

(No Model.)

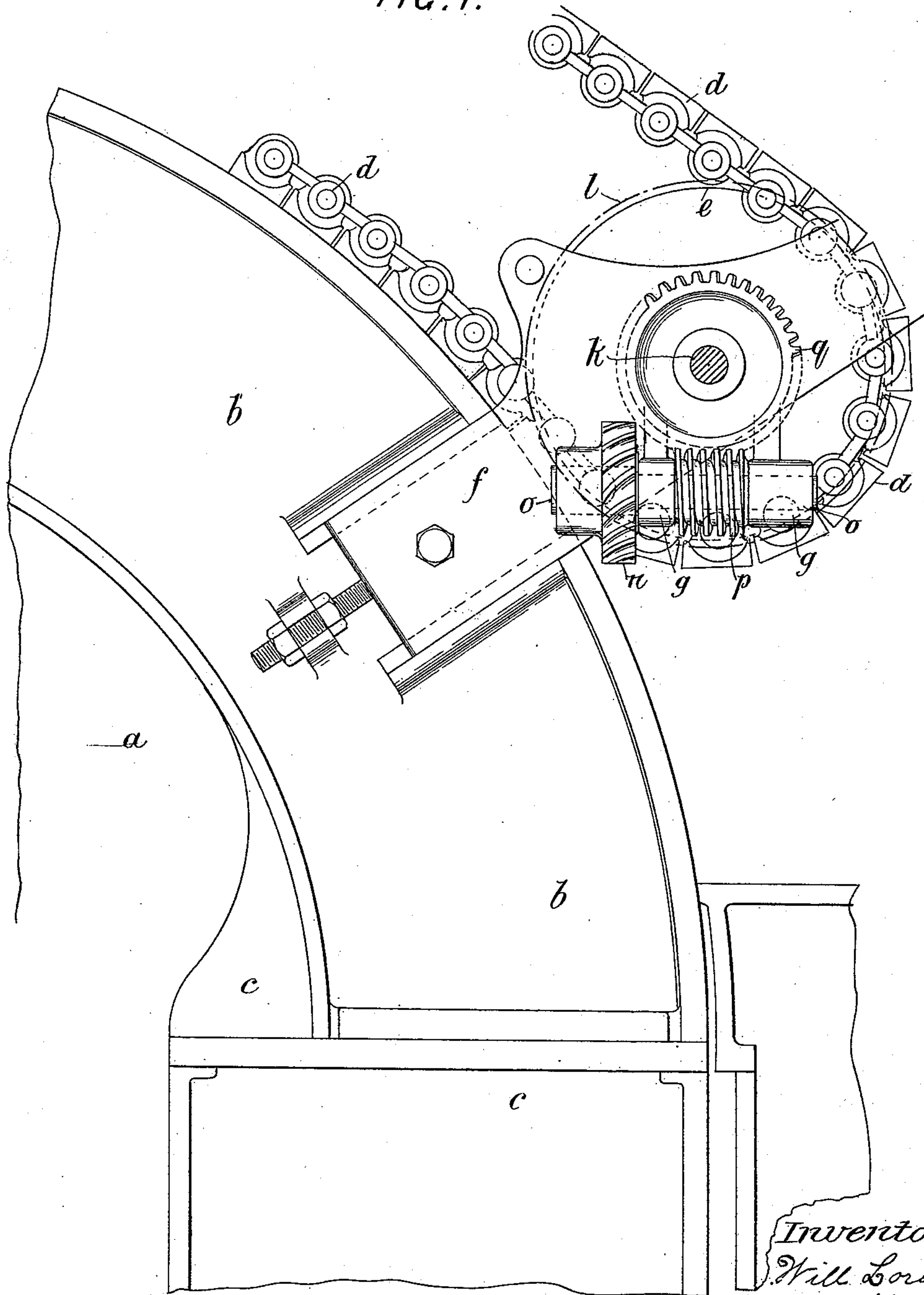
2 Sheets—Sheet 1.

W. LORD & T. S. WHITWORTH.
TRAVELING FLAT CARDING ENGINE.

No. 464,161.

Patented Dec. 1, 1891.

FIG. 1.



Witnesses:

E. B. Bolton
A. L. Rüsing

Inventors:
Will Lord
Thomas Schofield Whitworth

By

Richard R.
their Attorneys.

(No Model.)

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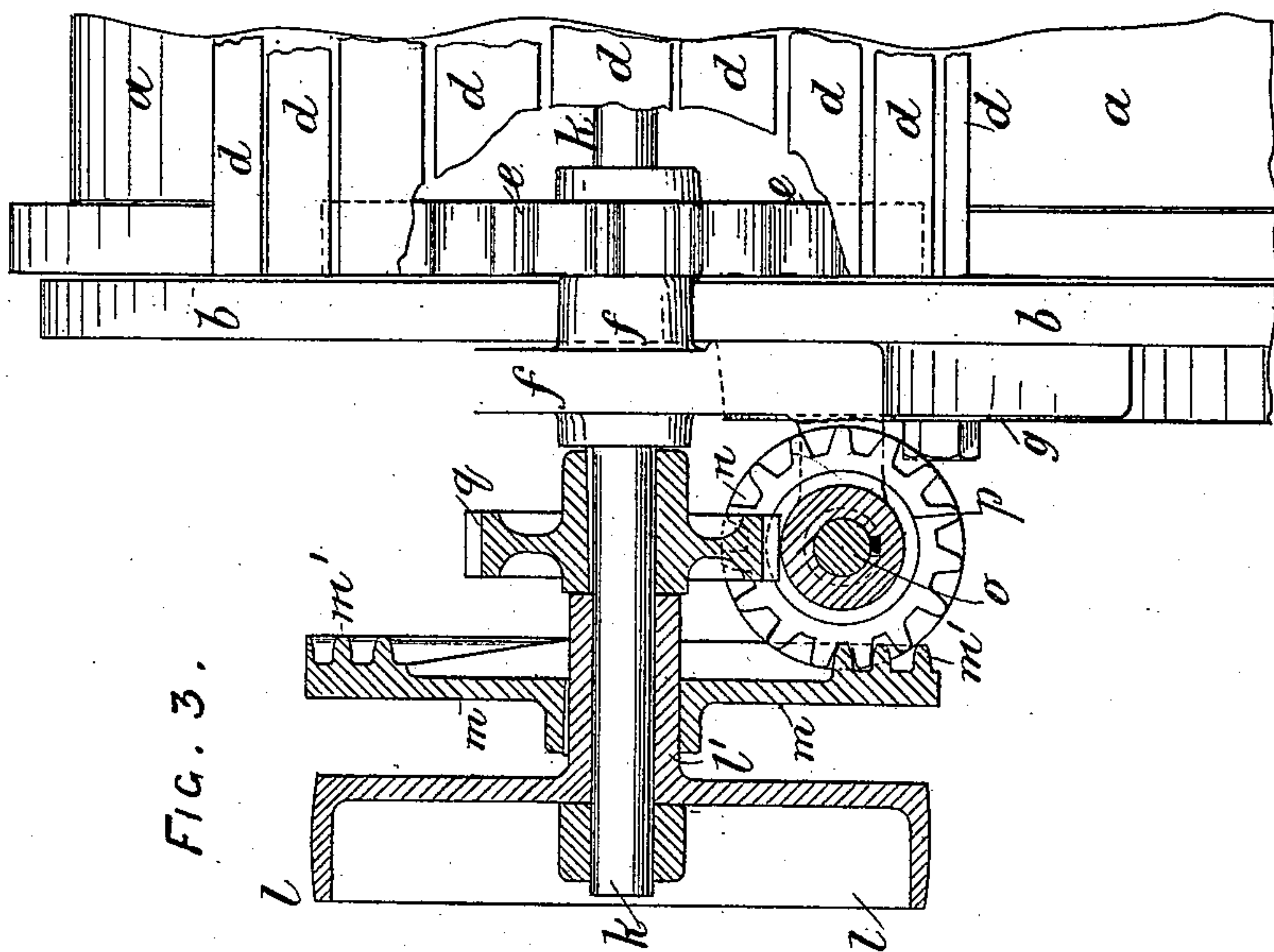


FIG. 3.

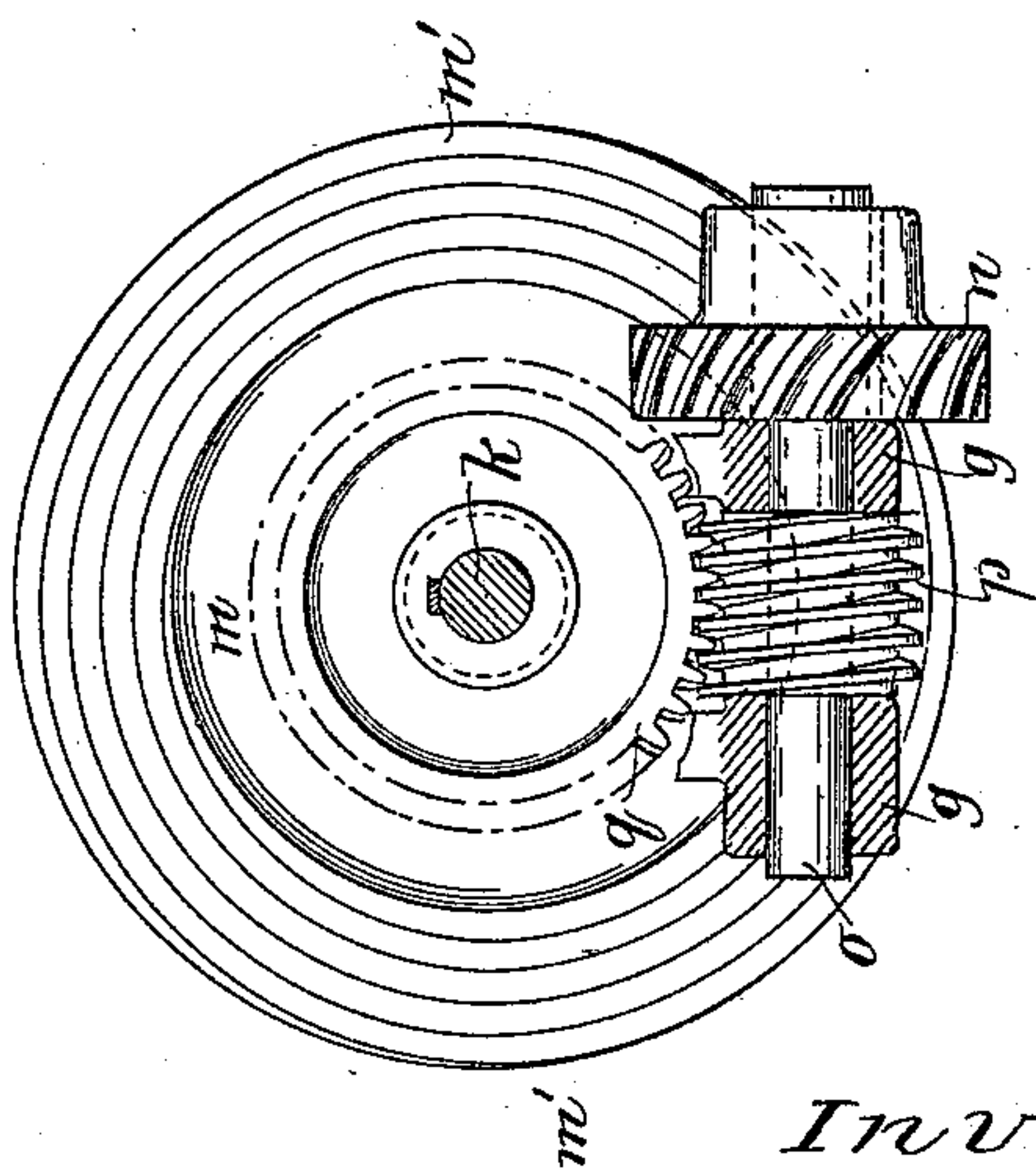


FIG. 2.

Witnesses
E. B. Bolton
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Inventors:
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UNITED STATES PATENT OFFICE.

WILL LORD, OF TODMORDEN, AND THOMAS S. WHITWORTH, OF MANCHESTER,
ASSIGNORS TO LORD BROTHERS, OF TODMORDEN, ENGLAND.

TRAVELING-FLAT CARDING-ENGINE.

SPECIFICATION forming part of Letters Patent No. 464,161, dated December 1, 1891.

Application filed July 15, 1891. Serial No. 399,658. (No model.) Patented in England October 19, 1889, No. 16,517.

To all whom it may concern:

Be it known that we, WILL LORD and THOMAS SCHOFIELD WHITWORTH, both subjects of the Queen of Great Britain, the said WILL LORD being a resident of Todmorden, in the county of York, and the said THOMAS SCHOFIELD WHITWORTH being a resident of Manchester, in the county of Lancaster, both in England, have invented certain new and useful Improvements in Traveling-Flat Carding-Engines, (for which we have obtained a patent in Great Britain, No. 16,517, bearing date October 19, 1889,) of which the following is a specification.

Our invention relates to traveling-flat carding-engines; and it consists in improved means for driving the shaft to which is secured the star-wheels or carrier-pulleys, around which the flats travel and by which they are driven.

In the accompanying drawings, Figure 1 is a side elevation of part of a carding-engine fitted with our improved means for driving the shaft for traveling the flats; and Figs. 2 and 3 are a side view and a sectional elevation, respectively, of the mechanism.

In Fig. 1, *a* designates part of the main cylinder of the carding-engine; *b*, the side framing or engine-bend supported upon the under framing *c*; *d*, the chain of traveling top flats; *e*, one of the star-wheels or carrier-pulleys for traveling the flats, and *k* the shaft upon and near one end of which the said star-wheel *e* is secured, a similar wheel *e* (not shown) being of course secured, as usual, near the other end of the shaft. The star-wheel shaft is supported by the usual brackets *f*, secured to the side framing *b* on each side of the engine.

On the shaft *k* (see Figs. 2 and 3) we mount loosely a pulley *l* with a boss *l'*, on which is fixed a disk-wheel *m*. The loose pulley *l* is driven by a band (not shown) from the shaft of the main cylinder *a*, and on the side face of the disk-wheel *m* is a continuous spiral or worm forming teeth *m'*, which gear into a toothed wheel *n*, secured upon a stud *o*, mounted in bearings *g*, secured to the bracket *f*; also, secured to the stud *o* is a worm *p*, which gears into a worm-wheel *q*, fast on the star-wheel shaft *k*, and thus gives motion to it and to the star-wheels or carriers *e* for carrying around the chain of flats *d*.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim, and desire to secure by Letters Patent of the United States, is—

In a traveling-flat carding-engine, the combination, with the shaft *k* and wheel *e*, mounted thereon, over which the flats travel, of pulley *l*, loosely mounted on said shaft and provided with boss *l'*, disk-wheel *m*, mounted on said boss, having teeth *m'*, shaft *o*, worm-wheel *n* thereon engaging the teeth *m'*, worm *p*, also on said shaft *o*, and a worm-wheel *q* on shaft *k*, engaging worm *p*, substantially as and for the purpose set forth.

In witness whereof we have hereunto set our hands in presence of two witnesses.

WILL LORD.

THOMAS S. WHITWORTH.

Witnesses:

H. B. BARLOW,
S. W. GILLET.