

L. D. Le NORD.  
Horse-Power.

No. 219,588.

Patented Sept. 16, 1879.

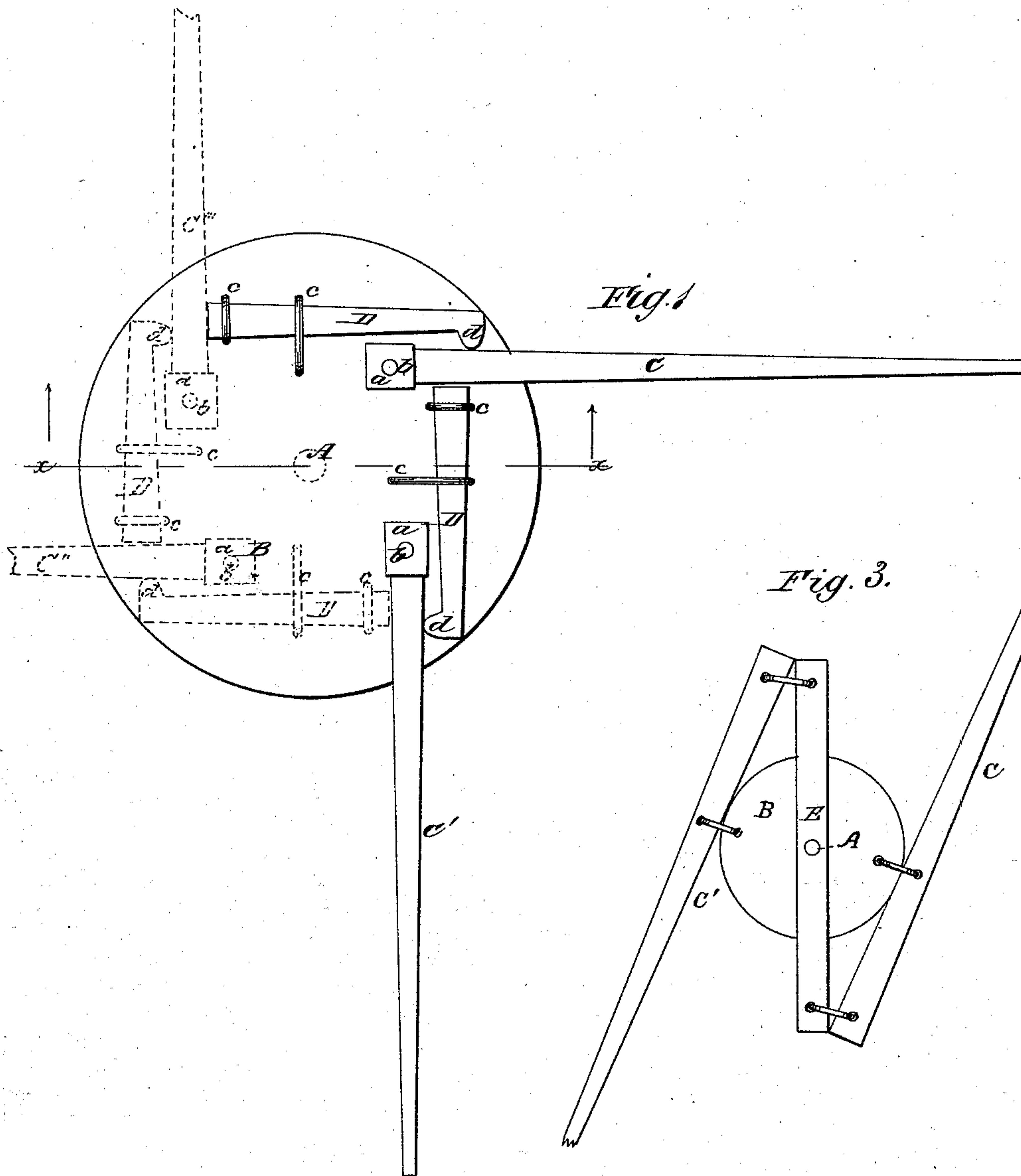


Fig. 3.

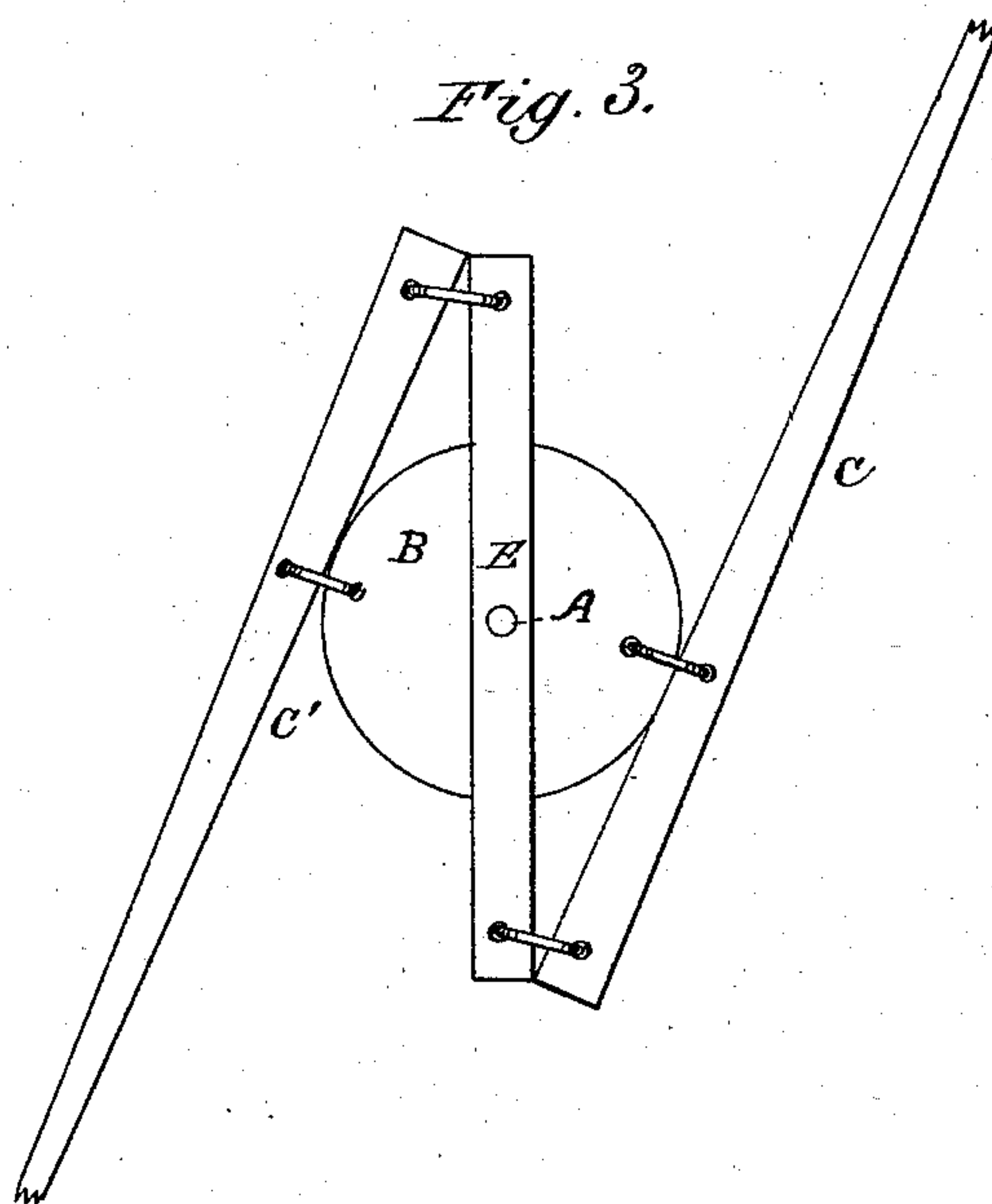
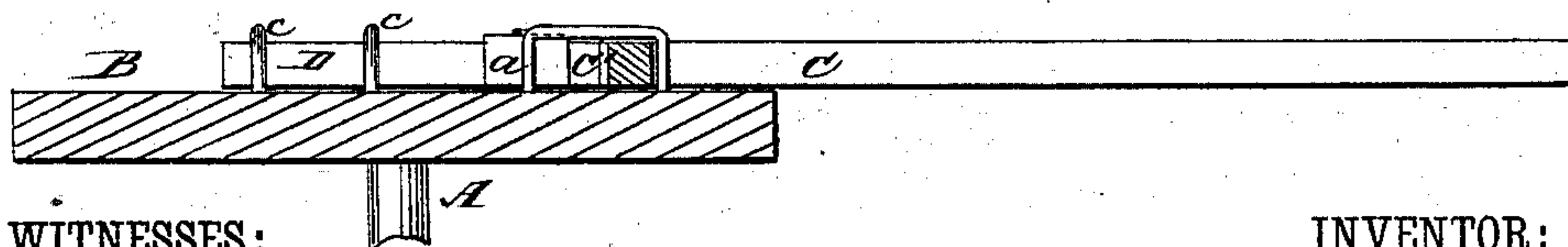


Fig. 2.



WITNESSES:

Francis McArdle  
C. Sedgwick

INVENTOR:

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BY *Munroe*

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# UNITED STATES PATENT OFFICE.

LOUIS D. LE NORD, OF LOCKSBURG, ARKANSAS.

## IMPROVEMENT IN HORSE-POWERS.

Specification forming part of Letters Patent No. **219,588**, dated September 16, 1879; application filed December 13, 1878.

*To all whom it may concern:*

Be it known that I, LOUIS D. LE NORD, of Locksburg, in the county of Sevier and State of Arkansas, have invented a new and Improved Horse-Power, of which the following is a specification.

The object of this invention is to provide an improved horse-power to be used in giving motion to cotton-gins, thrashing-machines, and for other similar purposes.

It consists of an arrangement of bars and sweeps, specifically described hereinafter.

In the accompanying drawings, Figure 1 is a top view or plan of my improvement, and Fig. 2 is a section on line *xx* of Fig. 1. Fig. 3 is a plan view of the modification.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the shaft or axis of the horse-power, to the upper end whereof is fixed a table or wheel, B.

C C' C'' C''' are the sweeps, to the ends whereof the horses are hitched. These sweeps are connected with the table B at points outside the axis of the power by being confined in straps *a*, bolted to the table, and held therein by pins or bolts *b*, passed through straps, sweeps, and the table.

The sweeps being fixed to the table at points outside of the center or axis, the radial distance of the point of attachment is added to the length of the sweep, and this added distance increases the power or leverage of the sweep by so much, and is more effective than if the sweep were attached to the axis of the machine directly.

To increase the strength of the connection of the sweeps with the table and connect all

together, I provide short shafts D, fixed to the table by hasps *c c* at right angles to one sweep, as C, and parallel to the next succeeding one, as C', and in such a way that sweep C bears against the adjacent end of shaft D, while the opposite end has a right-angular projection, *d*, bearing against the side of the succeeding sweep. Thus when four sweeps are used, as in Fig. 1, each one bears against the adjoining end of a shaft, D, and is borne against on the opposite side by the right-angular projection *d* on the opposite end of said shaft. Thus a rectangular connection is made between the fixed ends of the sweeps outside the axis of the wheel B, and the sweeps support and strengthen each other.

The arrangement may be modified by fixing a horizontal shaft, E, to the axis of the power above the wheel B, with its ends projecting a short distance beyond the periphery of the said wheel. To these projecting ends, and to the periphery of the wheel, the sweeps C C' are so attached that they are at a tangent to the periphery of wheel, and form, with the horizontal shaft, compound levers.

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

As an improvement in horse-powers, the sweeps C C' C'' C''', fixed to table B by straps *a* and bolts *b*, in combination with supporting-shafts D, having right-angular projection *d*, table B, and shaft or axis A, substantially as described.

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Witnesses:

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