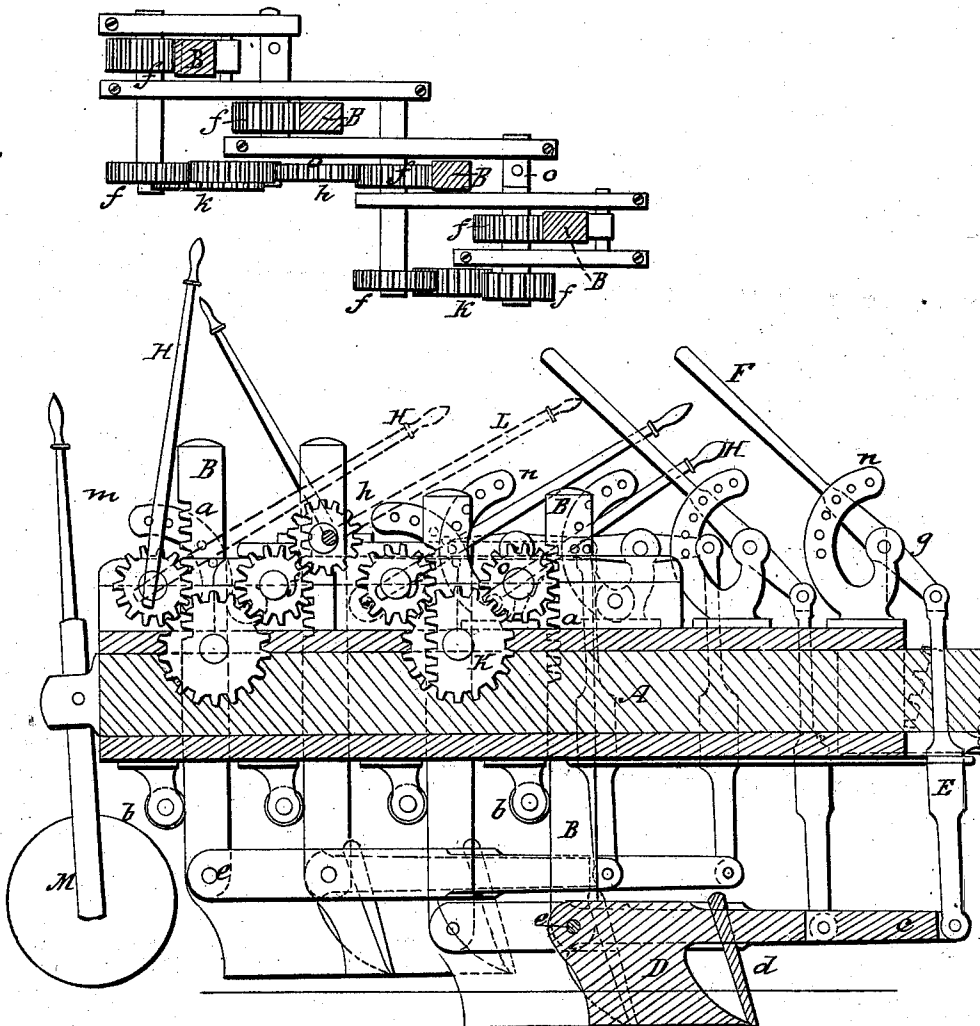


Steam-Plow.

Patented Aug 10. 1858.



UNITED STATES PATENT OFFICE.

JOSEPH JONES, OF WILMINGTON, DELAWARE, ASSIGNOR TO EDMUND AND JOSEPH JONES, JR., OF SAME PLACE.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. 21,167, dated August 10, 1858.

To all whom it may concern:

Be it known that I, JOSEPH JONES, of Wilmington, in the county of New Castle and State of Delaware, have invented certain new and useful Improvements in Plows Applicable to Locomotive-Engines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification.

The greatest difficulty met with in the employment of a locomotive to plowing land has been a suitable means of controlling the plows so that in an instant they may be thrown out of or in work by the attendant on the machine. To accomplish this various devices have been employed, but none so simple as to be free from objection.

In plowing with steam it is not like that of an ordinary horse-team and single plow, whose handles are held by the workman, who, in prospect of an obstruction, can either stop the team or throw the plow out of the land; but in the use of steam a suitable mechanical contrivance must be substituted to prevent accident to the numerous plows, shares, or cultivators employed when a locomotive is used.

To enable others to construct and employ the mechanical means I have invented, I would describe them as follows, observing that in the construction of the locomotive there is nothing peculiar from those in use:

A represents the bed or frame-work sustaining the plows, to be attached to the rear of a locomotive by suitable bolts or chains.

B is an upright sliding post, moving in ways or guides connected with the bed. On its side is a rack, *a*. In addition to the guides are rollers *b*, placed below the bed, and thereto attached for sustaining the lower end of B. The description of a single plow will answer for any number employed in the gang. C is the beam; D, the mold-board; *d*, a colter; *e*, a bolt connecting the post B with the rear end of the beam.

E is a draw-bar or upright attached to the front end of said beam.

F is a hand-lever, whose fulcrum is at *g*, and whose office is that of raising the front end of the plow-beam.

ff are pinions meshing into and moving the racks *a a*.

h is an intermediate or connecting pinion mounted on an axis capable of being thrown into or out of gear with pinions *ff*.

K is a master-wheel meshing at all times with pinions *ff*.

H is a hand-lever socketed in the shaft *o*, which carries the pinion *f*. When this lever is thrown down, as seen in the drawings, the plows will be thrown into the soil; but, as shown at H', the rear of the plow will be raised and out of work. In the shaft carrying pinion *h* is a hand-lever, L, which, on the contrary, when down throws the connecting-pinion out of mesh, but when up all the pinions are brought in mesh, and as a consequence the plows may be all worked simultaneously.

M is a large roller sustaining the frame at a suitable height above the earth while the plows enter the soil. It is swung on a frame provided with a handle, *m*, at the rear of the frame or bed A of the machine.

nn are bearing-racks. Through holes therein bolts are passed, in locking the plows to their work, by the hand-levers being brought in contact with said bolts.

The mode of working the plows may be thus described: The workman, standing on the frame A, lays hold with left hand on the lever F, and on the lever H with his right, (now supposing the connecting-pinion *h* to be thrown out of gear with *ff*.) On depressing lever F and raising lever H two of the plows will be raised from the soil independent of the others. Should it be required that the whole gang be raised simultaneously, then the connecting-pinion *h* is brought in mesh with *ff*, and all the racks will be operated on at once.

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

The combination of the before-described gear and levers, when constructed and arranged for operation conjointly, in the manner as and for the purposes set forth.

In testimony whereof I have signed my name before two subscribing witnesses.

JOSEPH JONES.

Witnesses:

JOHN F. CLARK,
EDM. F. BROWN.