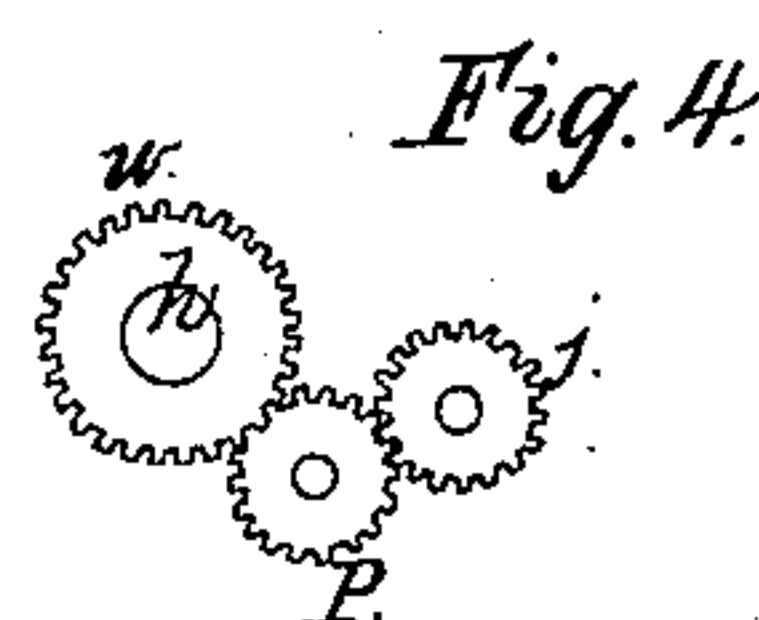
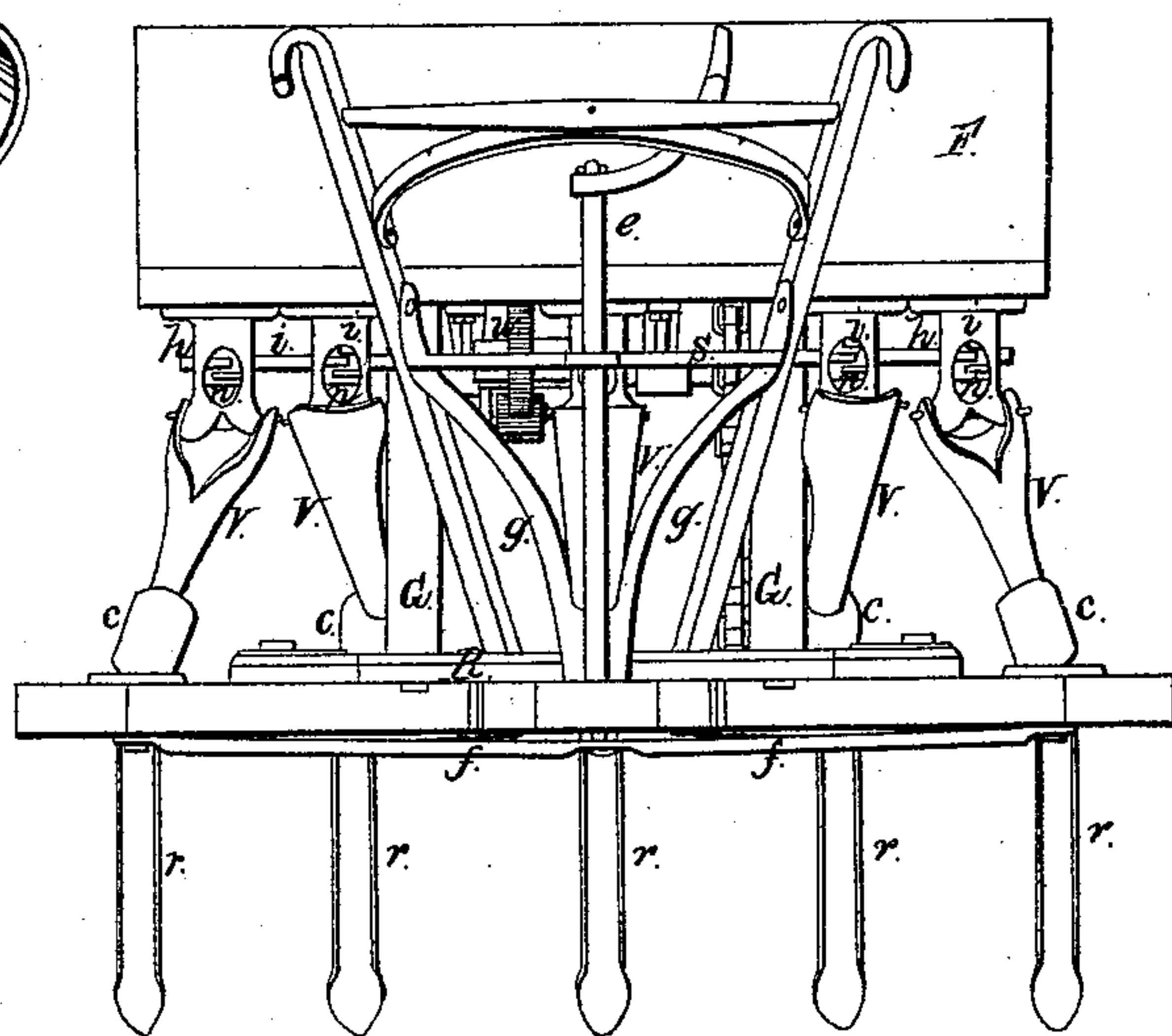
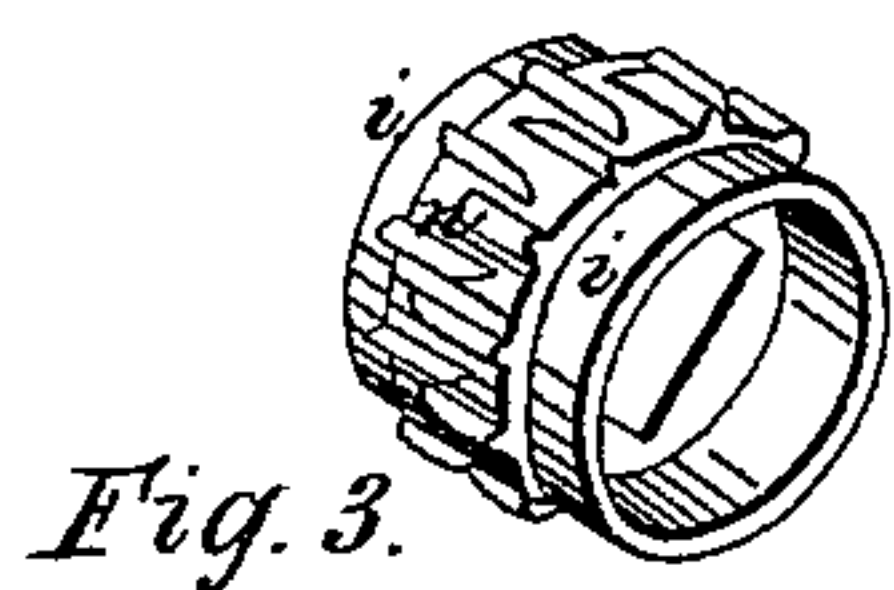
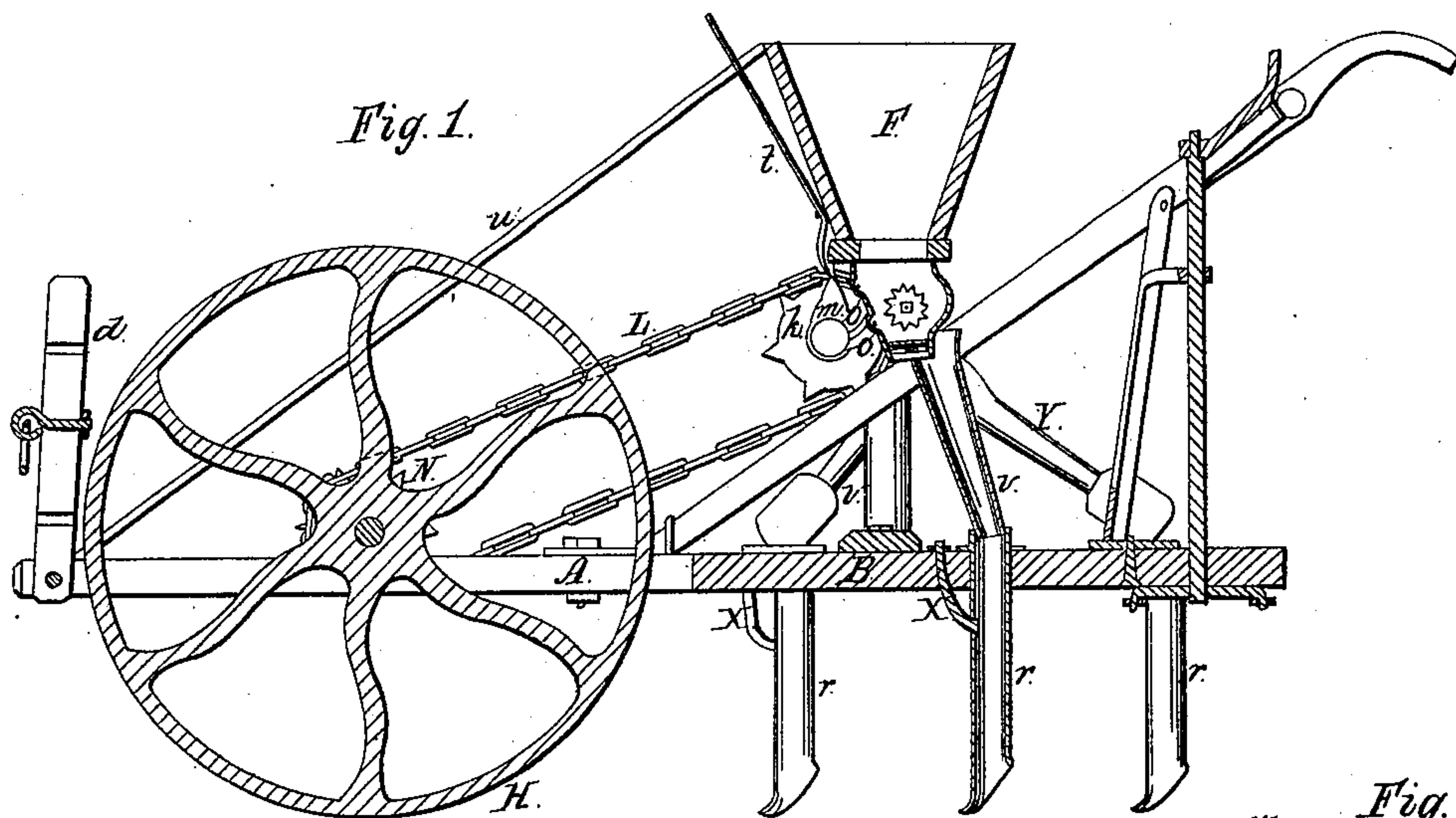


*J.R. S.B. & G.W. Rude.*

*Grain Drill.*

*Nº 95,607.*

*Patented Oct. 5, 1869.*



*Witnesses.*  
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# United States Patent Office.

J. R. RUDE, S. B. RUDE, AND G. W. RUDE, OF LIBERTY, INDIANA.

Letters Patent No. 95,607, dated October 5, 1869.

## IMPROVEMENT IN GRAIN-DRILLS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, J. R. RUDE, S. B. RUDE, and G. W. RUDE, of Liberty, in the county of Union, and State of Indiana, have invented certain new and useful Improvements in Grain-Drills; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 represents a side elevation of our machine.

Figure 2 is an end view of the same.

Figure 3 is a perspective of one of the seed wheels.

The nature of our invention consists in constructing and combining the several parts composing our machine, substantially in the manner hereinafter fully set forth.

It further consists in the peculiar construction of the perforations or openings in the seed-box, with other devices, as fully set forth.

A, in the annexed drawings, represents the beam of our cultivator.

B designates a supplemental beam, of which there are two, one being hinged on each side of beam A, at an acute angle.

To the rear end of beam A, the bifurcated brace *g* is attached, which answers as supports to the handles of the cultivator.

On the front end of beam A, is an upright, *d*, to which the horses are hitched.

*e* represent a metal rod, passing through the beam A, and through a horizontal bar, *s*, that connects the braces *g* together.

The upper end of rod *e* is furnished with a handle, for operating said rod.

*f f* designate two jointed levers, the outer ends of which are secured to their respective beams B. In operating these levers by means of rod *e*, the beams B B can be thrown outward or inward, as required.

F represents the seed-box, which rests on the uprights G G.

The uprights themselves rest on the cross-bar R.

The said cross-bar is slotted at its ends, which rest on the beams B B, and is confined to the beams B B by means of a bolt, which passes through the said slots, thus allowing the beams B B to move out or in, as may be desired.

The seed-box F has the necessary number of openings at bottom, for the issue of the seed.

*h* represents a horizontal shaft, placed beneath the seed-box F.

The shaft *h* passes through a series of cases *i*, their

number corresponding with the number of openings in seed-box. The cases *i* are fastened securely to the bottom of seed-box F.

Inside of cases *i* are placed the seed-wheels *n*, having alternate broken cogs.

The wheels *n* are penetrated by the shaft *h*, and being directly under the openings in seed-box F, serve to distribute the seed.

*m* represents a shaft, which works in two hangers *o o*, beneath the seed-box F.

The hangers *o o* are slotted so that the gearing of the two wheels *p* and *j*, on shaft *m*, may be properly adjusted.

The wheel *j*, it will be observed, gears into spur-wheel *w*, on shaft *h*, and thus operates the seed-wheel *n*.

In the front end of beam A, a slot is made, sufficiently long to admit of the play of the driving-wheel H.

To the projecting end of the axle of H, the toothed wheel N is secured.

To the shaft *m*, a similar toothed wheel, K, is attached.

L represents a chain, which passes over the toothed wheels *m* and *k*, and thus imparts motion to shaft *m* and shaft *h*, on which the seed-wheels *n* are secured.

The toothed wheel *k* may be made to disconnect the gearing by means of the lever *t*.

*r* designates the standards, with hoes or shovels attached, and braced with rods *x*. The standards are made concave on their rear side, to afford a safe passage to the seed into the furrow.

Communicating with each standard is a hollow bulb, *c*, which receives the seed from the distributing seed-wheels *n*, by means of the connecting-tubes V, the upper ends of said tubes being pivoted to cases *i*.

*u u* represent two rods, extending from the outer ends of seed-box to the front end of plow-beam A, as braces.

The operation of our machine is simple. The driving-wheel H gives motion to shaft *h*, by means of chain L, and wheels *k*, *j*, *p*, and *n*, thus operating the seed-distributors *n*.

Having thus described our machine,

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

1. The seed-wheels, so constructed that the bearings come on shaft *h*, in the centre of seed-wheels, for the purpose substantially as described.

2. The countershaft *m*, receiving motion from the driving-wheel H, by means of wheels N K and chain-belt L, substantially as set forth.

3. The standards *r*, furnished with shovels or hoes,

and braced with rods *x*, when constructed substantially as described.

4. The countershaft *m*, in combination with hangers *o o*, as and for the purpose specified.

5. The hangers *o o*, arranged for accommodating the gearing, in the manner described.

6. The countershaft *m*, in combination with wheels *p, j*, and *w*, and lever *t*, when arranged in the manner set forth.

7. Cases *i*, the seed-wheels *n*, pinions *j* and *p*, the chain *L*, toothed wheels *k* and *N*, and driving-wheel *H*,

the whole combined and arranged as and for the purpose set forth.

In testimony that we claim the foregoing as our own, we affix our signature, in presence of two witnesses.

J. R. RUDE.  
S. B. RUDE.  
G. W. RUDE.

Witnesses:

DAVID DIEL,  
SAMUEL L. MOORE.