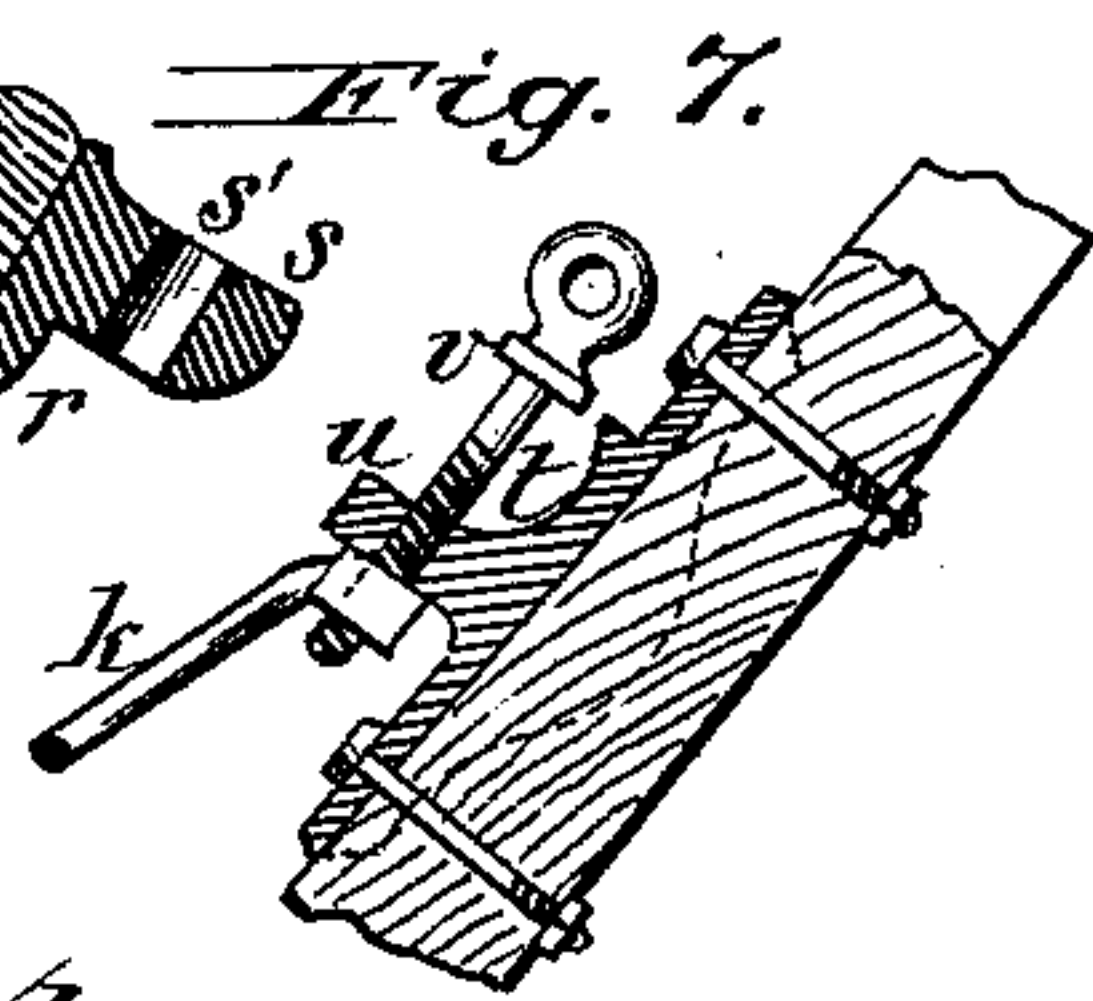
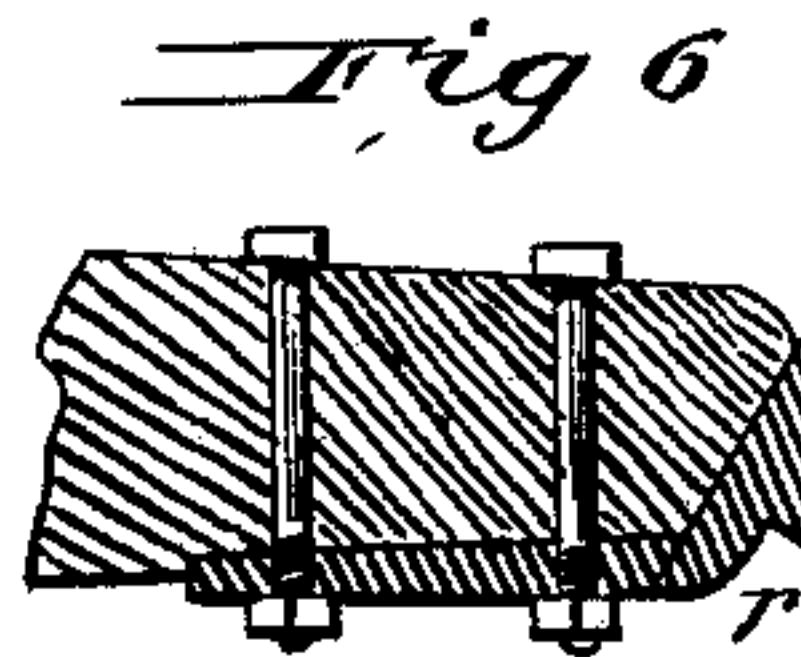
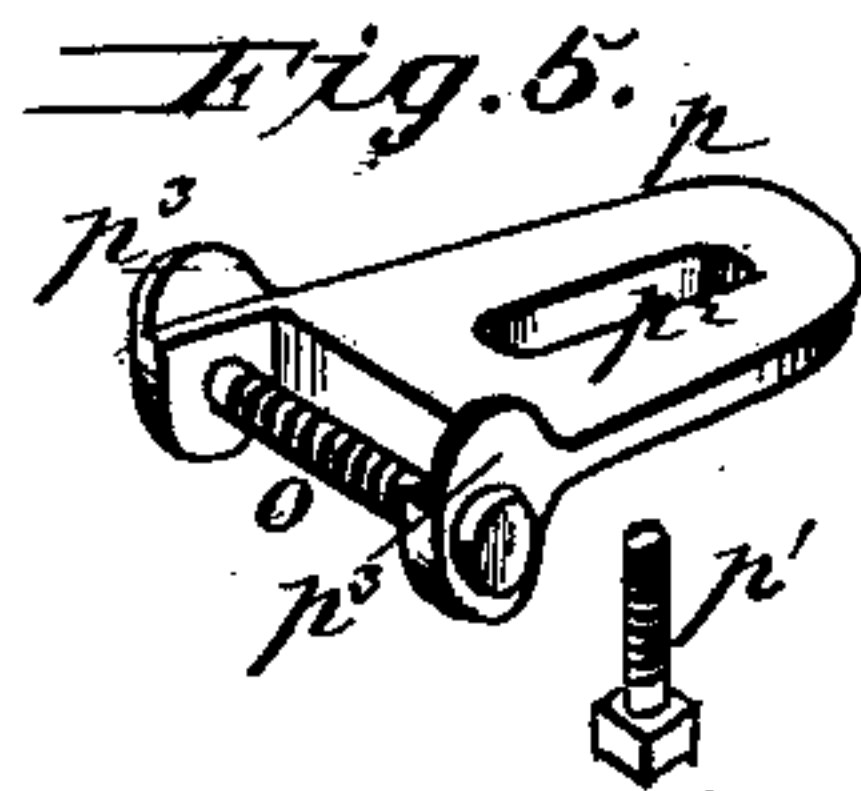
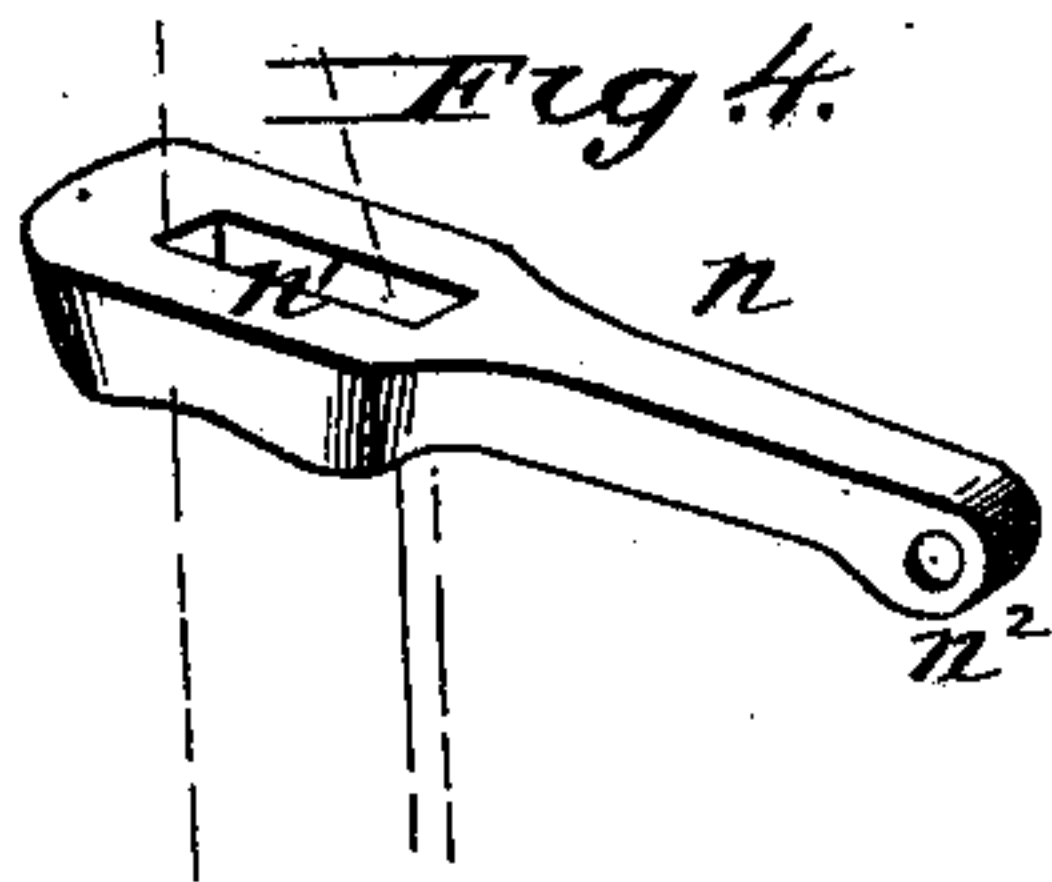
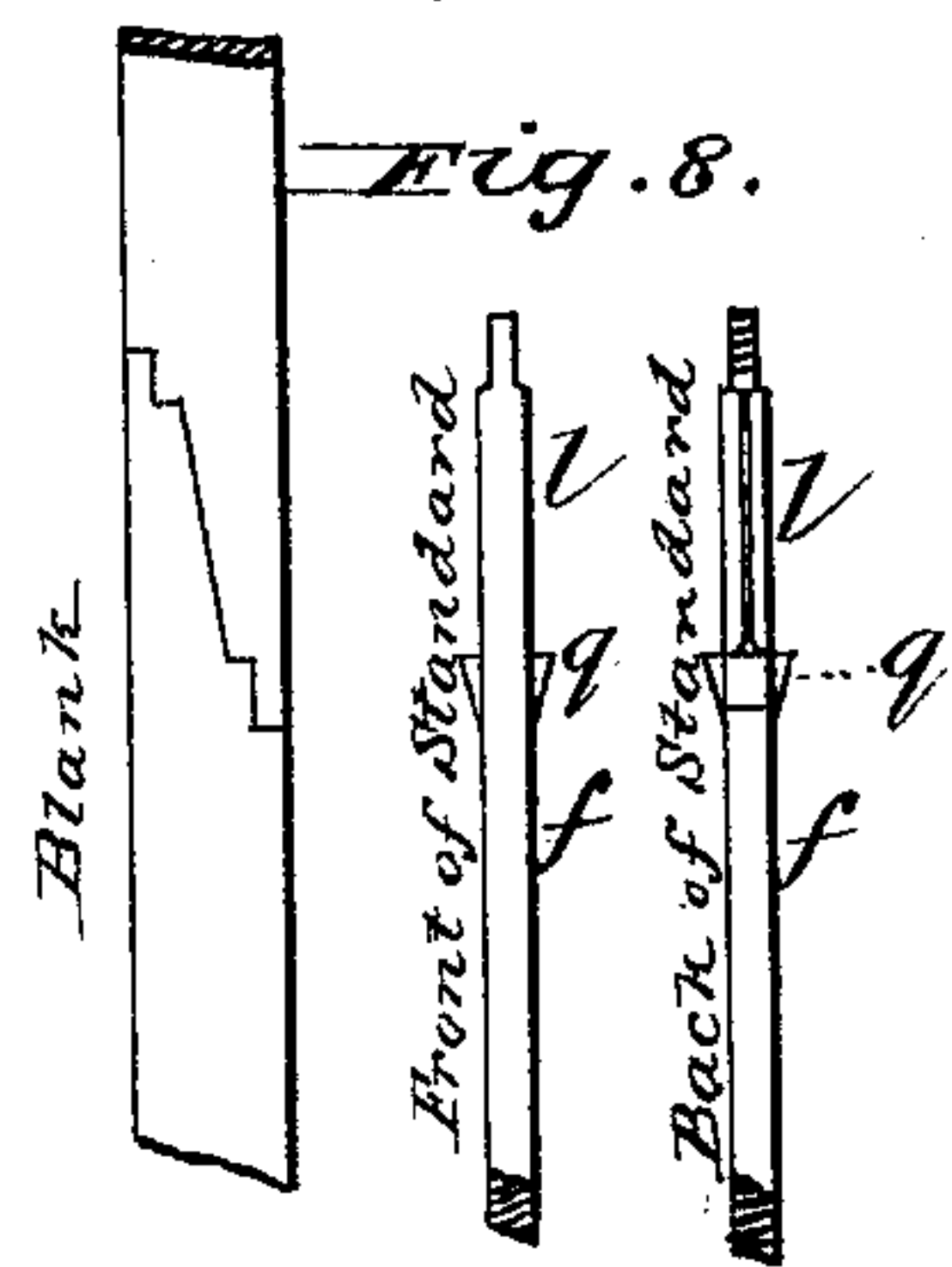
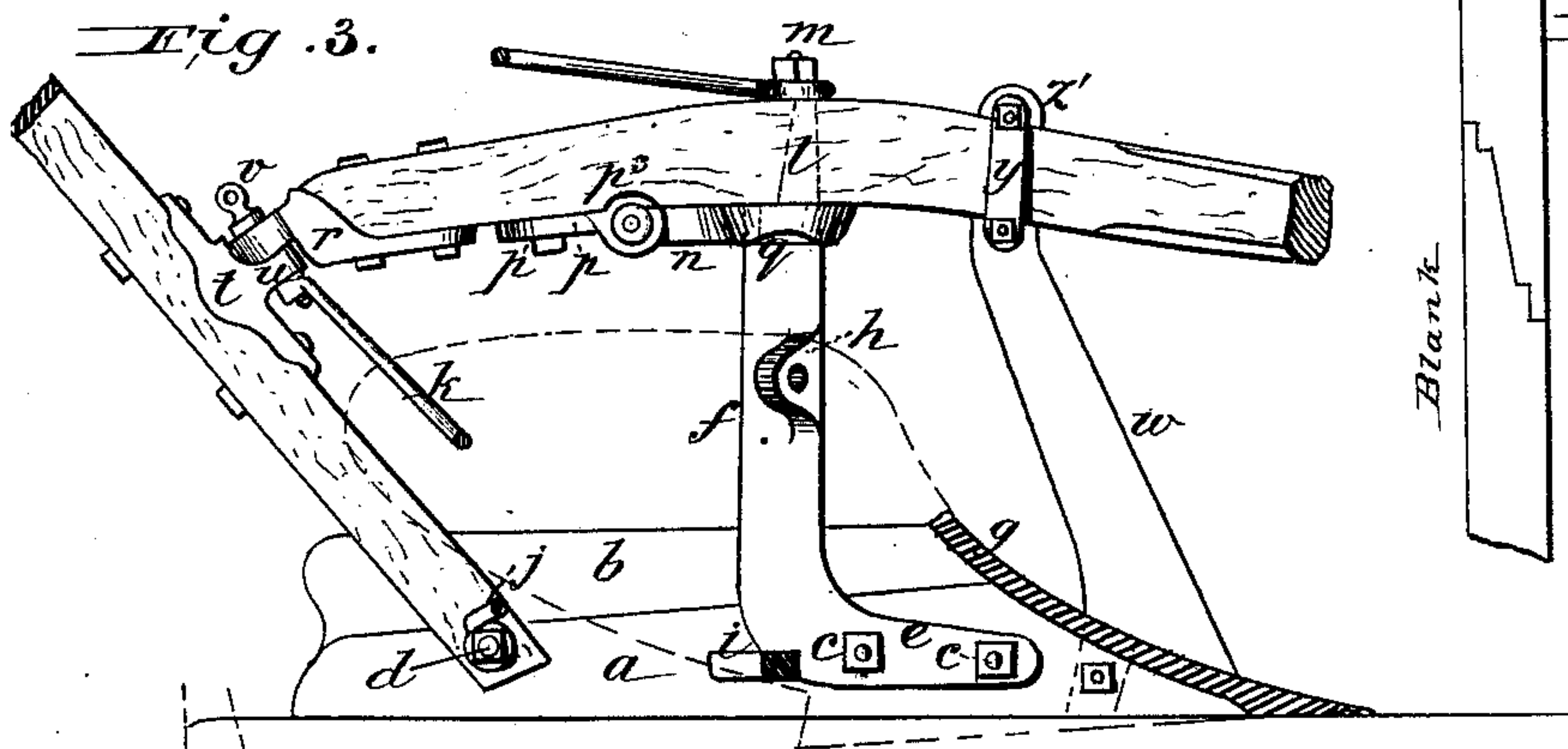
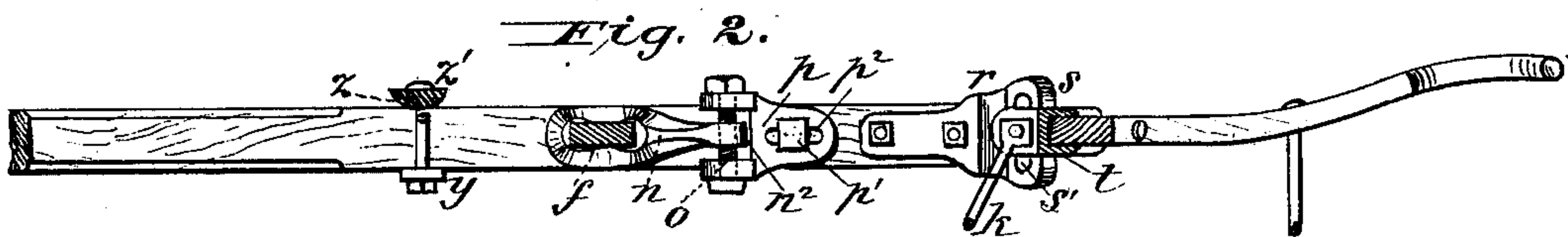
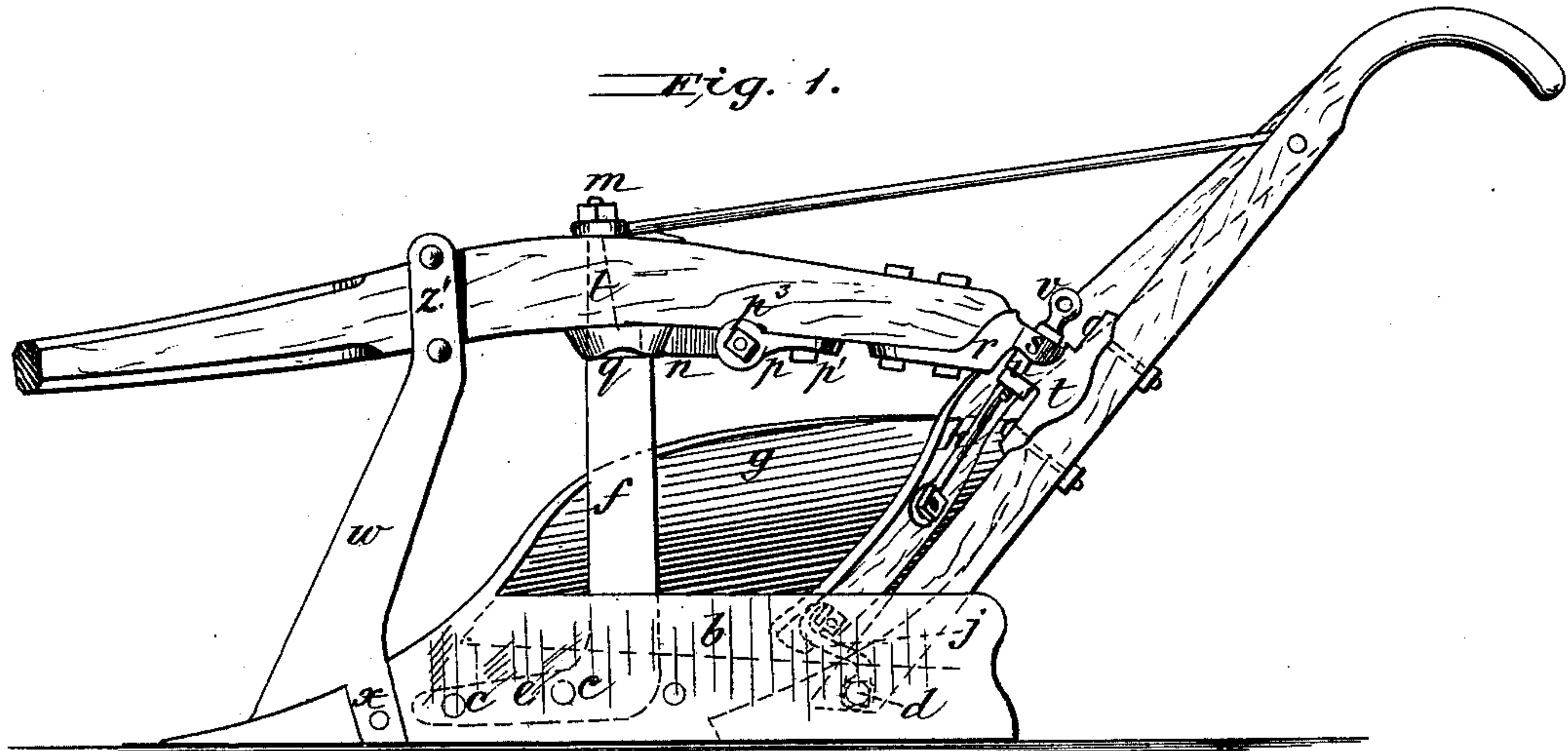


F. STRIDDE.
Plows.

No. 206,639.

Patented July 30, 1878.



Attest
H. L. Pennell
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Inventor.
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Atty's

UNITED STATES PATENT OFFICE.

FRIEDERICH STRIDDE, OF MENASHA, WISCONSIN.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. **206,639**, dated July 30, 1878; application filed June 13, 1878.

To all whom it may concern:

Be it known that I, FRIEDERICH STRIDDE, of Menasha, in the county of Winnebago and State of Wisconsin, have invented certain new and useful Improvements in Plows; and I do hereby declare that the following is a full, clear, and exact description thereof, which 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 letters of reference marked thereon, which form a part of this specification.

My improvements are designed to render more effective the invention patented to me December 15, 1874, in which the lateral adjustment of the plow-beam is effected by means of an adjusting-screw fixed to and across the beam and connected with the plow-standard by a slotted bar, which, being fixed to the standard, controls by its screw-end connection the adjustment of the beam into and from land, for a purpose well understood by farmers. In this construction, however, the connection of the beam and handle was fixed so that a certain opening and closing movement of the handles was necessary to allow of the function of the adjusting-screw.

The invention I have now made embraces, among other things, the combination, with the beam-adjusting screw, of means for connecting the beam with the land-side handle, so as to allow of the action of the adjusting-screw to move the beam independent of the handles. The clamp-screw and device by which this beam and handle connection is made serve also as the means for making a bracing connection with the mold-board. The adjusting-screw is carried by a slotted plate, which, having a fixed connection with the beam cross-wise, is, by its slot, adjustable in the line of the beam to conform automatically to the arc described by the beam upon the standard-shank in turning the screw to the right or left, as the screw-connecting bar, being fixed with the standard, the screw-carrying plate must have a slight adjustment upon the beam, as stated, and thus avoid stripping the screw-threads. The standard has its lower end bent horizontally, so as to form a bracing-knee attachment with the land-side, making the connection much stronger and more durable than

in the ordinary way. The mold-board is firmly braced to the standard, the land-side, and to the handles in a substantial manner. The colter is connected to the beam so as not to be twisted by the side turning of the latter.

Referring to the drawings, Figure 1 represents a view of the land-side of a plow embracing my improvements; Fig. 2, the under side of the beam, showing the adjusting-screw device and the slotted shoe-piece which forms the adjustable fastening with the handle; Fig. 3, a partial sectional elevation looking at the inner side of the land-side, showing the knee-shaped standard; Fig. 4, the slotted bar which connects the transverse adjusting-screw and the plow-standard; Fig. 5, the adjusting-screw carrying-plate; Fig. 6, the slotted shoe of the beam; Fig. 7, the handle-casting, which forms the bearing for the slotted shoe of the beam, and Fig. 8 front and back edge views of the standard *f* and a portion of the blank from which two standards are cut.

The land-side *a* of the plow has the usual steel facing-plate *b*, which is secured by the same bolts, *c c* and *d*, Fig. 3, which secure the knee-bend *e* of the standard *f* and the land-side handle. The knee-bend *e* of the standard gives it a firmer and more durable attachment to the land-side, and forms a better bracing-connection by extending from the standard horizontally inward toward the mold-board *g*, which may be of any suitable form and bolted to said standard by an inward oblique extension, *h*, therefrom, as in Fig. 3.

To the under outer part of the mold-board a brace, *i*, Fig. 3, is bolted, and, extending obliquely, is secured to the land-side bar, while braces *j k* connect the handles and support the rear curved termination of the mold-board, thus giving a bracing-connection for the mold-board at every point. The beam-connections with the standard and handle embrace the combination, with an adjusting-screw device carried by the beam, of an adjustable clamping-connection for the beam and handle, whereby the beam is more readily adjusted laterally to place it into or out of land with respect to the plow-point, in order to make the furrow-slice wider or narrower, to counteract the swerving tendencies of the mold-board, and, in the case of stubble, to avoid clogging

the throat of the plow, or to suit the number and arrangement of the team.

In my patent referred to the adjusting-screw device is adapted for use with a beam permanently secured to the handle, and in connection with handles having a capacity to open and close slightly by a slotted brace, according as the beam is moved either toward or from the land; while various plans have been adopted for adjusting the beam laterally upon the standard by adjustable handle-connections, but, so far as I know, the combination of the beam-adjusting and handle-connecting and clamping devices have never before been effected to obtain the advantages of a more perfect and ready adjustment of the beam.

The standard-shank *l* passes through an opening in the beam, and is beveled on both sides, so that its thickest part will be at the front, to give play for the turning of the beam laterally thereon, while adding strength to the shank, the upper end of which terminates in a screw, *m*, to receive the top-securing nut. A bar, *n*, just beneath and close to the beam, embraces by an oblong opening, *n*¹, Fig. 4, a parallel angular part of the standard-shank, and its opposite end terminates in a screw-threaded eye, *n*², through which passes an adjusting-screw, *o*, lying crosswise the beam, and carried by a slotted plate, *p*, Fig. 5, secured to the under side of the beam by a screw-bolt, *p*¹, passing through the slot *p*², to allow a slight adjustment of said plate in the line of the beam, while the screw-holding ears *p*³ lap against each side of the beam to secure said slotted plate from lateral movement. The screw-eyed end of the bar *n* embraces the screw between its holding-ears *p*³, so that by turning said screw to the right or left the bar *n*, being fixed upon the standard, will cause the beam to turn upon its standard-shank either into or out of land, the beam being supported in such movement upon the bar *n*, which is supported upon shoulders *q*, Figs. 1 and 8, formed upon the standard. This movement of the beam carries its slotted plate *p* in the arc of a circle, of which the standard is the center, and the slot *p*² allows the plate to accommodate itself automatically to such movement, and thus prevents the stripping of the screw-threads. The plate-confining screw for this purpose does not clamp it hard against the beam, but simply holds it in place.

Any suitable adjustable connection may be used for securing the beam to the handle. That shown consists of a transverse slotted shoe-casting, *r*, fitted over the end and bolted to the under side of the beam, and having its slotted end *s*, Fig. 6, projecting obliquely downward from the beam end, while a casting, *t*, embraces and is bolted to the handle, with a front projection, *u*, adapted to receive and support the oblique slotted end *s* of the beam-

end shoe, and upon which the latter is clamped by a screw-bolt, *v*, passing through the cross-slot *s*¹ in said projection *s* and a screw-threaded opening in the said front projection *u*, so that when it is desired to operate the beam-adjusting screw the clamp-bolt *v* is loosened, to allow the beam-shoe to be moved over the supporting-handle projection *u* by the action of said beam-screw.

In this construction, it will be noticed that the clamping-bolt is fixed—that is, it does not move with the beam; and for this reason I am enabled to use said bolt to secure the oblique brace *k* to the under side of the handle-casting front projection *u*, so that such brace-connection would not be disturbed by the unclamping action of the clamping-screw.

The adjusting-screw is turned by a wrench, and the adjustment of the beam is thereby regulated with the greatest ease to effect the desired result, and when so adjusted the screw-threads are relieved of all lateral strain by the handle-clamping screw.

The bar for the standard is cut for two lengths, and it is cut in the middle of its length, so as to form the shank portion of each, as shown in Fig. 8.

The colter *w* is secured to the land-side *a* by an arm, *x*, Fig. 1, while its connection with the beam allows the side adjustment of the latter without twisting said colter, by reason of the convex bearing *z* of the colter-arm *z*¹ against the beam side, and secured by the opposite side link *y* and cross-bolts, as in Fig. 2.

I claim—

1. The combination, in a plow, of a laterally-adjusting screw, carried by the beam and connected to the plow-standard by a fixed arm, with a supporting clamping device adjustably connecting the beam with the handle, substantially as and for the purpose herein set forth.

2. The slotted screw-carrying plate *p*, having the beam-lapping ears *p*³, in combination with the screw-eyed connecting-arm *n*, fixed to the plow, whereby said plate has an automatic adjustment in the line of the beam to compensate for the lateral adjustment of the beam and prevent injury to the adjusting-screw threads, as set forth.

3. The colter-arm *z*¹, having a convex bearing, *z*, in combination with the side link *y* and laterally-adjusting beam, whereby the latter may be turned upon its standard without twisting the colter.

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

FRIEDERICH STRIDDE.

Witnesses:

FRIDERICH KLASSEN,
JULIUS FIEWEGER.