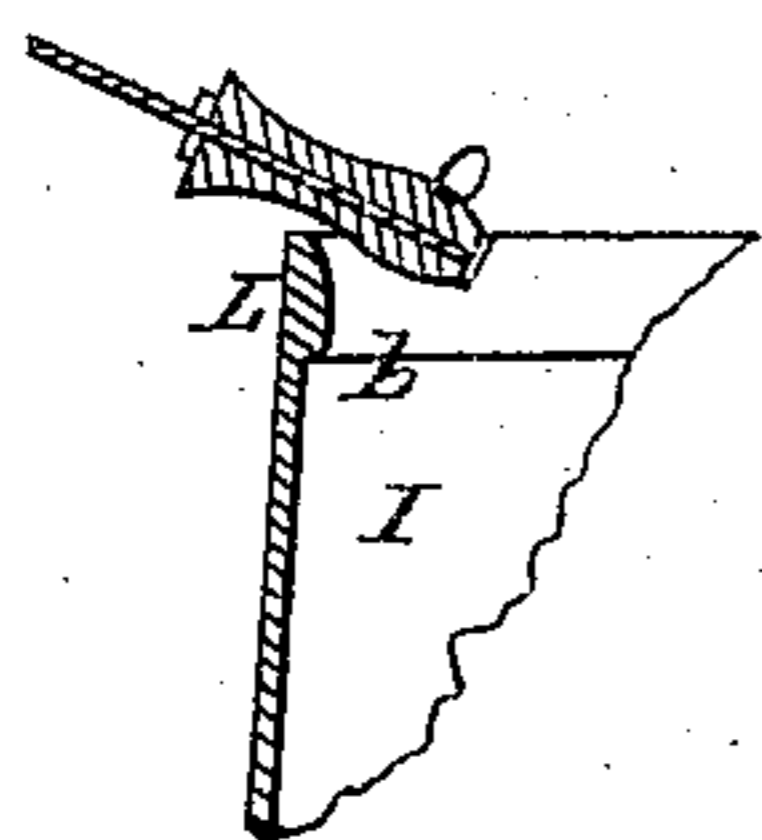
*Fig: 1*



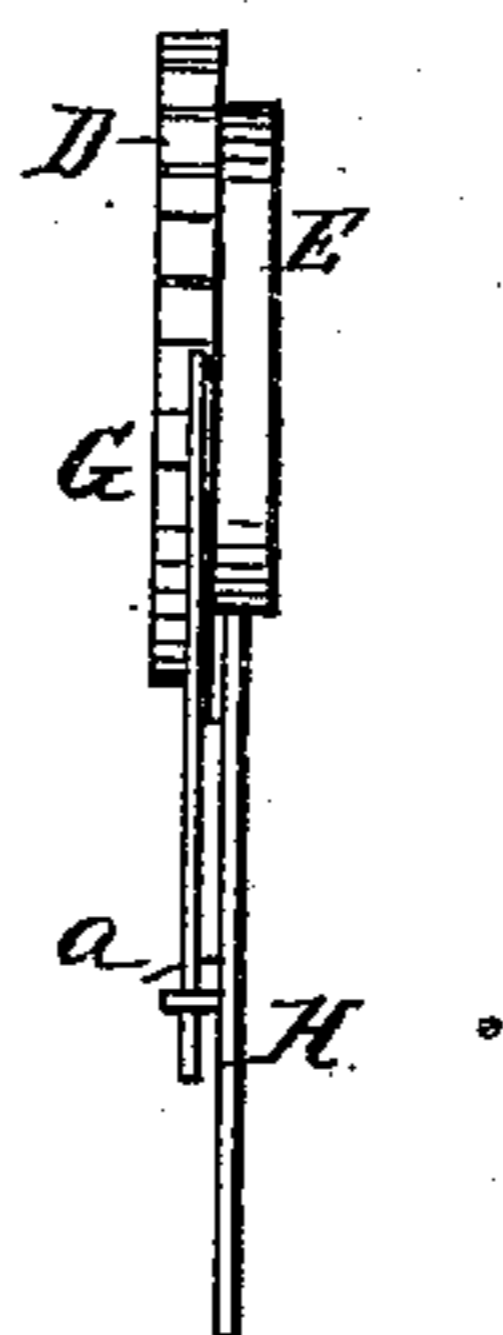
*Fig: 2.*



*Fig: 3.*



*Fig: 4.*



*Witnesses;*  
*M. E. Russell*  
*J. H. Burridge*

*Inventor;*  
*J. W. Wheeler*

# United States Patent Office.

J. W. WHEELER, OF CLEVELAND, OHIO.

Letters Patent No. 95,545, dated October 5, 1869.

## IMPROVEMENT IN WATER-ELEVATORS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, J. W. WHEELER, of Cleveland, in the county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Water-Drawers; and I do hereby declare that the following is a full and complete description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side view of the water-drawer.

Figure 2, a top view.

Figure 3, a detached section.

Figure 4, a detached section.

Like letters refer to like parts in the different views presented.

The nature of this invention relates to a device for tipping the bucket of a water-drawer by means of a roller attached to a vibrating arm, herein more fully described; also, a device whereby the speed of the descent of the bucket into the well is governed.

In fig. 1, A represents the curb or case of the machine, in the top of which is journaled a grooved wheel, B.

On the shaft C, fig. 2, close to said wheel, is a ratchet-wheel, D, fig. 4, to the side of which is attached a smooth-rim wheel, E.

Pivoted to the standard F is a pawl, G, to engage the ratchet-wheel referred to.

To said standard is also pivoted a lever or brake, H, from the side of which projects a pin, *a*, fig. 4, under which the lower end of the pawl proceeds, and is operated thereby, as and for a purpose hereafter shown.

I is the bucket attached to the rope J by the bail K.

Immediately around the inside of the rim of said bucket is a rib, L, fig. 3, whereby is formed a shoulder, *b*, the purpose of which will presently be shown.

M is a tilting-bar, from the centre of which projects a stem, N, on which is secured a roller, O, the purpose of which is as follows:

In this class of machines, for drawing water, it is necessary to use a flat chain for raising the bucket, in order that it may present the proper side to the tipping-device, for should a rope or common chain be used, the bucket would swing around, and as often present the sides to which the bail is attached to the tipping-device as the proper sides.

In order to avoid this difficulty, so that a rope can be used instead of a flat chain or other kind, resort is had to a device for turning the bucket, so as to present it properly to the tilt.

Such devices are not only expensive, but in consequence of the work that they have to perform, they are unavoidably complicated, and therefore liable to become deranged, and hence inoperative.

To avoid this difficulty is the purpose of the roller O, referred to, which, when the bucket ascends, and presents the bail-side more or less to the roller, is caught thereby, and will roll upon the edge of the bucket, turning it around till the pivotal line of the bail arrives transversely in the case, as shown in fig. 1, in proper position for tilting, which it will do as the bucket is continued to be drawn upward.

To prevent the bucket from becoming disengaged from the roller, while thus being tilted for discharging the water, is the purpose of the rib L, referred to, which, as the bottom of the bucket is elevated, cannot slip therefrom, as the thick end of the roller is caught by the shoulder *b*, and is thereby retained during the discharging of the water.

It will be obvious that by this device an ordinary chain or rope can be used for drawing up the bucket, thereby dispensing with the use of a flat chain, which is not only expensive, but very liable to break, in consequence of its peculiar construction.

In this class of water-drawers, a tilting-device is generally used, and if a common chain or rope is employed for drawing up the bucket, an additional device is introduced for bringing the bucket to the right position for tilting.

By the use of the roller referred to, the tilter is made to do this office of guiding the bucket, so that it can be tipped, thus performing a twofold work, thereby dispensing with the expensive arrangement or device for guiding the bucket, above mentioned.

As the bucket is lowered into the well, it is restrained from descending too fast, by the brake H, which, on depressing the outer end of the arm H', the inner arm H is brought in contact with the wheel E, thereby controlling its revolution according to the pressure applied.

At the instant the external arm H' is depressed, the pawl G is disengaged from the ratchet by said arm pushing downward the lower end of the pawl by means of the pin *a*. Thus a disengagement of the pawl is made simultaneously with the application of the brake, and, *per contra*, on the disengagement of the brake with the wheel, the pawl falls immediately upon the ratchet.

By this simple arrangement of the pawl and brake, no especial care is required in order to retain the bucket at any particular elevation in the well, as the action of the pawl is consequent upon the action of the brake, and not dependent upon the attention and care of those drawing water.

What I claim as my improvement, and desire to secure by Letters Patent, is—

1. The tilting-bar M and roller O, in combination with the rib L and shoulder *b* around the inner edge of the bucket, in the manner as and for the purpose set forth.

2. The roller O, in combination with the bucket I, arranged and operating in relation to each other, in the manner and for the purpose substantially as set forth.

3. The combination of the pawl and wheel G D, brake H, pin *a*, and wheel E, arranged to operate conjointly in the manner as and for the purpose specified.

J. W. WHEELER.

Witnesses:

J. H. BURRIDGE,  
E. E. WAITE.