

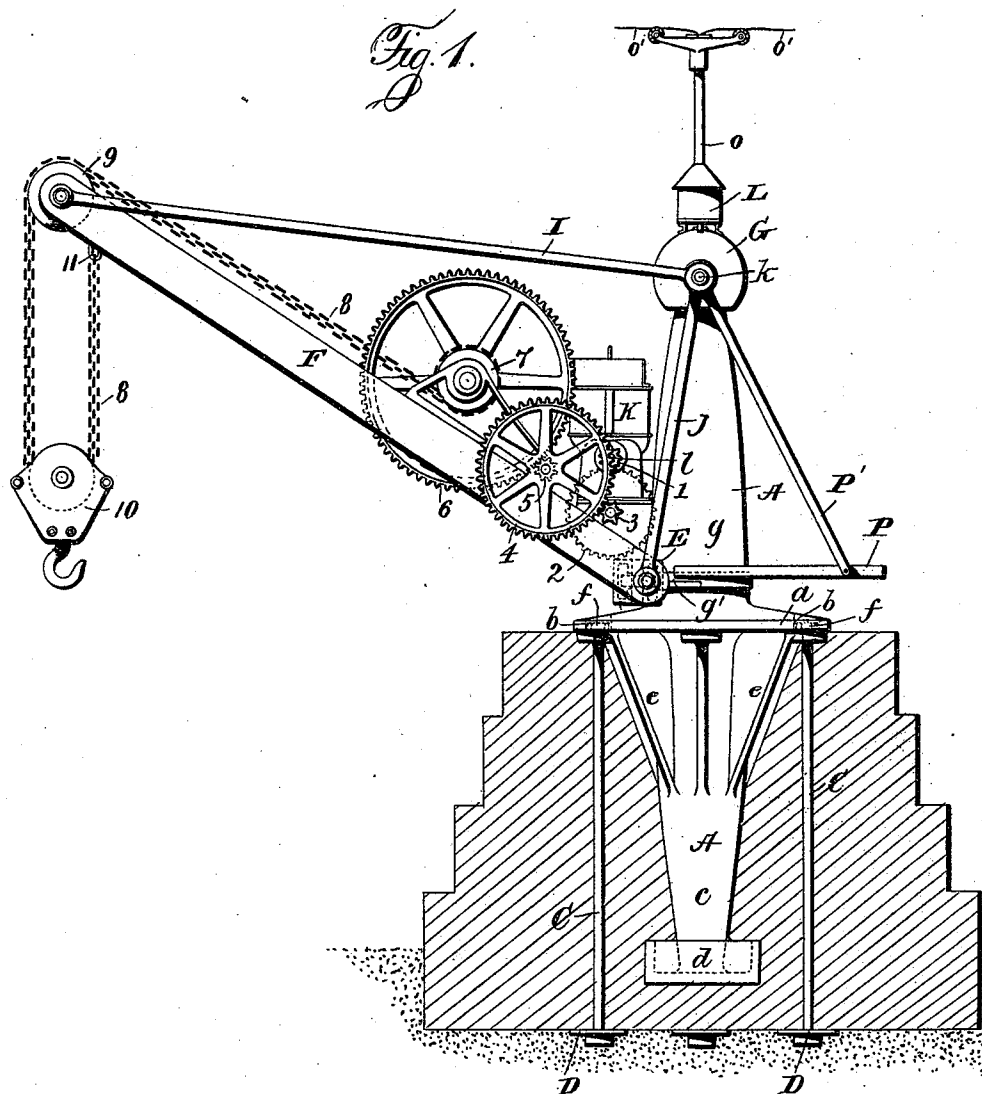
(No Model.)

3 Sheets—Sheet 1.

W. H. MORGAN.
PILLAR CRANE.

No. 496,433.

Patented May 2, 1893.



Witnesses
Jas. C. Hutchinson.
G. F. Downing.

Inventor
William H. Morgan
By *H. A. Seymour*
Attorney

(No Model.)

3 Sheets—Sheet 2.

W. H. MORGAN.
PILLAR CRANE.

No. 496,433.

Patented May 2, 1893.

Fig. 2.

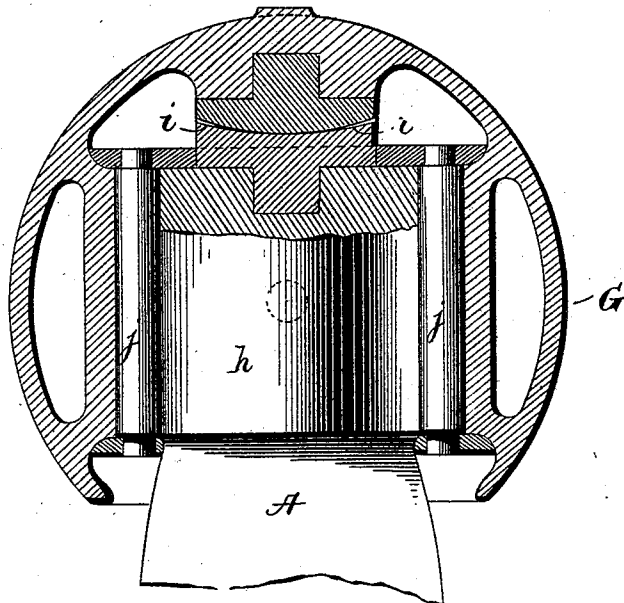
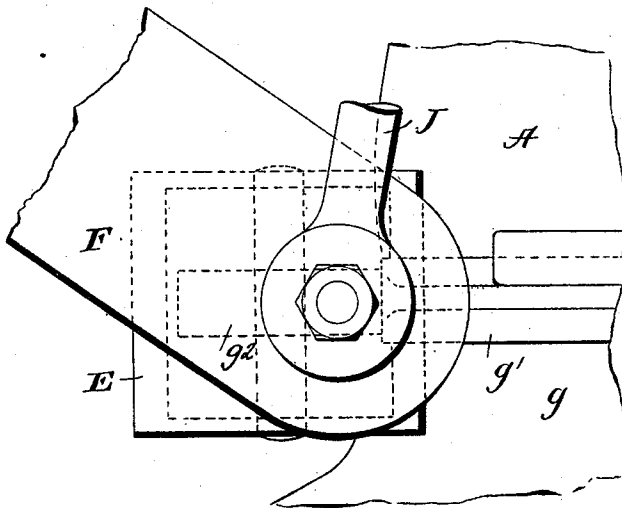


Fig. 3.



Witnesses
 *Jas. E. Hutchinson
 G. F. Downing.*

Inventor
 William H. Morgan
By *H. A. Seymour*
Attorney

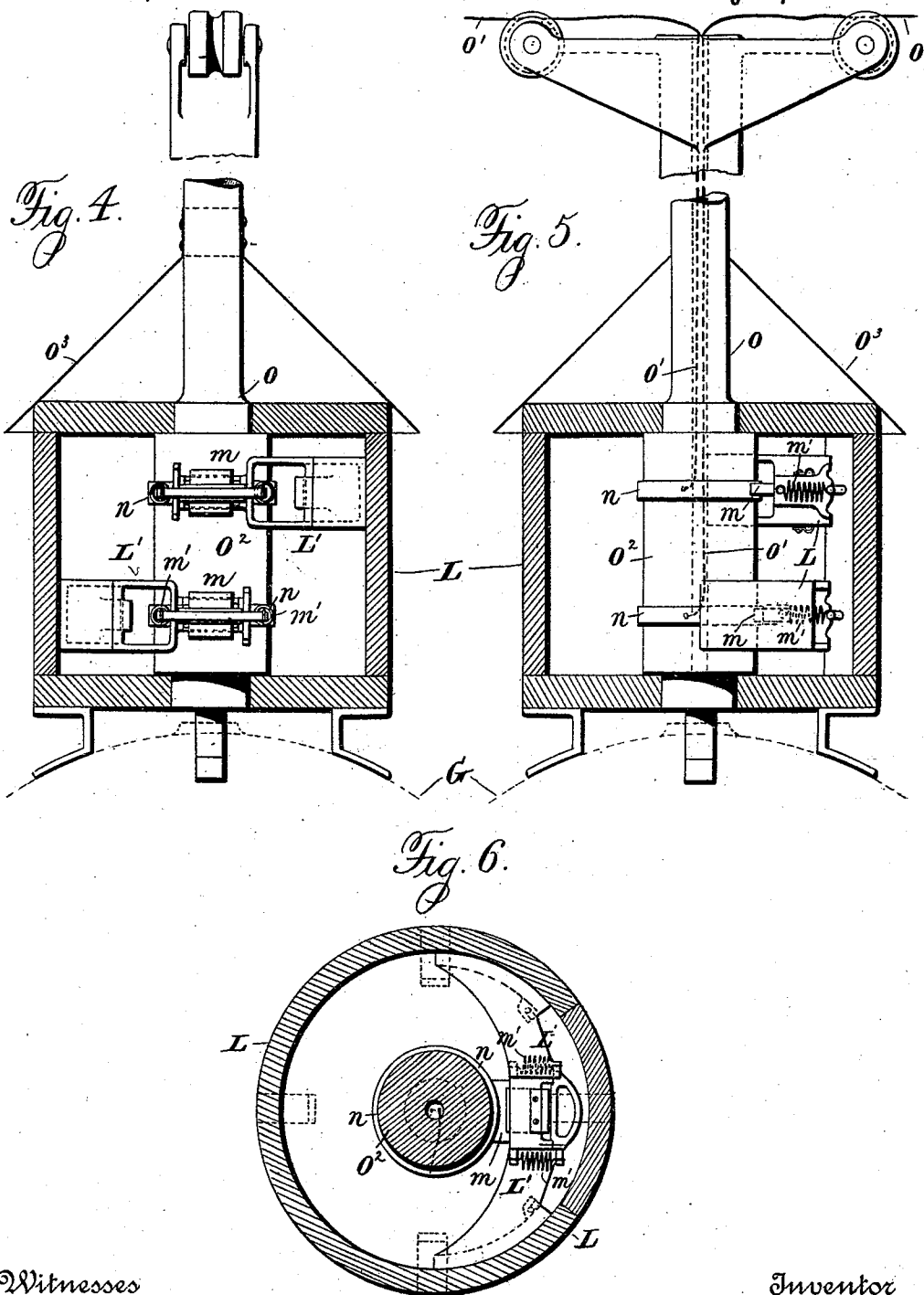
(No Model.)

3 Sheets—Sheet 3.

W. H. MORGAN.
PILLAR CRANE.

No. 496,433.

Patented May 2, 1893.



Witnesses
Jas. C. Hutchinson.
G. F. Downing.

Inventor
William H. Morgan
By *A. A. Seymour*
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM HENRY MORGAN, OF ALLIANCE, OHIO.

PILLAR-CRANE.

SPECIFICATION forming part of Letters Patent No. 496,433, dated May 2, 1893.

Application filed June 13, 1892. Serial No. 436,566. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY MORGAN, of Alliance, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Pillar-Cranes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in jib cranes, and it consists in the parts and combinations of parts as will be more fully described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in side elevation of my improved crane. Fig. 2 is a view in vertical section through the upper end of the post and the cap thereon. Fig. 3 is a view in perspective of the saddle to which the lower end of the jib is attached. Figs. 4 and 5 are views in vertical section through the contact box and Fig. 6 is a view in horizontal section through same.

A represents a metal post preferably of double conical form, provided at the bases of the cones with a base or flange *a* having a flat under side and provided with a series of bolt holes *b* for a purpose to be hereinafter described.

In the drawings the base *a* is shown about midway the length of the post, but I do not propose to limit myself to such location as it will be varied according to circumstances. That portion *c* of the post *A* below the flange *a* is adapted to be embedded in a concrete, masonry or other foundation, with the flange *a* resting solidly on said foundation, and is provided at its extreme lower end with an enlarged foot or anchor *d* and at its upper end with a series of wings or flanges *e* the latter being integral with the flange *a* and section *c* of the post. This foot *d* and the flanges *e* being firmly embedded in the foundation hold the post or standard *A* solidly in position and prevents any tendency to turn.

Passing through the bolt holes *b*, which by the way are located at suitable intervals apart near the edge of the flange are the bolts *C*. These bolts *C* are secured to the anchor plates *D* embedded in the foundation or located below and in contact with the under side of the foundation, and pass upwardly through said foundation and into or through the holes *b*.

By securing nuts *f* to the upper ends of these bolts *C*, the flange *a* is firmly locked thereto, thus relieving the section *c* of the post or standard *A* of considerable strain which would otherwise fall thereon.

The section *g* of the post or standard *A*, is provided near its bottom with a ring like bearing surface *g'* which latter is perfectly smooth and is in a plane slightly outside of the plane of the post or standard, and at its upper end with a flat bearing surface *h*, the lower bearing surface *g'* being for the saddle *E* carried by the lower end of the jib *F*, while the upper bearing surface *h* is for the cap *G*. The saddle *E* is curved in the arc of a circle concentric with bearing *g*, and is connected at its ends to the ends of the beams constituting the jib *F*. This saddle rests between the beams and is provided on its inner or concave face with a series of rollers *G*² which latter rest against and move in contact with the bearing *g'*. The cap *G* fits over the upper end of post *A*, and is provided with the convex bearing shoe which latter rests on the concave seat *i* on the upper end of the post *A*, and with a series of rollers *j* which latter rest in contact with the bearing *h*. This cap is free to revolve on the post and carries and supports the jib by the stay rods *I* and *J*. The rods *I* are secured at their inner ends to trunnions or bolts *k* carried by or secured to the cap *G* on opposite sides thereof, and at their outer ends are secured to the outer free ends of the jib *F*. The rods *J*, are also secured at their upper ends to the trunnions or bolts *k* on opposite sides of the cap *G*, and are secured at their lower ends to the inner end of the jib, and support the latter in position to bring the rollers carried by the saddle *E* in contact with the bearing *g*. By thus suspending the jib by means of the rods *I* and *J*, and connecting the latter to the cap it will be seen that the jib is free to swing in any direction around the post, the latter remaining stationary.

Mounted on the jib, and carried thereby is the electric motor *K*, the armature shaft *l* of which is provided with a small pinion 1 which meshes with the larger toothed wheel 2. This wheel 2 carries the small pinion 3 which in turn gears with the large toothed wheel 4. Wheel 4 carries the small pinion 5 which lat-

ter meshes with toothed wheel 6 fast to the winding drum 7. The lifting chain 8 is secured at one end to this drum and passes from there over pulley 9, through block 10 up to link 11 where it is secured. By means of the motor any load within the capacity of the crane can be elevated, held in an elevated position and lowered at the will of the operator.

Secured to the top of the cap G so as to move or revolve therewith is the contact box L preferably made of wood and carrying the contact holders L'. These holders L' are secured to the inner face of the box in different horizontal planes as shown, and each carries a carbon or other contact *m* held in yielding contact with the copper strips to be hereinafter referred to, by the springs *m'*. The contacts *m*, are connected by wires (not shown) to the motor, and as before stated are held solidly against the copper strips *n*. The strips *n* are secured to the pole O in different horizontal planes, and are connected to the main conductor O' by wires which preferably pass through the pole, the main conductor O' being secured to the insulators O² carried by the pole. The portion of the pole within the box L is enlarged as shown, and the lower end thereof rests on the cap G. This pole remains stationary while the box carrying the contacts is turned with the jib, and hence the motor can be thrown into the circuit at any time irrespective of the position of the jib. The box and the contacts therein are protected by the metal hood O³ rigidly secured to the pole above the box and overhanging the sides of the latter.

I can obtain with this device the same results by attaching the carbon brush holders to the pole and the copper rings or straps to the inner face of the housing thus causing the strips or rings to revolve and the brush holders to remain stationary.

P is the operator's platform secured at one edge by the saddle E, and at or near its opposite edge by the links P' which latter are suspended from the trunnions or bolts *k*. This platform is designed to carry a cut out, reversing switch and rheostat, or be located within easy reach of such parts so that the operator standing thereon will have complete control of the movements of the drum.

It is evident that numerous slight changes might be resorted to in the relative arrangement of parts herein shown without departing from the spirit and scope of my invention. Hence I would have it understood that I do not restrict myself to the exact construction of parts herein shown and described, but,

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a jib crane, the combination with a stationary pillar or standard, and a jib bearing against said pillar or standard at or near its base and attached to said pillar or standard at a point above its base, of an electric motor on the jib, gearing connecting said motor with the winding drum, a conductor and sliding contacts between said motor and conductor, substantially as set forth.

2. In a jib crane, the combination with a supporting standard and a cap mounted on the upper end thereof, of a jib, stay rods secured to the cap and to the jib at or near the outer free end of the latter, stay rods or supports connecting the cap and inner end of the jib, a motor carried by the jib, a winding drum, gearing controlled by the motor for actuating the winding drum, a conductor, and sliding contacts between the motor and conductor, substantially as set forth.

3. In a jib crane, the combination with a post or standard, and a jib carrying a drum, and an electric motor for actuating same, of an electric conductor, a pair of stationary contacts, a pair of contacts movable with the jib and conductors connecting said movable contacts and the motor, substantially as set forth.

4. In a jib crane, the combination with a standard and a jib, and a motor and drum carried by said jib, of an electric conductor and sliding contacts between said conductor and motor, substantially as set forth.

5. In a jib crane the combination with a post or standard an electric conductor, and stationary contacts connected with said conductor, of a cap loosely mounted on the post or standard, a box carried by said cap, contacts carried by said box, a jib supported by said cap and electric motor carried by said jib.

6. In a jib crane, the combination with a stationary post, and stationary contacts located above the post, of a movable cap mounted on the post and carrying contacts the latter bearing against the stationary contacts, a jib, stay rods connecting the jib and cap and a motor carried by the jib, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM HENRY MORGAN.

Witnesses:

F. E. DUSSEL,
H. W. HARRIS.