

(No Model.)

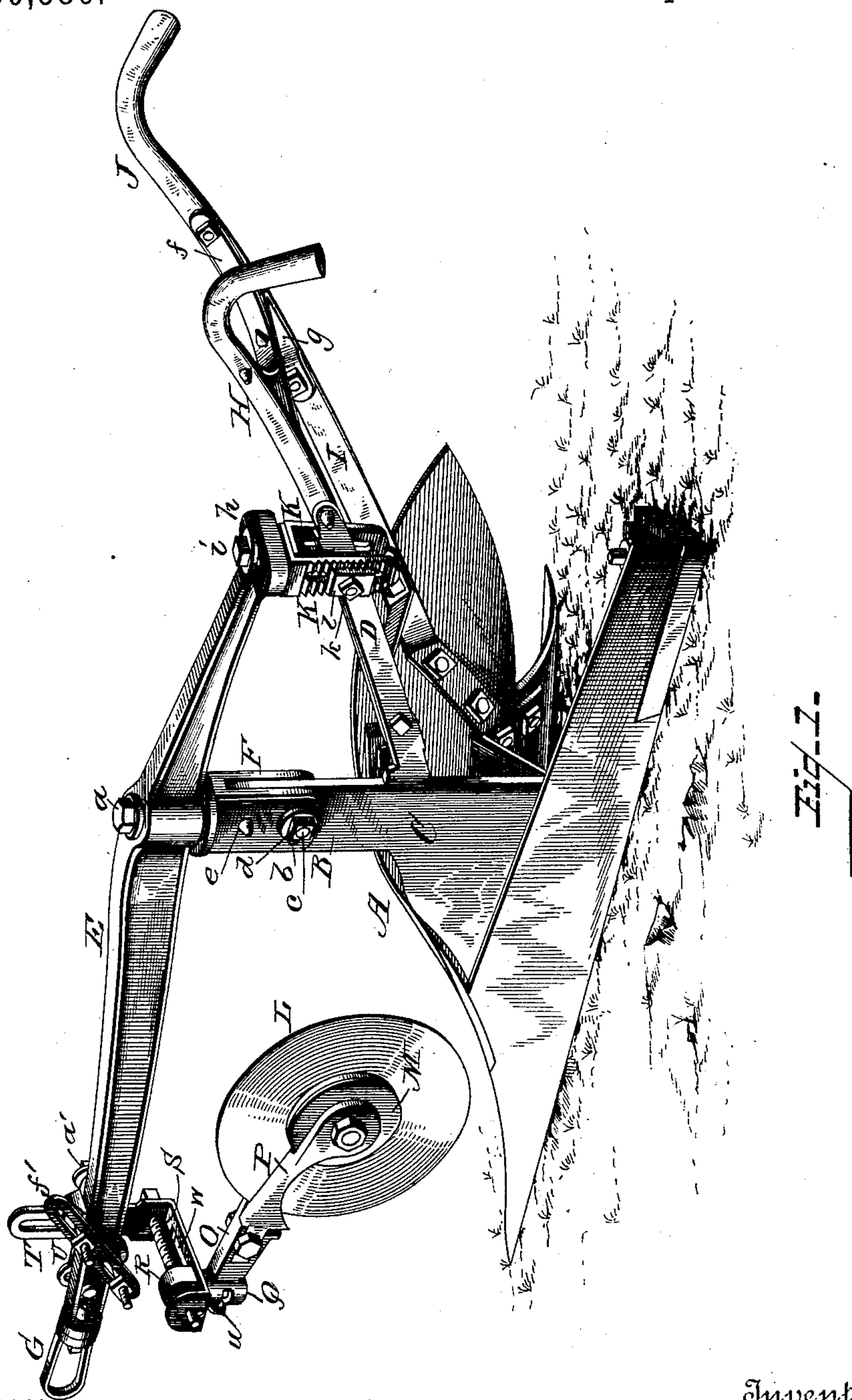
2 Sheets—Sheet 1.

C. HANSON.

PLOW.

No. 360,586.

Patented Apr. 5, 1887.



Witnesses

Wm. L. Miller.

Inventor

Charles Hanson.

By *his* Attorney *Chas. H. Fowler*

(No Model.)

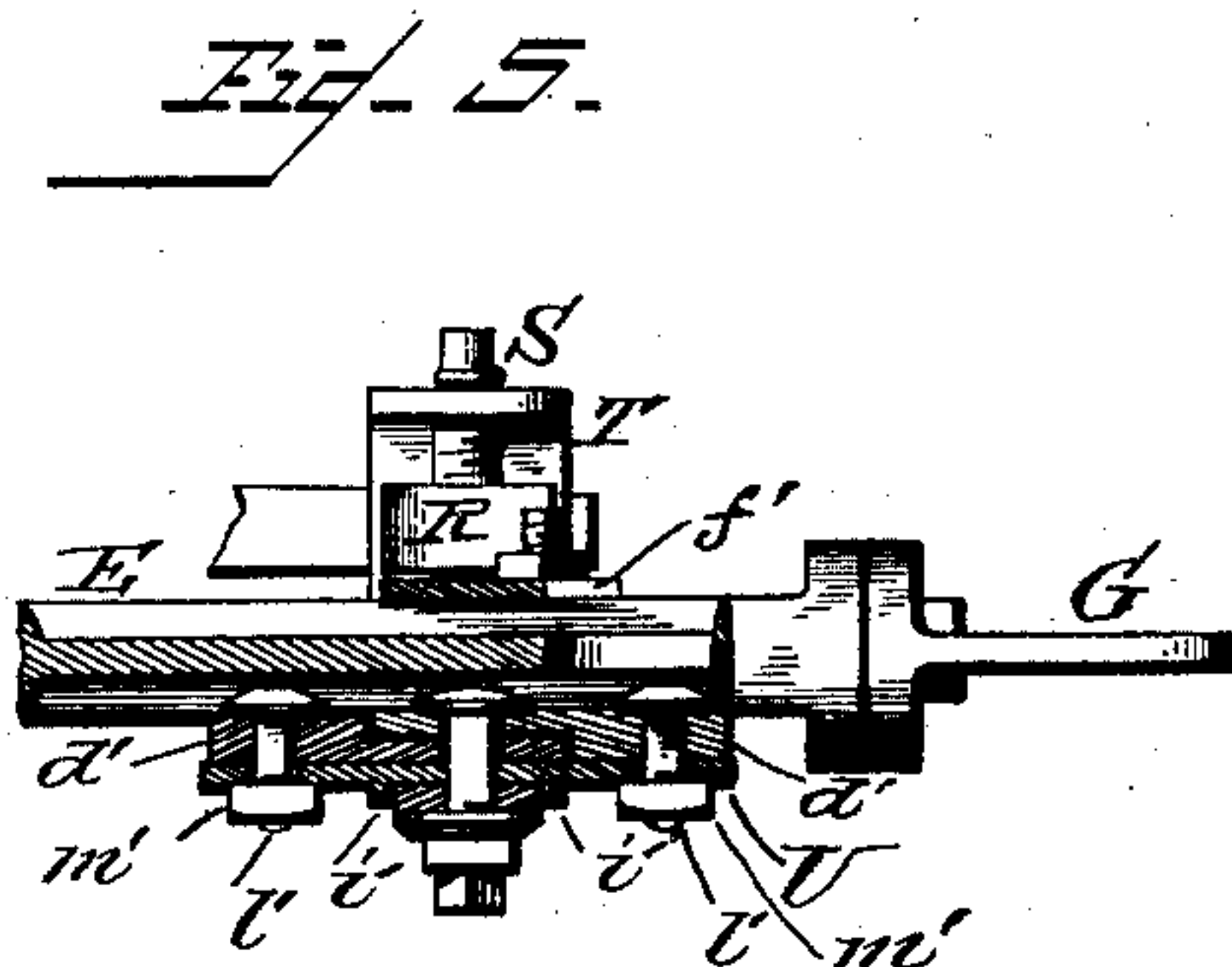
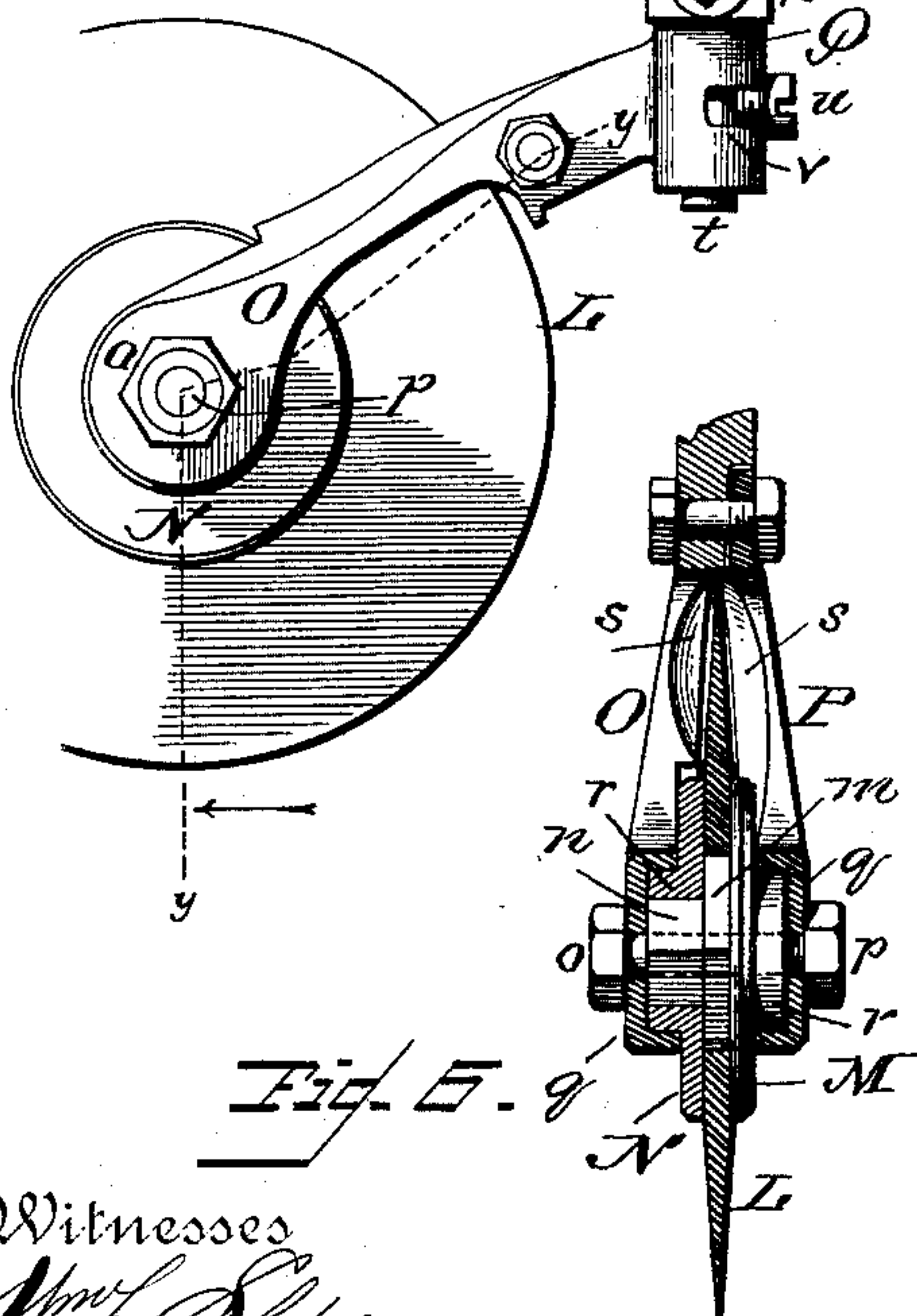
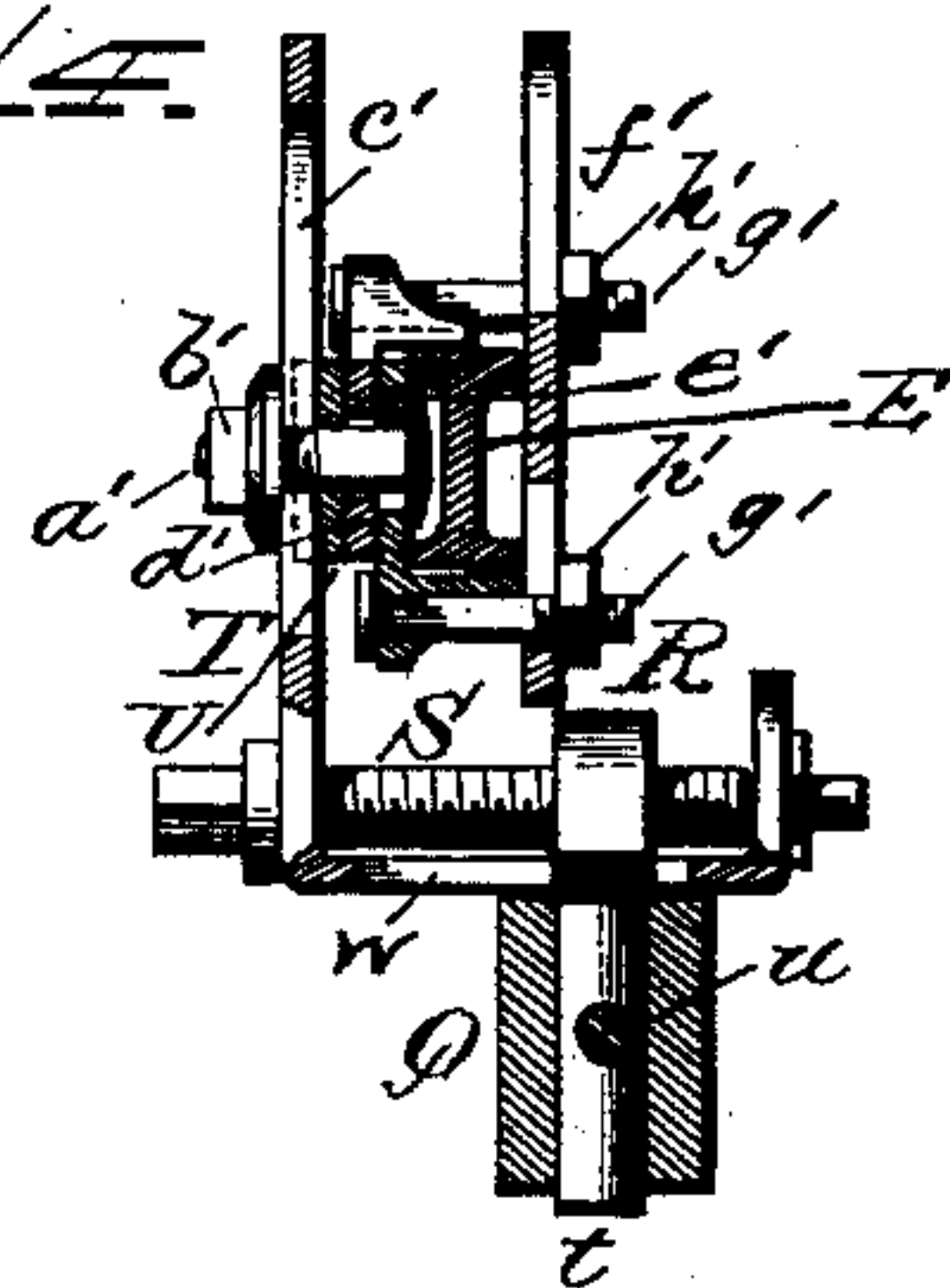
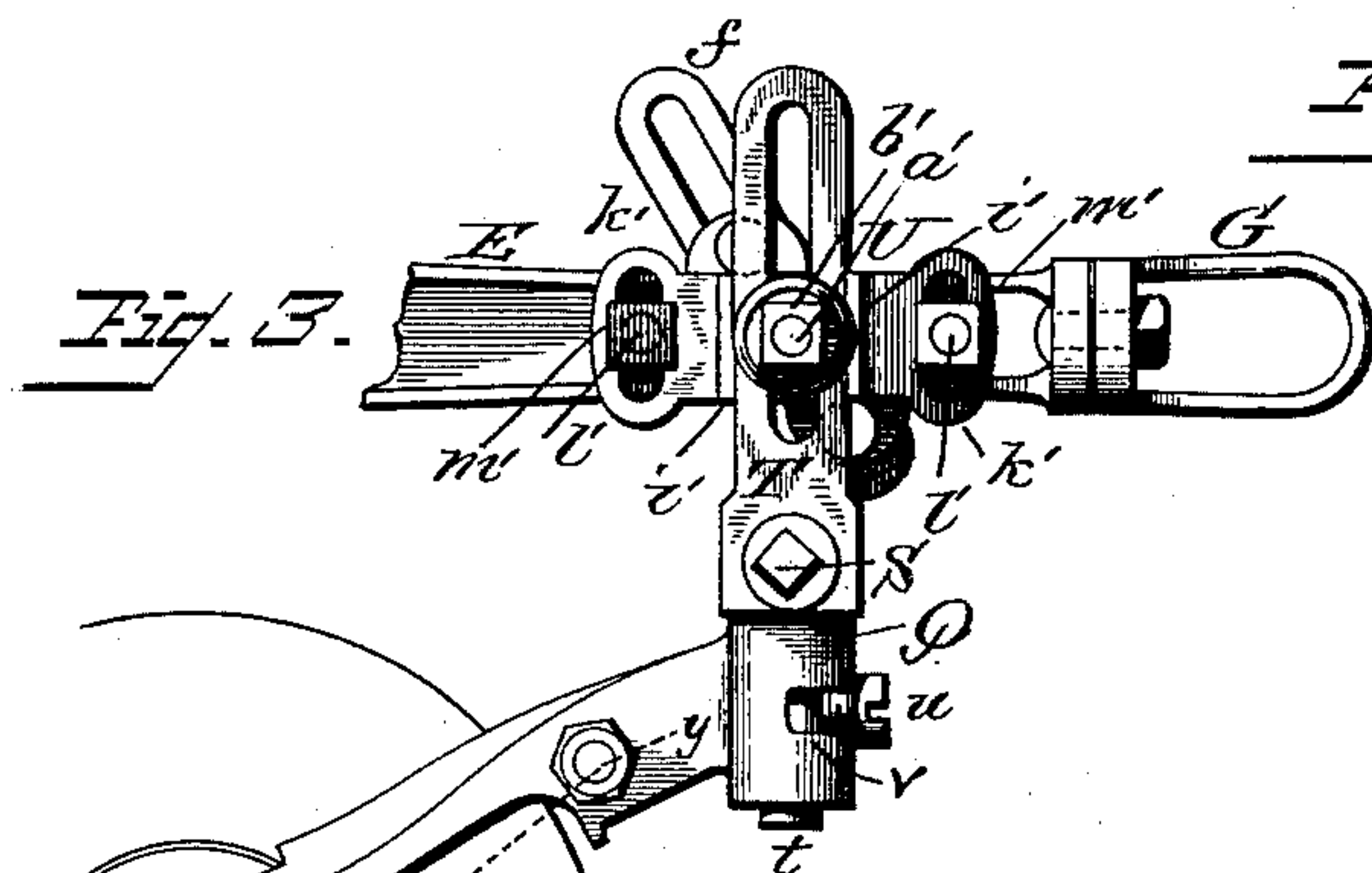
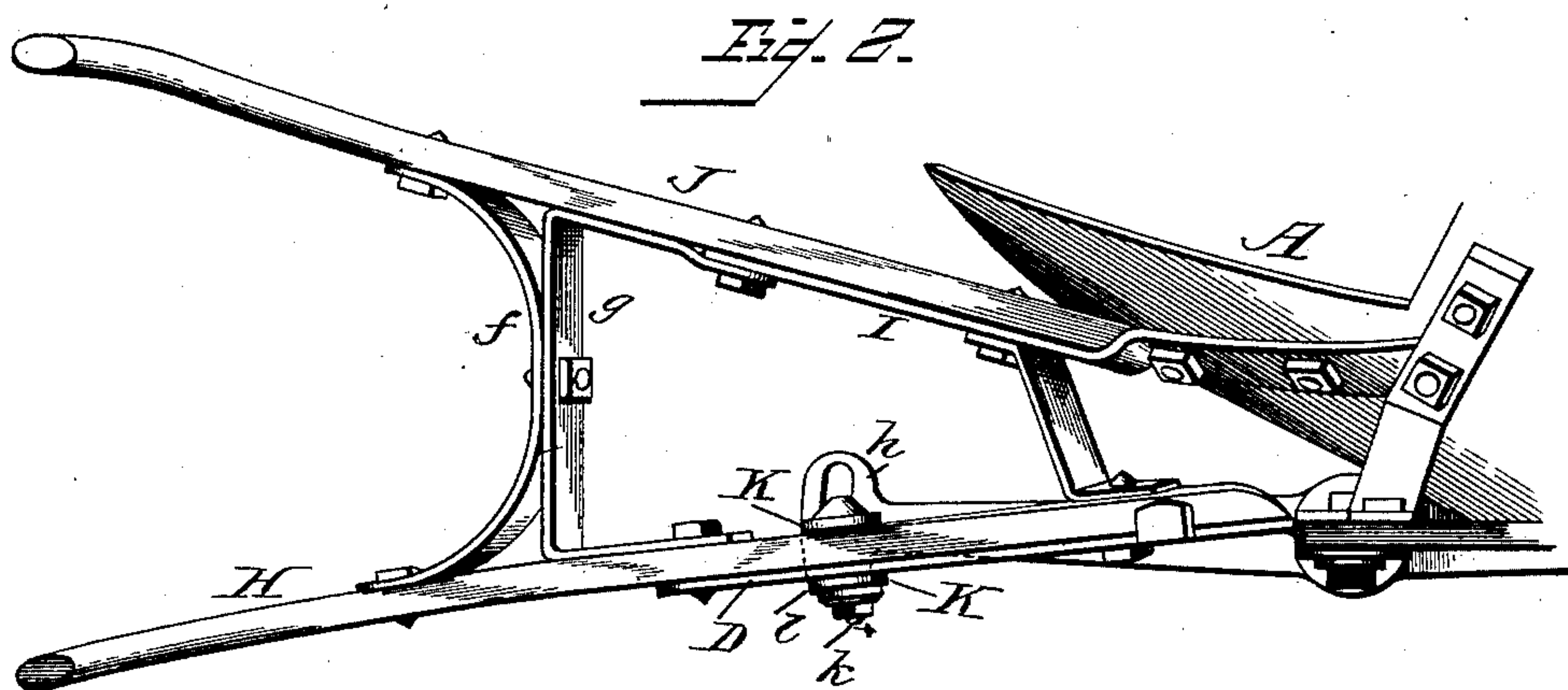
2 Sheets—Sheet 2.

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Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES HANSON, OF ROCK ISLAND, ILLINOIS.

PLOW.

SPECIFICATION forming part of Letters Patent No. 360,586, dated April 5, 1887.

Application filed August 20, 1886. Serial No. 211,382. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HANSON, a citizen of the United States, residing at Rock Island, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Plows; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a perspective view of my invention; Fig. 2, an under side perspective view showing the manner of bracing the handles to the plow; Fig. 3, a detail view in elevation of the forward end of the plow-beam, showing the colter connected thereto; Fig. 4, a transverse section thereof; Fig. 5, a sectional elevation taken on line *y y* of Fig. 3, and Fig. 6 a longitudinal section through the forward or draft end of the plow-beam.

The present invention has relation to that class of plows provided with adjustable beams, also adjustable colters, and is especially designed as an improvement upon my former patent, bearing date February 6, 1883, No. 271,844, and the object thereof is to improve this class of plows in the several details of construction, as will be hereinafter described and claimed.

In the accompanying drawings, A represents the plow, provided with a standard, B, which has a downwardly-extending brace-plate, C, of sufficient size to fill up all space between mold-board and land side, thereby avoiding clogging, which would result from open space being left between standard, mold-board, and land side of the plow. The standard B is formed in one piece with a brace, D, said brace extending up along the outer side of one of the handles and suitably bolted thereto, thus greatly strengthening the handle where most needed, and, the standard and brace being formed in one piece, there is no danger of the latter working loose therefrom, while the cost of manufacture is greatly diminished.

The plow-beam E is pivoted by bolt *a* to a bifurcated hanger, F, said hanger supporting the plow and enabling it to turn laterally in either direction. This hanger F, near its lower end, has curved slots *b*, through which passes

a set-bolt, *c*, provided with a nut, *d*, engaging with the screw-threaded end thereof, said bolt also passing through the standard B. The hanger F is also pivoted to the standard B immediately above the set-bolt, as shown at *e*, thereby forming a very simple, strong, and durable connection between the plow-beam and standard, and enabling the beam at its forward end to be adjusted as to height by means of the set-bolt and slot hereinbefore described.

The plow-beam, which is preferably made of malleable iron, is comparatively straight, thereby giving a straight draft, and has at its forward end a swiveled clevis, G, thereby keeping the double-trees in proper position should the plow upset on either side or be tipped in turning. In addition to the brace D, which is connected to the handle H, a brace, I, is employed, which is bolted to the inner side of the handle J, and also to the inner side of the mold-board of the plow, thereby strengthening the handle J in the same manner as brace D does the handle H, this latter-mentioned brace obviating the necessity of twisting the lower end of the wooden handles by steam, which is an expensive process, by reason of a considerable percentage of the handles being broken while being thus twisted.

As a substitute for the ordinary wooden braces between the plow-handles, I provide metal braces *f g*, bolted to the handles and together in any well-known manner, the metal not being affected by moisture, as in the case of wooden braces. The rear end of the plow-beam E has a transverse slotted plate, *h*, through which passes a suitable clamping-screw, *i*, said screw connecting to the under side of the plate slotted and serrated hangers K, said hangers being capable of vertical adjustment and held in their adjusted position by means of a set screw or bolt, *k*, and a serrated clamp, *l*, the serrated face thereof engaging with the serrations upon the outer side of one of the hangers K, the serrations, as should be understood, being on one of the hangers only, and the set screw or bolt *k* passing through the slots in the hangers and also through the brace D and plow-handle H. By this construction a very simple and effective means is provided for raising or lowering the rear end of the plow-beam, the slotted plate *h* and set-screw *i* enabling the rear end of the

beam to be adjusted laterally, said adjustments being required to bring the forward or draft end of the beam in the position required.

The wheel-colter L is provided with a square opening, through which passes a correspondingly-formed hub, *m*, projecting from the inner side of a clamping-disk, M, the hub having an extension, *n*, also formed square in cross-section, and over which fits a clamping-disk, N. Between these disks are held the colters by means of a bolt, *o*, which passes through the disk and colter, and is provided with tightening-nut *p*, engaging with the screw-threaded end of said bolt, as shown in Fig. 6. This bolt *o* also connects to the colter and clamping-disks arms O P, which are so constructed at their lower ends as to form caps *q*, which fit over flanges *r* upon the outer side of the clamping-disks, thereby forming a solid and firm bearing for the clamping-disks to revolve in, the disks carrying with them the colter. By this construction the fastening-bolts ordinarily used are dispensed with, thus avoiding the wear of the colter revolving on the bolt and the consequent wearing and cutting of the bolt and the enlargement of the colter-hole by frictional wear. These objections are all obviated by the construction herein described, while the colter will run truer without lateral play.

The employment of the caps *q*, which fit over the rims or flanges *r*, excludes all dirt and foreign substances therefrom.

The arms O P are curved out, as shown at *s*, to form scrapers to clean the sides of the colter from earth, grass, &c., that may adhere thereto, the scraping edges upon the arms being formed in any well-known manner. The arm P is detachably connected to arm O by means of a bolt and nut, or any other well-known means may be employed to attain this end, and the arm O is formed at its upper extremity with a sleeve, Q, which fits over a pin, *t*, depending from a head, R, the sleeve being held to the pin by means of a set-screw, *u*, passing through an elongated slot, *v*, and engaging with a screw-threaded hole in the pin, thereby forming a swiveled connection between the colter-arms and plow-beam. The head R of the pin *t* is provided with a screw-threaded hole, through which passes a screw-rod, S, said rod having its bearings in a right-angle plate, T, which plate is connected to the forward end of the plow-beam. By turning the screw S, by means of a wrench or other suitable tool, the head R is made to travel longitudinally thereon, the head extending down through an elongated slot, *w*, which admits of its movement and forms a guide for the same. The plate T is

vertically adjustable by means of the bolt and nut *a' b'*, the bolt passing through an elongated slot, *c'*, and through plates *d'* and *e'*, the plate *e'* being connected to a slotted plate, *f'*, by bolts *g'* and nuts *h'*, which are also firmly secured to the plow-beam E. The upright portion of the angle-plate T, in which the slot *c'* is formed, is seated between flanges *i'*, formed on a plate, U, said plate having slotted ends *k'*, through which pass bolts *l'*, provided with screw-nuts *m'*, these slots in the several plates and the screw bolts and nuts admitting of the various adjustments of the colter, as circumstances require.

The means herein described for connecting the wheel-colter to the plow-beam is equally applicable to any of the plow-beams now in ordinary use, whether of metal or wood, and obviates the use of bolts or rivets through the plow-beam.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a plow, the beam, the standard B, formed with extending brace-plate C, and brace D, in combination with braces I and braces *f g*, formed of metal and connected to the plow-handles, substantially as and for the purpose set forth.

2. In a plow, the combination, with a pivoted beam thereof, having at its rear end a transverse slotted plate, *h*, of the independent vertically-adjustable slotted hangers K, connected to the plate of the beam by clamping-screw *i*, one of said hangers having a serrated face and a serrated clamp engaging therewith, and bolt for holding said clamp to the hanger, substantially as and for the purpose set forth.

3. In a plow, the wheel-colter thereof, having a square opening through its axis, in combination with the clamping-disks M N, said disks having flanges or rims *r*, and arms O P, having caps *q*, fitting over the flanges, and a bolt and nut for holding the parts together, substantially as and for the purpose specified.

4. In a plow, the combination, with a wheel-colter, of arm O, having an independent section, P, bolted thereto, said arm and section being provided with scraping-edges on their inner sides, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

CHARLES HANSON.

Witnesses:

OLIVER OLSEN,
C. C. STONE.