

(No Model.)

2 Sheets—Sheet 1.

C. B. HUNTER.
WHEELED SCRAPER.

No. 372,415.

Patented Nov. 1, 1887.

Fig. 1.

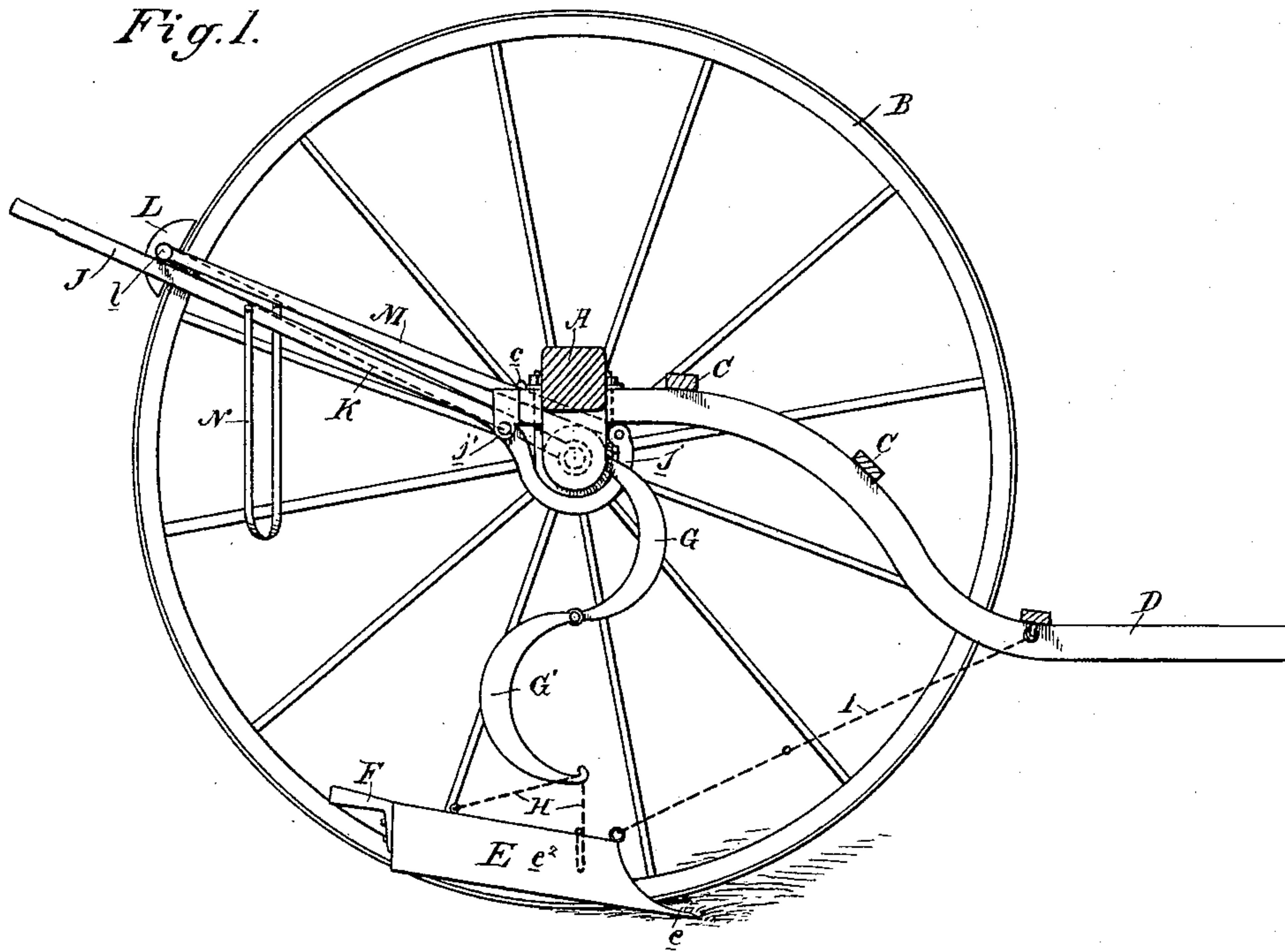
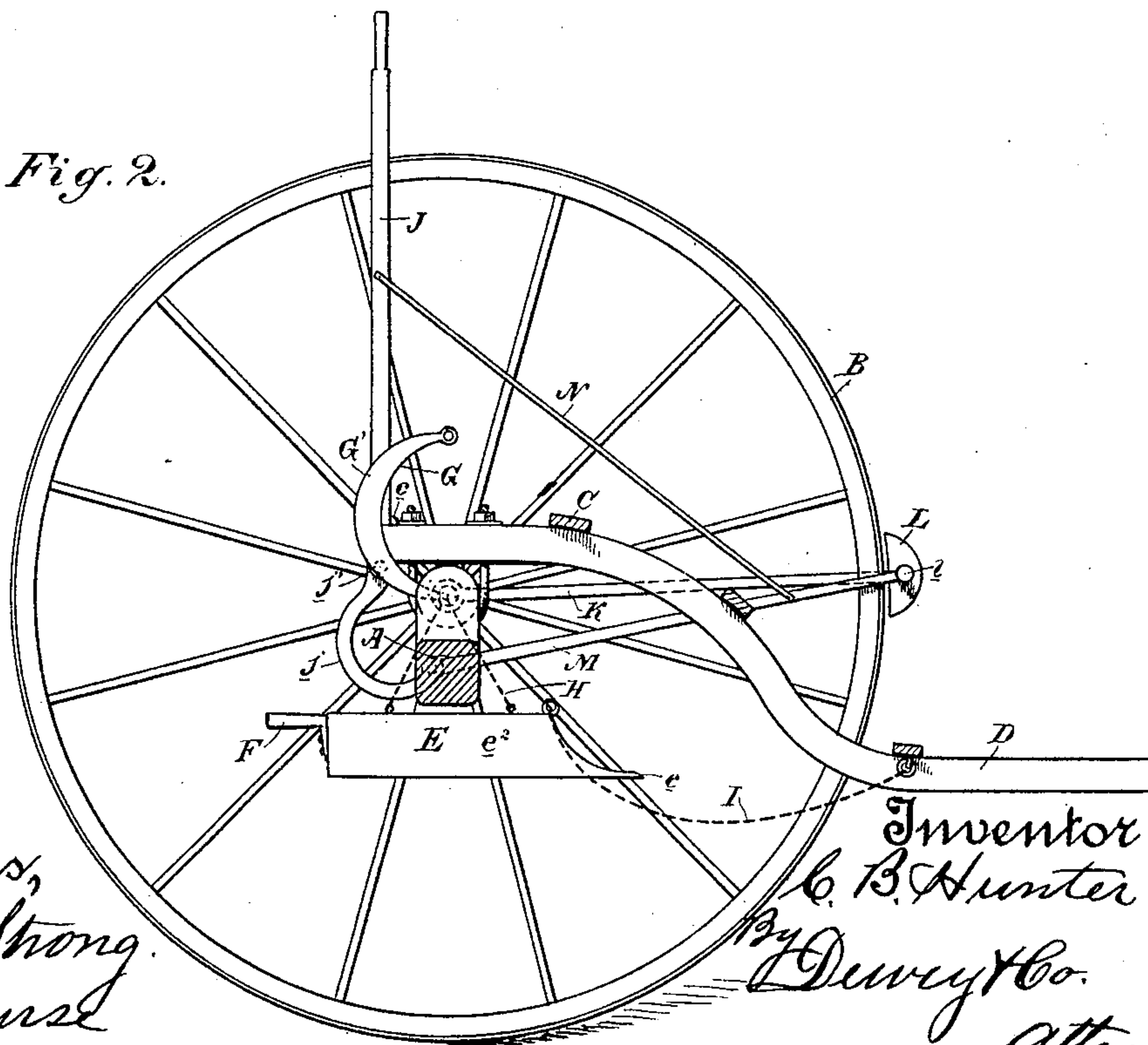


Fig. 2.



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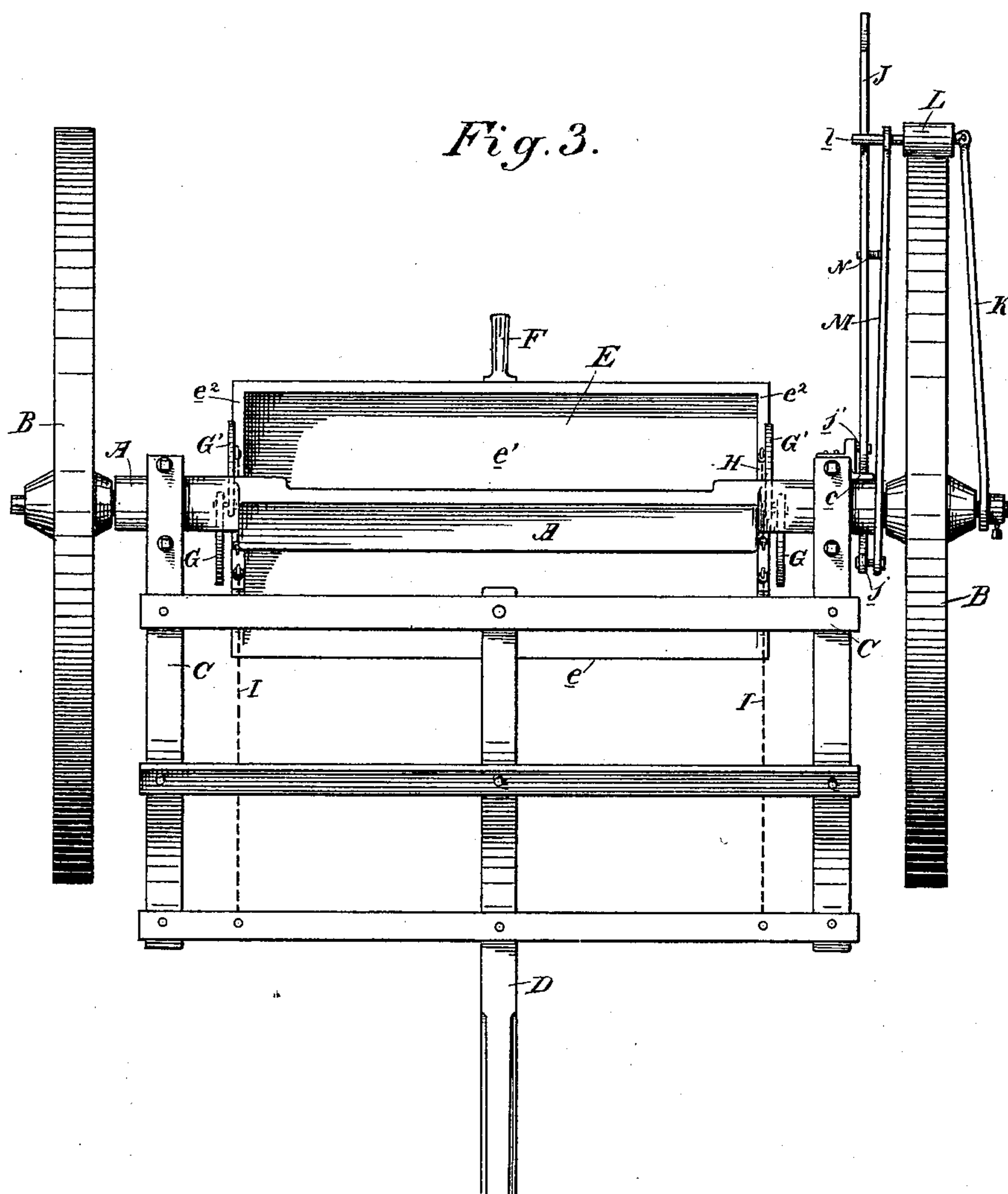
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UNITED STATES PATENT OFFICE.

CHARLES BENJAMIN HUNTER, OF TRAVER, CALIFORNIA.

WHEELED SCRAPER.

SPECIFICATION forming part of Letters Patent No. 372,415, dated November 1, 1887.

Application filed February 23, 1887. Serial No. 229,259. (No model.)

To all whom it may concern:

Be it known that I, CHARLES BENJAMIN HUNTER, of Traver, Tulare county, State of California, have invented an Improvement in
5 Wheeled Scrapers; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to the class of scrapers; and it consists in the arrangement and combination of parts, hereinafter fully described
10 and claimed.

The object of my invention is to provide a simple, economical, and effective scraper.

Referring to the accompanying drawings for
15 a more complete explanation of my invention, Figure 1 is a side elevation of my scraper, showing the scoop depressed. Fig. 2 is a side elevation showing the scoop elevated. Fig. 3 is a plan of my scraper.

20 A is a bent axle, upon the journals of which are mounted the wheels B. To the axle is secured the frame C, to which is attached the pole D.

E is the scraper proper, or "scoop" or
25 "bowl," as it is variously called. It may be made in any suitable manner, its essential parts being its front blade or bit, *e*, its body *e'*, and sides *e''*. A handle, F, is secured to its back for directing and dumping it.

30 To the axle A, at each end and just within the wheel-hubs, is secured rigidly and solidly a curved crank, G, to the lower end of which is pivoted a curved link, G', of about the same dimensions as the crank G, but having an opposite curve, so that when the link is extended, as shown in Fig. 1, it and the crank G
35 above form an ogee curve or a reversed letter S. To the lower end of each curved link G' are attached chains H, which are secured
40 to and suspend the bowl or scoop E. The front of the scoop is further connected by chains I with the frame in front, whereby the draft is lowered and so directed as to pull the bit of the scoop into the ground when taking
45 earth.

To the rear portion of the frame C, which for this purpose is extended to a point behind the axle, is pivoted, at *j'*, a lever, J, the handle of which projects backwardly to within reach
50 of the operator. The inner or lower end of

the lever J has a curved part, *j*, the curve of which approximates to that of the wheel-hub, being but little larger.

Secured solidly and rigidly to the extreme end of the axle A, outside of the wheel-hub, 55 is a bar, K, which extends radially beside the wheel and is connected at its outer end with a grip-shoe, L, to which it is pivoted, Fig. 3. The grip-shoe extends across the wheel-tire and has pivoted to its inner end a rod, M, the 60 other end of which is pivoted to the extreme end of the curved portion *j* of the main lever J. A flexible strap, N, connects the main lever J with the rod M.

Extending from the grip-shoe inwardly is a 65 stop-lug, *l*, which comes in contact with the lever J and supports the shoe when at rest. Upon the rear extension of the frame C, to which lever J is pivoted, is a stop-lug, *c*, which limits the forward movement of said lever. 70

The operation of my scraper is as follows: When about to take a load, the several parts occupy the positions shown in Fig. 1—that is to say, the scoop is down on the ground, the curved links G' are downwardly extended, the 75 curved cranks G likewise, the main lever J is in position to be grasped by the operator from behind, the grip-shoe rests on the lever by its stop *l* and does not bind on the wheel-tire, and the flexible strap is loose. The operator, 80 by means of the handle F, properly directs the nose or bit of the scoop into the ground, takes his load, and levels the scoop again, all this being permitted by the chain suspension and connection of the scoop. He now wishes 85 to elevate the scoop with its load, and therefore, while the machine is still traveling, he throws the lever J upwardly. The immediate effect of this is to cause the curved end *j* to tighten up on the rod M, which thus draws in 90 on the pivoted grip-shoe L, causing said shoe to bind upon the wheel-tire. The shoe thereupon is carried forward by the wheel, and the operator, continuing to move the lever J upward, whereby he moves its curved end *j* 95 downward, keeps the connections tight and preserves the binding effect of the shoe on the wheel. The shoe, moving with the periphery of the wheel, of course travels faster than the lever J, and increases the distance between 100

them, thereby, as I shall presently show, enabling the full result—namely, a half-turn of the axle—to be produced with a short movement of the lever. Now, as the shoe is connected rigidly with the axle A, through the bar K on the outside of the wheel, it will be seen that the forward movement of the shoe with the wheel causes the axle A to turn also. The cranks G, being rigidly connected with the axle, are also turned, their lower ends describing an arc of a circle with the axle for a center. These, therefore, raise the links G', which, turning on their pivots, approach the cranks, until, when these latter have described one hundred and eighty degrees, more or less, they lie beside them in adjacent planes, the connected ends of the two being above the axle, while the scoop, suspended from the lower ends of the links, is elevated to a plane just under the axle, in which position it is held and carried. When the scoop has been thus elevated, the lever J has about reached its limit of motion, and, coming in contact with the stop c, can go no farther. The consequence is that, the strain on the rod M being relieved, the grip shoe at once loosens, and, throwing off from the wheel-tire, drops slightly until caught and held by the strap N. The parts being thus relieved, the scoop is still held up, because the cranks G and links G' have been carried a little beyond the perpendicular and rest against the axle. This carrying position is shown in Fig. 2. When the machine reaches the dumping-place, the scoop is inclined by its handle F and the load discharged. It then comes back to the loading-place again, where the scoop must be dropped. The operator now pulls back on lever J, which, acting through the strap N, raises the grip shoe, which is now kept free of the wheel-tire by the upwardly-turning point j of the lever following it up and, through the rod M, pushing it out. The upward movement of the shoe, through the bar K, turns the axle back until, when the cranks G have moved back far enough behind the perpendicular, the links G' drop away from them with a rush and the parts resume the position shown in Fig. 1.

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

1. In a scraper, the combination of the axle A, having the curved cranks G, the wheels on the axle, the curved links G', pivoted to the cranks G, the scoop or bowl suspended from the links, a grip for throwing the wheel and axle into and out of gear, and a lever for operating the grip, whereby the axle is turned and the scoop or bowl raised and lowered, substantially as herein described.

2. In a scraper, an axle having cranks, wheels mounted on the axle, and a scoop or bowl suspended from the cranks, in combination with mechanism for throwing the wheel and axle into and out of gear, whereby the axle is turned and the scoop or bowl raised

and lowered, consisting of the pivoted lever J, having a curved end, j, the grip shoe L, acting on the wheel-tire, the bar K, pivoted to one end of the grip shoe and fast on the axle, and the rod M, pivoted to the curved end of lever J and to the other end of the grip shoe, substantially as herein described.

3. In a scraper, an axle having cranks, wheels mounted on the axle, and a scoop or bowl suspended from the cranks, in combination with the pivoted lever J, having a curved end, j, the grip shoe L, acting on the wheel-tire, the bar K, pivoted to one end of the grip shoe and fast on the axle, the rod M, pivoted to the curved end of lever J and to the other end of the grip shoe, and the flexible strap N, connecting the lever J with the bar M, substantially as and for the purpose herein described.

4. In a scraper, the axle A, the wheels B, journaled on the axle, the curved cranks G, secured rigidly to the axle, the curved links G', pivoted to the cranks G, and the scoop or bowl E, suspended from the links, in combination with the pivoted lever J, having a curved end, j, the grip shoe L, acting on the wheel-tire, the bar K, pivoted to one end of the grip shoe and fast on the axle, and the rod M, pivoted to the curved end of the lever and to the other end of the grip shoe, substantially as and for the purpose herein described.

5. In a scraper, the axle A, the wheels B, journaled on the axle, the curved cranks G, secured rigidly to the axle, the curved links G', pivoted to cranks G, and the scoop or bowl E, suspended from the links, in combination with the pivoted lever J, having a curved end, j, the grip shoe L, acting on the wheel-tire, the bar K, pivoted to one end of the grip shoe and fast on the axle, the rod M, pivoted to the curved end of the lever and to the other end of the grip shoe, and the flexible strap N, connecting the lever J with the rod M, substantially as and for the purpose herein described.

6. In a scraper, the axle A, the wheels B, journaled thereon, the frame C, carried by the axle, the curved cranks G, secured rigidly to the axle, the curved links G', pivoted to cranks G, and the scoop or bowl E, suspended from the links, in combination with the pivoted lever J, having a curved end, j, the stop-lug c on the frame C, for limiting the forward movement of the lever, the grip shoe L, acting on the wheel-tire, the bar K, pivoted to one end of the grip shoe and fast on the axle, the rod M, pivoted to the curved end of the lever J and to the other end of the grip shoe, and the flexible strap N, connecting the lever J with the rod M, substantially as and for the purpose herein described.

7. In a wheeled scraper, the axle A, the wheels B, journaled thereon, the frame C, the curved cranks G, rigidly secured to the axle, the curved links G', pivoted to the links, and the scoop or bowl E, and the chains H I, sus-

pending it from the links and connecting it
with the frame, in combination with the lever
J, pivoted to the frame and having a curved
end, *j*, the grip-shoe L, acting on the wheel-
5 tire, the bar K, pivoted to one end of the grip-
shoe and fast on the axle, the rod M, pivoted
to the curved end of lever J and to the other
end of the grip-shoe, and the flexible strap N,

connecting the lever J with rod M, substan-
tially as herein described.

In witness whereof I have hereunto set my
hand.

CHARLES BENJAMIN HUNTER.

Witnesses:

O. C. GOODIN,

PETER C. JURGENS.