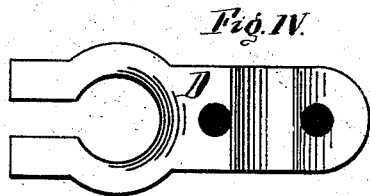
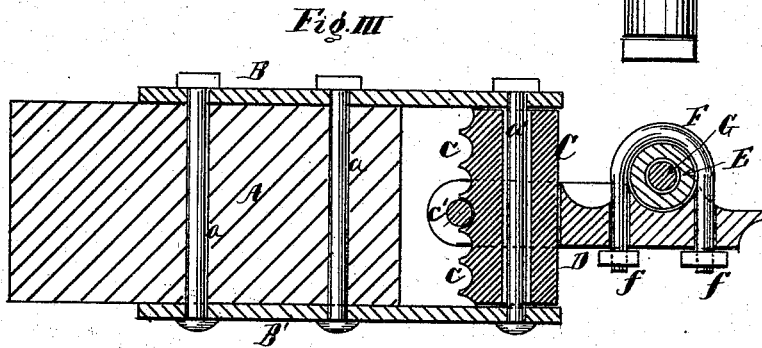
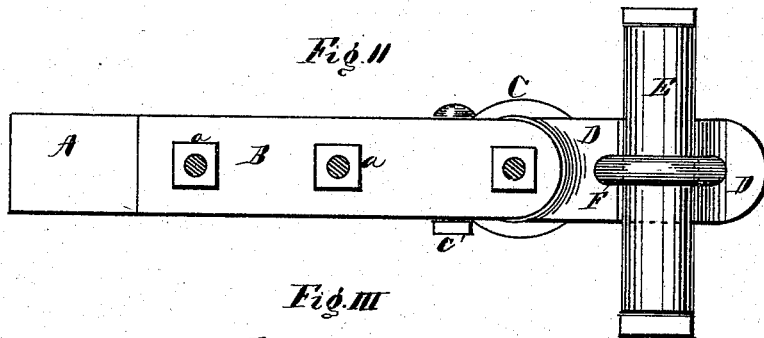
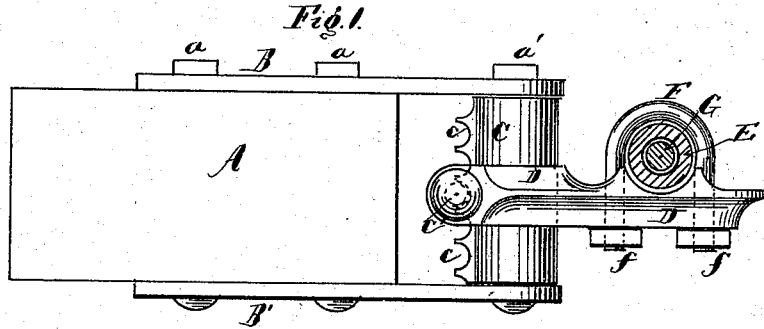


S. P. COONS.
WHEEL-CULTIVATOR.

No. 182,642.

Patented Sept. 26, 1876.



Witnesses:
Richard Corner.
Franklin Barrett.

Inventor:
Samuel P. Coons.
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City.

UNITED STATES PATENT OFFICE.

SAMUEL P. COONS, OF WINCHESTER, ILLINOIS.

IMPROVEMENT IN WHEEL-CULTIVATORS.

Specification forming part of Letters Patent No. 182,642, dated September 26, 1876; application filed March 27, 1876.

To all whom it may concern:

Be it known that I, S. P. COONS, of Winchester, in the county of Scott and State of Illinois, have invented a new and useful Improvement in Coupling for Plow-Beams, of which the following is a full and clear description:

The object of this invention is to construct a coupling for plow-beams so as to allow the end of the beam to which the coupling is attached to move freely as much as required either in a lateral or a vertical direction, and at the same time to hold the end of the beam measurably rigid.

The nature of the invention consists of a coupling for connecting the plow-beam to the axle of the carriage to which it is attached, which coupling consists of two metallic straps, fastened by bolts, respectively, to the top and bottom of the plow-beam, with a swivel-piece connected to the front ends of the said straps by means of a vertical bolt passing through the said straps and swivel-piece, so as to allow the latter a rotating movement on its assembling-bolt, for the purpose of a lateral adjustment. The swivel-piece has serrations on its back edge, by means of which a coupling-link is adjusted and attached to it at different elevations, as required, and to the front end of this coupling-link is attached a tubular axle, so as to have as much vertical motion about this connection as required.

These couplings are adaptable to any form of plows, but are especially desirable for use on cultivator-plows, where two plows of any form are worked together, the construction of the couplings permitting the plows to be easily set at any required distance apart.

The invention will be readily understood by reference to the accompanying drawings, of which—

Figure I is a side elevation of a portion of the end of one plow-beam, with the improved coupling attached to it. Fig. II is a plan of the same. Fig. III is a longitudinal sectional elevation of the coupling and its attachments. Fig. IV is a plan of the connecting-link.

The plow-beam A has two metallic straps, B B', secured to its front end by means of the through-bolts *a*. The strap B is placed on top of the plow-beam, and the strap B' on the bottom of the said beam, so that the distance between these plates will be equal to the vertical depth of the plow-beam. Between the front ends of these straps, and fitting in snugly between them, will be placed the swivel-piece C, through the vertical axis of which, and through the ends of the straps B B', the bolt *a'* will pass, so as to assemble these parts together, and as the said bolt *a'* is round on the part of it which passes through the piece C, the said swivel-piece will be free to turn laterally on this bolt, for the purpose of lateral adjustment of the parts while in use, as will be required when the plow or plows pass over uneven surfaces. The back face of the swivel-piece has several notches, *c*, at different heights, each of which notches is a segment of a circle, fitted to the periphery of the lateral assembling-bolt *c'*. The connecting-link D, at its rear end, is fitted to embrace the swivel C, and is attached thereto by means of the transverse bolt *c'*. In assembling these parts together the bolt *c'* is placed in either of the notches *c*, as desired, so as to make the plow run deep or shallow, in the usual manner. The front end of the link D is attached to the tubular piece E by means of the clamping-strap F that embraces the said tubular piece, and is secured in place by the nuts *f f* that screw down on top of the link D, the two ends of the strap F passing up through the said link, so as to receive the nuts above the top face of the same. The tube E is made to surround the rod G that forms the axle of the carriage, and this tube is allowed a rotating motion on the said axle, for the purpose of permitting a free vertical adjustment of the parts while in use, so as to accommodate the movement of the plows in passing over the asperities of the ground.

When two or more plows are used, these couplings are decidedly advantageous, as the plows can so readily be set at any required

distance apart by simply loosening the nuts *ff*, and moving the coupling to the position required, and then retightening the said nuts.

Having thus described my invention, I desire to claim—

1. The link D, arranged to embrace the swivel-piece C, and adjustably connected therewith by means of the assembling-bolt *c'*, and arranged to connect with the tubular

axle-piece E by means of the screw-strap F, as described and set forth.

2. The straps B B', swivel-piece C, link D, tube E, and axle G, combined and arranged as and for the purpose set forth.

SAMUEL P. COONS.

Witnesses:

J. P. CALDWELL,
JOHN H. COATS.