

E. M. MORGAN.
Grain-Drill.

No. 206,189.

Patented July 23, 1878.

Fig. 1.

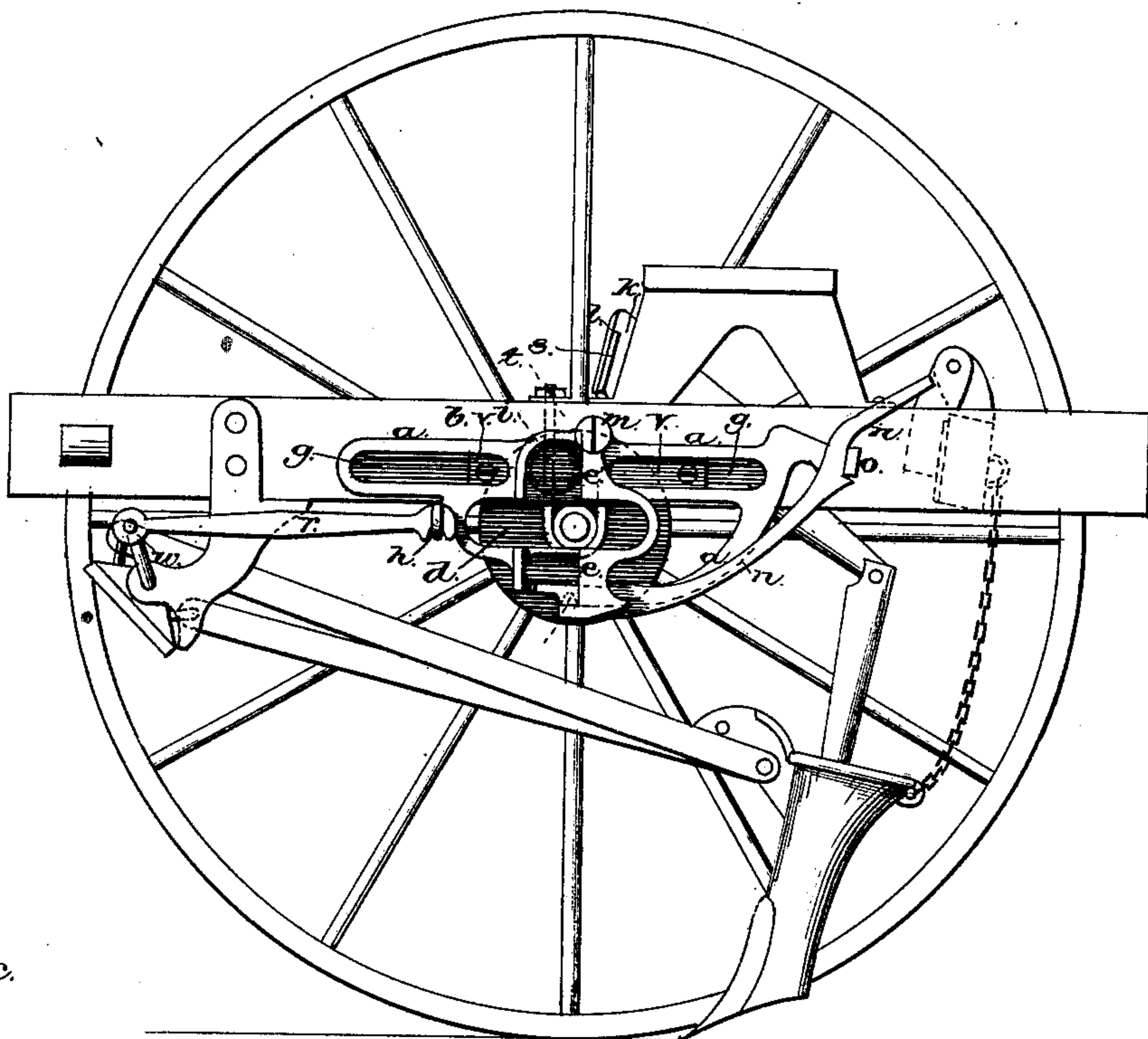


Fig. 2.

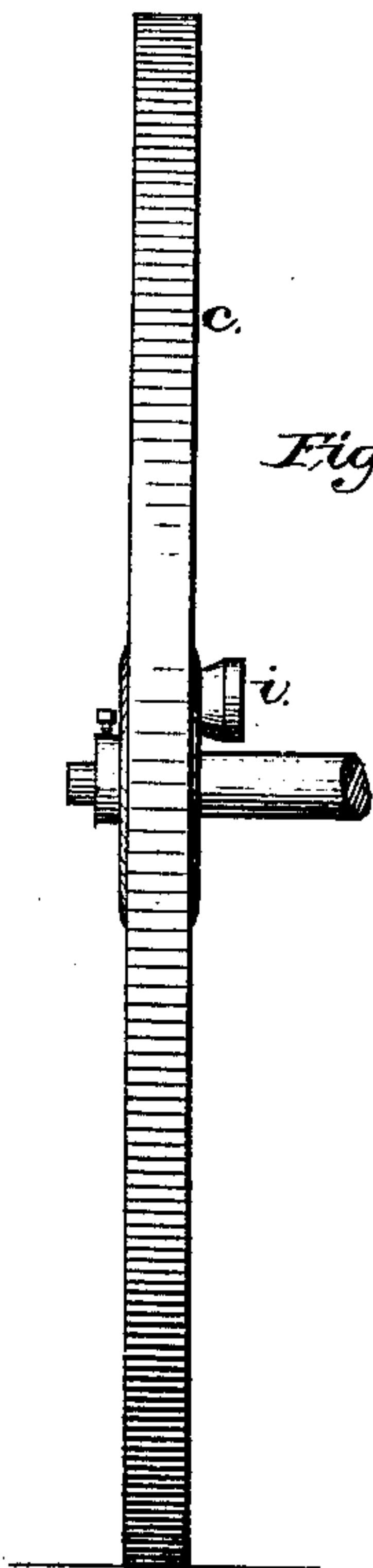


Fig. 3.

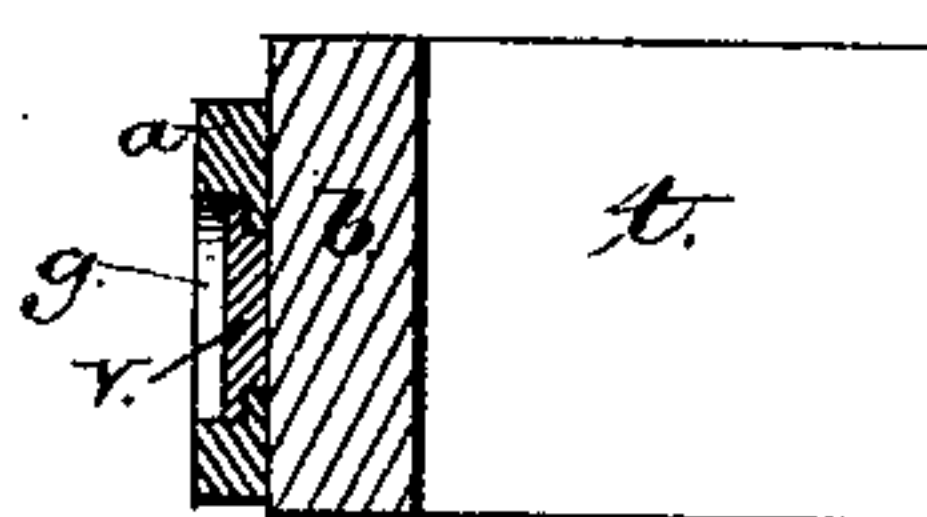


Fig. 4.

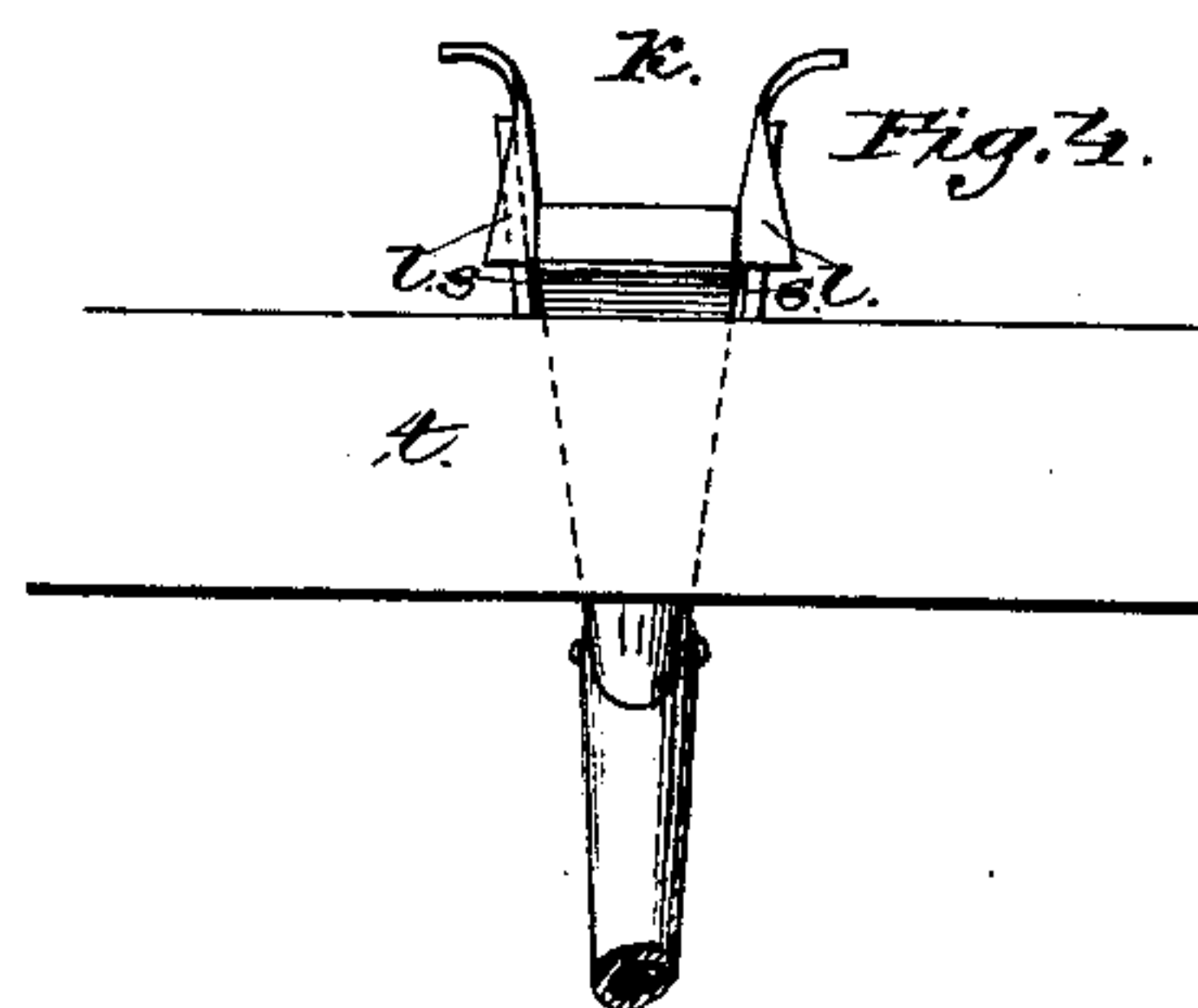
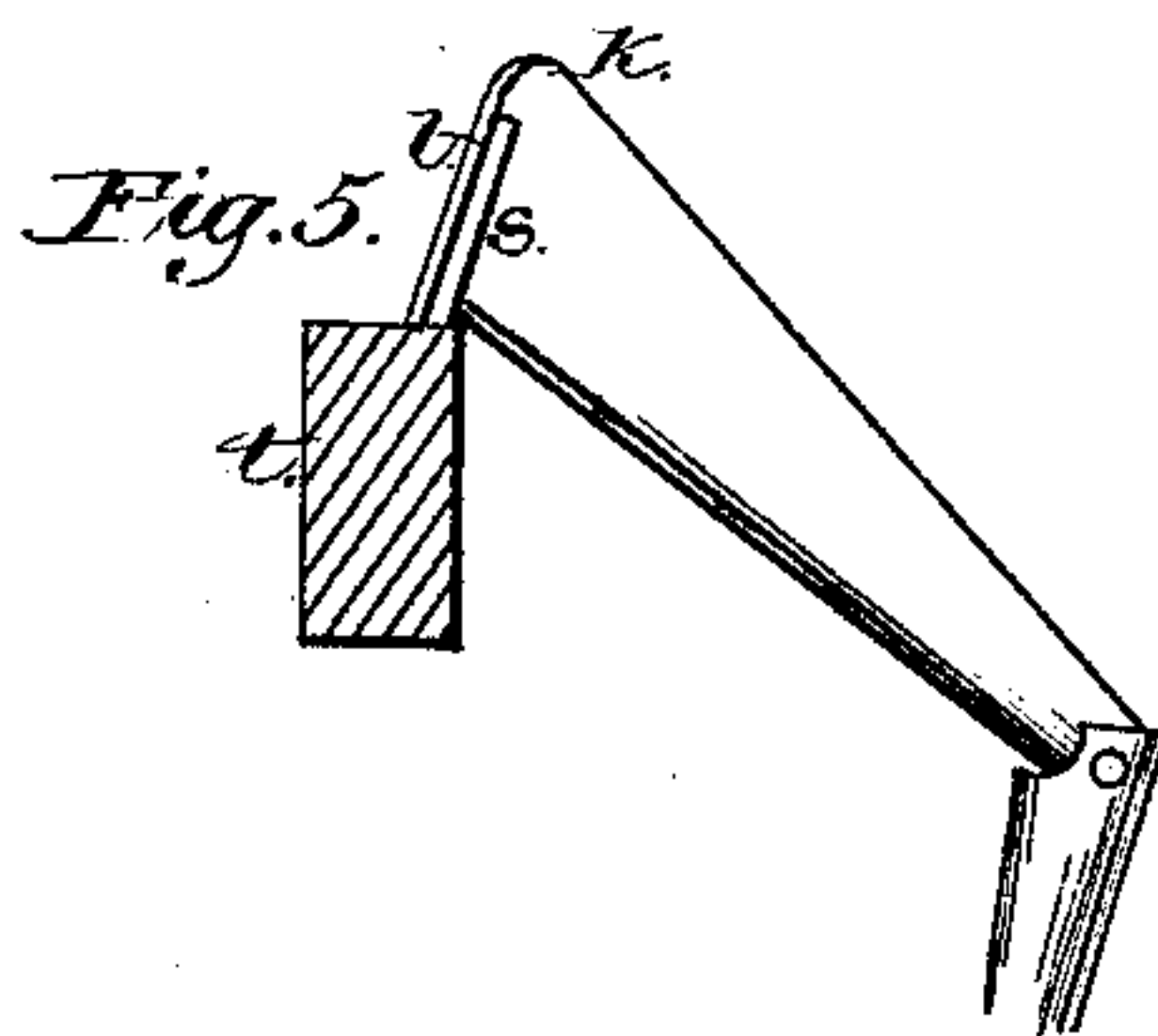


Fig. 5.



Attest:

Henry Kintchle
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Inventor:

Elias M. Morgan

UNITED STATES PATENT OFFICE.

ELIAS M. MORGAN, OF BELLEVILLE, ILLINOIS, ASSIGNOR TO HENRY RENTCHLER, OF SAME PLACE.

IMPROVEMENT IN GRAIN-DRILLS.

Specification forming part of Letters Patent No. **206,189**, dated July 23, 1878; application filed January 16, 1877.

To all whom it may concern:

Be it known that I, ELIAS M. MORGAN, of the city of Belleville, in the county of St. Clair and State of Illinois, have invented a new and useful Improvement in Grain-Drills, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side view with driving-wheel removed; and Figs. 2, 3, 4, and 5 are detail views.

The object of my invention is to impart a reciprocating motion in a new and improved manner to the hoes of grain-drills, for the purpose of ridding them of obstacles gathered in passing over trashy ground, and the attaching of conducting-funnels to grain-drills in a manner to prevent breakage or damage to the funnels in passing over rough or uneven ground.

My invention consists of a yoke, *a*, attached to the side of a frame, *b*, operated by a roller, *i*, or its equivalent, attached to the hub of ground-wheel *c*, or its equivalent. Said yoke is so constructed as to encompass the shaft or axle of the wheel *c*, or its equivalent, by means of a slot, *d*, which enables the yoke to move backward and forward without conflicting with said axle.

Placed at right angles with slot *d* on yoke *a* are two flanges, *e e'*, set parallel with each other, between which the roller *i*, or its equivalent, on wheel *c*, or its equivalent, works to impart a reciprocating motion to the yoke *a*. Said flanges *e e'* have a section removed over the slot *d*, to accommodate the passage of the shaft or axle of the wheel *c*.

One of said flanges, *e'*, is attached to the yoke *a* at *m* by means of a stud, the other end being held in position by means of a hook, which clasps the circular side of yoke *a*, and a hand-brace, *n*, which is attached to a stud on inner side of said flange and a stud at *o* on extreme end of yoke *a*. The end of said brace extends back and forms a handle by which to operate the said flange. By detaching the hand-brace *n* from the stud at

o and drawing back the loose flange *e'*, the operation of yoke *a* ceases, while the hoes remain in a straight line.

For attaching the yoke *a* to the frame *b*, there are two slotted holes, *g g*, the inner edges of which form flanges, that clamp a correspondingly-flanged bar, *r*, on the side of frame *b*, by which means the yoke *a* is held in position.

For attaching to the yoke *a* a stud, *h*, is placed on the front part nearly on a center line with the axle of the wheel *c*, to which one end of a connecting-rod, *v*, may be attached, and at the other end connected to the rock-bar at *w*, to which the hoes are attached, and by this means a reciprocating motion may be imparted to the hoes of a grain-drill for the purpose before mentioned.

My funnel is constructed with the ordinary wide top for receiving the grain from the hopper. At the upper end of the wide top *k* are two flanges, *l l*, one on each side, the object of which is to suspend the funnel *k* between two pins, *s s*, which I place in the cross-piece *t* of frame *b*, in close proximity to the front of hopper, the hopper being represented by the elevated plank across the frame.

My object in hanging the funnel in this manner is that it may be lifted from its position by the hoe in rough and uneven ground, and come back to its place again without breakage or damage.

The rock-bar, manner of attaching the hoes, shifting the hoes from a right to a zigzag line, imparting a continuous reciprocating motion to the hoes, and a funnel to convey the seed from the hopper to the hoe are all old. I do not claim them.

I do not claim funnels or grain-conductors when supported above upon pins or rollers, in connection with the hopper, or pivoted to the hoes.

What I do claim, and desire to secure by Letters Patent, is—

1. The sliding yoke *a*, provided with slotted openings *d* and the flanged openings *g g*, for attaching it to the frame *b*, and the two parallel flanges *e e'*, in combination with the

roller *i* and the ground-wheel *c*, or their equivalents, substantially in the manner and for the purpose set forth.

2. The adjustable flange *c'*, in combination with the yoke *a* and hand-brace *n*, for the purpose described.

3. The flanges *l l* at the upper end of funnel *k*, in combination with pins *s s* in the

cross-piece *t* of frame *b*, for the purpose of confining the funnel *k* to cross-piece, as set forth.

ELIAS M. MORGAN.

Witnesses:

HENRY RENTCHLER,

J. D. RENTCHLER.