No. 826,708. PATENTED JULY 24, 1906.

J. R. BROWN.

MEANS FOR LAYING OR ERECTING TELEGRAPH AND LIKE POLES.

APPLICATION FILED DEC. 15, 1905.

4 SHEETS—SHEET 1.

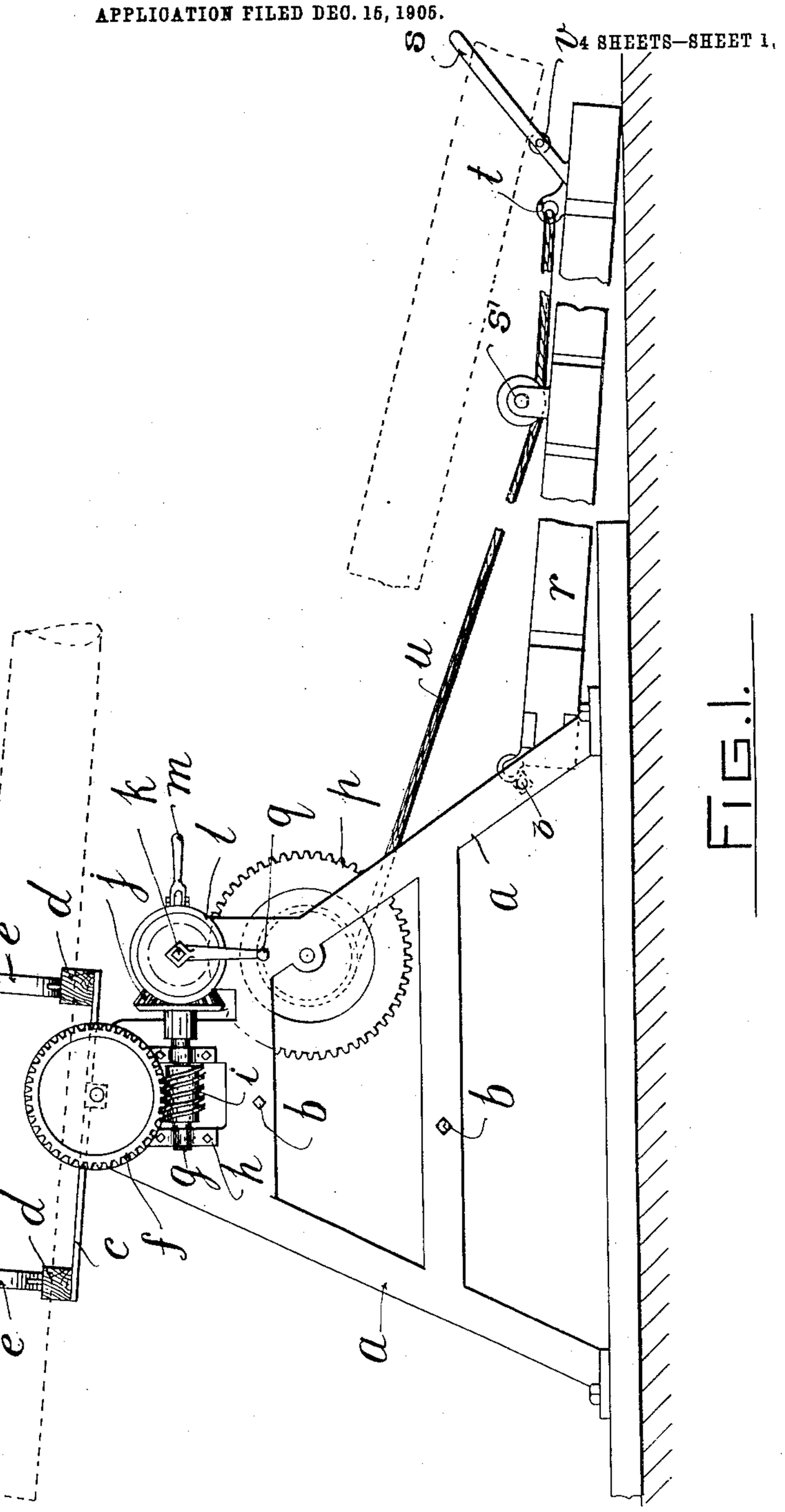

FIG. 1.

WITNESSES.

John Camp.

P. D. Bailey.

INVENTOR

John R. Brown

By his Attorney. Walter Gunn.

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4 SHEETS—SHEET 2.

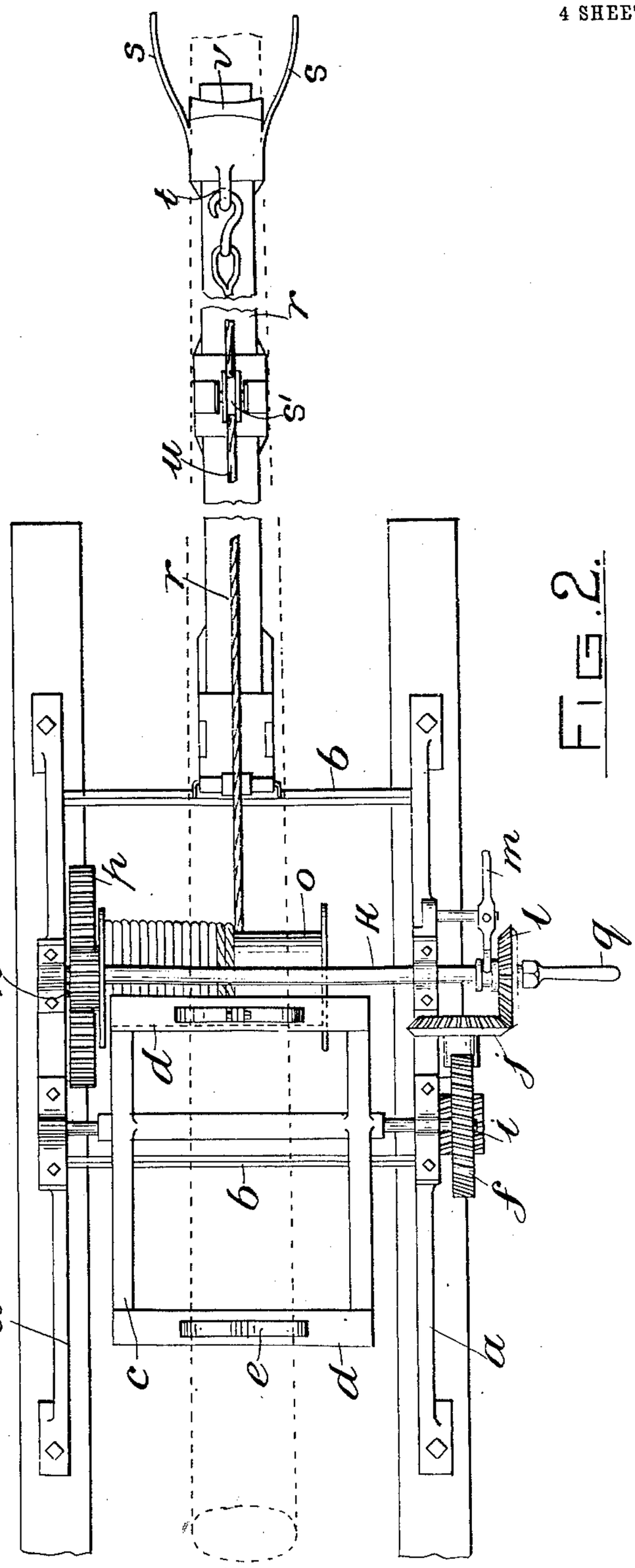

FIG. 2.

WITNESSES.
T. D. Bailey.
John Lamp.

INVENTOR.
John R. Brown.
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No. 826,708. PATENTED JULY 24, 1906.

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4 SHEETS—SHEET 3.

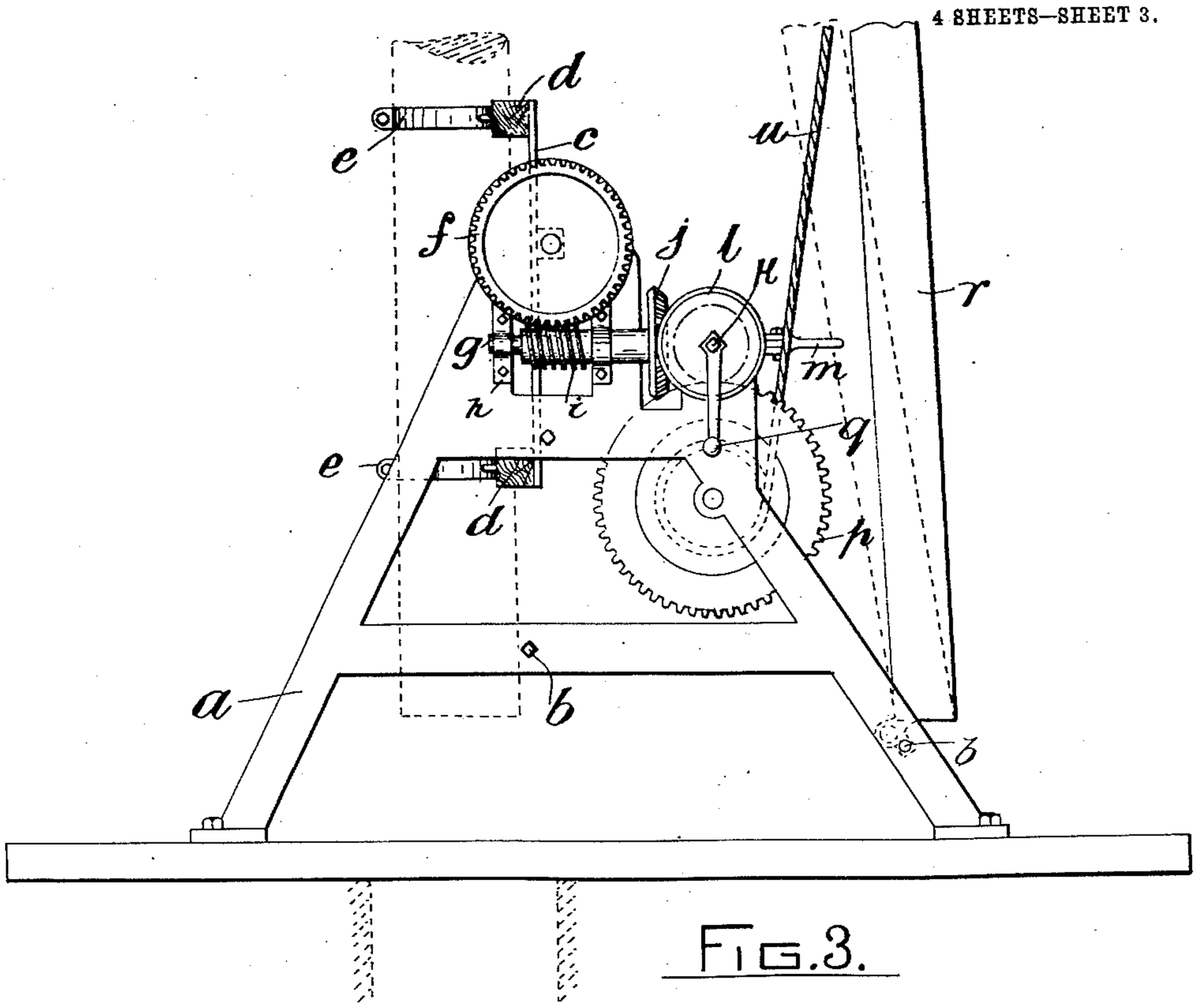

FIG. 3.

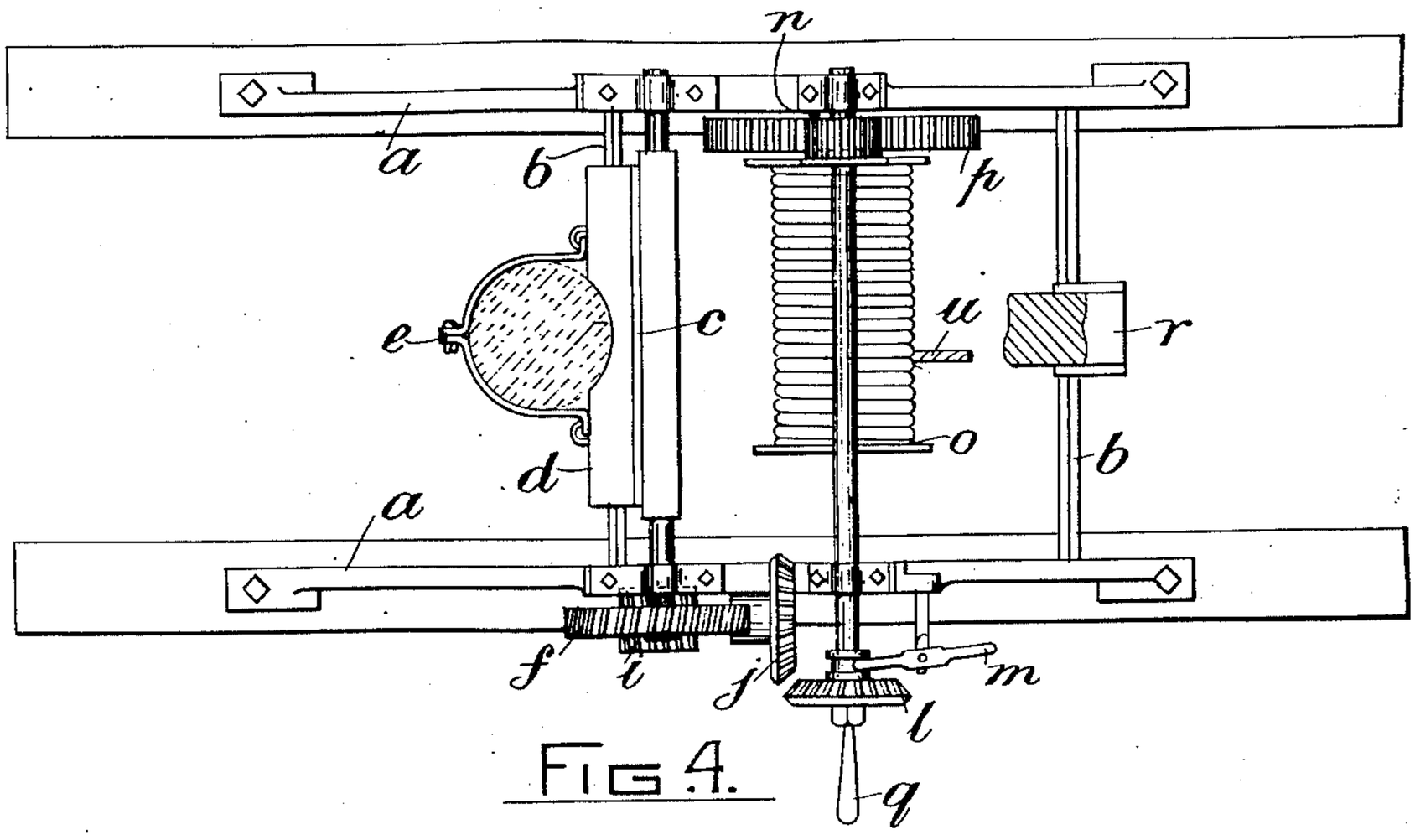

FIG. 4.

WITNESSES.

T. D. Bailey.

John Camp.

INVENTOR.

John R. Brown

By his Attorney. Walter Gunn.

No. 826,708. PATENTED JULY 24, 1906.

J. R. BROWN.

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4 SHEETS—SHEET 4.

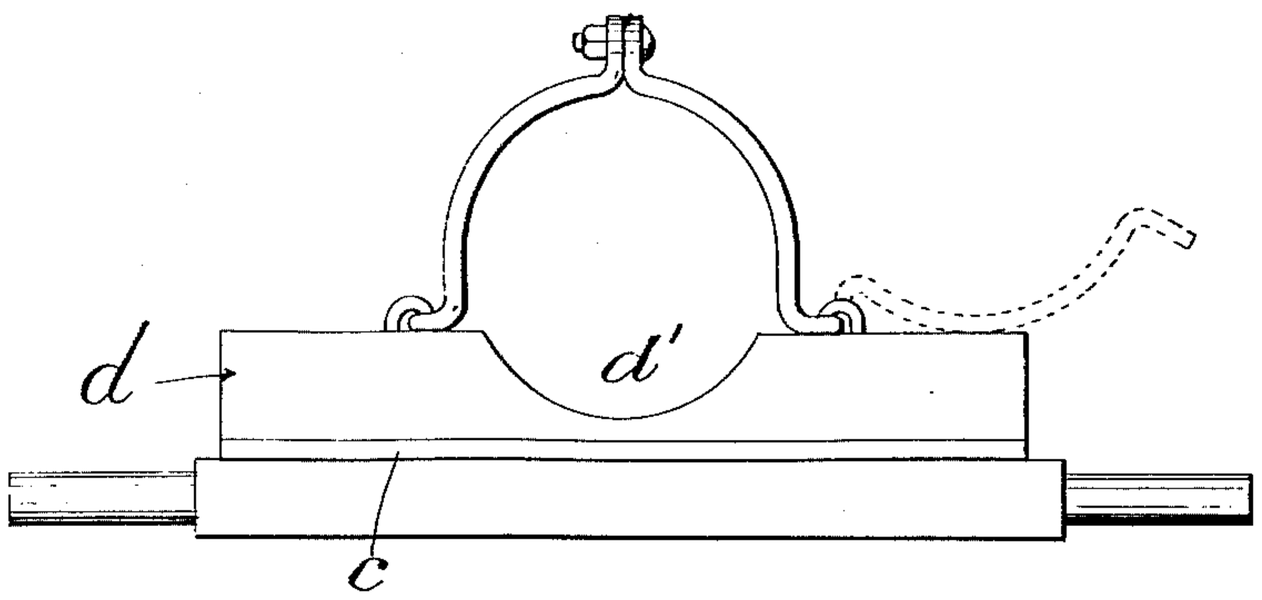

FIG. 5.

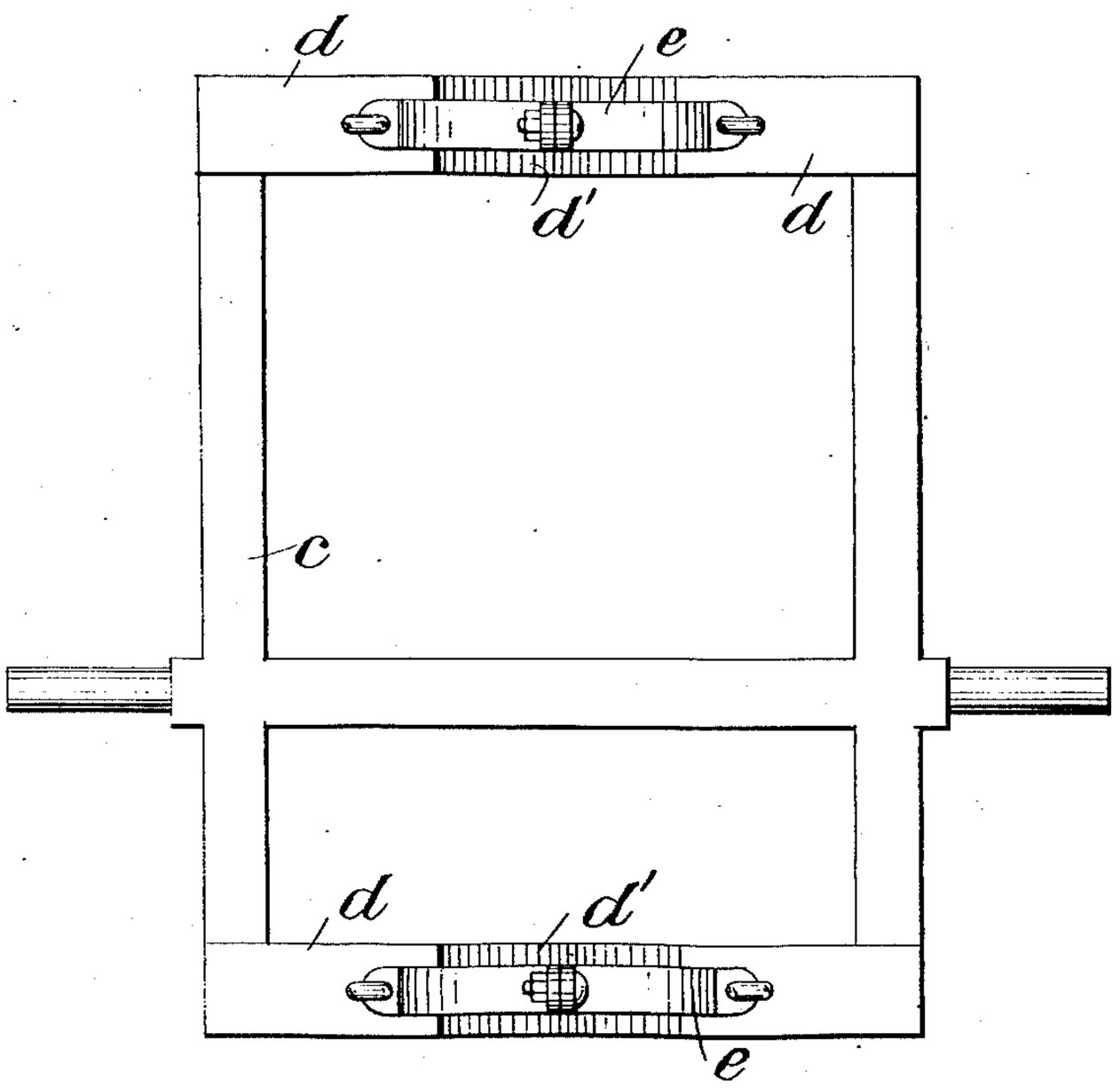

FIG. 6.

WITNESSES.
F. D. Bailey.
John Bamp.

INVENTOR.
John R. Brown
By his Attorney. Walter Gunn.

UNITED STATES PATENT OFFICE.

JOHN RIDDALL BROWN, OF MANCHESTER, ENGLAND.

MEANS FOR LAYING OR ERECTING TELEGRAPH AND LIKE POLES.

No. 826,708. Specification of Letters Patent. Patented July 24, 1906.

Application filed December 15, 1905. Serial No. 291,865.

To all whom it may concern:

Be it known that I, JOHN RIDDALL BROWN, a subject of the King of Great Britain and Ireland, and a resident of Manchester, England, have invented certain new or Improved Means for Laying or Erecting Telegraph and Like Poles, of which the following is a specification.

This invention has for its object to provide a machine suitable for use in readily erecting telegraph-poles and the like.

Heretofore the operation of raising a pole and placing it in the ground has been a tedious and risky undertaking, ladders and ropes and manual labor being the usual and only means employed and the task occupying a considerable length of time. By this invention the operation is rendered easy, safe, and rapid.

Upon the accompanying drawings, Figure 1 illustrates a side elevation, and Fig. 2 a plan, of the machine forming the invention. Fig. 3 and 4 illustrate like views, but show certain parts in a different position. Figs. 5 and 6 illustrate a side and plan view, respectively, of a detail part to a larger scale.

According to the invention the machine comprises two end frames *a a*, joined by cross-rods *b b*. At their upper parts the frames carry the axis of a table *c*, (see Figs. 5 and 6,) and such table is preferably longer on one side of its axis than on the other. Upon the ends of the table are two wooden blocks *d*, each with a curved recess *d'*, and linked to each block is a divided yoke or clamp *e*, the two parts and the recess *d'* approximating to the average girth of a telegraph-pole near its wider end. Upon one end of the axis of the table is keyed a worm-wheel *f*, and on an axis *g*, carried by brackets *h* on the frame side, is a worm *i*, with which the worm-wheel meshes, as shown. Fast upon the worm-axis *g* is also a bevel-wheel *j*. Also supported by the upper part of the machine is a cross-shaft *k*, and slidably mounted on such shaft is a bevel-wheel *l*, adapted, by means of a forked lever *m* and grooved boss, to be held in or out of gear with the bevel-wheel *j*. Fast upon the same shaft and near the opposite end is a pinion *n*. Upon another cross-shaft is a large flanged drum or winch *o*, and fastened to such drum or winch is a large gear-wheel *p*, which meshes with the pinion *n*. By rotation of the shaft *k* by means of handle *q* the worm *i* and worm-wheel *f* are rotated and the table *c* caused to rotate and assume, say, the horizontal position shown in Fig. 1 or the vertical position shown in Fig. 3. Upon a further cross-shaft or one of the rods *b* is hinged the lower end of a long post-like arm or lifter *r*, three or four yards in length (or longer) and adapted to lie on the ground, as shown in Figs. 1 and 2 and to be turned upward to the vertical, as shown in Figs. 3 and 4. At its free end the lifter is fitted with a forked mount *s*, with the forks when the lifter is on the ground extending upward. Upon the lifter is also a guide-pulley *s'*. Forming part of the mount *s* is a loop or eye *t*, and hooked to such eye is one end of a rope *u*, the other end of which is wrapped around and secured to the barrel *o*. Between the forks of the mount *s* is a runner *v*.

With the lifter resting on the ground, as shown in Figs. 1 and 2, and the table *c* in the horizontal position the machine is ready for use. The pole to be erected is first deposited on the ground alongside the machine. The wider end is then lifted onto the table *c* and into the recesses *d'*, the other end still resting on the ground. Such other end is then placed over the lifter *r* and between the forks of the mount *s* until it rests on the runner *v*, as shown by dotted lines. The clamps *e* are then brought round the pole and securely fastened over the pole, as shown, either by bolts and nuts, as shown, or by chains, the fastening in all cases being such as to securely hold the pole to the table, which is set parallel therewith. The shaft *k* is then rotated by the handle *l*, thus rotating the drum or winch *o* and the table *c* and causing the rope *u* to be simultaneously wound onto the drum *o* and the lifter *r* to be raised. The combined effect of the two movements is to raise the pole to the vertical, and until its lower end bears against the cross-rods *b*, (see Figs. 3 and 4,) the lifter following the pole, the pole riding on the runner *v*, and the rope controlling the lifter when fully raised. The wheel *h* (see Fig. 4) is then drawn out of gear with the wheel *j* and the drum *o* rotated in the reverse direction, thereby lowering the lifter *r* onto the ground. Due to the worm-gearing, the table *c* is held locked in all positions. The clamps *e* are then released to an extent which allows the pole to slide slowly down and into the prepared hole in the ground. When the pole is in the ground and the hole has been filled up, also when the pole has been properly stayed, the clamps *e* are fully unfastened and the pole made free. The machine is then removed.

For convenience in removing the machine it may be mounted on wheels or upon iron slides or skates.

If desired, there may be two pinions on the shaft *k* and two wheels *p*. Likewise there may be two worm-wheels *f*, two worms *i*, two shafts *g*, and two sets of bevel-wheels *j* and *l*—one set on each side of the machine.

The table is preferably longer on one side of its axis than on the other in order to support the pole low down when tilted and to bear against the two cross-rods; but it may be otherwise.

What I claim is—

1. In means for facilitating the erection of telegraph-poles and the like, a machine comprising a swiveling table with clamps for clamping the pole to the table, a winch or drum, a lifter pivoted at one end and free at the other, a rope secured to the drum and the free end of the lifter and means for rotating the table and the drum, substantially as herein set forth.

2. In a machine for facilitating the erection of telegraph-poles and the like, a swiveling table with clamps for holding a pole thereto, and means for rotating the table and holding it in any set position, substantially as set forth and illustrated on the accompanying drawings.

3. In a machine for facilitating the erection of telegraph-poles and the like, a winch or drum and means for rotating the same, a lifter hinged at one end to the machine and at the other end free and provided with a forked mount, and a rope connected to the said free end of the lifter and to the said drum or winch, substantially as herein set forth and illustrated on the accompanying drawings.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

JOHN RIDDALL BROWN.

Witnesses:

P. D. BAILEY,

JOHN CAMP.