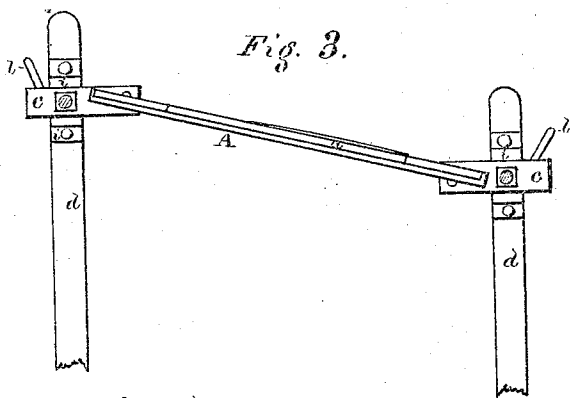
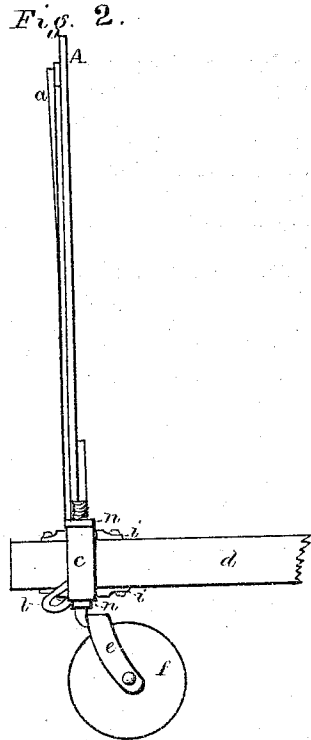
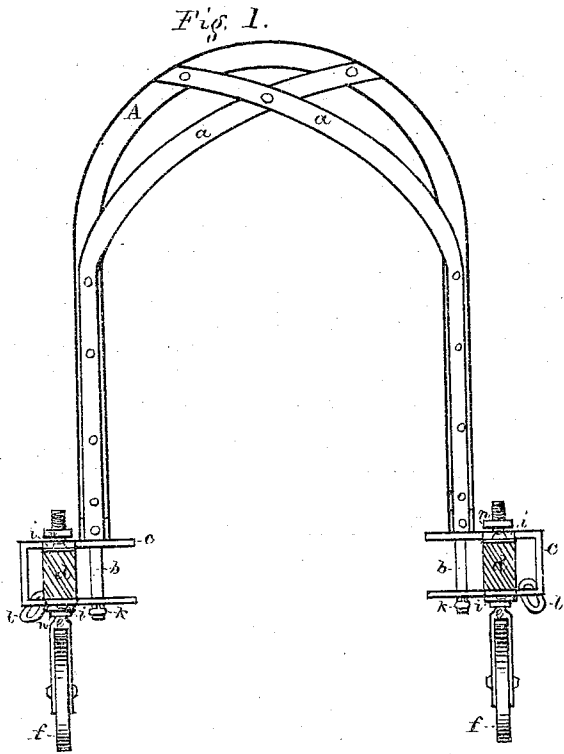


R. M. MILLER.

Improvement in Plows.

No. 129,418.

Patented July 16, 1872.



Attest.
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UNITED STATES PATENT OFFICE.

ROBERT M. MILLER, OF SPRINGFIELD, OHIO.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. 129,418, dated July 16, 1872.

Specification describing certain Improvements in Plows, invented by ROBERT M. MILLER, of the city of Springfield, in the county of Clarke and State of Ohio.

My invention relates to an improvement in the manner of connecting or coupling plows, and may apply to both double-shovel or other plows.

In connecting one plow or gang of plows with the other an arched or bent bar of iron or steel has been used, which is rigidly attached at its lower ends to the clevis, or to an iron strap or loop, which may be used in lieu of a clevis. In this manner of attachment, when one horse pulls ahead of the other and in turning at the ends of the rows, the arch is liable to be bent, twisted out of shape, or broken. The object of my invention is to prevent this, and at the same time to give freedom of movement to the team and steadiness to the plows, making the labor and strain much less on both driver and horses.

To accomplish this I form a bolt or pin on each end of the arch. This pin passes through the clevis on the ends of the plow-beams. It is fastened below the clevis by either a key or nut, and, being loosely fitted, turns easily in the hole when one plow is forward or behind the other. The construction of the parts will allow the arch to assume any angle between the plows without affecting their upright positions or its own perpendicularity, so that in plowing around or over stumps, or in turning at the ends of the rows, the plows are easily controlled. The pins which form the pivots are formed up round on the ends of the arch itself to give more strength and firmness to this part of the plow, one of the principal objects of my invention being to prevent any twisting or inclination of the plow-beams to either side, and to keep the plow-standards perpendicular and in line with the sides of the arch. My clevis is made to cross the ends of the beams exactly at right angles to the same. To keep it in this position I use metal plates, which I call beam-plates. These are gaped across the middle and firmly bolted to the ends of the beams on the upper and under sides, so that they cannot move from their places, and the clevis is fitted into them. A hole in the middle of the beam-plates, through the end of

the beam and through the clevis, admits the upright of a fork for a caster-wheel, which is attached under the front ends of the beams; its object being to facilitate turning by supporting the front ends of the plow-beams and to allow a free side movement of the plows. This upright has a screw-thread cut upon it, and is provided with a nut on the top and one under the beam to regulate the depth of the plows. The draft-link is attached to the lower part of the clevis.

Figure 1 shows an arch connecting two plow-beam sections, in front elevation. Fig. 2 is a side elevation of the same. Fig. 3 is a plan view.

In Fig. 1, *A* is the arch; *a a*, braces for strengthening the same. *b b* are the lower ends of *A*, which pass through the inside ends of clevis *c*, and are fastened below it by the split-key *k*. *d d* are plow-beam sections. *e e* are forks supporting caster-wheels *f*. Their upright shanks are threaded and pass through the beam-plates *i*, clevis *c*, and ends of plow-beams *d*, and are made adjustable in height by nuts *n*. In Fig. 2 the position of the parts is seen when the plow is moving on a right line. *l l* are draft-links for attaching the single-trees, no tongue or pole being used with this plow. Fig. 3 shows a plan of the plow attachments, the beam section on the left being in advance, as is often the case when one horse is in advance of the other in meeting with an obstruction by one of the plows or in turning at the ends of the rows. It will be seen that the arch maintains its relative position at all times.

I do not claim an elevated coupling, nor a series of couplings made adjustable; nor do I claim a coupling which admits of any inclination of the plows from an upright position; nor any part of the device shown in the patent of Robert H. Avery, issued December 27, 1870, as the object of my improvement is not to confine the plows to parallel movements, as is shown in his device, which is coupled at front and rear of plow-beam and necessitates such movement, but to allow the plows to be thrown apart by the handles, so that the beams will be at angles with each other, as is often the case in plowing around stumps or in cultivating corn the ground for which has been fur-

rowed but one way, and it stands in very uneven rows; this independent side movement being required to plow close to each hill, a result which can be accomplished by a gang-plow coupled at the front ends of the beams only, and better when these are supported on caster-wheels, as shown and described in my improvement.

I claim as my improvement—

The arrangement of arch *A* with its ends *b*, cross-clevis *c*, beam-plates *i*, plow-beams *d*, uprights *e*, nuts *n*, and caster-wheels *f*, in the manner described, as and for the purpose hereinbefore set forth.

ROBERT M. MILLER.

Attest:

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W. Y. EMMET.