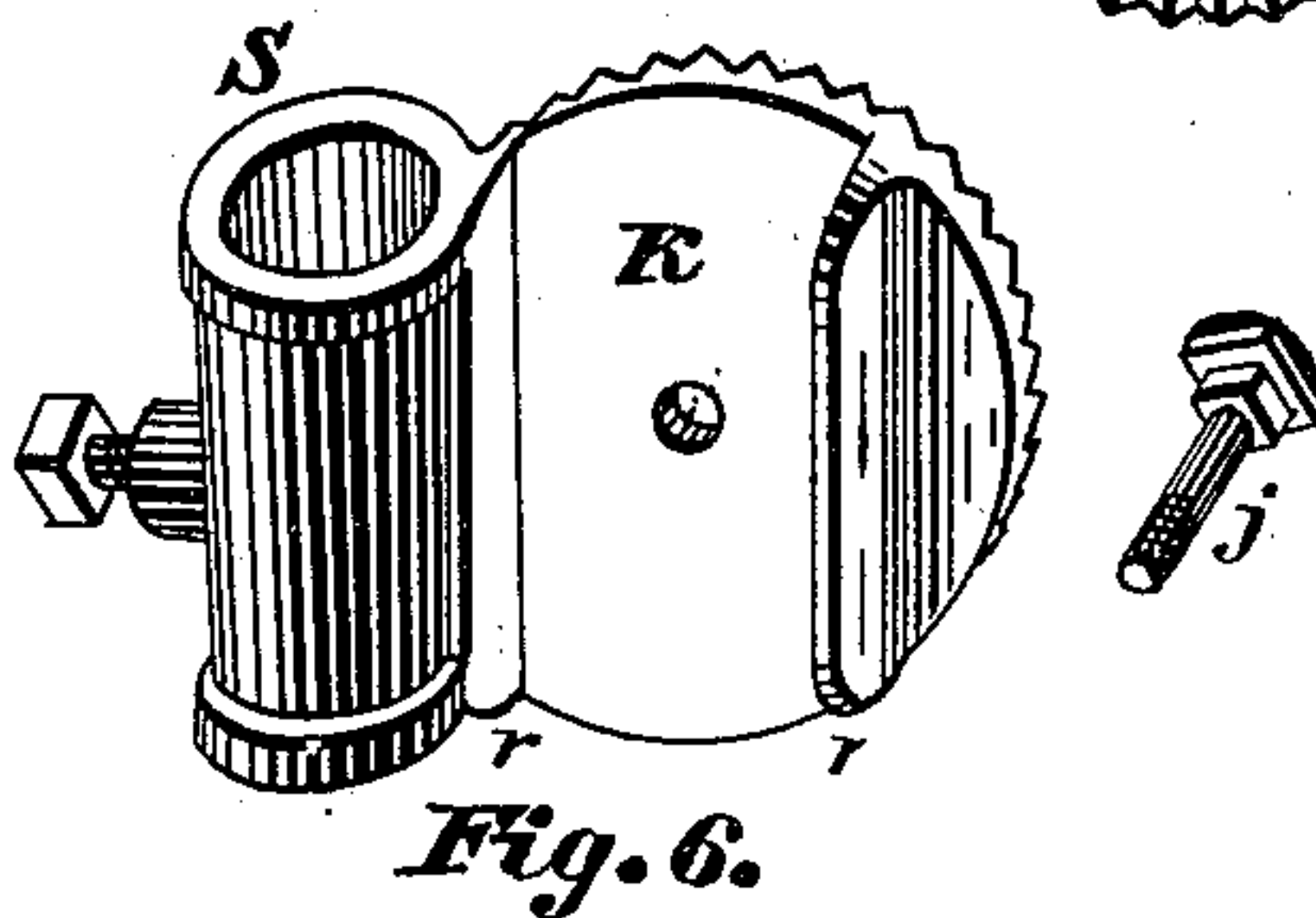
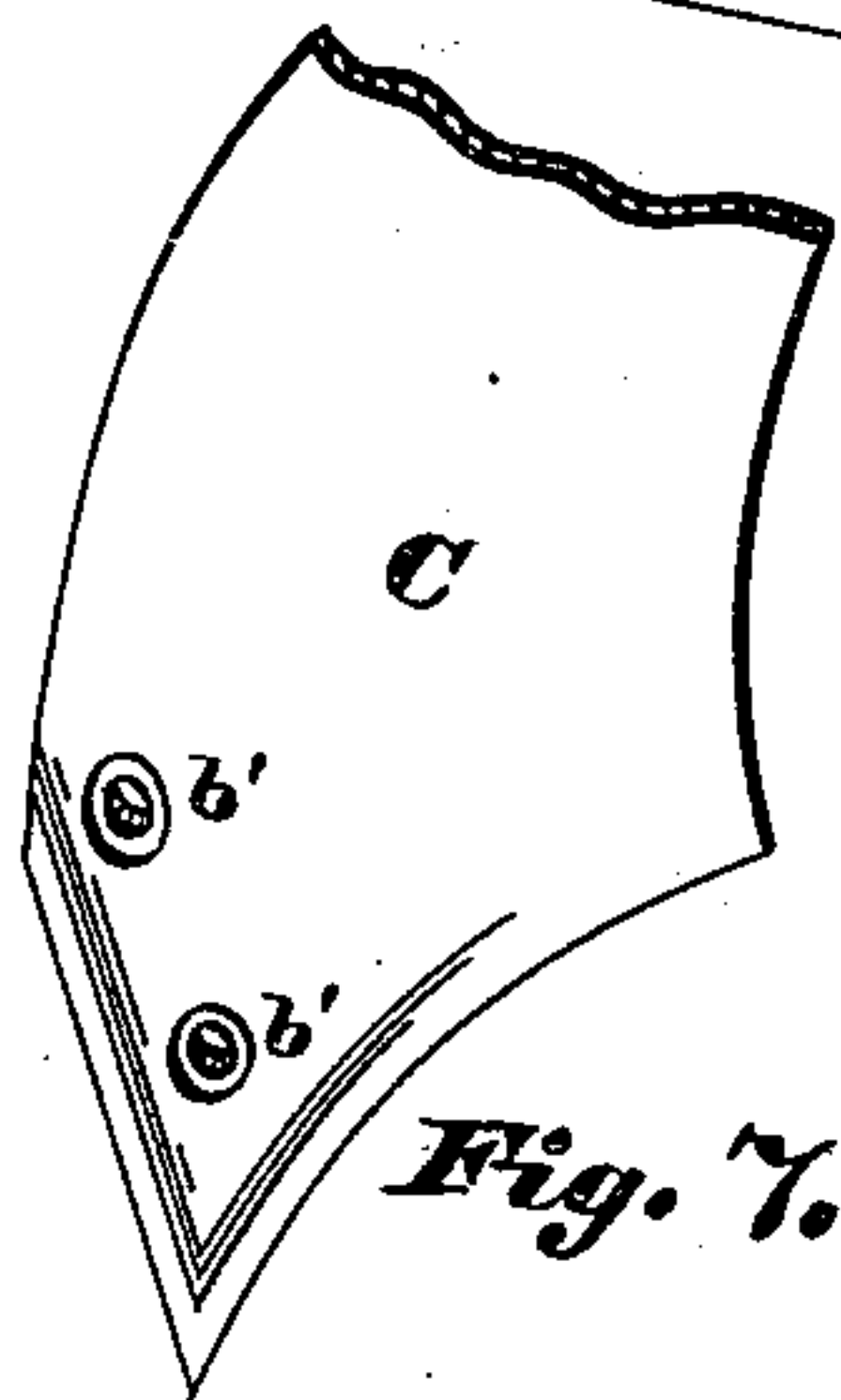
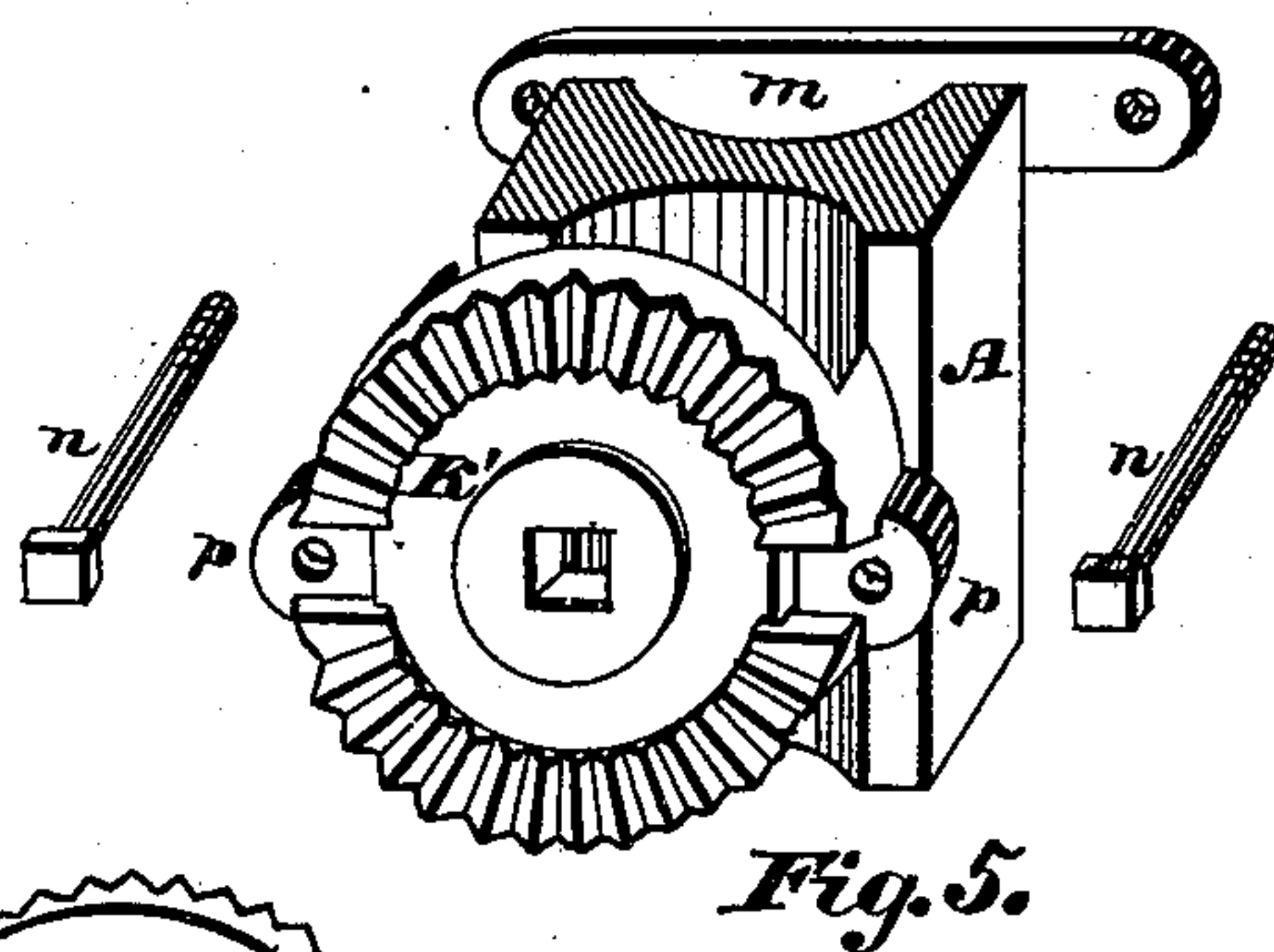
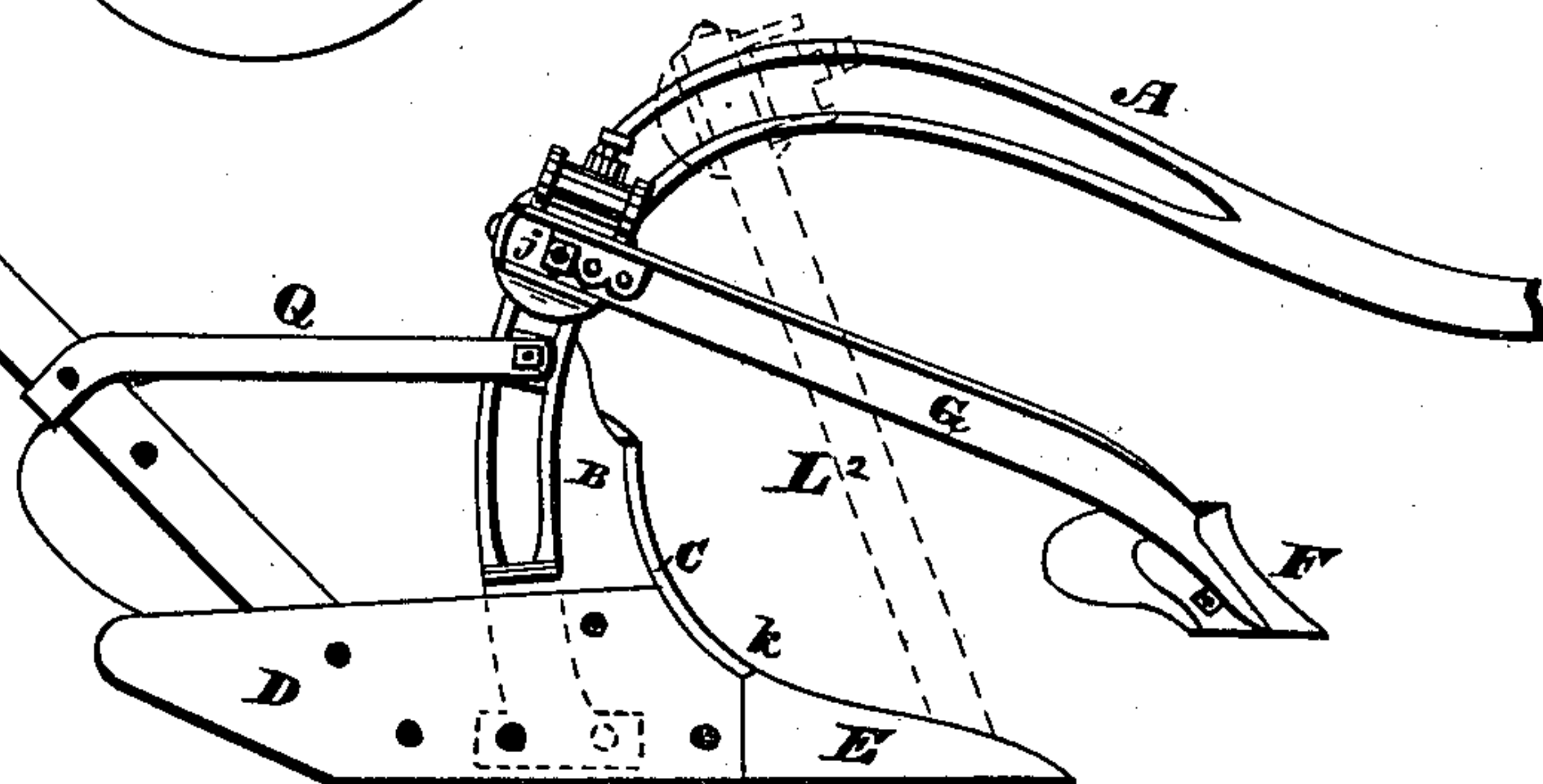
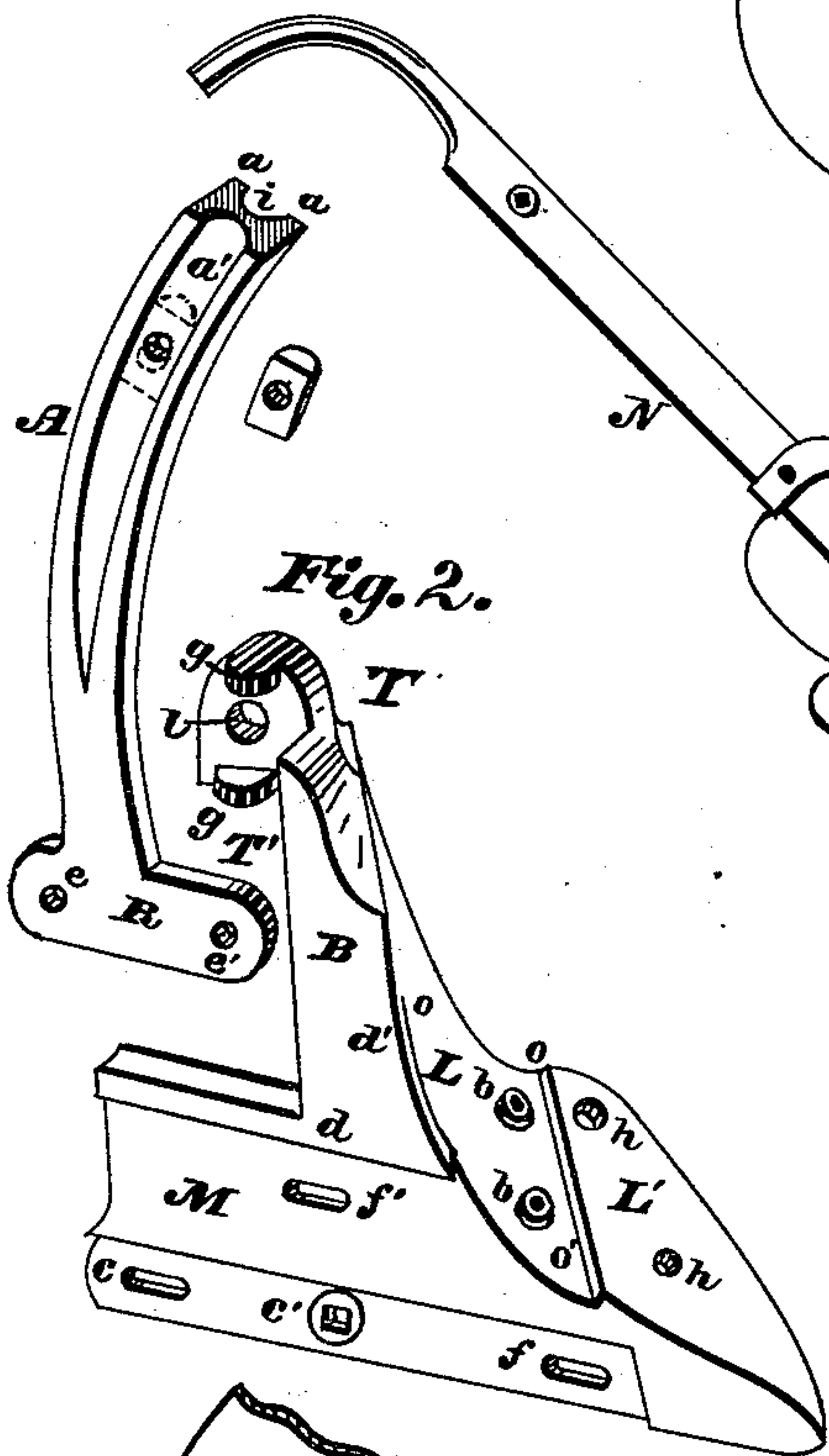
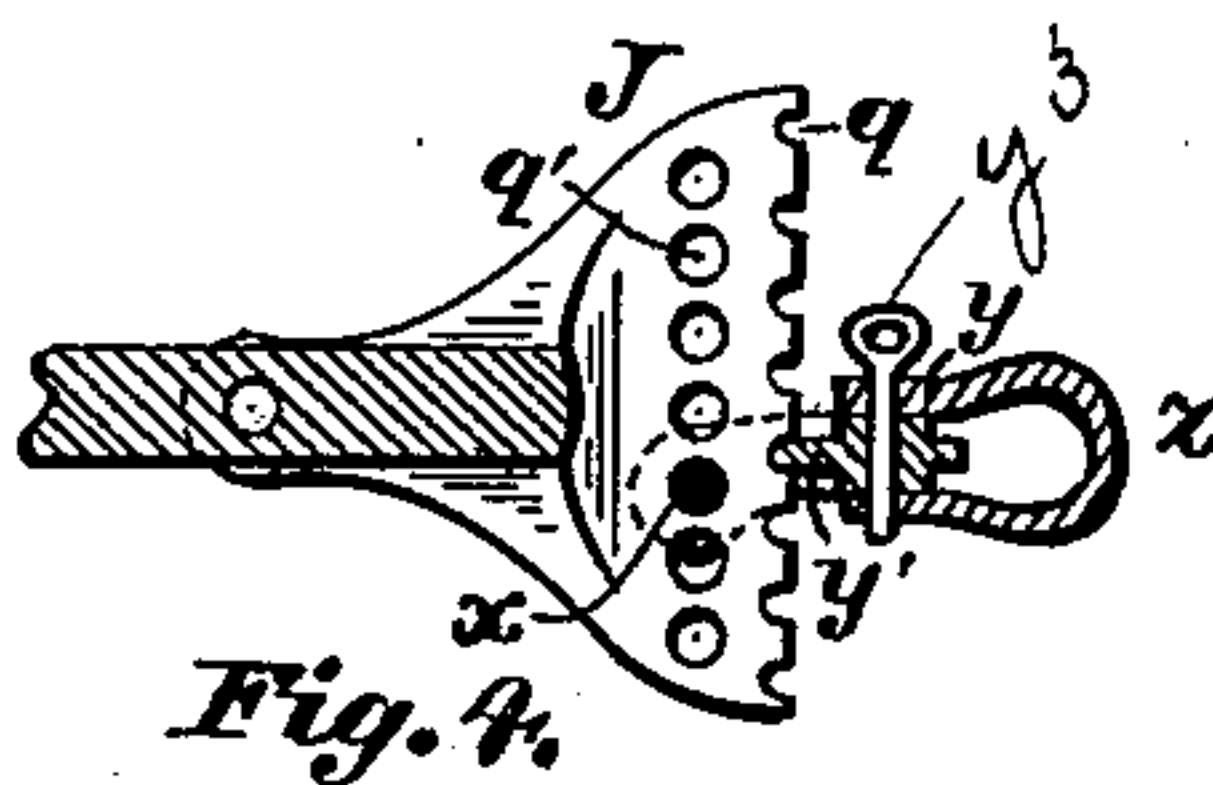
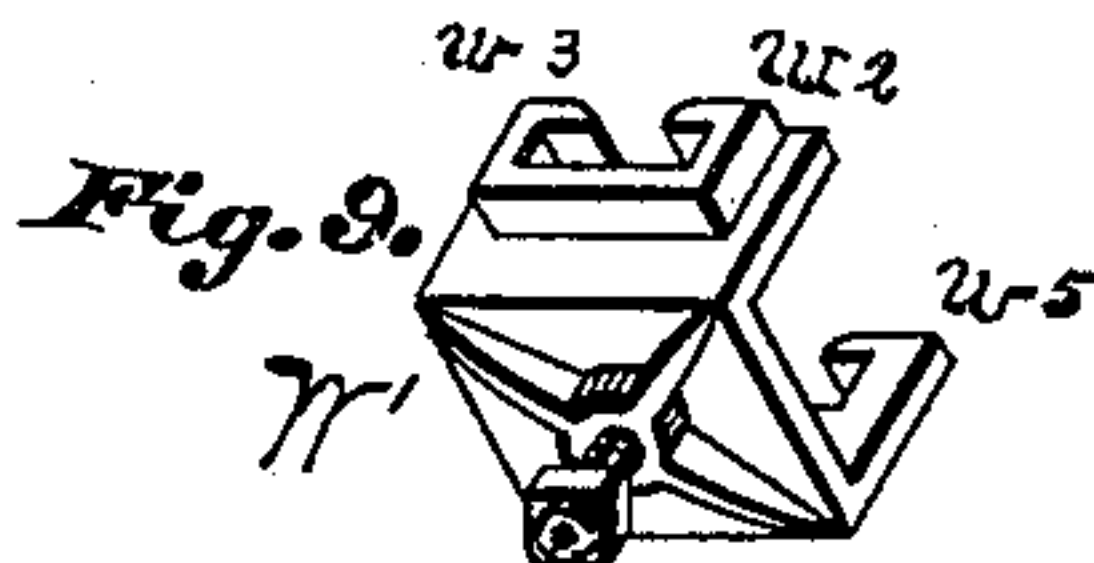
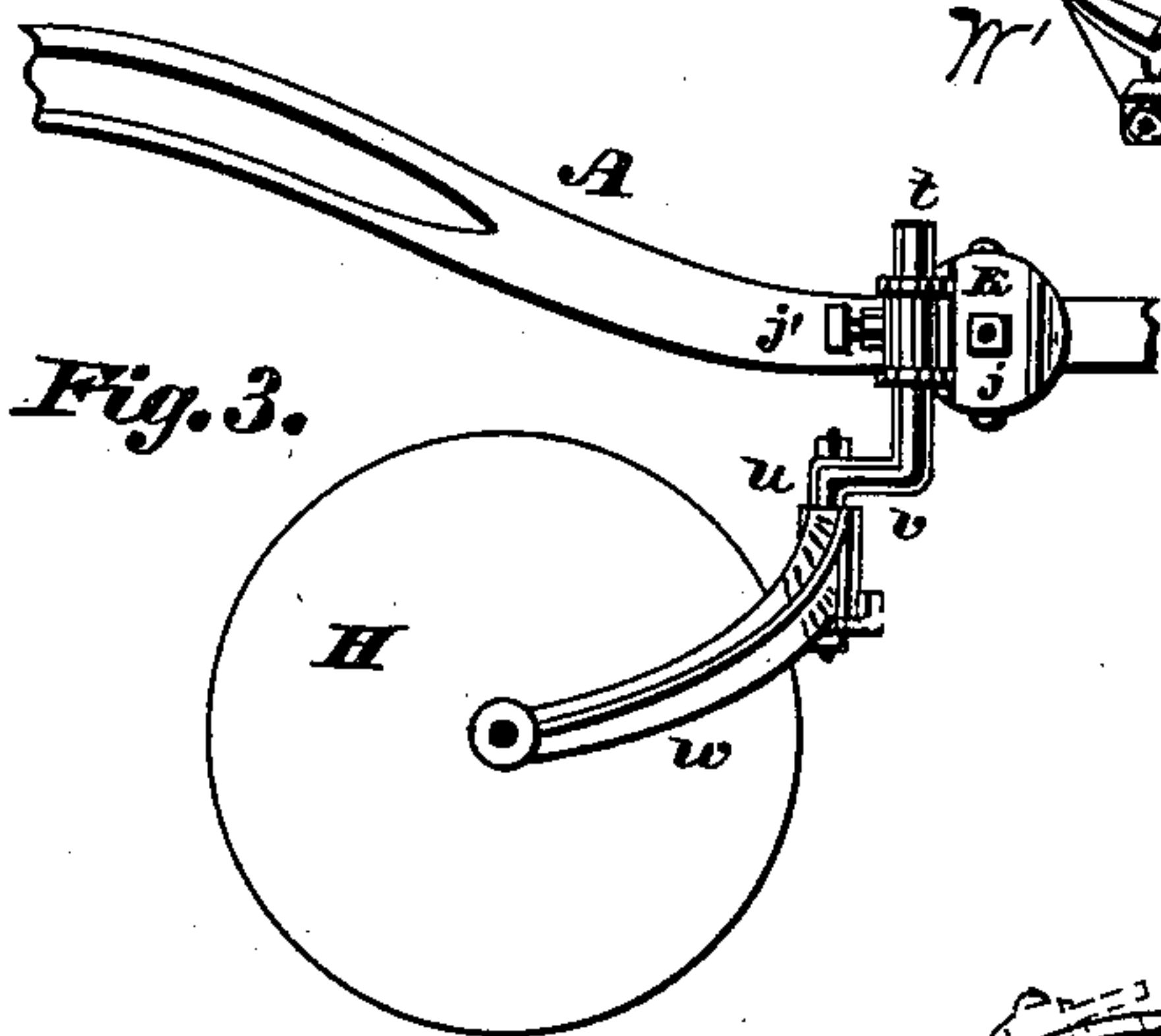
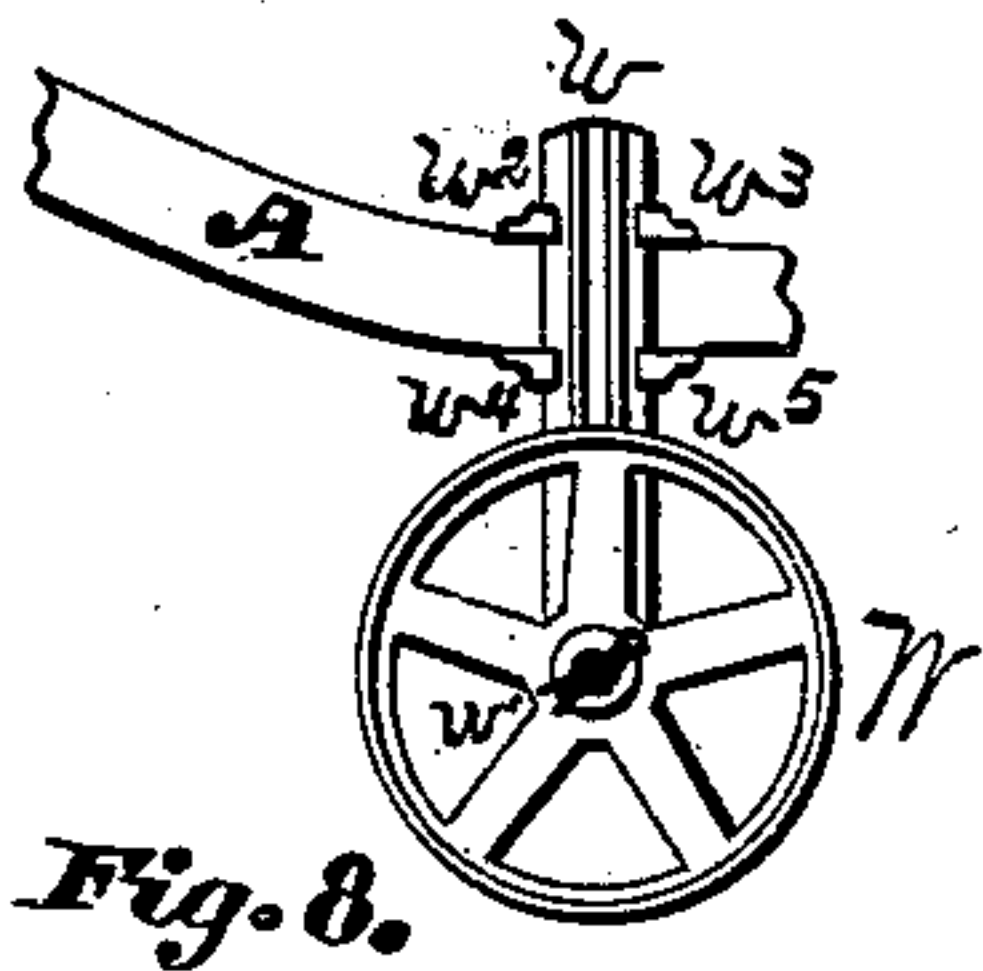


(No Model.)

L. GIBBS.
PLOW.

No. 335,348.

Patented Feb. 2, 1886.



WITNESSES

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LEWIS GIBBS, OF CANTON, OHIO, ASSIGNOR TO BUCHER, GIBBS & CO.,
OF SAME PLACE.

PLOW.

SPECIFICATION forming part of Letters Patent No. 335,348, dated February 2, 1886.

Application filed September 26, 1885. Serial No. 178,256. (No model.)

To all whom it may concern:

Be it known that I, LEWIS GIBBS, a citizen of the United States, and a resident of Canton, county of Stark, State of Ohio, have invented a new and useful Improvement in Plows, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention relates to improvements in plows; and it consists in providing an improved standard; also relates to and consists in providing improved methods of attaching a mold-board and landside to a main standard.

My invention also relates to and consists in certain improvements in a metal plow-beam and the manner of adapting the beam and the standard to each other.

My invention further relates to and consists in means provided for the adjustment and support of a jointer-beam; also for adjustment and support to a shank for revolving cutter; also relates to and consists in certain improvements in plow-clevis and certain other improvements of construction and combination of parts, as hereinafter specified, and set forth in the claims.

Figure 1 is a side elevation of my improved plow, showing the manner of connecting the beam to the standard; also the means employed and the manner of supporting the jointer-beam. Fig. 2 is a perspective of my improved standard and a section of the plow-beam. Fig. 3 is a view of the front end of plow-beam with revolving cutter attached. Fig. 4 is a sectional view of the clevis. Figs. 5 and 6 are views in detail of the jointer and cutter support. Fig. 7 is a view of section of mold-board.

A is the plow-beam; B, the standard; C, the mold-board; D, the landside; E, the share; F, the jointer; G, the jointer-beam; H, the revolving cutter; J, the clevis.

K is an adjustable support for the jointer-beam and revolving cutter.

The beam A has semicircular longitudinal concaves *i* on each side, forming a beam composed of an upper and a lower flange, *a*, united by the web *a'*. The front end is drawn down and adapted for attachment with a clevis. The rear end is drawn down, as shown in Fig. 2, and a foot-piece, R, formed thereon, and adapted

for bolting to the wing M of the standard B, which is provided with perforations *e* and *e'*, that coincide with perforations *e* and *e'* in the foot R of the beam. Through these perforations bolts may pass to secure the beam to the standard.

The standard B is provided with a wing, L, which projects outward and backward as a support for the mold-board, also the wing L', which projects downward, outward, and forward as a support for the shear. The wing L is provided with the perforated bosses *b* *b*, which are adapted to the countersinks *b'* *b'*. The standard is also provided with a wing, M, projecting rearward for the support of the landside, and the foot R of the beam, as heretofore stated, and is provided with perforations *e* and *e'*, also *f* and *f'*.

At the upper end of the standard B there is provided a head-flange, T, set over to the mold-board side the thickness of the beam from a perpendicular line, T', of the standard. The head T projects to the rear of the standard, and is provided with lugs *g* *g* and a perforation, *l*, for a bolt, by which the beam is bolted to the standard; or the lugs may be formed into a rib extending from the lower to the upper side of the head. In either case the lugs or rib should be adapted to the shape of the beam. I prefer the lugs, for the reason that there is a less amount of metal required, and the standard is more easily molded. With the head so located, when the beam is passed down between the landside M and the head T, the foot R bolted to the landside on the mold-board side, the head T to the beam on the mold-board side, the beam will be in the rear of the standard, leaving the land side of the standard free of projecting obstructions. The head T is connected to the wing L by a flange projecting outward and forward, forming a junction with the top of the wing L.

The wing L' is provided with perforations *h*, through which bolts may pass to secure the share to the standard.

In the manufacture and use of plows, it is desirable to have a supporting-standard that is adapted to the use of a chilled cast-iron mold-board, as well as a hardened-steel mold-board, and that they may be interchangeable, so as to adapt the plow to the peculiarities of soil in different localities; and to secure this

object the standard should be so provided and adapted as to meet the requirements of a thick cast-iron mold-board, as the cast mold-board, to have the requisite strength and temper, should be at least one-half thicker than a steel mold-board. To accomplish this desirable result, there is an offset, *O*, formed at the juncture of the wings *L* and *L'*, forming a depression, *O'*, in the face of the wing *L*. This depression *O'* is provided to form a locking-shoulder and to adapt the standard for the use of a thick cast mold-board, and the perforated bosses *b b* are provided as a support for and on which the steel mold-board may rest and be secured by bolts passed through it and the wing *L* of standard *B*. This would secure a proper adjustment of the mold-board and the share, as shown at *k*, Fig. 1, and when desirable to use a mold-board of cast metal it should be provided with the countersinks *b' b'*, which are adapted to the height of the bosses *b b*, and when placed on the standard, the bosses passed into the countersinks, the top surface of the cast mold-board will be brought to the same line of adjustment with the share as that established by and for the use of the steel mold-board, and the same bolts secure the mold-boards to the wing of the standard. The land-side is bolted to the standard by bolts passed through perforations *f* and *f'* and *c*. Under the shoulder *d* this projection extends to the top of the standard, the front edge, *d'*, supporting the mold-board, the follow-board resting under the shoulder *d*, and forming with it a continuous support for the edge of the mold-board, which forms with the share a continuous cutting-edge from the point of the share to the top of the mold-board. The beam may be bent, as shown in Fig. 1, giving it the proper height over the front of the plow, and dropping the front end down to a desired line of draft. The handle *N* is bolted to the land-side, as shown, and supported by the brace *Q*, connected to the beam.

The adjustable support *K'* (see Fig. 5) for the jointer-beam *G* is secured to the beam *A* by means of the clip *m* and the bolts *n* by passing the bolts *n* through the ears *p p* on the piece *K'* and the clip *m* on the opposite side of the beam. A bolt, *j*, projecting through the center perforation of the disk, passes through the disk *K* and the jointer-beam. The outer edges of the disks are serrated and adapted to each other as a means of adjustment. The disk *K* may be vibrated about the center bolt, *j*, and fixed at any desired point by drawing the serrated edges together, thus adjusting the beam *G* and jointer *F* to a greater or less depth; or the jointer may be thrown up above the surface of the ground when desired. The disk *K* is provided with the ribs *r r*, as a support to the beam *G*.

I wish to call especial attention to the adjustment of the disk *K'* on the beam, and the disk *K* rotating about a bolt or pin central thereto and engaging therewith, for the purpose of adjusting the parts mentioned. (See

Fig. 6.) The disk *K* is also provided with an annular socket, *S*, as a support for the shank *t*. (See Fig. 3.) This shank is formed in three sections—the main section, *t*, and a parallel section, *u*, united by a right-angle section, *v*, in the form of a crank. The yoke *w* has a pivotal connection about section *u* of the shank, and by rotating the shank *t* in the socket *s* the desired lead may be given to the revolving cutter, and the shank then securely held in position by the use of the set-screw *j'*; or the shank may be raised and lowered by moving the shank *t* up or down, thus setting the cutter *H* in the desired relation with the plow share or point. This clamping device is brought into further use, as indicated by the dotted lines, (see Fig. 1,) as a support for an adjustable removable colter, *L'*. By moving the clamp on the beam and adjusting the disks, as shown in Figs. 1 and 3, a great variety of changes and uses may be made of these means.

The guide-wheel *W* (see Fig. 8) is supported by the shank *w'*, at the lower end of which there is a spindle, *w'*. The shank is held to the beam by the clamping-plate *W'*, (see Fig. 9,) which embraces the beam *A*, and is provided with the jaws *w'*, *w''*, *w'''*, and *w''''*. These jaws embrace the wheel-supporting shank *w'*, and is operated in the following manner: Place the clamping-plate *W'* on the beam and pass the shank *w'* up between the beam and the jaws, and when adjusted fix the parts in position by turning in the set-screw *w''*. This adjusting mechanism is simple and easily adjusted, and will hold the parts securely in the desired adjustment to secure the required strength in shank *w'* and the clamping-plate *W'*. I prefer to make them of malleable iron.

The clevis is composed of the plates *J*, which are placed one on each side of the beam, and secured by through-bolts, the draft-bar *y*, and link *z*. The plates *J* are provided on their front edges with the notches *q*. The draft-bar *y* is provided with a rib or ledge, *y'*, adapted to rest in any one of the notches, and the rear end thereof is secured in position by a bolt or lugs, *x*, which latter pass through a perforation, *q'*, corresponding to the notch *q*, occupied by the rib *y'*. The link *z* is secured to the draft-bar *y* by a bolt or pin, *y''*.

Having described the nature and object of my invention, what I claim, and desire to secure by Letters Patent, is—

1. A plow-standard having the lugs *g g* formed at the upper end thereof and located one above the other, the outward and backward projecting wing near the lower end thereof for the support of the mold-board, the downward and forward projecting wing, forming a support for the plowshare, the shoulder located between said wings and forming an abutment for the mold-board, the bosses located above the shoulder, and the wing *M*, for the attachment of the land-side, all of the above parts formed integral, substantially as set forth.

2. The combination, with a plow-standard

having wings for the support of the mold-board, plowshare, and landside, and the curved bearings against which the plow-beam rests, of a plow-beam having a groove within
 5 which the curved bearings of the standard rest, and bolts for securing the beam to the standard.

3. The combination of the beam A, as described, with the standard B, the lugs *g g*, the
 10 wing L, the raised bosses *b b*, the shoulder O, and wings L' and M, substantially as described, and for the purpose set forth.

4. The serrated disk K', having lugs *p p*, in combination with the serrated disk K, having
 15 ribs *r r* and annular socket *s*, substantially as described, and for the purpose set forth.

5. The combination of the serrated disk K', having lugs *p p*, the clip *m*, disk K, having an annular tube or socket, *s*, and the bent shank
 20 *t*, substantially as described, and for the purpose set forth.

6. The combination, with the side plates, J, secured to the front end of the beam and projecting in front thereof, and provided with the

notches *q*, and perforations located in front of 25 the plow-beam, of the draft-bar *y*, having a rib adapted to engage the notches *q*, and a bolt for securing the draft-bar to the side plates, substantially as set forth.

7. The combination of the herein-described 30 plow-standard, comprising the perpendicular section B, the mold-board-supporting wing L, having the perforated bosses *b b*, the wing L', as a support for the share and forming the shoulder O, the projection *d* and *d'*, the head 35 T, having perforation *l* and lugs *g g*, and the beam A, substantially as set forth, and for the purpose specified.

8. The combination of the beam A, the wheel W, shank *w'*, and clamping-plate W', as 40 described, and for the purpose set forth.

In testimony whereof I have hereunto set my hand this 23d day of September, A. D. 1885.

LEWIS GIBBS.

Witnesses:

CHAS. R. MILLER,
 W. K. MILLER.