

(No Model.)

P. HINKLEY.

CHECK ROWING ATTACHMENT FOR SEED PLANTERS.

No. 299,981.

Patented June 10, 1884.

Fig. 2.

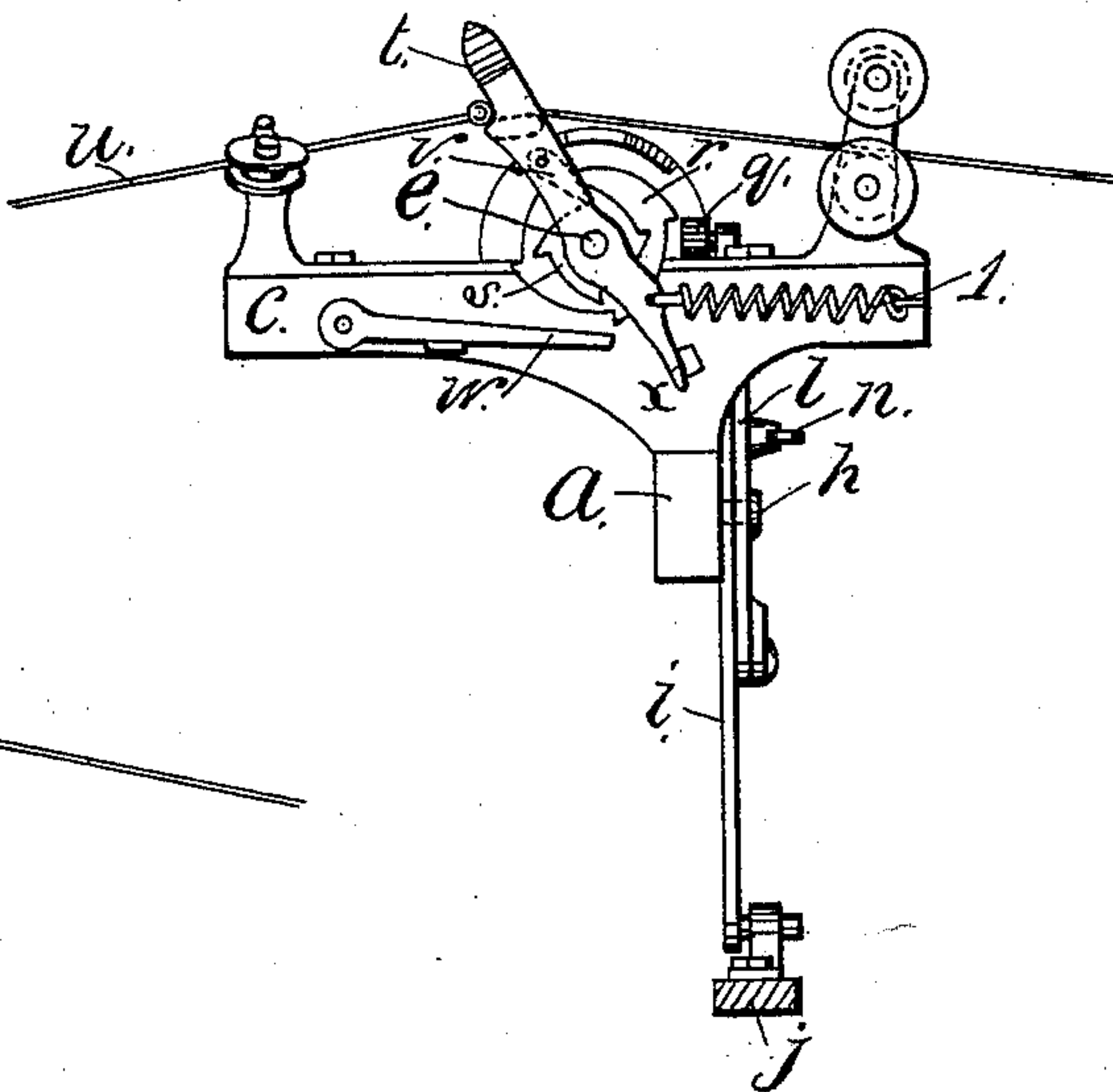


Fig. 3.

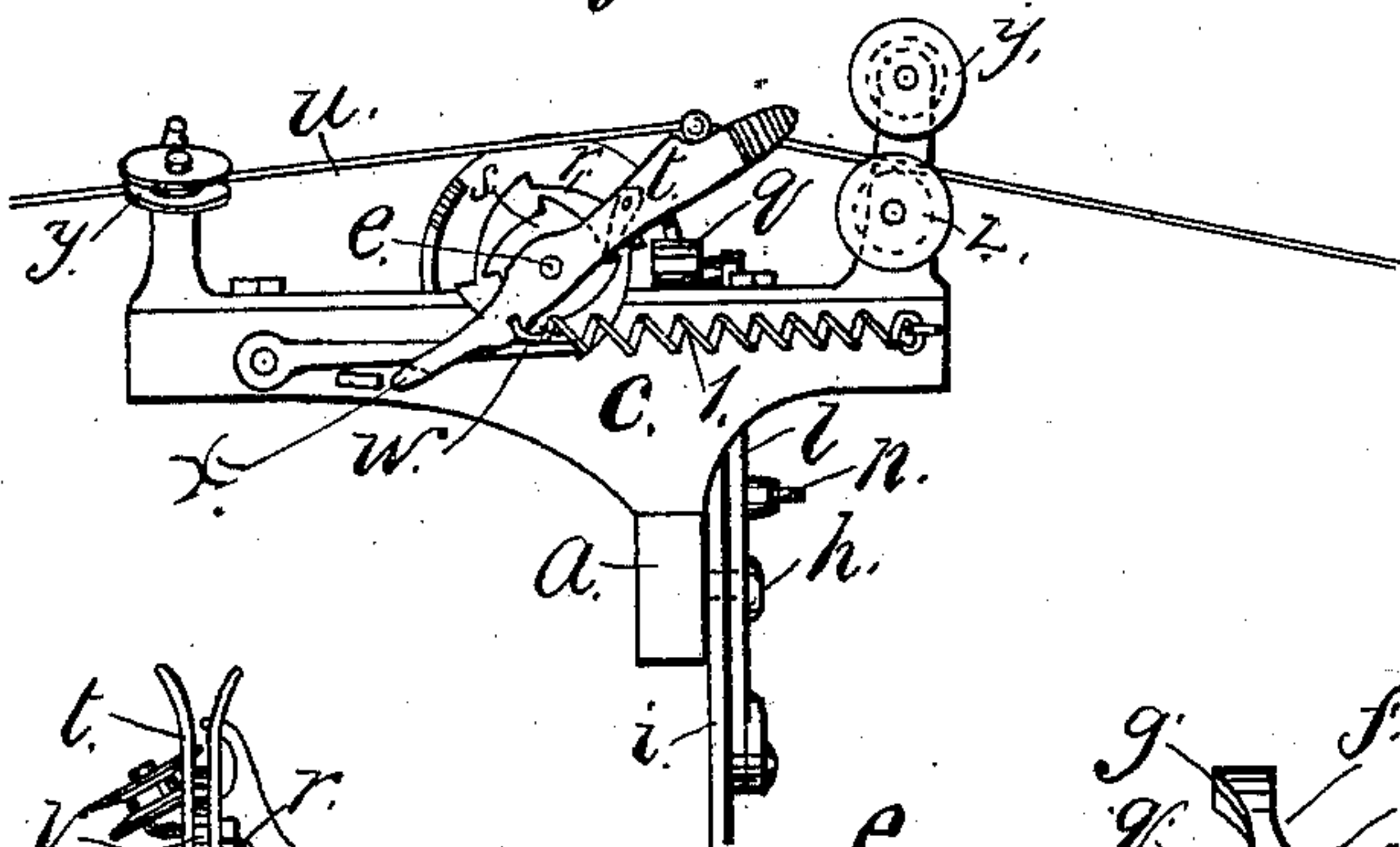
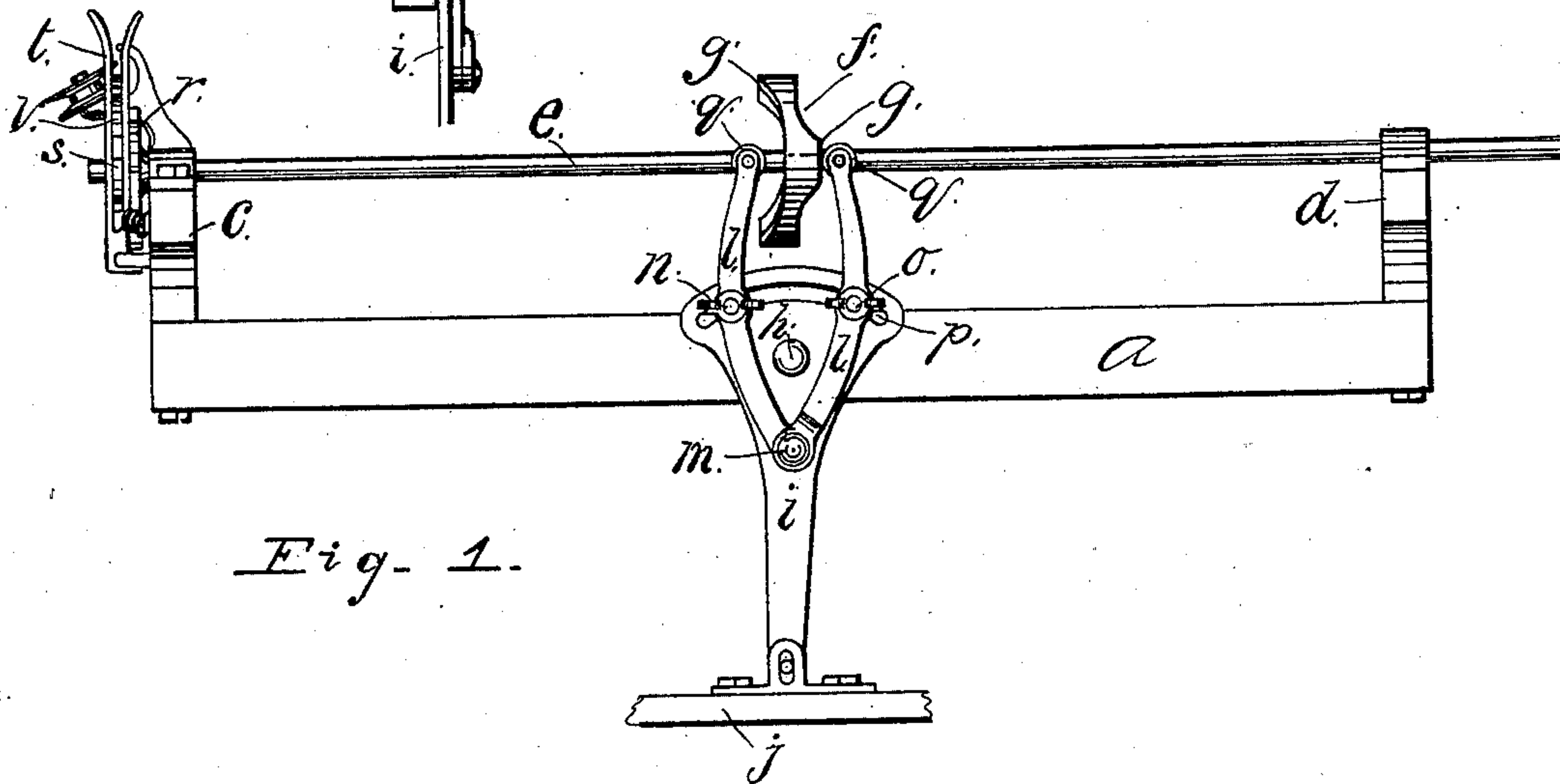


Fig. 1.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

PHILANDER HINKLEY, OF CHARLESTON, ILLINOIS.

## CHECK-ROWING ATTACHMENT FOR SEED-PLANTERS.

SPECIFICATION forming part of Letters Patent No. 299,981, dated June 10, 1884.

Application filed October 12, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, PHILANDER HINKLEY, a citizen of the United States, residing at Charleston, in the county of Coles and State of Illinois, have invented a new and useful Improved Check-Rowing Attachment for Seed-Planters, of which the following is a specification.

My invention relates to an improved check-rowing attachment of that class which are operated by means of a knotted wire or rope stretched across the field, and which are adapted to operate the seed-dropping mechanism of that class of seed-planters in which the seed is dropped alternately from each of a pair of seed-hoppers placed on opposite sides of the planter.

The objects of my improvements are to adapt the same check-rowing attachment to the varying stroke of the seed-dropping mechanisms of different seed-planters, and to insure the uniform movement of the checking-cam, as hereinafter explained.

The accompanying drawings illustrate my invention.

Figure 1 is a side elevation. Fig. 2 is an end elevation, showing the position of the parts at the moment the knot on the checking-wire engages the checking-lever. Fig. 3 is an end elevation, showing the position of the parts at the moment of the discharge of the knot from the checking-lever.

Like letters indicate the same parts.

*a* is a beam adapted to be secured by bolts, or in any other suitable manner, to and across the frame of a seed-planter.

To the opposite ends of beam *a* are secured cross-pieces *c d*, which form bearings for a shaft *e*.

Centrally located on shaft *e* is a disk, *f*, having on each side cam projections *g*.

Pivoted to beam *a* at *h* is a lever, *i*, the lower end of which is adapted to engage the sliding bar *j*, forming part of the dropping mechanism of the planter.

To the upper end of lever *i* a pair of arms, *l l*, are secured by means of a pivot at *m*, passing through both arms and secured in the lever, and thumb-bolts *n o*, which are adjustable

along stop *p* in the lever. An adjustable fork is thus formed on lever *i*, having on its outer extremities friction-rolls *q q*, which engage the opposite sides of disk *f*. The purpose of said fork is to communicate more or less motion to lever *i* and bar *j*, as the distance between the friction-rollers on the arms is diminished or increased.

Secured to one end of shaft *e* are two ratchet-wheels, *r* and *s*, and turning loosely on said shaft is a checking-lever, *t*, forked at the top to receive the knotted checking-line *u*. Lever *t*, as it is drawn backward, engages ratchet-wheel *s* by means of a pawl, *v*, pivoted to said lever. A pawl, *w*, is pivoted to cross-piece *c* in such a position that as lever *t* is drawn backward an inward projection, *x*, thereon catches under pawl *w* and raises it so that at the moment lever *t* has completed its backward movement pawl *w* engages ratchet-wheel *r* and prevents shaft *e* and cam-disk *f* from turning farther.

*y y* and *z* are guide-wheels for the knotted line *u*.

The operation of my device is as follows: As the planter moves forward, to which the check-rower is attached, the lever *t* is in the position shown in Fig. 2. When a knot in the checking-line engages lever *t*, it is thrown into the position shown in Fig. 3, thereby turning shaft *e* and cam-disk *f* by means of a pawl, *v*, and ratchet-wheel *s*. At the same time pawl *w* is raised by the lower end of lever *t*, and ratchet *r* is engaged, as before explained, thus preventing the momentum acquired by disk *f* from carrying it beyond the desired movement. When lever *t* reaches the inclination shown in Fig. 3, the knot slips over the end of the lever, and the lever is returned to its normal position by a spring, *l*. As disk *f* revolves, the cams *g* thereon successively engage on alternate sides with the friction-rollers on the ends of arms *l l*, thereby vibrating lever *i*, and giving a reciprocating motion to bar *j*. It is obvious that if arms *l* are brought together so as to touch disk *f* on both sides at once, lever *i* will receive the full throw of cams *g*; but if the arms are spread wider apart



the movement of said lever and bar will be proportionally less.

I claim as my invention and desire to secure by Letters Patent—

- 5 In a check-rowing attachment for seeding-machines, the combination of cam-disk *f* and vibrating lever *i*, having arms *ll* pivoted there-

to and adjustable thereon, thereby forming an adjustable forked extension of said lever, substantially as and for the purpose specified. 10

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Witnesses:

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