

J. A. SHEPHARD.
Grain-Drill.

No. 222,316.

Patented Dec. 2, 1879.

Fig 1

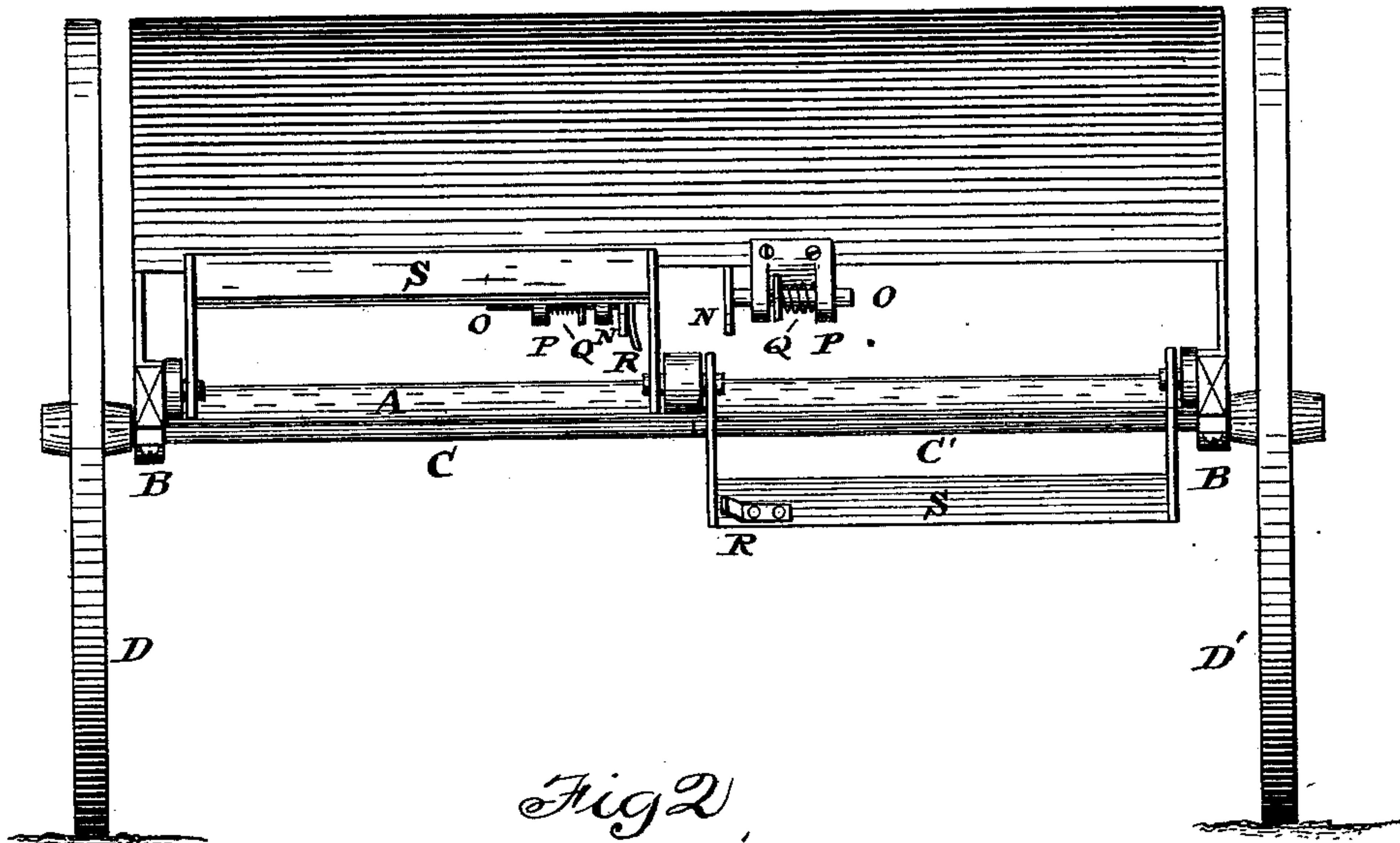


Fig 2

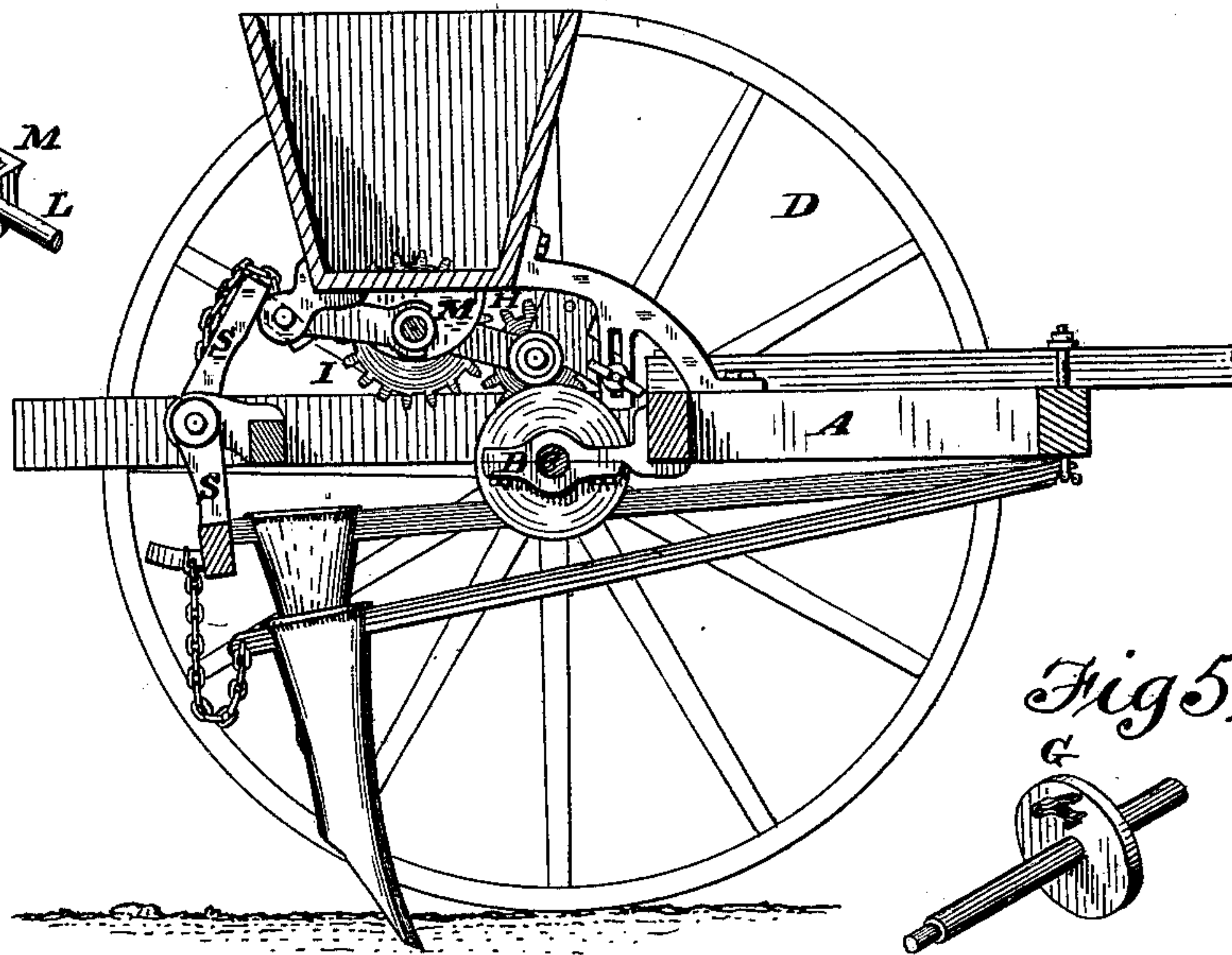


Fig 6

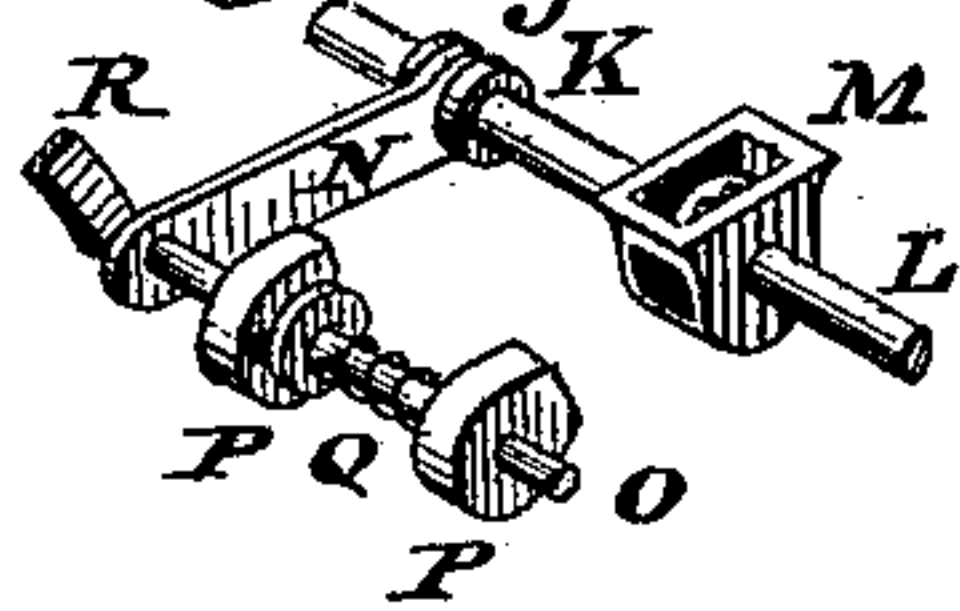


Fig 4

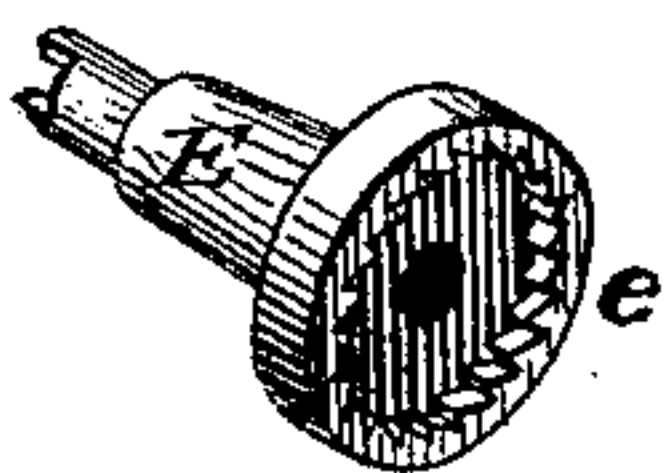


Fig 5

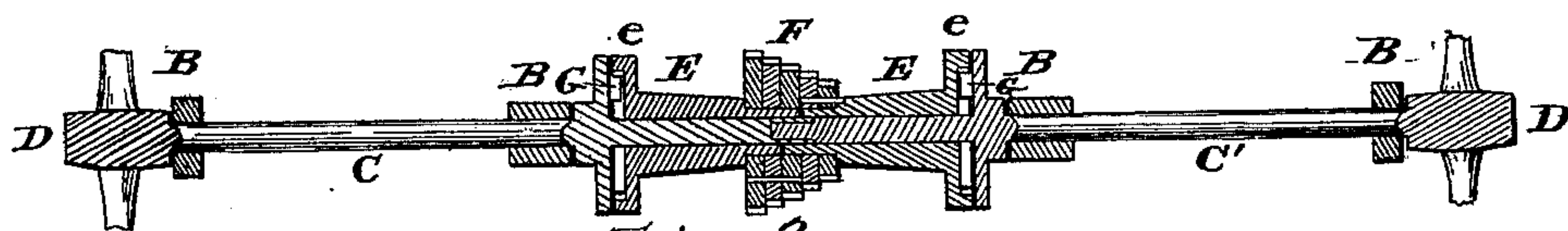
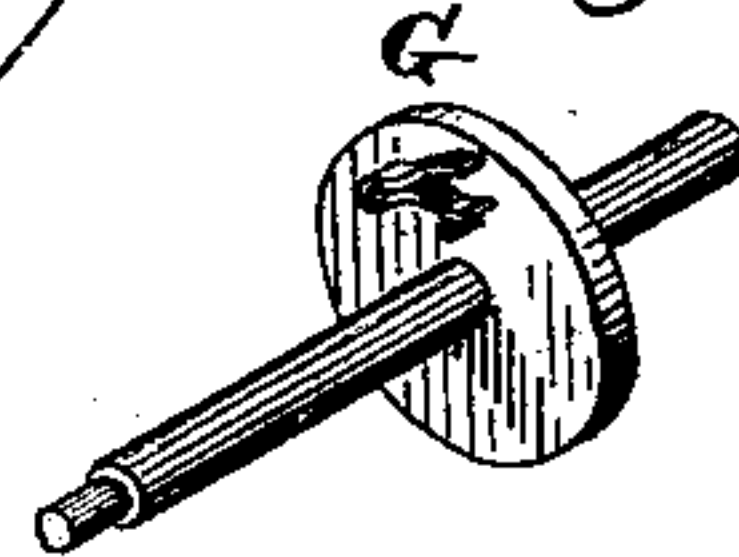


Fig 3

Attest.
Walter Knight
Harry Knight

Inventor
Joseph A. Shephard
By Knight Bros Atty

UNITED STATES PATENT OFFICE.

JOSEPH A. SHEPHARD, OF LANCASTER, OHIO, ASSIGNOR TO HOCKING VALLEY MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN GRAIN-DRILLS.

Specification forming part of Letters Patent No. **222,316**, dated December 2, 1879; application filed August 19, 1879.

To all whom it may concern:

Be it known that I, JOSEPH A. SHEPHARD, of Lancaster, Fairfield county, Ohio, have invented a new and useful Improvement in Grain-Drills, of which the following is a specification.

The first part of my invention relates to a provision of a central sleeve, which carries the feed-driver, and has independent ratchet-connection with the respective shafts or solidly-projecting axles of the ground-wheels.

The second part of my invention relates to a provision whereby the action of unearthing the hoes or seed-ducts is made effective to disconnect the feed or grain distributing mechanism corresponding to the hoes thus unearthed.

In the accompanying drawings, Figure 1 is a rear view of portions of a grain-drill embodying my invention. Fig. 2 is a transverse section of the same. Fig. 3 is an axial section of the ground-wheel shafts and their accessories. Figs. 4 and 5 show parts of the loose sleeve and its ratchet-connections with the ground-wheel shafts. Fig. 6 is a perspective view of the device for automatic disengagement of the seed-distributor mechanism.

A represents the principal frame or bed of a grain-drill. B are journal-bearings thereon for shafts C C', which, respectively, project rigidly from as many ground-wheels, D D'.

The inner extremities of the shafts C C' are inclosed in a loose sleeve, E, to which is firmly attached the seed-distributor drive-wheel F.

The sleeve E is armed at each end with a ratchet-collar or flange, e, which takes a pawl, G, from the adjacent ground-wheel shaft, in order that a forward rotation of either ground-wheel may be equally effective to propel the sleeve, and that a backward rotation of either or both ground-wheels may be inoperative on the said sleeve.

The drive-wheel F operates through suitable gearing H upon wheel I, on a clutch, J, which receives at each end the counter-clutch K of shaft L of feed-distributor M.

Each shaft L has a customary feathered and sliding connection with its distributor. Each counter-clutch is grooved circumferentially to receive the forked arm N, from a rod, O, hav-

ing a sliding bearing in lug P. A helical spring, Q, holds each respective shaft L in clutch, except when forcibly disengaged by the impact of oblique projection or cam R from the hoe-lifter S.

By means of this device it follows that the unearthing of the hoes on either half of the drill is of necessity accompanied by the cessation of the feed-delivery action on that side; or if all the hoes are unearthed, then, by the cessation of the entire feed-delivery, and conversely, the dropping of a part or all of the hoes is accompanied by the automatic resumption of the seed-delivery without the necessity of any attention on the part of the operator.

I am aware that it is not new to cause the discontinuance of the seed-delivering action by the act of unearthing the hoes or drill-teeth, and I therefore make no claim, broadly, thereto; but

I claim as new and of my invention—

1. In a grain-drill, the pair of rigidly-projecting ground-wheel shafts C C', inclosed in a loose sleeve, E, carrying the seed-distributor driver F, said sleeve having independent ratchet-connection e G with the respective ground-wheel shafts, substantially as described.

2. In a grain-drill, the seed-distributor sleeve E, inclosing the contiguous ends of the rigidly-projecting ground-wheel shafts C C', and having separate ratchet-connection e G therewith, substantially as and for the purpose set forth.

3. The combination of the central clutch, J, circumferentially-grooved counter-clutches K, sliding distributor-shafts L, sliding forked arm or yoke N embracing the counter-clutch, rod O, having sliding bearing in lug P, springs Q, for holding the distributor-shafts in clutch, and the cam-projections R secured to the inner end of the hoe-lifter S, as and for the purpose described.

In testimony of which invention I hereunto set my hand.

JOSEPH A. SHEPHARD.

Attest:

IDA M. MITHOFF,
GEO. H. KNIGHT.