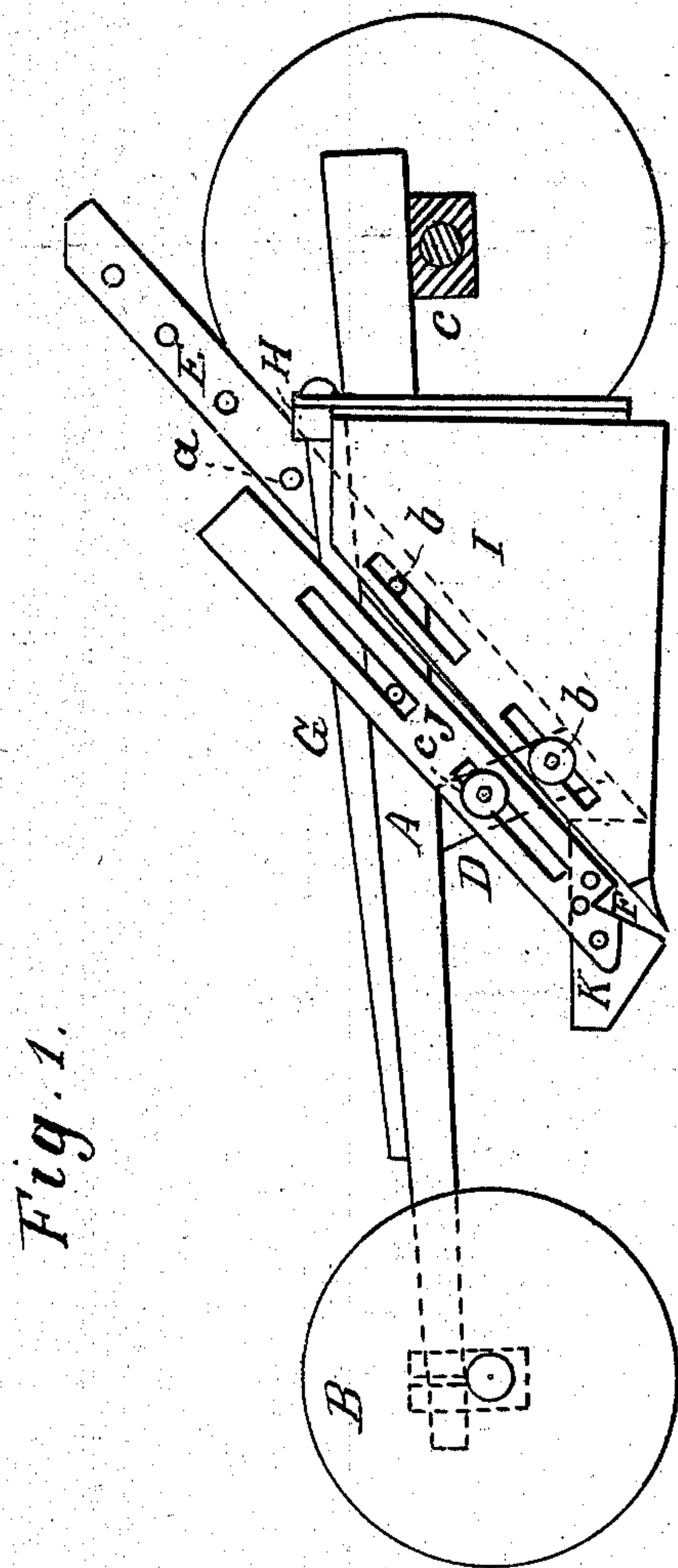


W. CLINE, Jr.  
Ditching Plow.

No. 97,606.

Patented Dec. 7, 1869.



Witnesses  
F. A. Schumann  
C. L. Overb

Inventor  
Wm. Cline Jr.  
per Abraham Thason



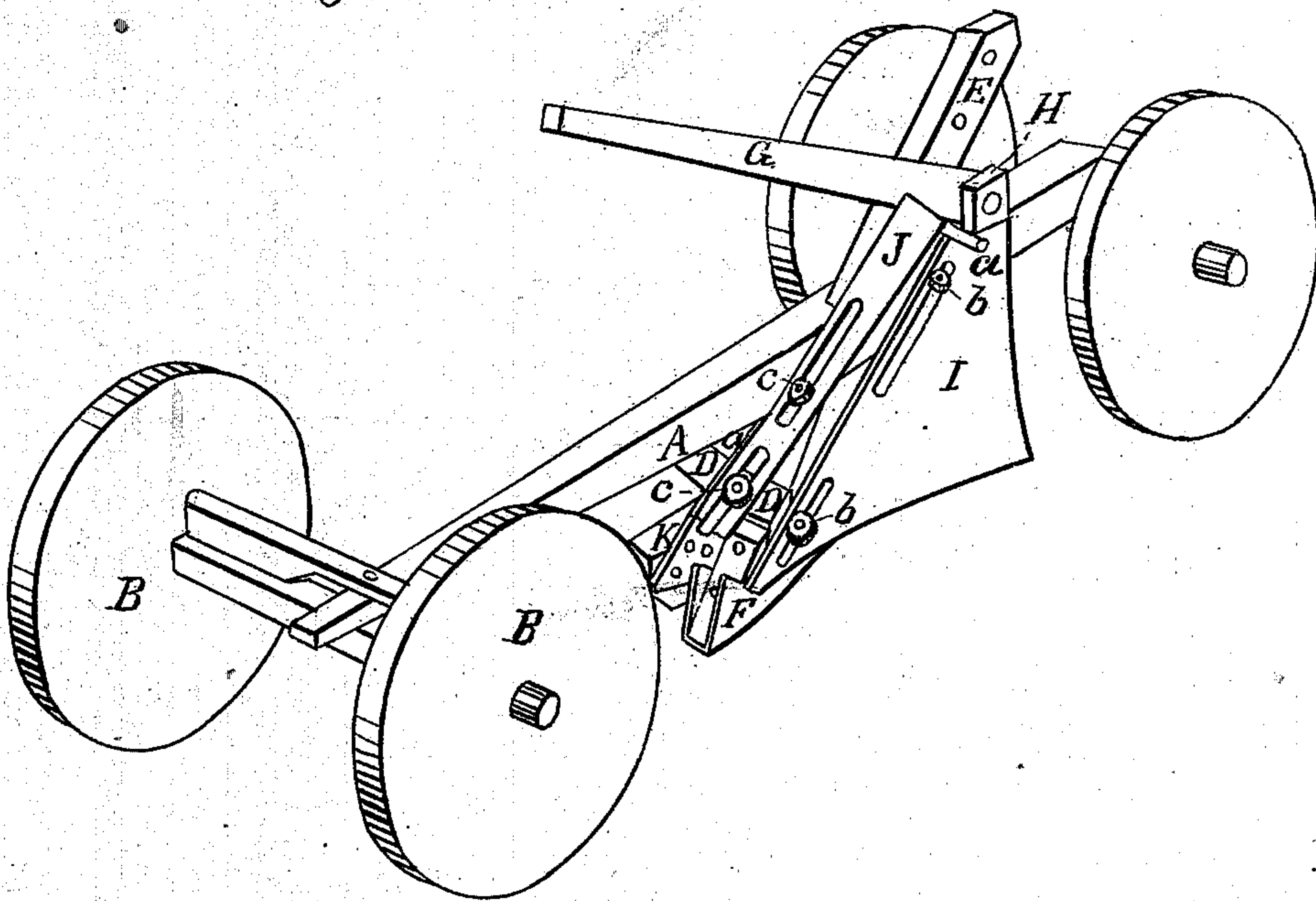
2 Sheets—Sheet 2.

W. CLINE, Jr.  
Ditching Plow.

No. 97,606.

Patented Dec. 7, 1869.

Fig. 2.



Witnesses

Harry King.

*C. L. Cline*

Inventor

*Wm Cline Jr*

*per Alexander Mason*  
Atty.



# UNITED STATES PATENT OFFICE.

WILLIAM CLINE, JR., OF CLAYTON, INDIANA.

## IMPROVEMENT IN DITCHING-MACHINES.

Specification forming part of Letters Patent No. 97,606, dated December 7, 1869.

*To all whom it may concern:*

Be it known that I, WILLIAM CLINE, Jr., of Clayton, in the county of Hendricks, and in the State of Indiana, have invented certain new and useful Improvements in Ditching-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and general arrangement of a ditching-machine, as will be hereinafter fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which represents a side elevation of my machine.

A represents a beam of any suitable dimensions, which is flattened at the front end, so as to fit in the place of a coupling-pole between the front wheels, B B, of a common wagon, while the rear end is placed on top of the axle-tree C of the hind part of a wagon.

At a suitable point under the beam A is secured a cutter, D, which is inclined toward the rear, and its lower end is hollow; or rather a box or sleeve is formed on its lower end. Through this box or sleeve and through an inclined slot in the beam A is passed the foot-piece E, which has an inclined position downward toward the front.

At the lower end of the foot-piece E is secured the bit F, by means of which the ditch is cut out. The foot-piece E and bit F can be raised and lowered at pleasure, so as to cut the ditch any depth desired, by means of the lever G, pivoted to a block, H, which is fastened to the side of the beam A. Pins *aa* may now be inserted either above or below the lever in the foot-piece E, above the beam, and then, by raising or pressing down the lever, the foot-piece is either raised or lowered.

A broad curved scraper, I, is attached to

the beam A and cutter D by means of guides *b b*, passing into the same through slots in the scraper. This scraper is for the purpose of removing the dirt as taken out of the ditch, and moves up and down with the surface of the ground on the guides *b b*. I also attach a sliding plate, J, which moves up and down on guides *c c*, to guide the dirt to that side of the ditch the scraper I is on. This sliding guide has a piece, K, bolted on at the bottom, which runs on the surface of the ground, to raise and lower the guide with the surface.

The ditch guides the dirt to the top of the ground, and then it is pushed off by the guide J, and removed by the scraper I.

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

1. The adjustable foot-piece E, provided at its lower end with the bit F, and running in an inclined position, substantially as and for the purposes herein set forth.

2. The combination and arrangement of the slotted beam A, cutter D, adjustable foot-piece E, and lever G, all constructed as described, and operating substantially in the manner and for the purposes herein set forth.

3. The broad curved scraper I, working up and down on guides *b b*, substantially in the manner and for the purposes herein set forth.

4. The slotted sliding plate or guide J, provided with block K at its lower end, and moving up and down on the guides *c c*, substantially in the manner and for the purposes herein set forth.

5. The combination and arrangement of the beam A, foot-piece E, cutter D, scraper I, and sliding guide J, all constructed as described, and operating substantially in the manner and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 22d day of July, 1869.

WILLIAM CLINE, JR.

Witnesses:

DENNIS CROWLEY,  
WM. S. McCORMICK.