

(No Model.)

2 Sheets—Sheet 1.

W. C. MORTON.

MACHINERY FOR PLOWING, &c.

No. 324,578.

Patented Aug. 18, 1885.

FIG. 2.

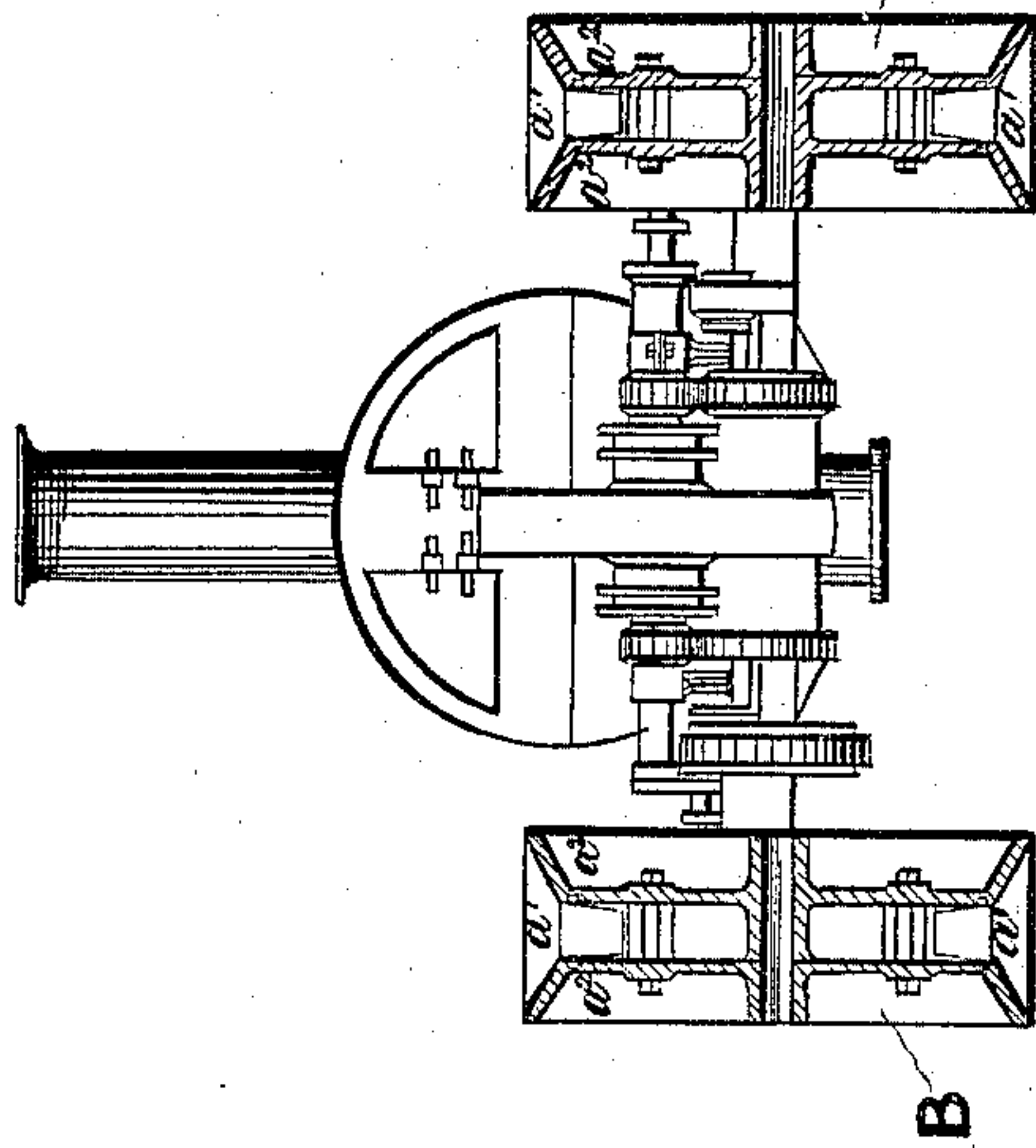
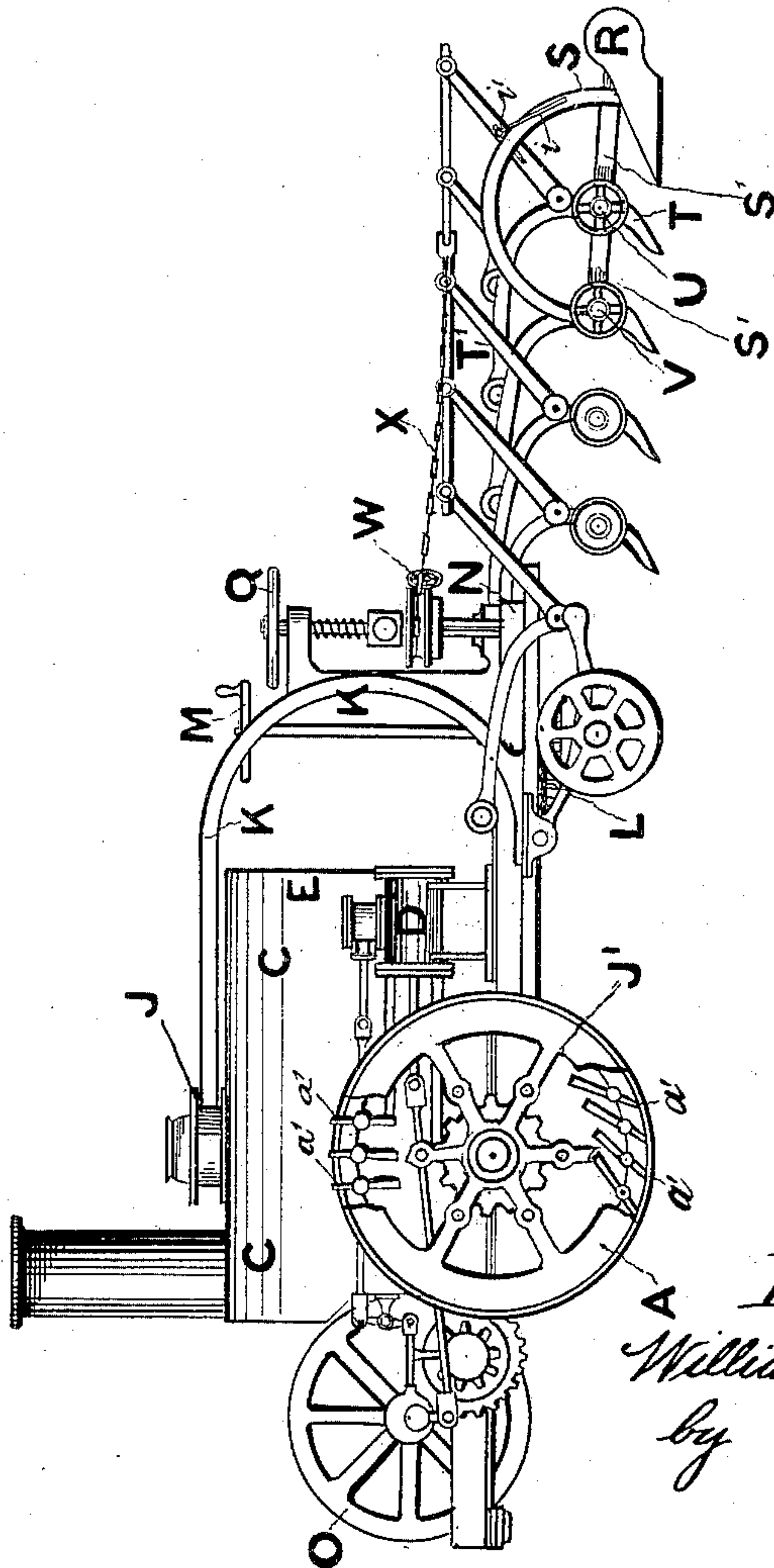


FIG. 1.



Witnesses:

W. R. Haight
J. Reynolds

Inventor:

William Charles Morton
by W. H. Babcock
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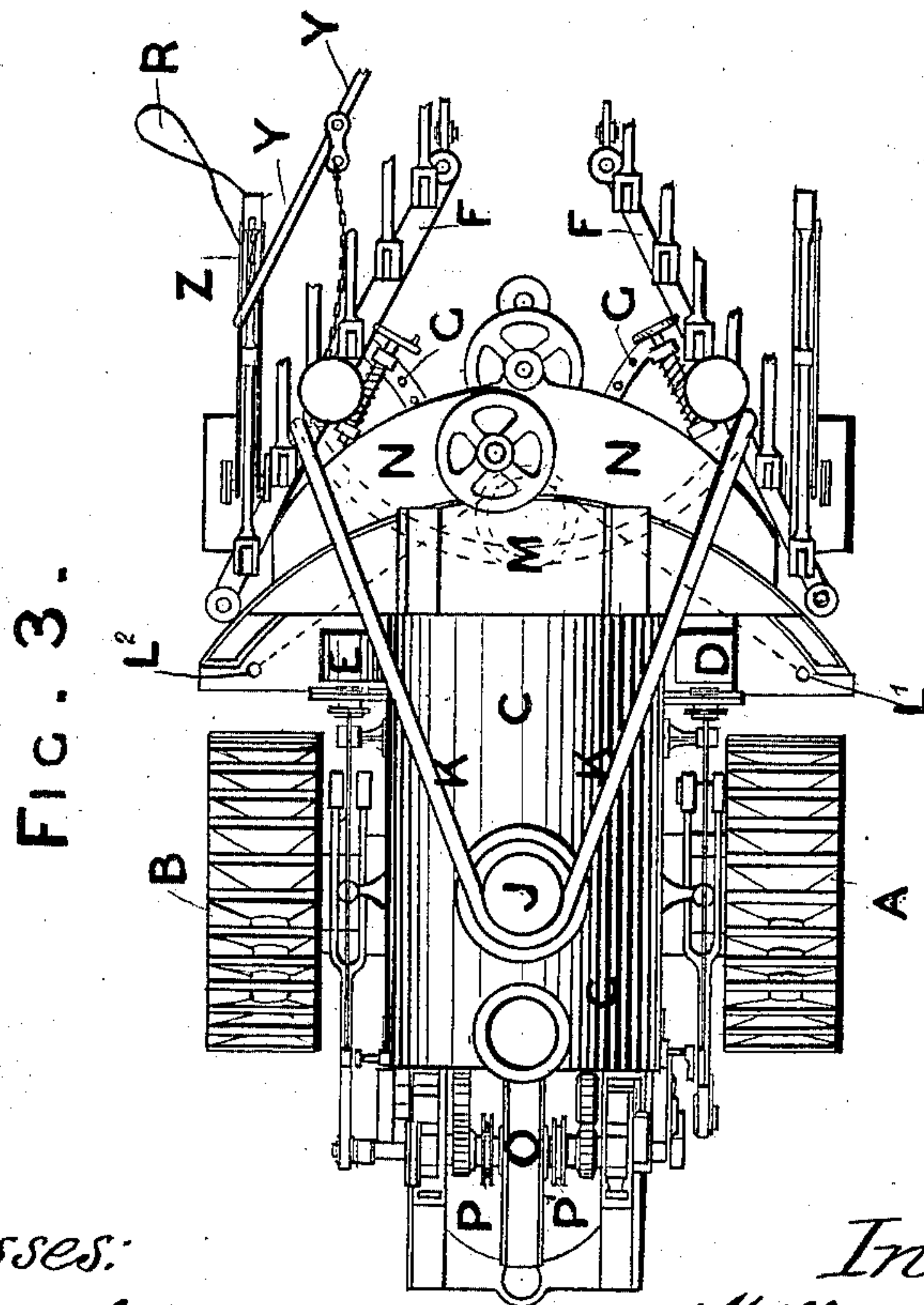
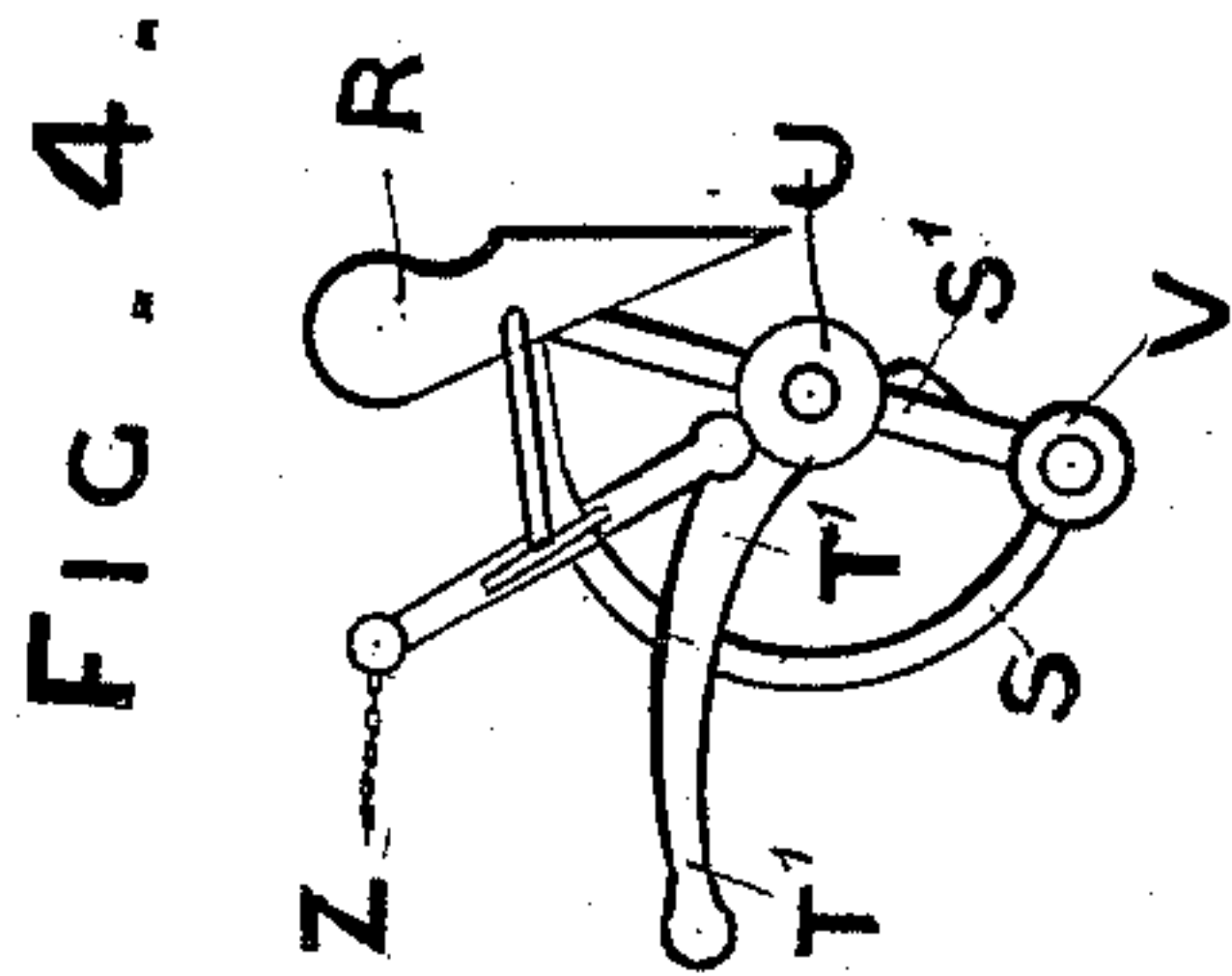
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UNITED STATES PATENT OFFICE.

WILLIAM CHARLES MORTON, OF COLESHILL, COUNTY OF WARWICK,
ENGLAND.

MACHINERY FOR PLOWING, &c.

SPECIFICATION forming part of Letters Patent No. 324,578, dated August 18, 1885.

Application filed June 3, 1885. (No model.) Patented in England February 5, 1884, No. 2,732, and February 6, 1884, No. 2,822;
in France November 10, 1884, No. 152,684; in Belgium November 10, 1884, No. 69,176, and in Germany December 10, 1884,
No. 4,233.

To all whom it may concern:

Be it known that I, WILLIAM CHARLES MORTON, officer inland revenue, residing at Coleshill, in the county of Warwick, England, and a subject of the Queen of Great Britain, have invented new and useful Improvements in Machinery for Plowing and other Purposes, of which the following is a specification.

My invention has for its object improvements in machinery for plowing, part of which may be used for other purposes, which enables me to plow over rough and uneven ground, and to turn sharp corners with great facility, and, altogether, to do the work better and cheaper than at the present time.

Two sheets of drawings are attached hereto, by which I will proceed to explain my invention.

Figure 1 is a side elevation of the machinery. Fig. 2 is a front or end elevation. Fig. 3 is a plan, and Fig. 4 is an end elevation of one plowshare lifted off the ground, as it would be when not at work.

The traction-power of the machinery is transmitted through the two special wheels A and B from the boiler C and cylinders D and E, and thence through the bars F, to which the plows are attached. The width of the furrows or plowshares is set and maintained by the diagonal position of this bar F, which may easily be altered by the holes G in the under frame of the after carriage to any desired angle to make the furrows either wider or narrower. On plan, Fig. 3, one plow only is shown; but six or any other number of plows may be placed on the right-hand side, and six or any other number may also be placed on the left-hand side; or the machinery may be worked with the plows on one side only, or with some removed from either side; but, to balance the machinery, equal numbers should be used; but the number fitted will always correspond to the power of the engine and other conditions. On the drawings the plowshare R is shown just ready to enter into the ground, and Fig. 4 illustrates its position when lifted from the ground.

One of the special features of the machinery

is, that the engine hauls the load direct from the top center, J, and bottom center, J', which are fast to the boiler C, through the radial bands K, and the weight of the engine is almost entirely carried by these driving-wheels A and B, which are also specially constructed to obtain an effective grip upon the soil, and yet to not become stuffed up by such soil. This is prevented by the arms a' taking the inclined position shown at the bottom of the wheel, Fig. 2, and being pivoted at a^2 between the two sides of the wheel, so that as the wheel turns round the heavy inner parts of the arms constantly change their position by gravitation, and so disturb any soil which may have a tendency to clog the spaces. In many cases, however, fast arms may be riveted in at a suitable inclination, according to the character of the soil, without much fear of clogging. The engine will turn very sharp corners, because the front part pivots upon the centers J and J' by means of the steering hand-gear M and chain-gear L, carrying chains to L' and L² under the foot-plate of the engine, the said foot-plate turning round upon the frame of the after carriage N. The engine may also be turned round corners by means of the clutches P and P' on the driving-shaft on each side the fly-wheel O, which engages chain-wheels on a supplemental shaft driving onto fast chain-wheels on each traction-wheel A and B, and thus driving either separately or both together, as now shown.

The back end of the engine may be elevated or depressed, when going up or down hill, by the hand-gear Q, which carries the shaft of the back wheels.

The coal is carried on the foot-plate N of the after carriage on each side of the engine, and the water may be carried under this after-carriage foot-plate.

Each plowshare R is made fast with the double-sided quadrant-frame S, connected by the cross-bar S'. The leading knife T is one with the lever T', which moves between the two quadrant-plates.

When the plows are in work, the depth of furrow is regulated by the wheel U; but when not in work the one, two, or more plows are

lifted into the position shown by Fig. 4, so as to rest on the wheels V.

The plows may be lifted by the hand or other gear W, which winds up the chain X, drawing back the connecting-bar Y and each plow by its independent chain Z and Z', and so on, according to the number of plows in use. The lifting is accomplished through the rod *i* and slot *i'*; or the plows may be lifted entirely off the ground by a suitable elevated pulley on the back of the engine or the front of the plow-frame, operated by a chain and winding-drum.

It will be readily seen that these plows will work a regular depth in varying ground, going over ridges and other irregularities, because each share and section to which it is connected is at liberty to adapt itself, both by its peculiar shape and construction, to its own particular circumstances, and yet they are all drawn by one motor and easily controlled.

Of course many details and designs of parts

may be varied, and the engine might be used separately or the plows drawn by animals, as will be evident to any one.

What I claim, then, is—

The improvement in machinery for plowing, consisting of the engine pivoted and controlled from the centers J and J' by the straps K, in combination with said straps, the self-clearing wheels A and B, the elevating and steering mechanism for turning quick corners, and the plows adapted to single or grouped use at will, with independent and yet controllable action, as herein set forth.

In testimony that I claim the foregoing as my own I affix my name in the presence of two witnesses.

WILLIAM CHARLES MORTON.

Witnesses:

GEORGE BARKER,
GEORGE PRICE.