No. 707,726. Patented Aug. 26, 1902.

A. SCHULZ.

PLOW.

(Application filed Feb. 7, 1902.)

(No Model.)

Fig. 1.

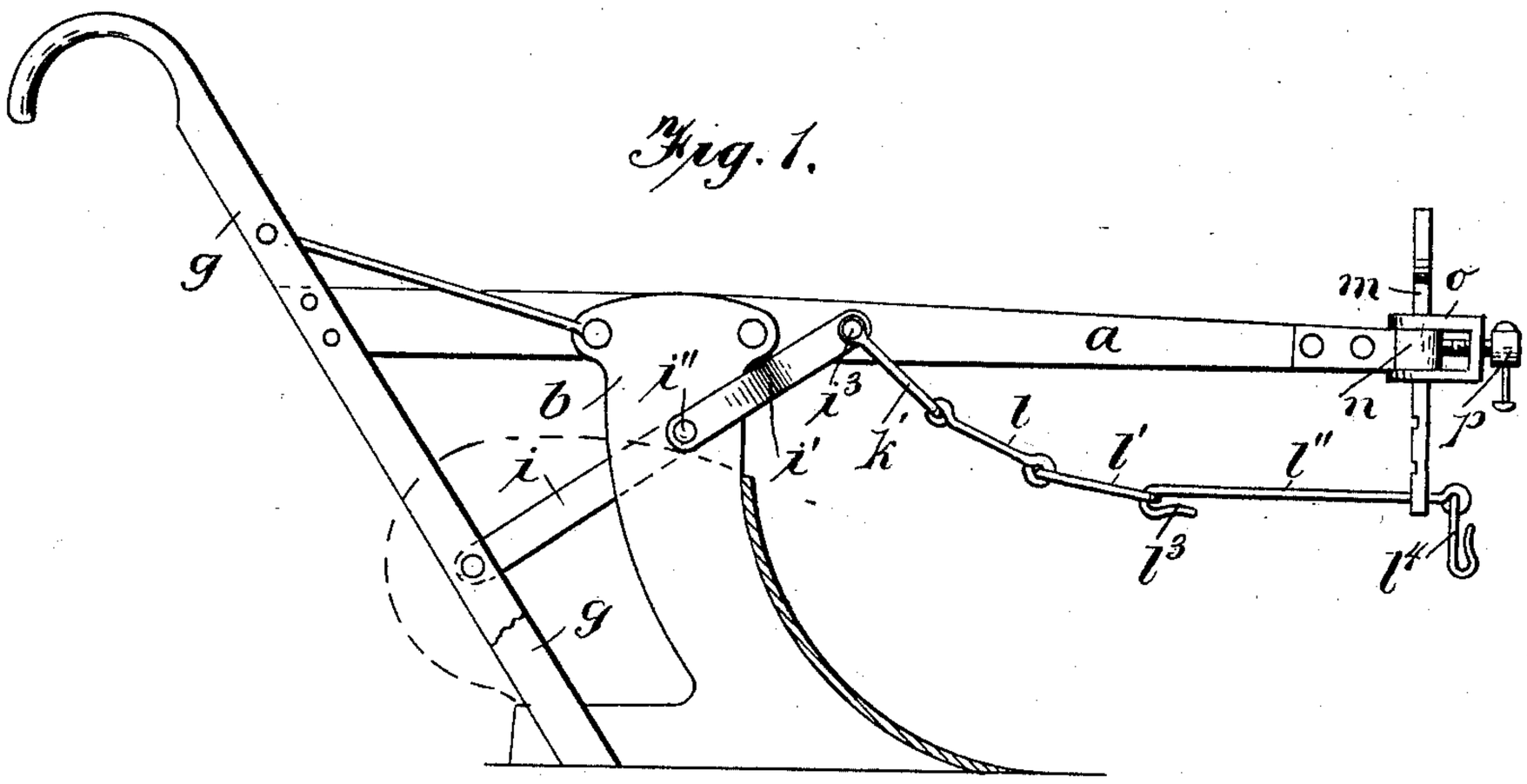


Fig. 2.

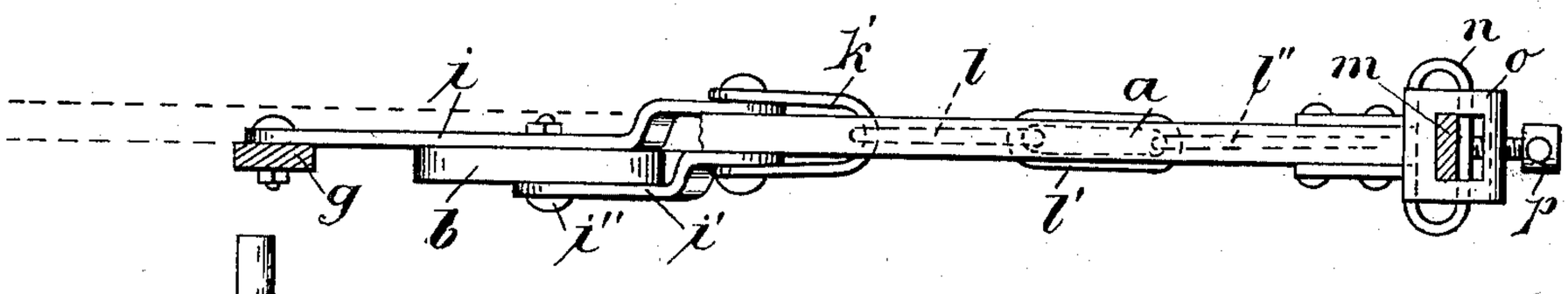
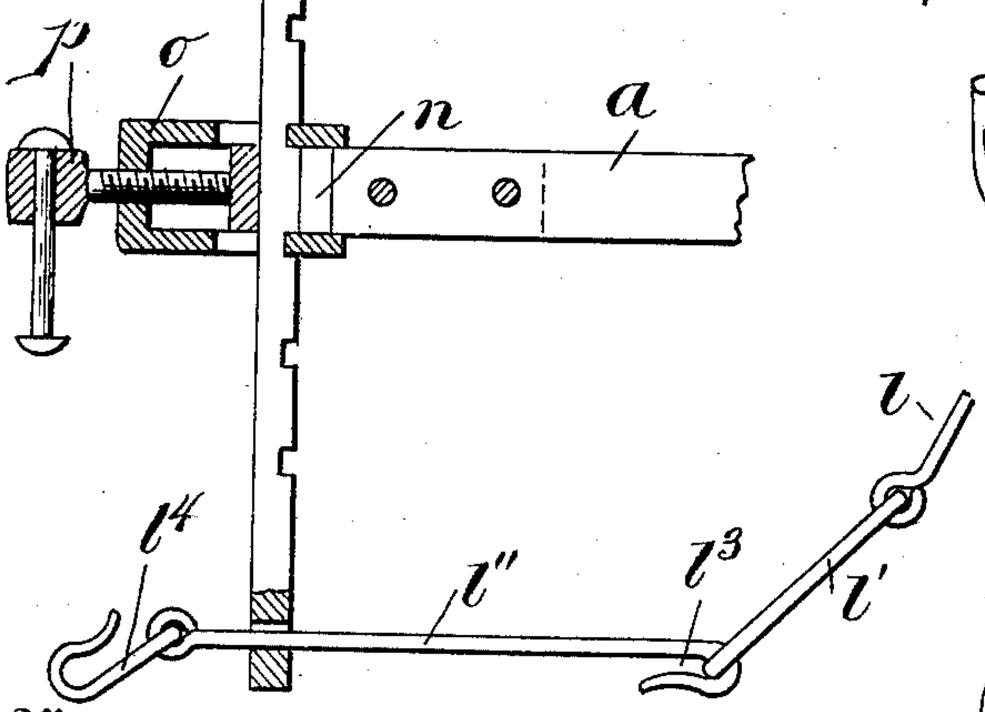


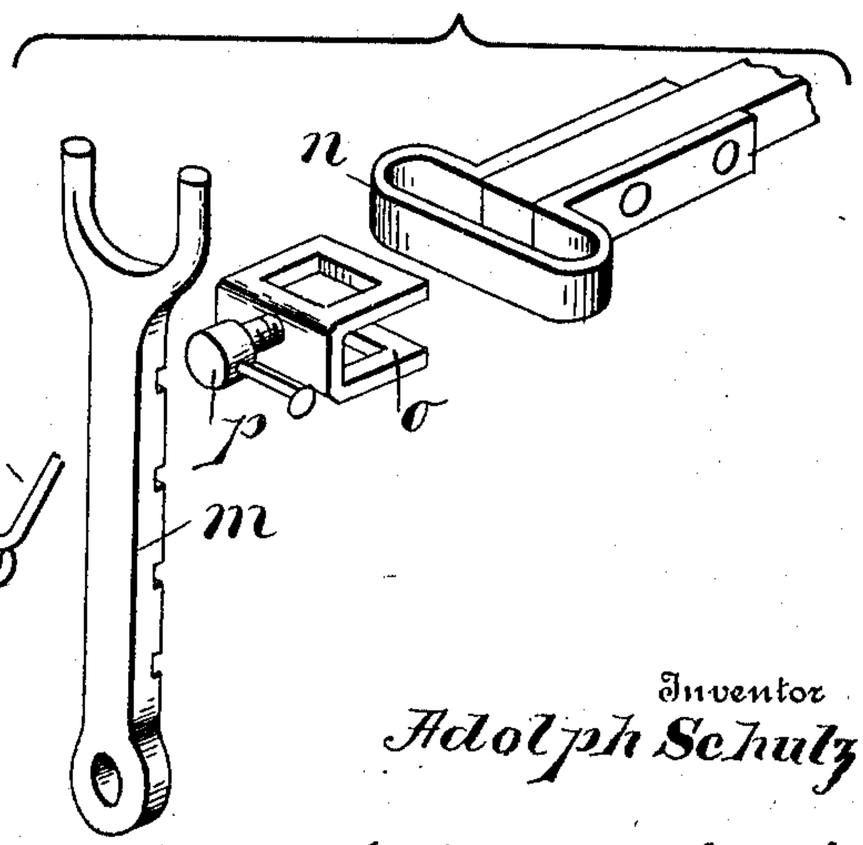
Fig. 4.



Witnesses

Geo. E. Frech.
E. R. Peck.

Fig. 3



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UNITED STATES PATENT OFFICE.

ADOLPH SCHULZ, OF CHICAGO, ILLINOIS.

PLOW.

SPECIFICATION forming part of Letters Patent No. 707,726, dated August 26, 1902.

Original application filed September 3, 1901, Serial No. 74,208. Divided and this application filed February 7, 1902. Serial No. 93,070. (No model.)

To all whom it may concern:

Be it known that I, ADOLPH SCHULZ, a subject of the Emperor of Germany, (but having declared my intention of becoming a citizen of the United States,) residing at Chicago, Cook county, Illinois, 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.

This invention relates to certain improvements in plows, and is filed as a division of my parent application, Serial No. 74,208, filed September 3, 1901; and the objects and nature of my invention will be readily understood by those skilled in the art in the light of the following explanations of the example shown in the accompanying drawings of one construction, among others, within the spirit and scope of my invention.

My invention consists in certain novel features in construction and in combinations or arrangements of parts, as more fully and particularly set forth hereinafter.

Referring to the accompanying drawings, Figure 1 is a side elevation of a plow from the landside, showing my improved draft appliances. Fig. 2 is a top plan view, the plow being partially broken away, the beam partially broken away to show the braces secured to the plow-beam, standard, and one of the handles. Fig. 3 is a detail perspective view showing the draft-adjusting parts separated, the front portion only of the plow-beam being shown. Fig. 4 is a sectional elevation of the front portion of the plow-beam and draft-adjusting devices.

In the drawings, *a* is the plow-beam, which is strong and durable in structure and is preferably formed of steel or other suitable metal.

b is the plow-standard, at its upper end rigid with the plow-beam and depending therefrom. This standard *b* is strong and durable in construction and is preferably flat and if made separate from the beam can at its upper end overlap and be bolted or otherwise secured rigidly to the plow-beam.

g g are the handles, which are preferably formed of steel or other metal and are strong and durable in structure and at their lower ends are suitably secured to the plow.

i is an upwardly and forwardly inclined strong metal strap or brace, at its lower rear end secured to the landside-handle and at an intermediate point crossing the landside-face of the standard and rigidly secured thereto at a point above the cast body and from thence crossing and rigidly secured to the plow-beam at a point in advance of the plow-standard. The plow-beam can be extended, as shown, rearwardly from the standard and at its rear end is rigidly secured to the landside plow-handle.

i' is an inclined metal strap or brace corresponding to and usually parallel with brace *i*, but located on the moldboard side of the beam and standard and crossing and rigidly secured to only said beam and standard. If desired, the same bolt or bolts *i''* can be employed to secure both straps to the standard by passing said bolt transversely through the standard and said straps; also, a single strong draft pin or bolt i^3 can be employed to secure the front ends of said two braces or straps *i i'* to the beam by passing said bolt transversely through the straps and the beam.

If desired, I can hang the draft clevis or loop *k'* on the pin or bolt i^3, so that the clevis hangs or is located beneath the beam and in advance of the standard. The draft is coupled through the medium of suitable connections to said clevis *k'*. For instance, I show a draft connection extending forwardly below the plow-beam and at its rear end coupled to said clevis, while means for adjusting said connection vertically and laterally independently of the beam is provided at the front of the beam and draft connection. I prefer to form this connection of several loosely-joined rods, with an intermediate connection permitting disconnection of the rods. For instance, the rear fold *l* is loosely coupled to the clevis *k'* by a hook or eye, and the front end of the rod is loosely coupled to a loop, link, or ring *l'* by a hook or eye. The forward rod *l''* is formed at its rear end with a hook l^3, detachably receiving the said loop or link *l'*, so that said forward rod can be easily detached when desired from the remainder of the

draft connection. The front end of rod l'' is provided with any suitable draft attachment, to which the draft-animals can be hitched. For instance, I show a hook l^4, loosely confined to the front end of said rod. The said front rod l'' passes loosely through an opening or eye in the lower end of a vertically-disposed supporting bar or plate m and is removable therefrom when released from link l'. This bar m is supported at the front end of the beam, and means are provided for adjusting said bar m vertically to raise and lower said draft connection and to adjust said bar m horizontally to shift the draft connection accordingly.

n is a horizontal metal loop or eye secured rigidly to the front end of the beam and located in advance of the front end of said beam and elongated transversely of the beam, so that the eye or loop is long and narrow with a vertical opening. o is a U-shaped metal clip or plate having the vertical front end in front of the front wall or ply of said loop and the two horizontal parallel rearwardly-extending plates or wings located, respectively, above and below said loop and preferably extending rearwardly beyond the rear wall or ply thereof, so that the slip is carried by the loop and can be moved thereon longitudinally of the loop, but transversely of the length of the plow-beam.

p is a clamping-screw provided with a suitable handle and passing rearwardly through a tapped hole in the front end of the clip, so that the rear end of the screw can engage the front wall of the loop. The said horizontal plates of the clip are formed with vertical openings in the vertical plane of the opening of the loop, and the draft-connection guide and supporting-bar m passes vertically through the loop-opening and through said openings in the horizontal plates of the clip. The openings in said plates of the clip are so formed that when the screw p is loosened to the necessary extent said bar m can be freely moved vertically through the clip and loop to raise or lower the draft connection. The rear vertical face of the vertical bar m is formed with a series of transverse equally-spaced notches, so spaced as to receive the edges of plates of the clip loosened at the rear sides of the opening therethrough when the screw is tightened and the clip is consequently drawn forward to tightly grip the bar m between the clip and front wall of the loop, and thus lock the bar m against vertical movement and the clip against horizontal movement. By providing the series of notches the bar m can be held in a fixed vertical adjustment when the screw has been loosened sufficiently to permit horizontal adjustment or sliding of the clip carrying the bar longitudinally of the loop. Also the notches hold the bar against slipping down and disarranging the adjustment in the event of the screw becoming loose. In effecting vertical adjustment of the bar m it is necessary to loosen the screw to such an extent that the clip can be moved rearwardly a sufficient distance to allow the bar m to press forward and release its notches from the said edges forming the rear walls of the openings receiving the bar m. The upper end of bar m can be enlarged, if so desired, to prevent the bar dropping down through the clips when the bars are loosened for adjustment. If desired, the bar m can be lifted completely from the clip by releasing the draft connection from the lower end of the bar, which is possible by reason of the detachable joint or connection between the rods of said draft connection.

Material advantages are attained by employing the draft connection formed of jointed rods with an intermediate detachable connection between the rods.

It is evident that various changes and modifications might be made in the forms, arrangements, and constructions of the parts described without departing from the spirit and scope of my invention. Hence I do not wish to limit myself to the structure exactly as shown and described, but consider myself entitled to all such changes as fall within the spirit and scope of my invention.

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

1. In a plow, in combination, a beam, a rigid depending standard, a plow secured to the standard, braces arranged on opposite sides of and secured to the standard and extending upwardly and forwardly therefrom with their front ends on opposite sides of the beam, a swinging clevis, a bolt passing transversely through the beam, braces and clevis and securing the braces and clevis to the beam, an adjustable support at the front end of the beam, and a draft connection passing loosely through said support and at its rear end secured to said clevis and having draft-attaching means at its front end, substantially as described.

2. In a plow, in combination, a beam, a depending standard, a plow secured thereto, handles, two inclined braces on opposite sides of and secured to the beam, one of said braces extended rearwardly and secured to a handle, the two braces extending forwardly on opposite sides of the beam, a support at the front end of the beam, a draft connection passing through said support, a cross-bolt passing through the beam and said braces and confining the rear end of said connection to the beam and front ends of the braces, said connection including rods, one having an open link or eye and another a hook detachably engaging said eye, substantially as described.

3. A plow-beam having a rigid transversely-elongated loop at its front end, in combination with a U-shaped clip fitting above and below said loop and adjustable horizontally thereon and having vertical openings in its horizontal portions above and below the loop-

opening, a screw passing through the front end of the clip into engagement with the front side of the loop, the vertical bar passing through said loop and clip-openings and having the vertical series of transverse notches in its rear face to receive the edges of the clip, said bar having a guide at its lower portion, and a draft connection secured to the beam and extending forwardly beneath the beam and through said guide, the parts operating, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ADOLPH SCHULZ.

Witnesses:
CHARLES G. PELZ,
FREDERICH F. KREFT.