

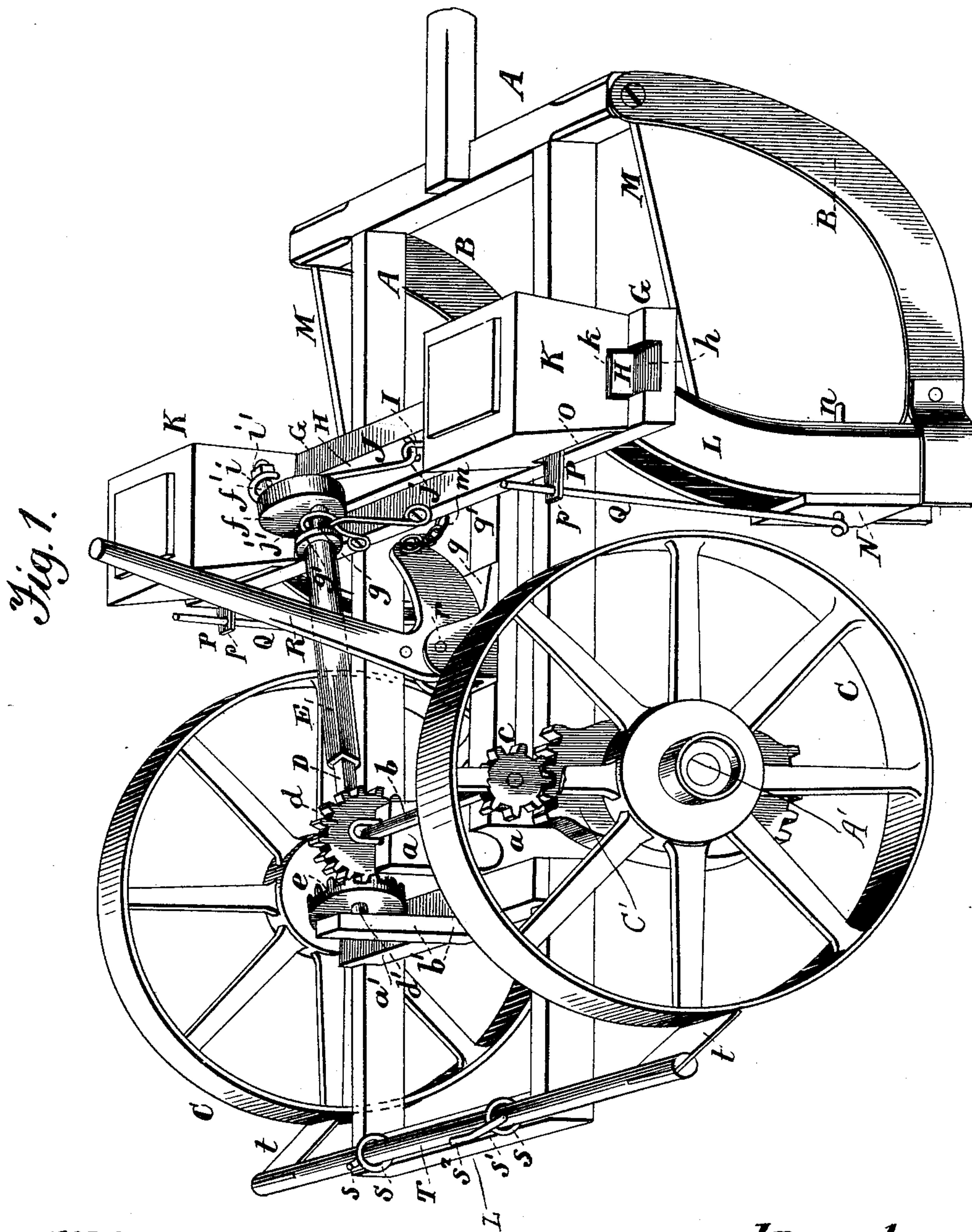
(No Model.)

2 Sheets—Sheet 1.

A. C. SMITH.
SEED PLANTER.

No. 406,962.

Patented July 16, 1889.



Witnesses.
A. Ruppert.
V. L. Mason.

Inventor:
Albert C. Smith
by Franklin D. Hough
his Attorney

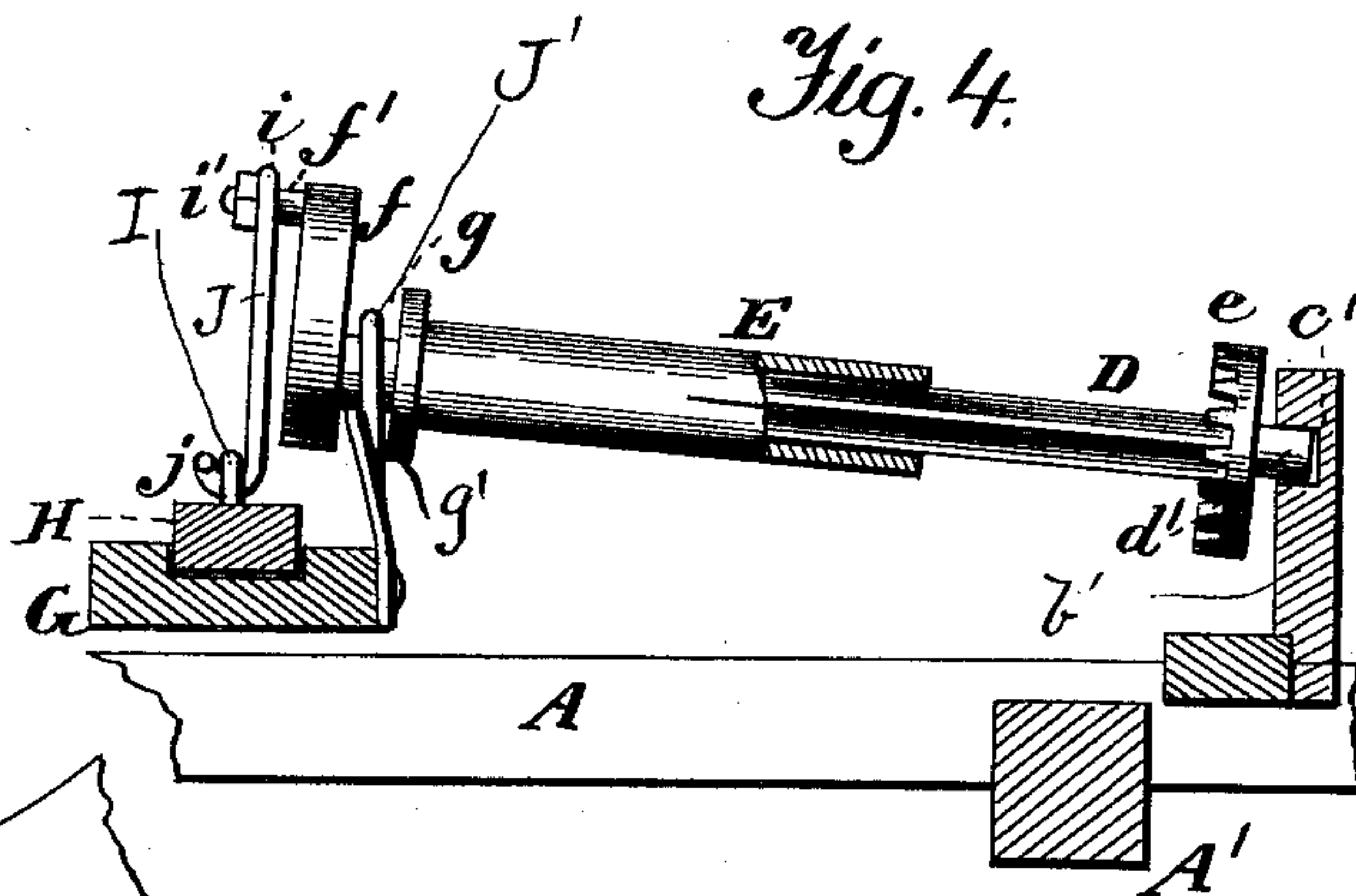
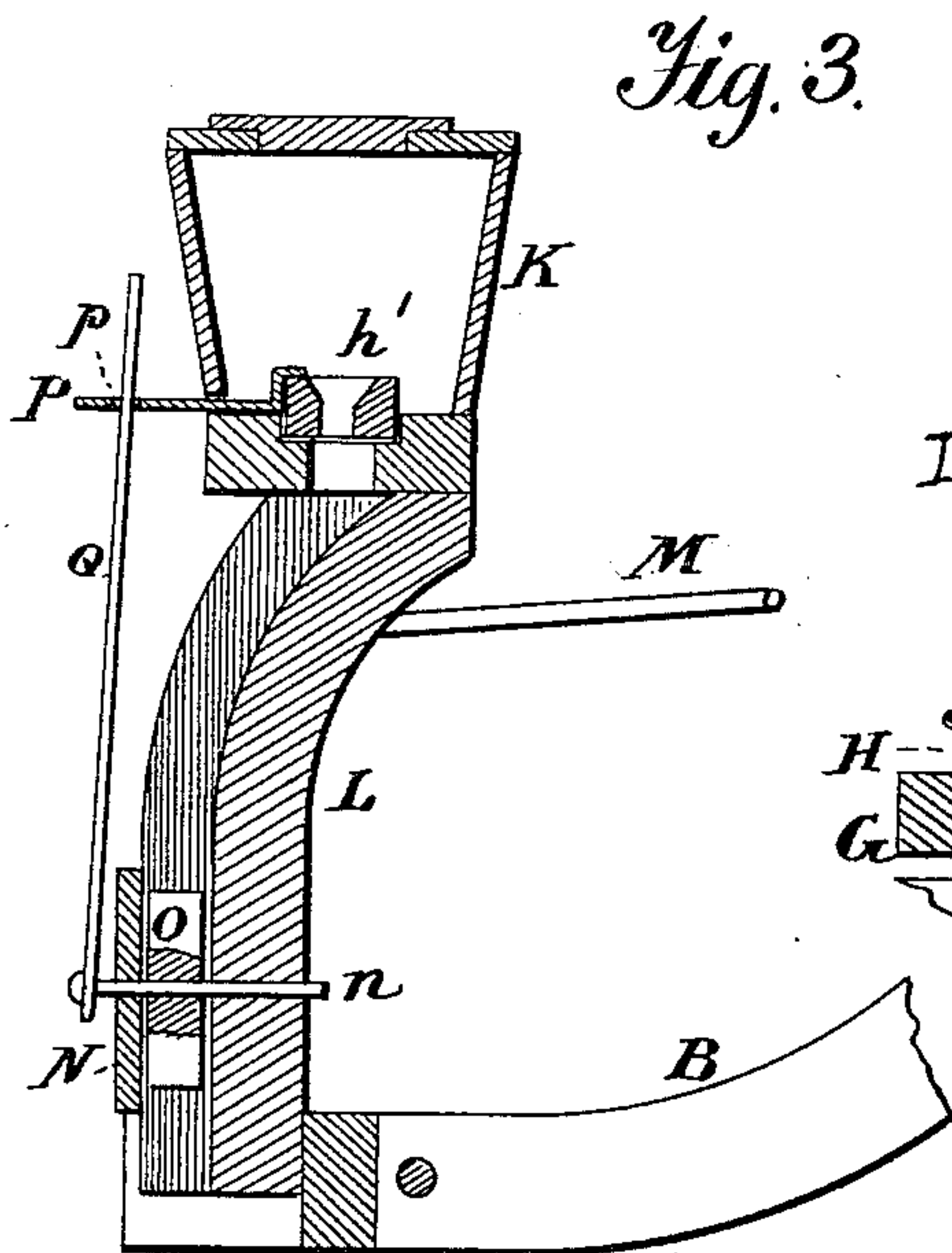
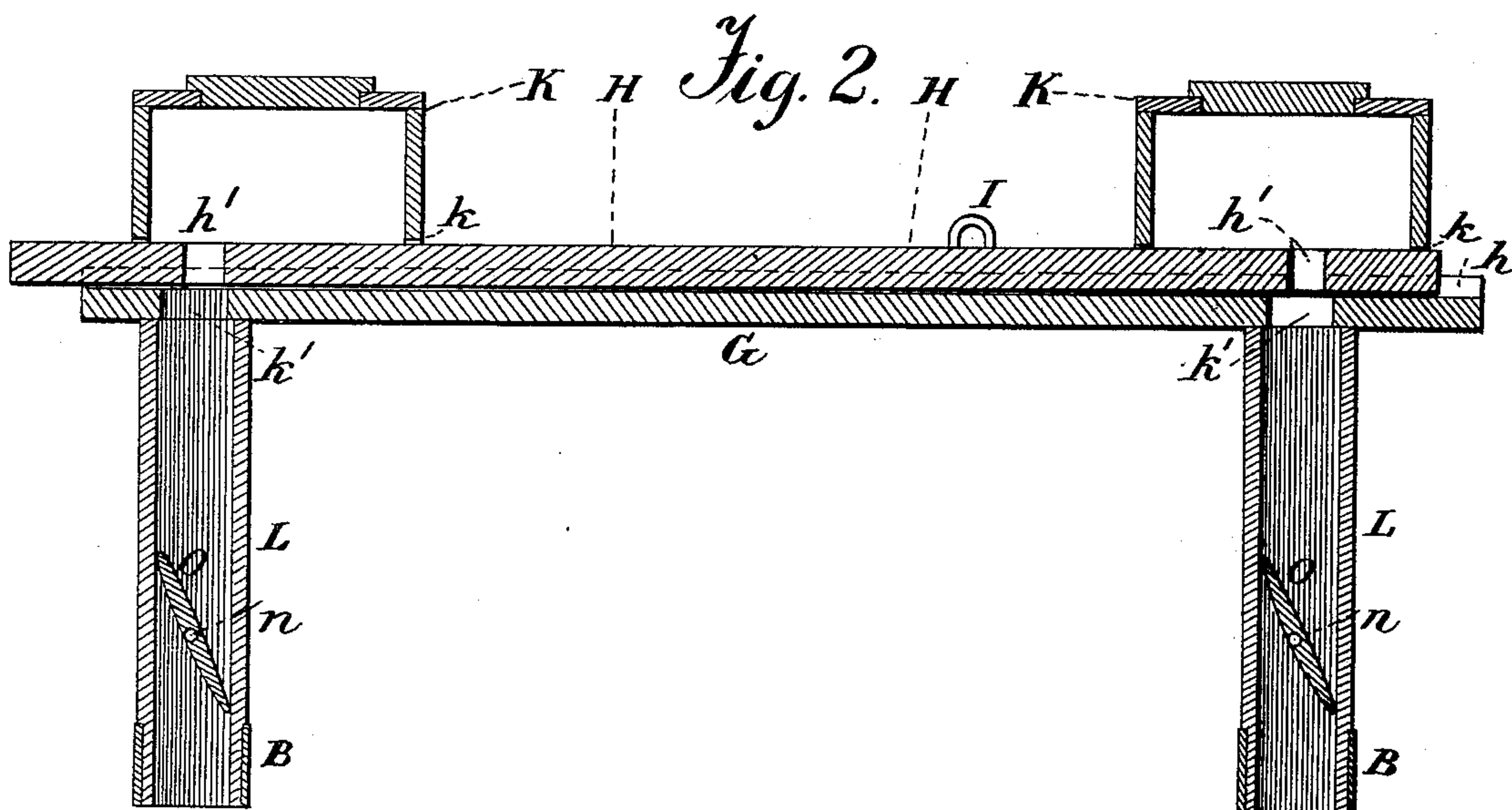
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by Franklin H. Donger
his attorney

UNITED STATES PATENT OFFICE.

ALBERT C. SMITH, OF SARDINIA, INDIANA.

SEED-PLANTER.

SPECIFICATION forming part of Letters Patent No. 406,962, dated July 16, 1889.

Application filed March 9, 1889. Serial No. 302,665. (No model.)

To all whom it may concern:

Be it known that I, ALBERT C. SMITH, a citizen of the United States, residing at Sardinia, in the county of Decatur and State of Indiana, have invented certain new and useful Improvements in Seed-Planters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in seed-planters; and it has for its objects to simplify and cheapen this class of devices, to render them more durable and efficient in operation, and to dispense with sprocket wheels and chains and other accessories heretofore necessary to the successful operation of machines of this character.

To the accomplishment of the above ends and to such others as the invention may pertain, the same consists in the peculiar combinations, and in the construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then particularly defined in the appended claim.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a perspective view of a seed-planter constructed in accordance with my invention. Fig. 2 is a transverse vertical section through the seed-boxes. Fig. 3 is a cross-section through one of the seed-boxes and runners. Fig. 4 is an enlarged detail.

Reference now being had to the details of the drawings by letter, A designates a suitable frame, the forward cross-bar of which extends beyond each side of the longitudinal timbers of the frame, and has pivotally secured thereto the forward upper ends of the runners B.

The axle A' is secured to the longitudinal timbers of the frame, and carries at its ends the wheels C, which have broad rims and fol-

low in the paths of the runners and serve as coverers for the seed.

Upon the upper face of the axle, at one side of the longitudinal center of the frame, is secured the bracket *a*, concaved upon its upper face, as shown, and in suitable bearings on this bracket is journaled the transverse shaft *b*. The outer end of this shaft carries a pinion *c*, which meshes with a toothed flange or collar C' on the hub of the adjacent wheel C, said flange or collar being toothed or cogged upon diametrically-opposite sides or ends only, so that motion is imparted to said shaft *b* intermittingly instead of continuously, for a purpose hereinafter described. The opposite end of the shaft *b* carries a pinion *d*. Secured to and rising from the transverse timber *a'* just to the rear of the axle is the post or standard *b'*. The upper end of this standard has upon its front face a socket *c'*, in which is seated the end *d'* of the shaft D, which at this end carries the gear-wheel *e*, meshing with the pinion *d* on one end of the shaft *b*. This shaft D is square or rectangular in cross-section, and works loosely in a square socket in the rear end of the shaft E, to the forward end of which is secured the disk *f*, provided with a wrist-pin *f'*. To the rear of said disk the shaft E is formed with a circumferential groove *g*, to the rear of which is a collar *g'*.

Extending transversely of the frame, forward of the wheels, is a bar G, having in its upper face a longitudinal groove *h*, in which slides and is guided the dropper-bar H, having at each end a hole *h'*, through which the seed may pass at predetermined intervals.

I is an eyebolt or hook secured to the upper face of the bar H, to one side of the longitudinal center thereof, and J is a link or rod provided at one end with a loop or hook *j*, loosely engaging the eyebolt or hook I, and at its other end formed with an eye *i*, loosely sleeved on the wrist-pin *f'* of the disk *f*, and retained thereon by means of the nut *i'*.

To the rear side of the bar G is secured a support for the forward end of the shaft E, which support consists of a wire *g*, having its ends formed into eyes, through which pass screws or other fastening devices for securing it to the bar G. The center of the wire is formed into a loop *j'*, which loosely embraces

the shaft E in the groove *g* between the disk *f* and the collar *g'*.

Secured to the ends of the bar G are the seed-boxes K, the ends of which are provided with apertures *k* for the passage of the drop-
 5 per-bar H, and the bar G is formed with an opening *k'* at each end of the center of the seed-box and over the entrance to the boots.

Secured to the under sides of the bar G, near the ends thereof, are the open standards L, the mouths of which are in line with the holes in the ends of the bar G, and which open standards are secured to the heels of the runners.

15 M are brace-rods extending from the cross-bar, connecting the forward ends of the longitudinal timbers of the frame to the open standards near the upper ends thereof.

To the rear face of the open standards, near the lower ends thereof, are secured the plates or bars N, forming a bearing for one end of the shafts *n*, the other ends of said shafts having bearings in the front wall of the open standards.

25 O O are valves pivoted near their center on the shafts *n* within the lower ends of the open standards and extending vertically therein.

Projecting rearwardly from the dropper-bar H, and working in slots *o* in the bottom of the seed-boxes, are the plates P, formed at their rear ends with holes *p*, through which extend loosely the upright arms Q, the lower ends of which are fast on the rear ends of the shafts
 35 *n*. The bar G and its accessories are not rigidly secured to the frame; but the bar is free thereof, and is designed to be elevated to lift the runners from the ground, when desired, by means of the lever R, fulcrumed at *r* on the bracket *q*, secured to a longitudinal timber *q'*
 40 of the frame, and provided at the free end of its short arm with a hook *r'*, engaging a chain *m* on the bar G.

Projecting upwardly from the rear cross-bar Z of the main frame are the eyes S, in which is loosely journaled the transverse shaft T, carrying at each end a scraper *t*, adapted to bear on the rims of the wheels C.

s is a pin projecting from the shaft T, and serving to limit the lengthwise movement thereof in one direction, and *s'* is a pin upon the said shaft serving to limit the movement thereof in the other or opposite direction. This pin *s'* is extended and formed with a bent end *s''*, to engage the main cross-bar and limit the movement of the shaft T.

The peculiar construction and connection of the shafts D and E allow of the raising and lowering of the bar G and its accessories without danger of injury to the parts and without interfering with the rotation of the two shafts when desired.

What I claim is—

The combination, with the frame A, the transverse bar G, having longitudinal groove *h*, and the dropper-bar adapted to reciprocate in said groove, of the runners, the open standards L, secured to the under side of the bar G and at their lower ends secured to the runners, the rods M, connecting the standards with the runners, the plates N, secured to the rear sides of the standards, the longitudinal shafts *n*, having bearings in said plates and the front walls of the standards, the rearwardly-extending plate P, secured to the dropper-bar, and the upright arms Q, connecting said plates P with the rear ends of the shafts *n*, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT C. SMITH.

Witnesses:

GEORGE H. ANDERSON,
 DYER I. MOORE.