

J. A. CLARK.
Ditching-Machines.

No. 150,529.

Patented May 5, 1874.

Fig. 1.

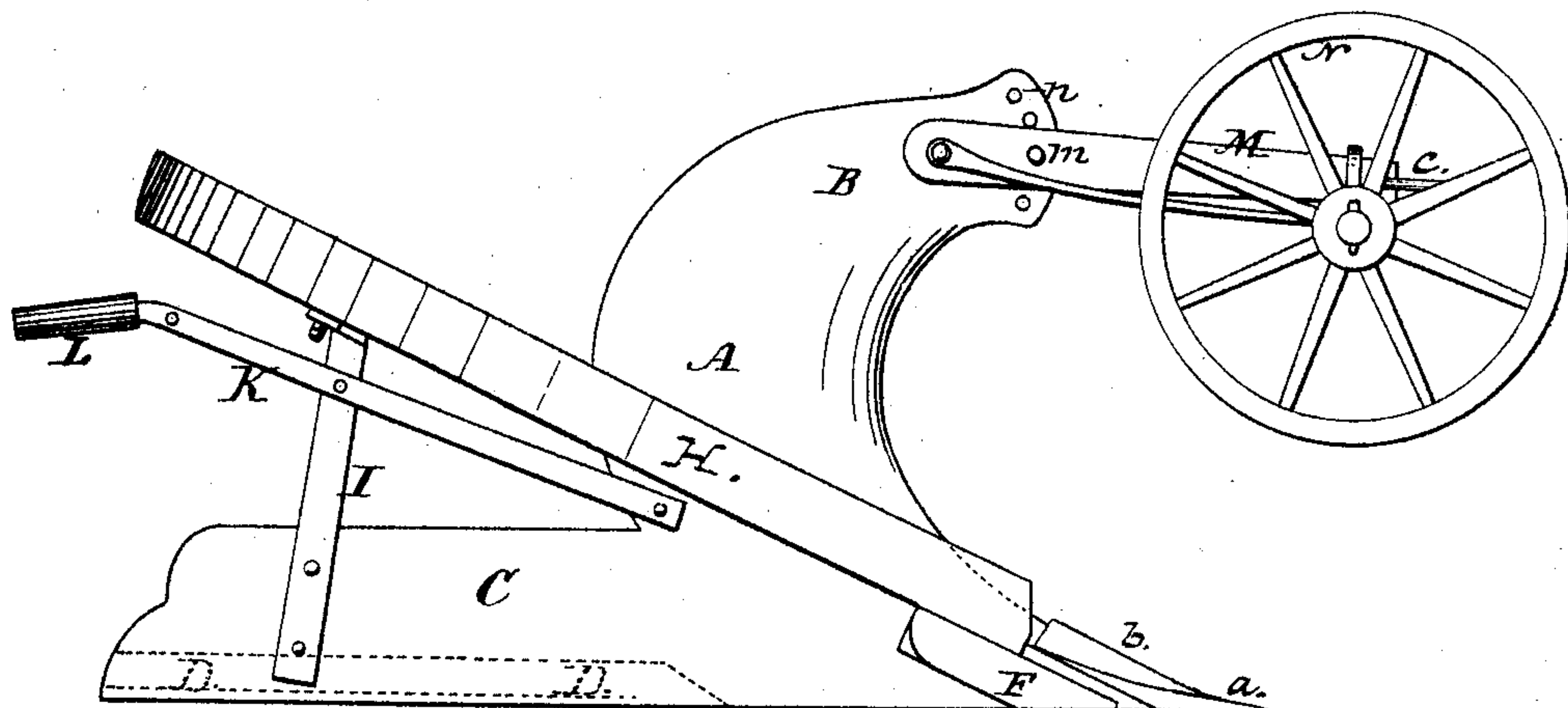
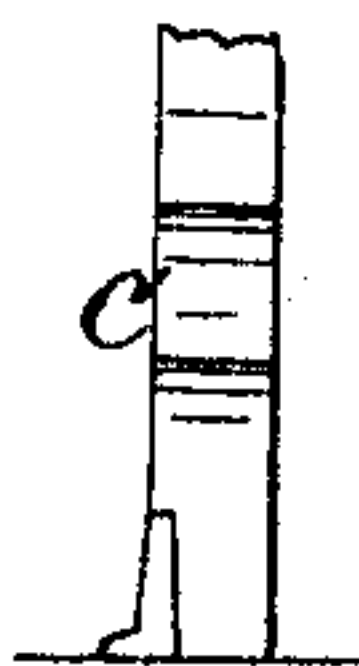
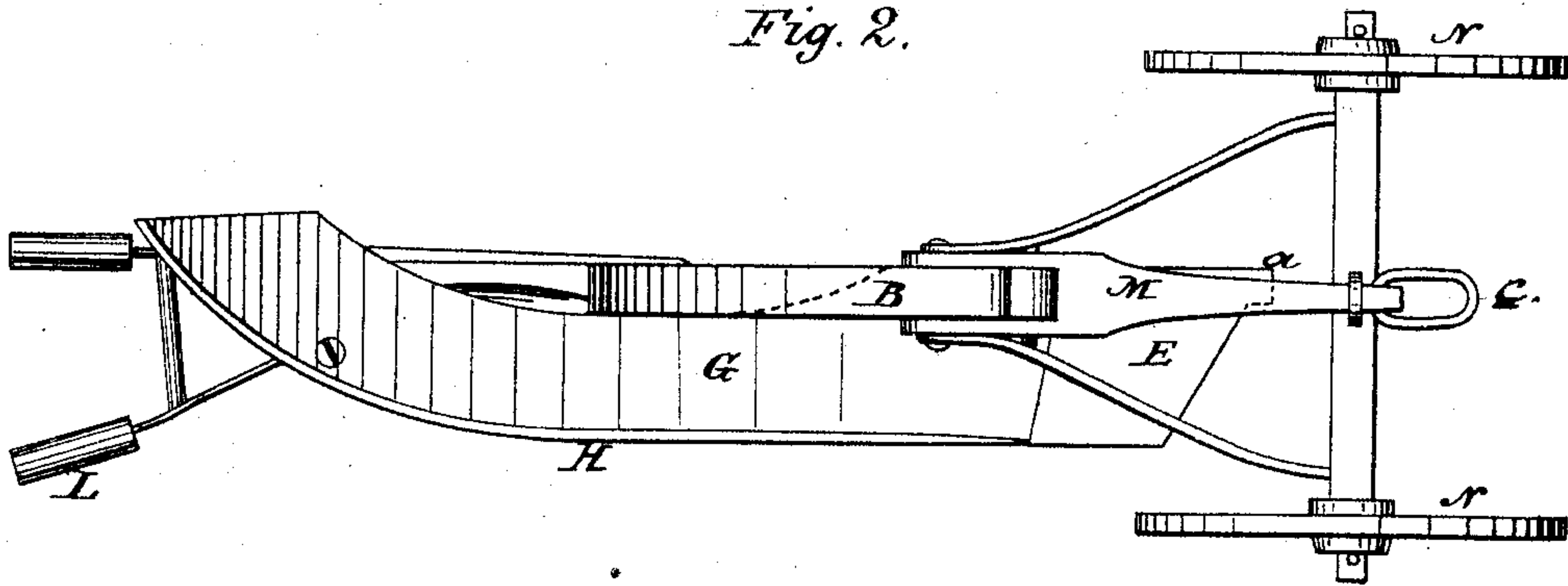


Fig. 2.



Witnesses,
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UNITED STATES PATENT OFFICE.

JOSEPH A. CLARK, OF FAIRVIEW, PENNSYLVANIA.

IMPROVEMENT IN DITCHING-MACHINES.

Specification forming part of Letters Patent No. **150,529**, dated May 5, 1874; application filed February 24, 1874.

To all whom it may concern:

Be it known that I, JOSEPH A. CLARK, of Fairview, in the county of Mercer and State of Pennsylvania, have invented certain new and useful Improvements in Ditching-Machines, of which the following is a specification:

This invention has reference to a simple and effective machine or plow for forming ditches ready for the reception of drain-tiles; and to this end it consists in the combination with a curved beam or standard possessing a colter or forward cutting-edge, and a land-side or guide-bar, of a lateral inclined elevator apron or chute, which is provided with a continuous wing or vertical flange at its outer edge, and with an upper curved extension for properly conducting the earth removed by a plow located at the base of the elevator-apron to the side of the ditch; the depth of penetration of the plow into the ground being determined or regulated by a pair of gage and guide wheels located at the forward end of the plow-beam, and attached in such a manner as to be adjustable in respect to said beam, for the object stated.

In the accompanying drawings, Figure 1 is a side elevation of a ditching-machine constructed according to my invention. Fig. 2 is a plan or top view of the same.

The letter A designates a metallic standard, the upper portion of which is bent forward to form a beam, B, while the front edge of the standard portion is curved and made sharp, so as to serve as a colter, which will cause the machine to pass readily through the earth. C is a guide-bar or sole, which is formed in one piece with the standard, and extended in a backward direction to a suitable extent for guiding and steadying the movement of the machine. The rear portion of said guide-bar is re-enforced by a detachable plate, D, of steel or other suitable metal. To the lower end of the standard A there is applied a plow or share, E, possessing a point, *a*, and an upper colter-edge, *b*, which is arranged in a direct line with the front cutting-edge of the standard. The share or plow is secured to and supported in position by a block or plate, F, which projects from the lower inner portion of the standard or guide-bar. An apron or chute G extends in an upward and

rearward direction from the plow E, and terminates at a suitable height above the rear end of the guide-bar. Said apron is provided with a continuous wing or vertical flange, H, which is designed to prevent the earth elevated by the apron from being thrown off until it has reached the rear upper portion of the apron, which is curved or turned off laterally, so as to discharge the earth at one side of the ditch. I is a suitable brace or support, which is attached to the guide-bar, and to the under side of the elevator-apron, and to said brace are attached the handle-arms K, the forward ends of which terminate and are secured to the standard, while their rear ends carry suitable handles L.

In order to regulate the depth of penetration of the ditching devices into the ground, I attach to the forward end of the beam B a pivoted tongue or beam, M, which carries an axle and a pair of wheels, N. The tongue is regulated or adjusted vertically in respect to the beam, through the medium of a series of holes, *n*, made in the latter, through which is passed a stay or retaining pin, *m*, which serves to hold the wheel-tongue at the desired elevation. Said wheels are located at such a distance from the ditching devices that they will run upon the top of the land at the sides of the furrow, and thus they serve as combined guide and gage wheels.

The draft for drawing the machine is applied to the forward end of the pivoted tongue or beam by an ordinary clevis, *c*.

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

The standard A, having the forward bent beam B and guide-bar C, and the adjustable draft-tongue M pivoted directly to said beam, and carrying the gage-wheel or wheels N, when all are arranged and combined with the chute G, located at the side of the beam, substantially as described, for the object specified.

In testimony that I claim the foregoing I have hereunto set my hand this 11th day of February, 1874.

JOSEPH A. CLARK.

Witnesses:

SAMUEL CLARK,
ALLEN SLATER.