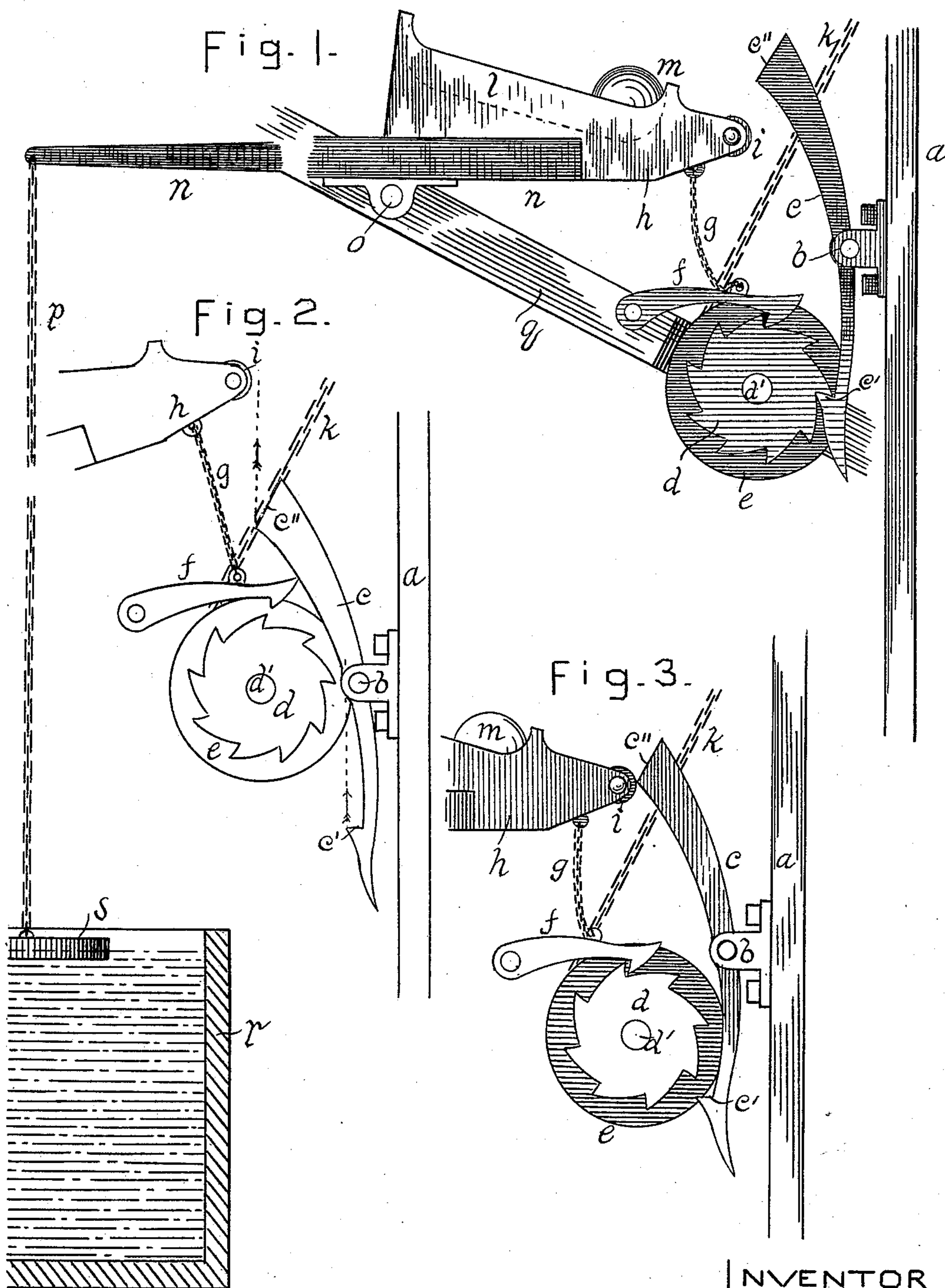


(No Model.)

T. O. REEME.
WINDMILL.

No. 420,520.

Patented Feb. 4, 1890.



ATTEST

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UNITED STATES PATENT OFFICE.

THEODORE O. REEME, OF DECATUR, ILLINOIS.

WINDMILL.

SPECIFICATION forming part of Letters Patent No. 420,520, dated February 4, 1890.

Application filed February 16, 1889. Serial No. 300,097. (No model.)

To all whom it may concern:

Be it known that I, THEODORE O. REEME, of the city of Decatur, county of Macon, and State of Illinois, have invented a certain new and useful Attachment for Windmills, of which the following is a specification.

My invention relates to wind-motors (commonly called "windmills") used in connection with pumps to supply drinking-water for live stock; and it consists in the details of construction and combinations of parts, hereinafter set forth and claimed.

The object is to automatically stop the motor when the water-tank is filled, and to start the same when the water or any considerable portion thereof has been drank or otherwise drawn from the tank.

In the drawings accompanying and forming a part of this specification, Figure 1 represents my device in side elevation with the pump-bar at or near its highest elevation and with the tank filled with water. Fig. 2 shows parts of the device as they appear while the tank is filling and while the pump-bar is at its lowest position. Fig. 3 shows the same parts as they appear while the motor is stopping and while the pump-bar is at an intermediate point in its movement.

The pump-bar, a portion of which is shown at *a*, is reciprocated longitudinally by the motor in the customary manner, and it connects directly or indirectly with the valve of the pump. Bracket *b* on the pump-bar provides a pivotal bearing for pawl *c*, which has the ratchet-catch *c'* at its lower end and the inclined surface *c''* at its upper end. The pawl is so shaped and proportioned that it normally rests with its lower end close to the pump-bar and its upper end extended as far as possible therefrom. Ratchet-wheel *d* is mounted on shaft *d'* and connected rigidly with drum *e*. A click *f* rests ordinarily on the ratchet-wheel, and when so resting prevents back motion in said wheel. A chain *g* on drum *e* connects with the motor in such manner that when shortened the motor will be stopped or thrown out of gear, preferably the former. The lever *n*, which is broken in the drawings to conform to the sheet of paper on which it is drawn, is pivoted at *o*, is connected by chain *p* with the float *s* in tank *r*, and has the head *i*, in which anti-friction

roller *i* pivots. Incline *l* carries a rolling weight *m*, and the weight of the head *h*, together with the rolling weight, are somewhat overbalanced by the weight of the float when suspended from the long arm of the lever.

When the tank is only partly filled with water, the float will hold the roller *i* out of the path of motion of the inclined end *c''* of pawl *c*, as shown in Fig. 2. As the water accumulates and raises the float, the roller descends to the position shown in Figs. 1 and 3. Then as the pump-bar rises it carries the inclined end of the pawl against the roller, as shown in Fig. 3, and develops sufficient motion to cause the catch to engage a ratchet-tooth, as seen in Fig. 1, and effect a partial rotation in the wheel and drum. This operation is performed successively until the chain has been wound on the drum to an extent sufficient to stop the motor, when all motion will of necessity cease. As the water lowers in the tank, the lever *n* tilts gradually until the rolling weight moves toward the pivot, when click *f* is raised from the ratchet-wheel through chain *g* and the drum unwinds and permits the motor to start.

The rolling weight is desirable for the purpose of increasing the inertia of the head when subjected to impingements of the pawl, and it is also useful in assisting the float to raise the click.

The bar *q* is a generalization of the support and connections of the various parts of the device, and is only suggestive in its nature. The relative position of the bearings of the different parts is a matter of importance in connection with the invention; but the formation of the connections and supports is not, and inasmuch as the device is designed for use in various kinds of wind-motors it is thought that a complete representation of supports and connections for use on the tower or derrick of any particular motor would be misleading as to all others, and so this feature is left entirely to the mechanical skill of persons connected with the construction of such machines.

I claim as new and desire to secure by Letters Patent—

1. A device for automatically applying the motion of the pump-rod of a wind-actuated pump to the stop mechanism of the wind-

wheel, such device consisting of a tank to receive water from the pump, a pawl on the pump-rod, a ratchet-wheel adapted to the pawl, a drum secured to the ratchet-wheel, a chain on the drum connected with the stop mechanism, a float in the tank, and a lever connected with the float and adapted to swing into the path of the pawl and force the same into mesh with the ratchet-wheel, as set forth.

2. A device for automatically applying the motion of the pump-rod of a wind-actuated pump to the stop mechanism of the wind-wheel, such device consisting of a tank to receive water from the pump, a ratchet-wheel adapted by its rotation to operate the stop mechanism, a pawl on the pump-rod adapted to the ratchet-wheel and hanging normally out of contact therewith, a float in the tank, and a lever connected with the float and adapted to swing into the path of the pawl and force the same into mesh with the ratchet-wheel, as set forth.

3. In combination, pump-bar *a*, pawl *c*, pivoted on the bar and having the catch *c'* and incline *c''*, drum *e*, ratchet *d*, fixed to drum *e*, lever *n*, connected with float *s* and having anti-friction roller *i*, click *f*, connected with the lever, and chain *k* on drum *e*, all constructed and arranged to operate as and for the purpose set forth.

4. In combination, pump-bar *a*, pawl *c*, pivoted on the bar and having the catch *c'* and incline *c''*, drum *e*, ratchet *d*, fixed to drum *e*, lever *n*, connected with float *s* and having roller *i*, rolling weight *m* on lever *n*, click *f*, connected with the lever, and chain *k* on drum *e*, all constructed and arranged to operate as and for the purpose set forth.

In testimony whereof I sign my name in the presence of two subscribing witnesses.

THEODORE O. REEME.

Attest:

JOHN N. BILLS,
L. P. GRAHAM.