

(No Model.)

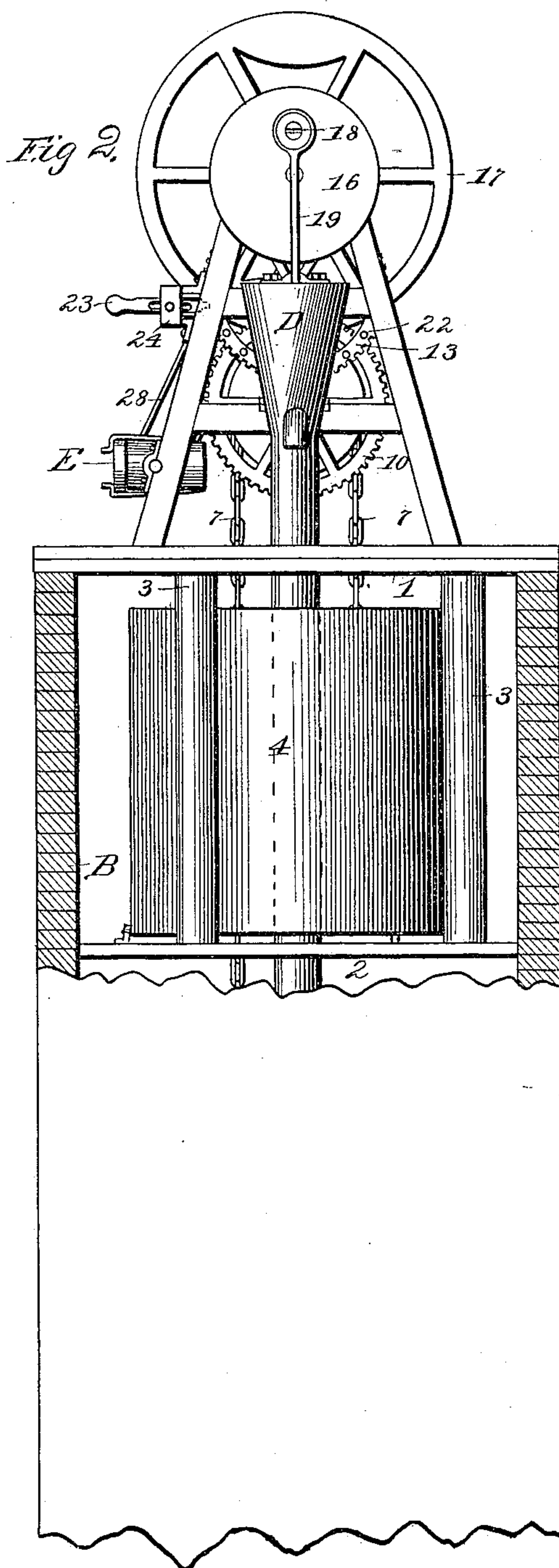
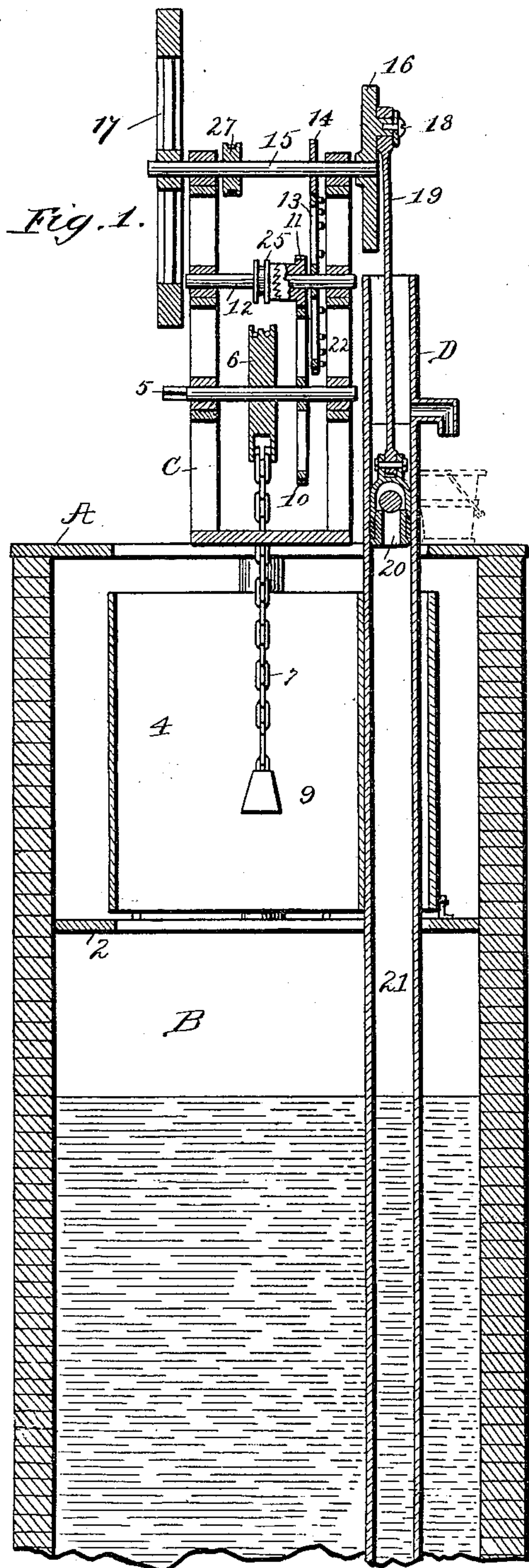
2 Sheets—Sheet 1.

A. C. T. PRANGE.

PUMP MOTOR SUPPORT.

No. 366,686.

Patented July 19, 1887.



Witnesses.

N. P. Rauter
Otto Lubkert

Inventor,
August C. T. Prange
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Atty.

(No Model.)

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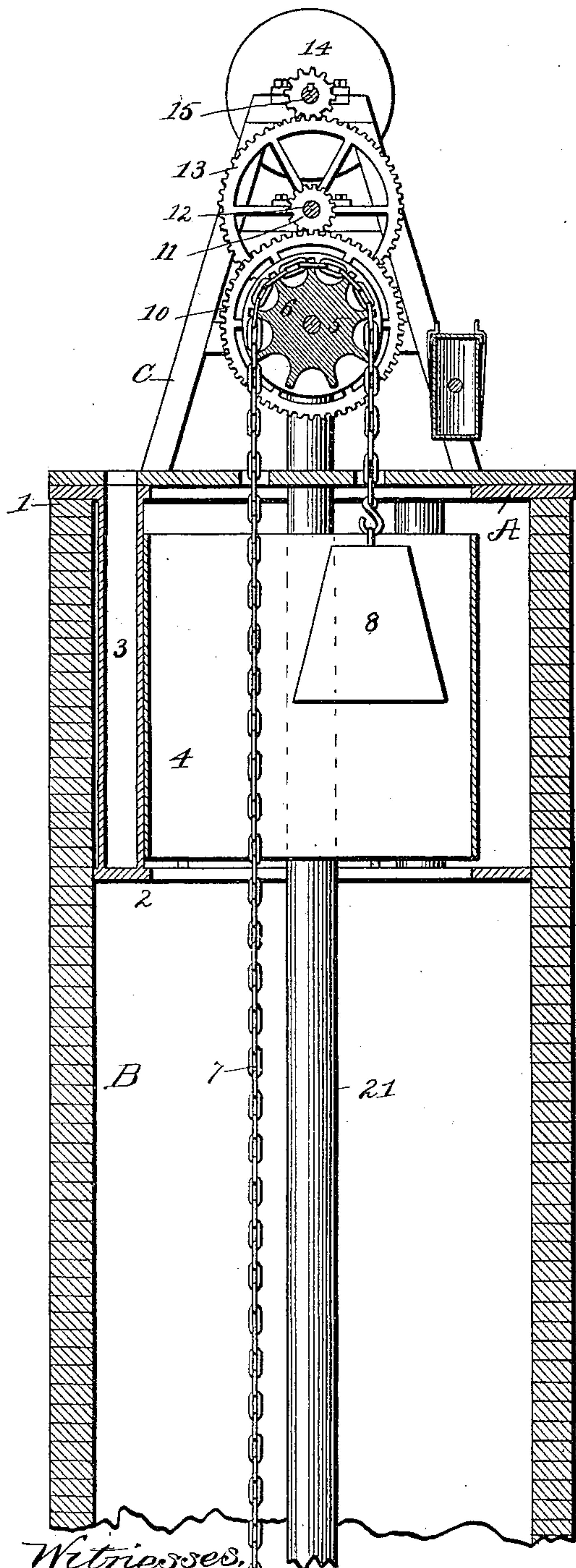
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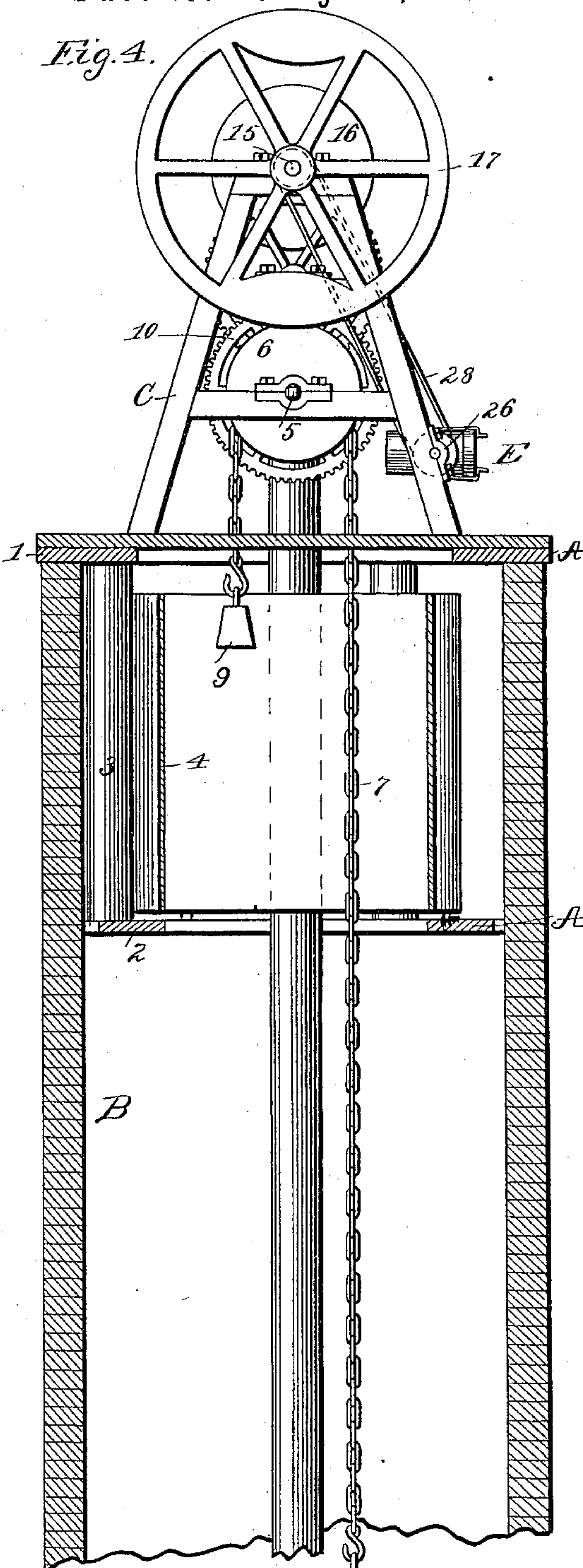
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Fig. 3.



Witnesses,
W. D. Porter
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Fig. 4.



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UNITED STATES PATENT OFFICE.

AUGUST C. T. PRANGE, OF POMEROY, IOWA.

PUMP-MOTOR SUPPORT.

SPECIFICATION forming part of Letters Patent No. 366,686, dated July 19, 1887.

Application filed February 7, 1887. Serial No. 226,846. (No model.)

To all whom it may concern:

Be it known that I, AUGUST C. T. PRANGE, a citizen of the United States of America, residing at Pomeroy, in the county of Calhoun and State of Iowa, have invented certain new and useful Improvements in Pump-Motor Supports, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to a device for supporting a motor over a well or other excavation. I will, in connection with the description of said device, also show and describe a motor; but it will be understood that any motor may be used therewith, and that I do not confine myself to the use of any particular motor in connection with the supporting device.

In the accompanying drawings, Figure 1 represents a longitudinal vertical section; Fig. 2, a sectional front elevation; Fig. 3, a transverse vertical section, and Fig. 4 a sectional rear elevation of the device as placed over a well.

Corresponding characters of reference designate like parts in the several figures of the drawings.

A denotes the base for the pump, consisting of two ring-plates, 1 and 2, connected by three (more or less) columns, 3, either one of which ring-plates is adapted to be secured upon the curb of the well for placing the motor on a higher or lower elevation, as may be desirable; and a cylinder, 4, secured upon these columns, is to brace the whole and to form a shell or wall for the driving-chain of the motor and pump-stock to extend through. The bottom ring-plate, 2, with the columns, serves in case of shallow wells to support the motor a distance above the top of the well, and thus lengthen the distance which the weight has to travel.

The ring-plate 1 is at the top of the curb, as shown in Fig. 2, and the ring-plate 2 is let down into the well a considerable distance, as shown in same figure, and is suspended by the columns 3. The cylinder 4 is located between the ring-plates, and may be attached to the lower one. The central opening in the ring-plates corresponds in size with the diameter of the cylinder, so as to give free unobstructed passage for the weights. The cylinder 4 has a smaller inclosure, 4^a, through which the

pump-stock 21 passes and by which it is held securely against lateral movement.

The cylinder 4 is supported on the lower ring-plate, 2, by means of brackets or legs, as shown. The cylinder prevents the weight and chain from swinging out and becoming entangled with the pump-stock or columns, and the smaller compartment 4^a thereof serves, as above described, to give lateral support to the pump-stock.

As shown in the drawings, ring-plate 1 is secured upon the curb of the well B, and upon this ring-plate 1 is secured the frame C, preferably composed of two A-shaped standards connected by suitable braces. (Shown in the drawings.) Upon the lower longitudinals of frame C is journaled in suitable boxes a shaft, 5, having a squared protruding end to attach a crank for winding such shaft, and upon it is mounted a sprocket-wheel, 6, over which is passed a chain, 7, having a large weight, 8, suspended to one end, and a small counter-weight, 9, to the opposite end. Upon this shaft 5 is also mounted a spur-wheel, 10, the teeth of which mesh with a pinion, 11; loosely sleeved upon a shaft, 12, journaled in suitable boxes upon the intermediate longitudinals of frame C. This pinion 11 is coupled with shaft 12 by a shifting-clutch, 25, feathered upon such shaft and operated by a suitable lever in the usual manner. Upon shaft 12 is also mounted a spur-wheel, 13, the teeth of which mesh with pinion 14, mounted upon crank-shaft 15. Upon the front overhanging end of shaft 15 is mounted the crank-disk 16, and upon the rear overhanging end is mounted a fly-wheel, 17, and the shaft 15 is journaled in boxes secured upon the top of standards of frame C. The crank-pin 18, by a pitman, 19, connects with the plunger 20 of any suitable kind of reciprocating pump, D, the suction-pipe 21 of which extends to near the bottom of the well, to be provided with a foot-valve in the usual manner. The upper end, D', of the pump-case is flared or broadened laterally to accommodate the stroke of the pitman.

The spur-wheel 13 to one side of its rim has studs 22, and a bolt, 23, sliding in a bracket, 24, will engage these studs for stopping the motor when desirable.

A revolving churn, E, of any suitable con-

struction, has trunnions pivoted in suitable bearings to one side of the frame-standards, and has mounted upon one of its trunnions a pulley, 26, and upon crank-shaft 15 is also
 5 mounted a pulley, 27, and an endless belt, 28, stretched over these pulleys will transmit the rotary motion from crank-shaft 15 to churn E, which belt, when the churn is not used, is thrown off its pulleys.

10 For winding the weight 8 the clutch 25 is shifted out of contact with pinion 11, while by a crank the shaft 5 is turned until such weight is elevated to its highest position, when the clutch 25 is coupled again with pinion 11. The
 15 weight 8 will now drive the pump, raising water until such weight is sunk to the bottom of the well again. For churning, the pitman 19 is disconnected and the endless belt 28 is placed over the pulleys, and for stopping the
 20 motor the bolt 23 is shifted to engage one of the studs 22 of spur-wheel 13.

A motor thus constructed and placed that the driving-weight hangs in the well-shaft brings the entire machinery in easy reach for
 25 lubricating, stopping, starting, and winding, so as to be of the most simple construction.

The advantages of the device for a farmer's use will be readily seen. He can wind up the weight in the morning, or whenever he has
 30 time, and then he will get his water supply for the whole day fresh from the well without any

further attention, and at the same time the churning can be done without manual labor.

Heretofore windmills were used for pump- 35
 ing the water into elevated tanks, which, how-
 ever, were exposed to storms and often de-
 stroyed, or at least damaged therefrom, while
 the water in the tank was exposed to the
 weather, freezing in the winter and becoming
 too warm in the summer, all of which is over- 40
 come by my device.

What I claim is—

1. The combination, with a weight-motor and pump-stock, of the ring-plates 1 and 2, 45
 columns 3, and cylinder 4, having the com-
 partment 4^a, said parts 1, 2, 3, 4, and 4^a serv-
 ing to support the motor, guide the weight
 and chain, and laterally brace the pump-stock,
 as set forth.

2. A device for use at the top of a well, 50
 consisting of the horizontal ring-plates 1 and
 2, the columns 3 between and uniting them,
 and a cylinder, 4, also held between said plates,
 through which the pump-stock passes, as set
 forth. 55

In testimony whereof I affix my signature in presence of two witnesses.

AUGUST C. T. PRANGE.

Witnesses:

WILLIAM H. LOTZ,
 OTTO LUBKERT.