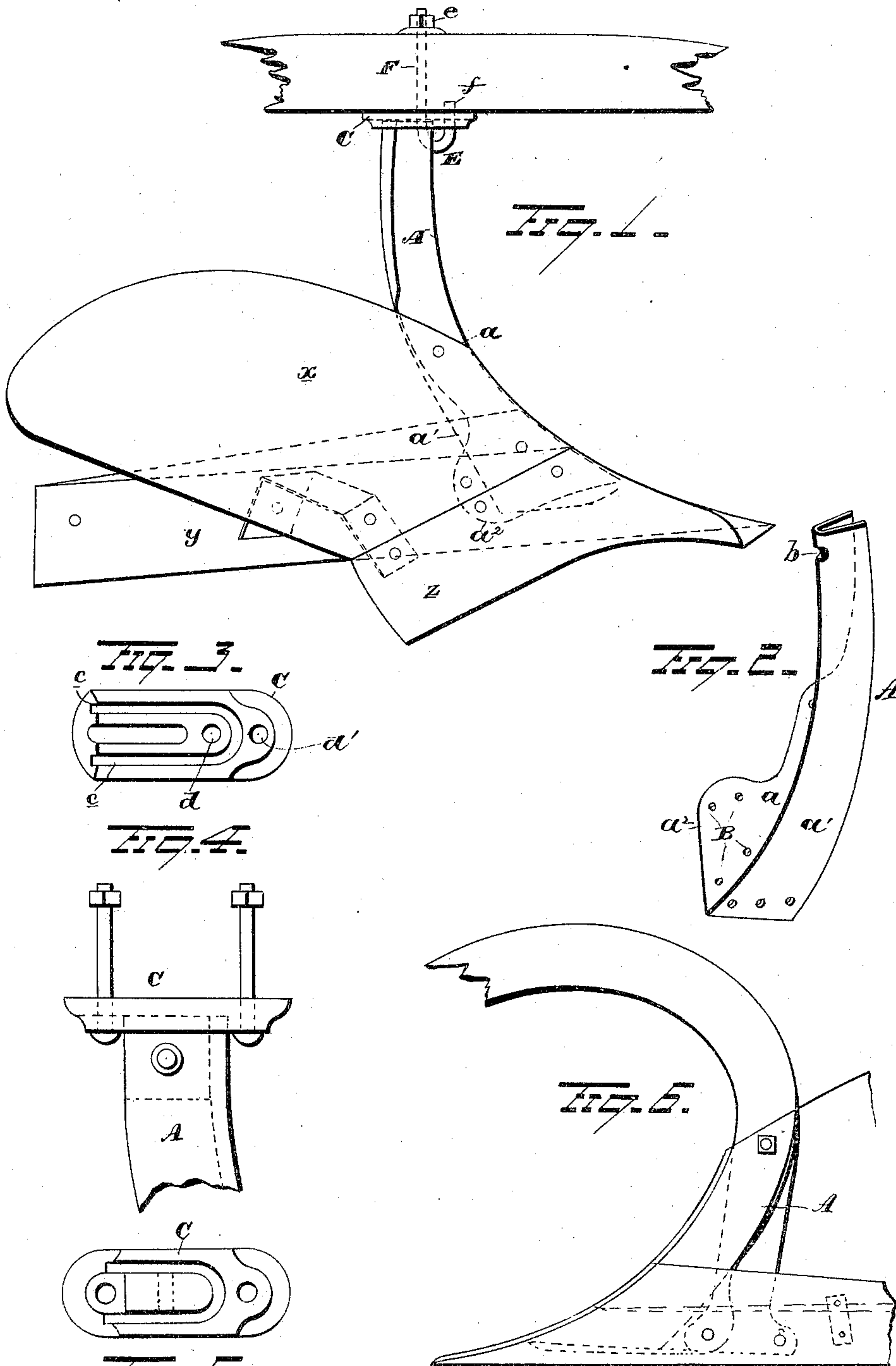


(No Model.)

W. H. RYER.
PLOW.

No. 311,449.

Patented Jan. 27, 1885.



WITNESSES
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WILLIAM HENRY RYER, OF SOUTH BEND, INDIANA.

PLOW.

SPECIFICATION forming part of Letters Patent No. 311,449, dated January 27, 1885.

Application filed September 12, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. RYER, of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Plows; and I do hereby 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.

My invention relates to an improvement in plows, particularly to an improvement in the construction of plow-standards and means for locking the same to the beams, the object of the same being to provide a standard, of steel, angle metal, or other strong metal, which shall be particularly adapted to use in connection with a detachable mold-board, landside, and share, and which shall combine lightness, strength, and durability with convenience and small initial cost, a further object being to provide a cap adapted to receive the upper end of the standard and a simple and effective device for locking the standard to the cap and both standard and cap to the beam.

With these ends in view my invention consists in certain features of construction and combinations of parts, as will hereinafter be described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of my improved standard and one of the devices for locking the same to the beam in position. Fig. 2 is a detached view of the standard, and Fig. 3 is a bottom view of the cap. Figs. 4, 5, and 6 represent modifications.

A represents a sheet of steel, angle metal, or other hard and strong metal bent, pressed, or otherwise formed into angular shape, as shown, provided with a curved flange, *a*, on one side to receive the mold-board *x*, with the flange *a'* on the opposite side to receive the landside *y*, and with a forwardly-extending portion, *a²*, at the foot of the standard to receive the plow-share *z*. The parts *x*, *y*, and *z* are constructed of steel or other hard metal. The flanges *a* *a'* and the projection *a²* are provided with perforations *B*, suitably arranged and of sufficient number to receive the bolts necessary to hold the mold-board, landside, and point securely thereto. The arch shape

of the standard in cross-section renders it capable of sustaining a great downward and backward pressure, such as a plow-standard is required to sustain when in use, without any liability of breaking or bending, while the amount of metal employed in its construction is reduced to a minimum, and the plow rendered thereby lighter to handle. Furthermore, by forming the standard of a single piece of metal shaped so that it combines in itself the frog cleat and lug for connecting the mold-board, landside, and share there will be little or no trouble in duplicating parts, as is liable to occur when the common iron standard is used in connection with the separate pieces to fasten mold-board, landside, and share. The standard *A* is further provided with a perforation, *b*, preferably at its front near the upper end, for the purpose of receiving the locking-hook or other fastening, as will appear hereinafter. A metallic cap, *C*, somewhat longer and wider than a cross-section of the standard, is provided on its under side with a U-shaped recess, *c*, which recess is adapted to snugly receive the upper end of the standard. The upper surface of the cap *C* is preferably flat and either smooth or provided with corrugations or spurs, and is adapted to rest in close contact with the lower side of the beam *D*. The cap *C* is also provided with two perforations, *d* and *d'*, the former located slightly forward of the center of the cap and the latter near the front end thereof. The perforations are adapted to receive the hook-bolt *E*, the shank of which extends upwardly through the plow-beam, and is conveniently threaded at its upper end to receive a draw-nut, *e*.

The standard is locked to the beam as follows: Pass the point of the hook *E* through the perforation *b* in the standard, then place the cap *C* on the shank of the hook *E* and pass it downwardly until the upper end of the standard rests in the recess *c* and the point of the hook passes upwardly through the perforation *d'* and extends a short distance above the cap. The shank of the hook is now passed upwardly through a perforation, *F*, in the beam, the point of the hook entering a socket, *f*, in the under side of the beam and the draw-

nut *e* is turned on the threaded end of the shank, thereby drawing the plate C snugly against the beam and locking the standard to the plate and both standard and plate to the beam.

The above-described manner of securing the standard to the beam prevents the working of the end of the standard in the wood of the beam, which has hitherto been found objectionable, and also forms a simple and neat locking device.

In the forms represented in Figs. 4 and 5 the upper end of the standard A is bolted or riveted directly to the cap C, or to the flanges formed integral with the cap, and said cap is held snugly in contact with the lower side of the beam by two draw-bolts, G, as shown. In Fig. 6 the standard is cut off flush with the upper edge of the mold-board, and a curved metal beam extends down the rear of the standard and is bolted thereto near the upper end, the lower end being bolted to the landside.

It is evident that slight changes may be made in the form and construction of the several parts above described without departing from the spirit and scope of my invention; hence I do not wish to be understood as limiting myself strictly to the construction herein set forth; but,

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

1. The combination, with a plow beam and standard, the latter consisting of one piece of sheet metal or angle metal formed into shape to receive the mold-board, landside, and point, and provided with a perforation near its upper end, of a metallic cap provided with a recess adapted to receive the upper end of the standard, and a hook or other bolt adapted to

pass through the plow-beam, cap, and standard and lock the cap and standard to the beam, substantially as set forth.

2. The combination, with a plow-beam and a plow-standard, the latter angular or U-shaped in cross section, of a metallic cap provided with a recess adapted to snugly receive the end of the standard, and a bolt adapted to pass through the cap, standard, and beam and lock the cap and standard snugly to the beam, substantially as set forth.

3. The combination, with a plow-standard consisting of a sheet of steel formed into angular or U shape in cross-section and arch shape in longitudinal section, of a metallic cap provided with a recess, and a downwardly-projecting lip or rim adapted to snugly fit the upper end of the standard, and a hooked bolt adapted to pass through the beam, cap, and standard and securely fasten the cap and standard to the beam, substantially as set forth.

4. The combination, with a plow-beam and a standard angular or U shaped in cross-section, arch shape in longitudinal section, and constructed to combine in itself the functions of a frog lug and cleat for securing the mold-board, landside, and share thereto, of a metallic cap, and the bolt adapted to pass through the beam, cap, and standard and secure the cap to the standard and both cap and standard to the beam, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM HENRY RYER.

Witnesses:

WALTER A. FUNK,
ALEXANDER RYER.