

J. W. McALISTER & J. C. POFFENBERGER.  
 Improvement in Ditching Machines.

No. 124,074.

Patented Feb. 27, 1872.

Fig. 1.

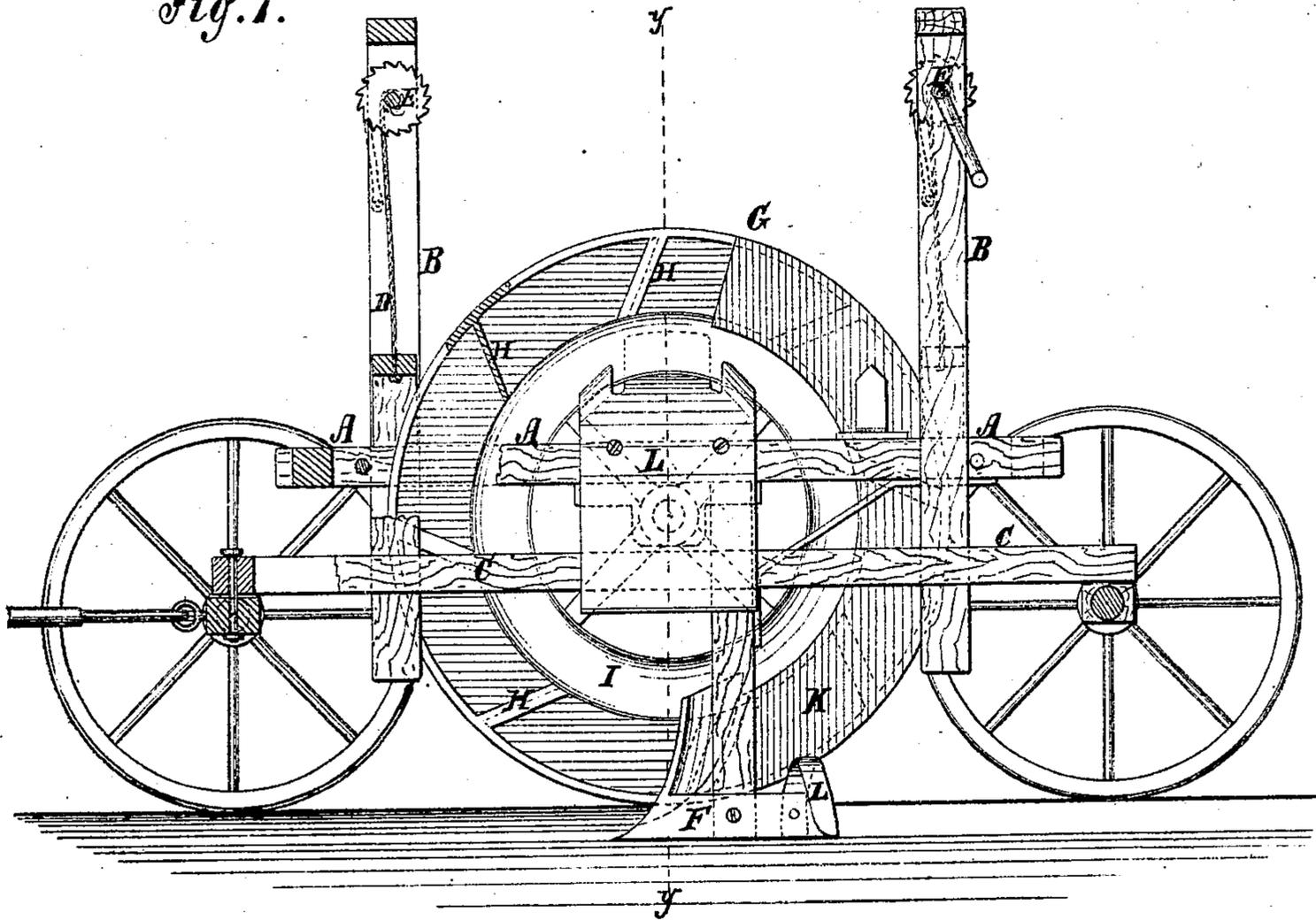
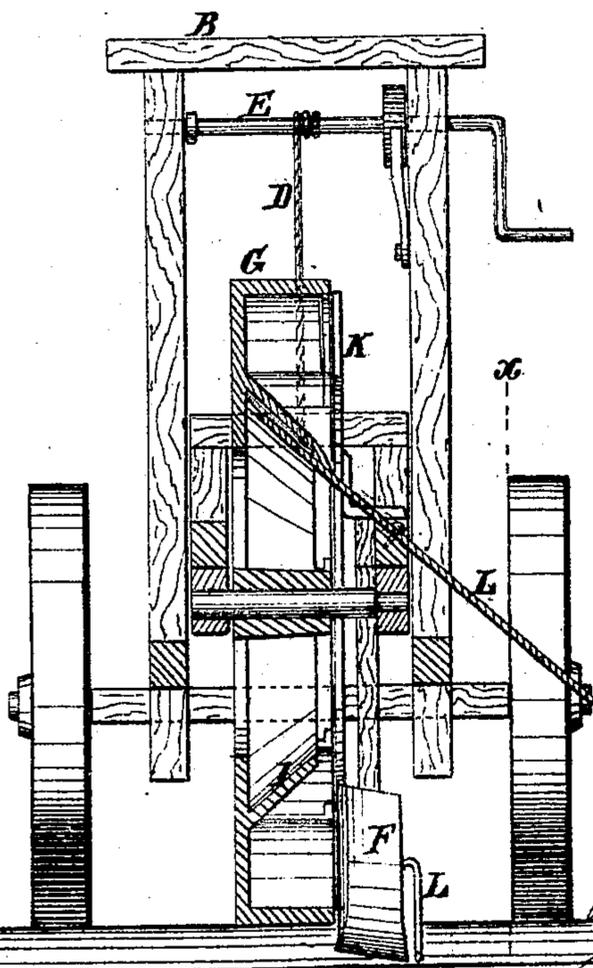


Fig. 2.



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN DITCHING-MACHINES.

Specification forming part of Letters Patent No. 124,074, dated February 27, 1872.

Specification describing a new and Improved Ditching-Machine, invented by JORDAN W. McALISTER and JOHN C. POFFENBERGER, of Jacksonville, in the county of Morgan and State of Illinois.

Our invention consists of a plow, an elevating-wheel, guide, and discharging-spout, all mounted on a truck by means of a vertically-adjustable frame, and arranged in such a manner that the furrow-slice is turned into the wheel at the side and carried by its rim and buckets thereon up past the fixed guide, which keeps it from falling out to a point above the axle, where it falls from the wheel and is received by a spout which conducts it to the bank at the side of the ditch, all substantially as specified.

Figure 1 is a partly sectional side elevation of our improved machine taken on the line  $xx$  of Fig. 2, and Fig. 2 is a transverse section taken on the line  $yy$  of Fig. 1.

Similar letters of reference indicate corresponding parts.

A is the vertically-adjustable frame, suspended between the posts B of the truck-frame C by cords or chains D and adjusting-rollers E. F is the plow suspended from said frame, and G is the elevating-wheel, which is arranged on the side of the plow on which the furrow-slice is turned to work in a vertical plane by rolling along the ground a few inches higher than the bottom of the plow. About midway between the axis and periphery of the wheel a conical flange, I, is formed on or suitably attached to it, as shown in Fig. 2. Between this flange and the tread or periphery of the wheel are placed the buckets H, which are inclined or tangential, as respects both the flange and periphery, as shown in Fig. 1. They join the periphery and likewise the closed side or back of the wheel. K is the guide, fixed to the adjustable frame by the side of the wheel behind the plow, and extending to the top to keep the earth in the wheel until it is elevated; and L is the chute or spout, also fastened to the adjustable frame, with its upper end projecting under the conical flange I to receive the earth,

and sloping therefrom over the plow to deliver upon the bank at one side of the truck.

The machine is run back and forth along the ditch, the wheel G running in the last furrow made, while the plow makes the one at the side deeper, thus working the ditch to a depth of about three feet, for which a wheel of about seven feet diameter will be required. It will be understood that the wheel G is allowed to rest with its whole weight on the surface of the ground when the first furrow is being turned, and subsequently at the bottom of the furrow last turned; and, since the plow necessarily always runs deeper than the wheel, it follows that every furrow-slice after the first will be double the thickness of the first.

In order to dress the vertical walls of the ditch better than the land-side of the plow will do, we arrange a cutter, L, on the heel of the land-side, as shown, to dress off an inch or more of the land as the heel of the plow passes, and deposit it in the bottom of the furrow to be turned up with the furrow-slice at the next round.

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

1. The combination of the plow and elevating-wheel G, said wheel being provided with buckets H, substantially as specified.
2. The combination of the guide-plate K with the elevating-wheel, substantially as specified.
3. The combination of the chute L and the elevating-wheel, substantially as specified.
4. The plow, elevating-wheel, guide, and chute, all mounted in a frame vertically adjustable on the truck-frame, and provided with adjusting-rollers, cords, and holding-pawls, all substantially as specified.
5. The conical flange I, wheel G, and chute L, substantially as specified.

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Witnesses:

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