

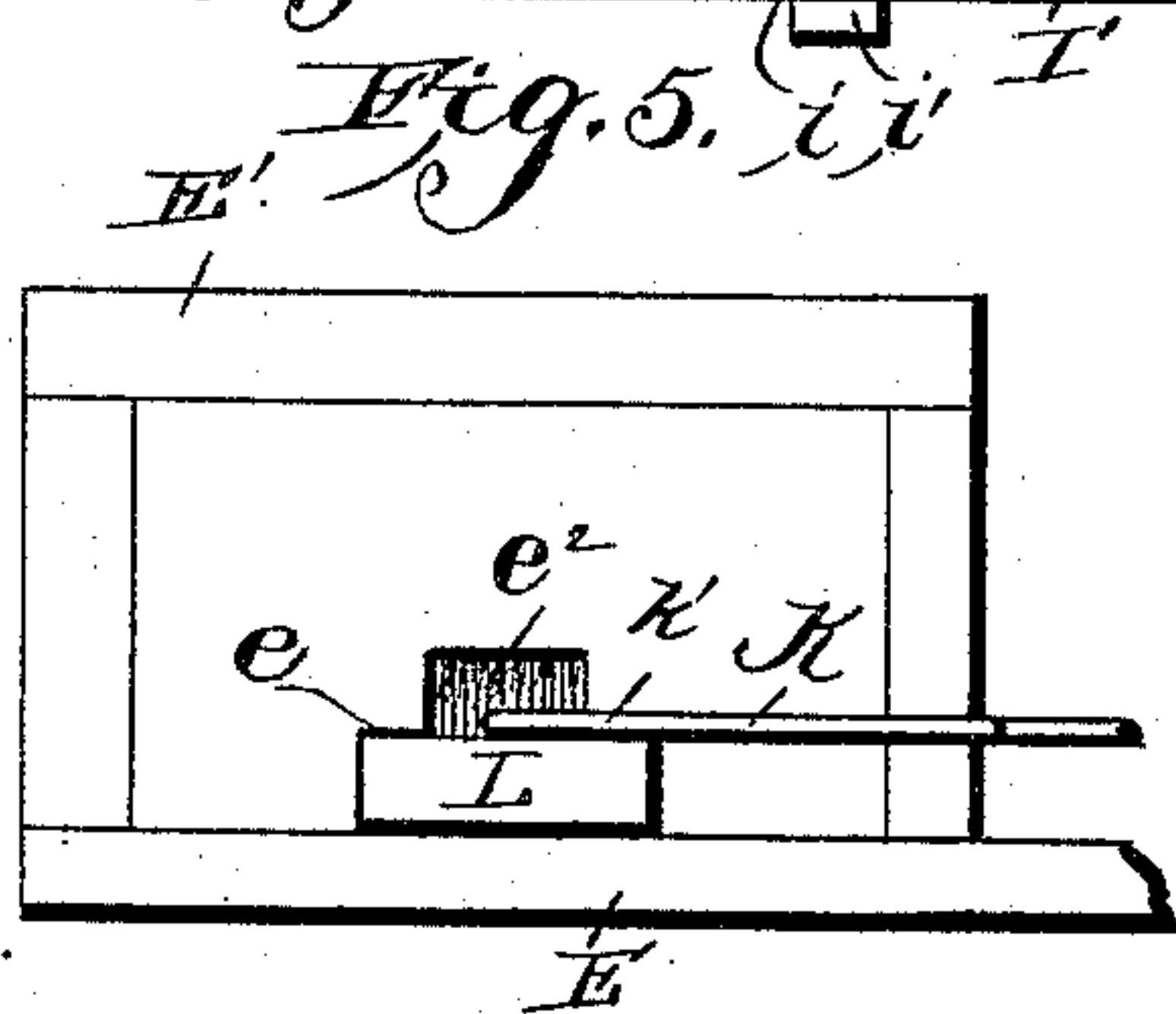
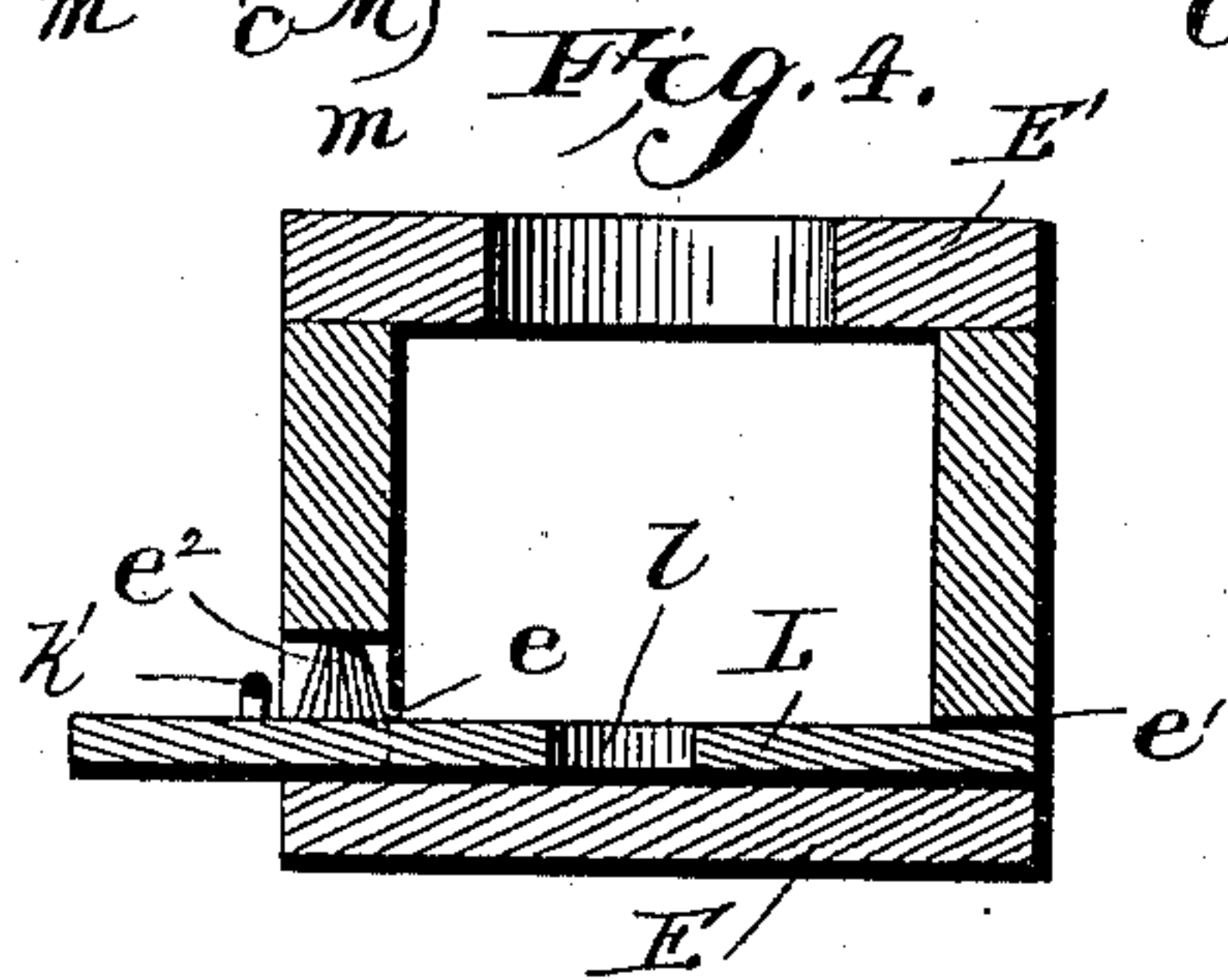
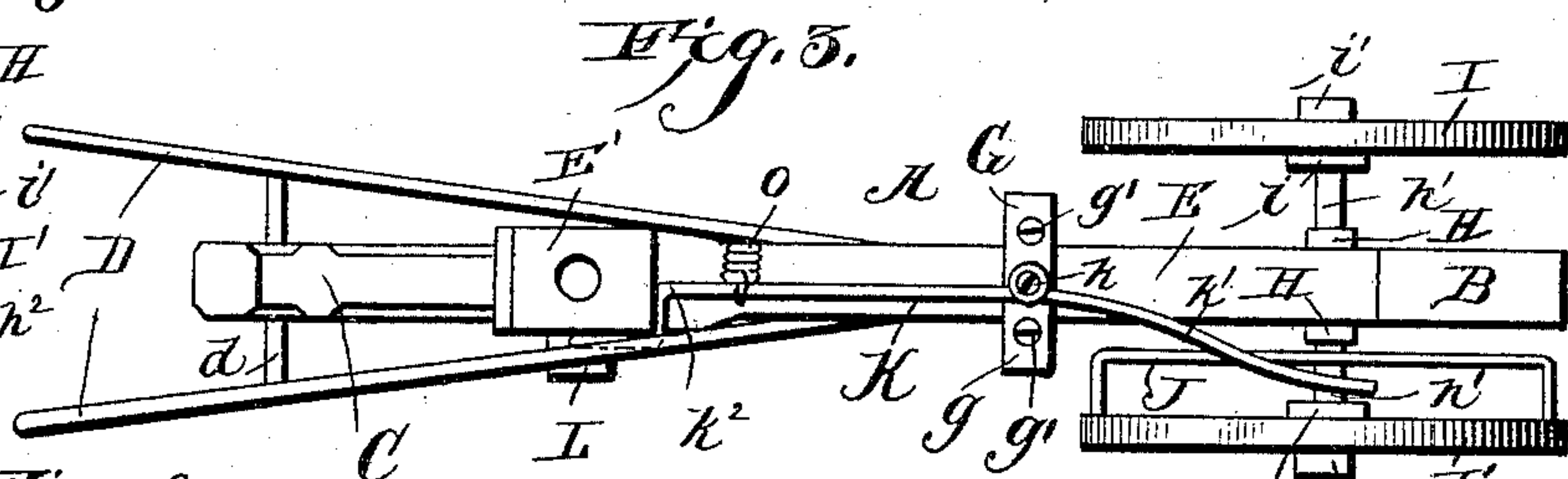
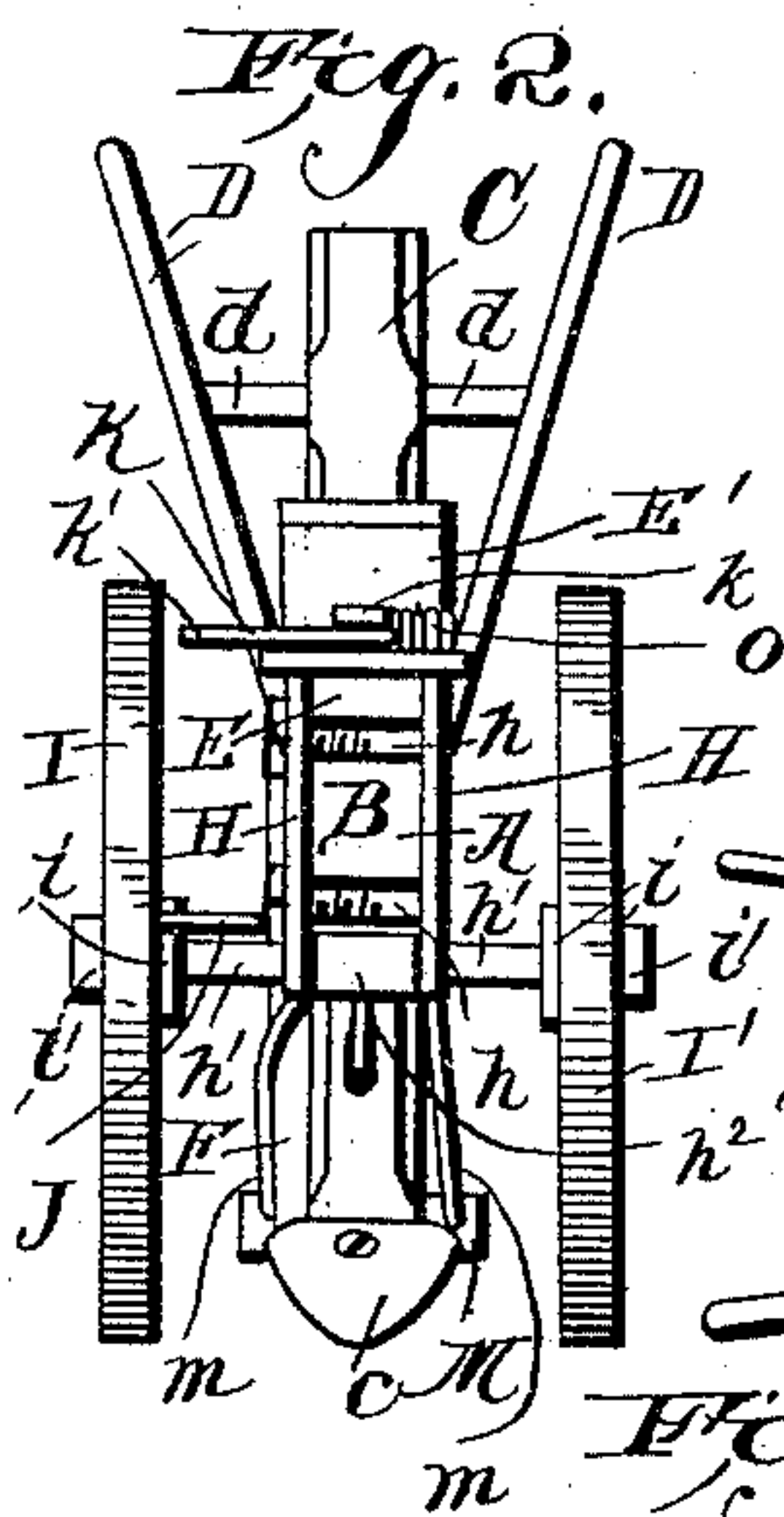
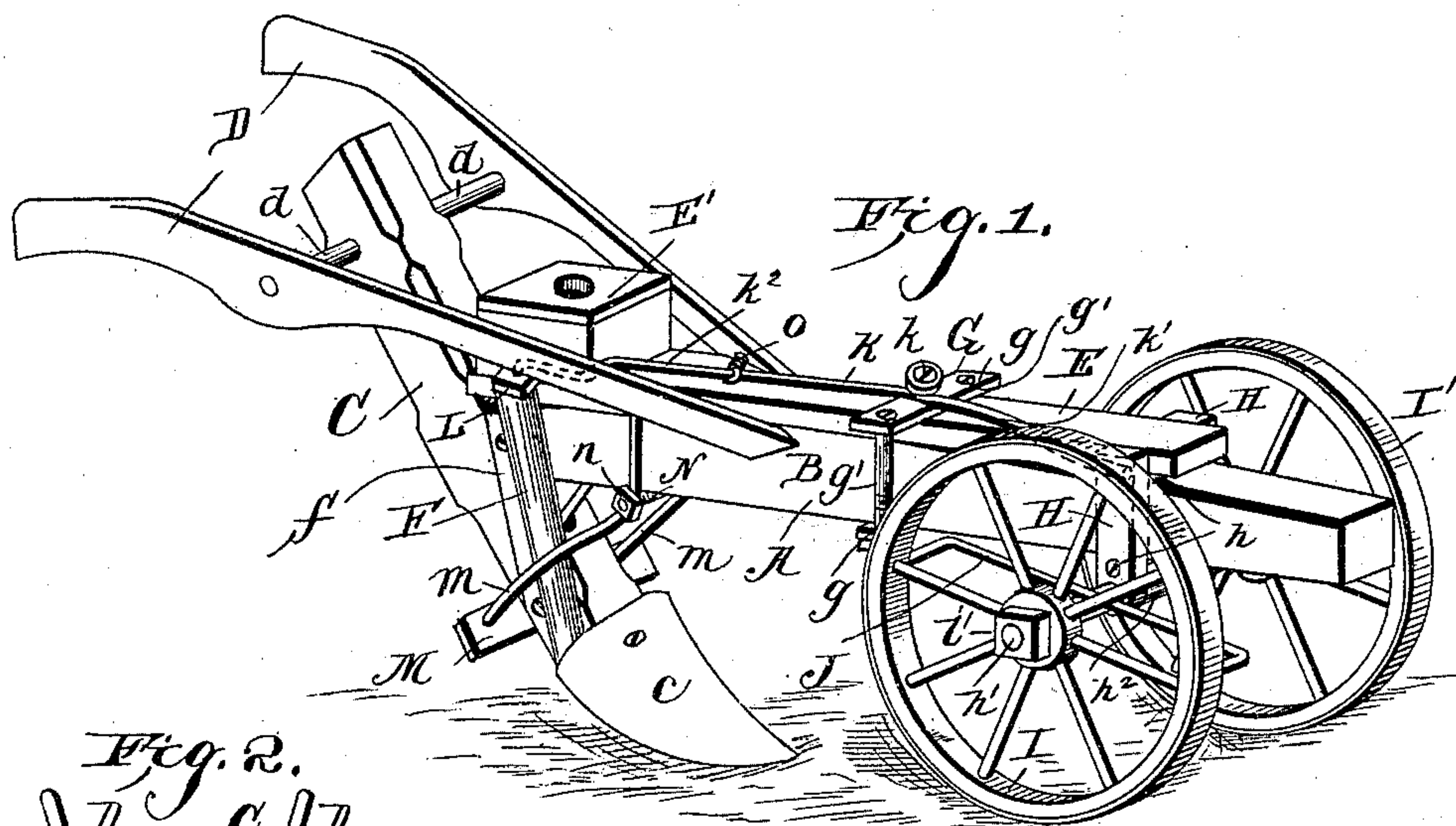
(No Model.)

T. L. CROMER.

PLANTER.

No. 395,694.

Patented Jan. 8, 1889.



Witnesses,

Henry G. Dietrich
Theodore S. West,

Inventor
Thomas L. Cromer

By his Attorneys

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

THOMAS L. CROMER, OF O'DANIEL, TEXAS.

PLANTER.

SPECIFICATION forming part of Letters Patent No. 395,694, dated January 8, 1889.

Application filed August 22, 1888. Serial No. 233,419. (No model.)

To all whom it may concern:

Be it known that I, THOMAS L. CROMER, a citizen of the United States, residing at O'Daniel, in the county of Guadalupe and State of Texas, have invented a new and useful Improvement in Planters, of which the following is a specification.

The invention relates to improvements in planters, being adapted for attachment to any kind of plow having a beam; and it consists in the construction and novel combination of parts hereinafter described, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a plow having the invention attached. Fig. 2 is a front end view thereof. Fig. 3 is a plan view of the same. Fig. 4 is a detail sectional view of the hopper, showing the seed-slide therein. Fig. 5 is a side view of the hopper, showing the wiper and opening for the seed-slide.

Referring to the drawings by letter, A designates a plow of common construction, consisting of the beam B, the downwardly and forwardly inclined standard C, having a suitable plowshare, *c*, secured to its lower end, and the handles D, secured to the plow-beam at their front ends and to the upper extension of the standard by the cross-bar *d*.

E is a board attached to the upper side of the plow-beam, and having the hopper E' secured to its rear end, immediately above the heel of the beam, between the handles and adjoining the standard, which hopper is provided with the openings *e e'* in its sides, adjoining its floor, for the seed-slide, and has the brush or wiper *e²* secured in an extension of the opening *e*, at the top thereof.

F is a dropping-tube secured to the side of the standard, with its upper end immediately below the opening *e* and its lower end immediately behind the wing of the share *c*, so that the grain will descend into the furrow made by said share. The dropping-tube is preferably slightly tapered downward.

The board E is attached to the plow-beam about midway of its length by the clip G, composed of the upper and lower cross-plates *g g*, and the bolts *g'*, passing through suitable openings in said plates on the sides of the plow-beam and engaging nuts on their lower ends.

H H are bearing-arms secured together by bolts *h* above and below the beam, adjacent to the front end of the board E, with their upper ends lying against the sides of said board and preventing lateral motion thereof, and provided with bearings in their lower ends for the shaft *h'*, having a boss, *h²*, between said bearings, so that it cannot slip laterally.

I I' are the conveyer-wheels retained on the shaft *h'*, the ends of which are threaded by the interior collars, *i*, and the exterior nuts, *i'*.

J is an actuating-rod, a suitable distance inward from the inner face of the wheel I and with its outwardly-bent ends secured in said face at diametrically-opposite points. There may be as many as desired of said rods at equal distances apart, the frequency of the dropping, as will hereinafter appear, being in proportion to the number thereof.

K is a double-armed lever pivoted or swiveled on a bolt, *k*, passing through a central opening in the top plate of the clip G, and having its front arm, *k'*, bent or inclined outward from its pivotal point, so that it is in the path of the rod or rods J when the wheel I rotates forward. The rear arm, *k²*, of said lever extends rearward to the center of the front of the hopper, then bends at a right angle outwardly, and again at a right angle rearward to a point opposite the opening *e* in the hopper.

L is the seed-slide, secured to the end of the arm *k²* of the lever, slightly curved in order to pass freely into the openings *e e'* in the hopper, and provided with the opening *l* at a suitable point in its length, which opening when the arm *k²* is moved to the farthest extent outward passes out of the hopper, is wiped by the brush *e²*, and drops the grain into the open upper end of the tube F.

M is the coverer-bar, secured to the lower ends of the integral spring-rods *m m* in rear of the plow-standard, which arms extend upward and frontward on the sides of the latter and meet in a transverse bar over the plow-beam and below the board E. The said arms are connected below the plow-beam by the bolt N and nut *n*, the bolt passing through eyes in the arms to engage the nut.

It is evident that by means of the rod J the lever-arm *k'* is moved inward and the arm *k²* outward as the plow progresses, and the seed-

slide moved outward against the action of the spring O, that returns the seed-slide inward.

The spring-rods supporting the coverer-bar prevent the latter from bouncing the plow-share out of the furrow it is cutting.

The shaft *h'* and wheels can be detached from the plow-beam by withdrawing the bolts *h*, the hopper and board E can be detached therefrom by removing the clip G, and the coverer-bar by then removing the bolt N.

The dropping-tube can be detached by withdrawing the screws which pass through openings in its wing *f* into the standard. By means of said bolts and clip the described parts may be attached to the beam of any plow.

Having described my invention, I claim—

1. The combination, with a plow, of the detachable board E, the hopper E', secured thereto, the double-armed lever pivoted or swiveled on said board and vibrated from one of the conveyer-wheels, the spring O, and the seed-slide attached to the end of the inner arm of said lever, substantially as described.

2. The combination, with a plow, of the shaft or axle *h'*, detachably secured to the front portion of the beam thereof, the conveyer-wheels on said shaft, the actuating-rods secured to the inner face of the wheel I, the board E, detachably secured to the beam, the hopper at the rear end of the said board, the double-armed lever swiveled or pivoted upon

the board, the spring O, and the seed-slide attached to the end of the rear arm of the said lever, substantially as described.

3. The combination, with a plow, of the board E, the clip G, detachably securing said board to the plow-beam, the hopper E', secured to the rear end of the board E and provided with the openings *e e'* and brush *e²*, the lever K, pivoted upon the clip G, the spring O, the seed-slide secured to the end of the rear arm of the lever K, and the dropping-tube F, screwed through its wing *f* to the plow standard.

4. The combination, with a plow and the board E, the hopper, seed-slide, double-armed lever, and dropping-tube detachably secured thereto, of the bearing-arms H, the bolts *h*, the shaft *h'*, the conveyer-wheels I I', and the actuating-rods J, secured to the wheel I, substantially as specified.

5. The combination, with a plow, of the coverer-bar, the integral spring-rods secured thereto and passing on each side of the plow-standard and over the beam, and bolt N, passing through eyes, said rods and the nut *n* engaging said bolt, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

THOMAS L. CROMER.

Witnesses:

HERMAN GERDES,
HEINRICH SCHWARZ.