

E. Hamburjer,
Dressing Stone.

N^o 43,687.

Patented Aug. 2, 1864.

Fig. 1.

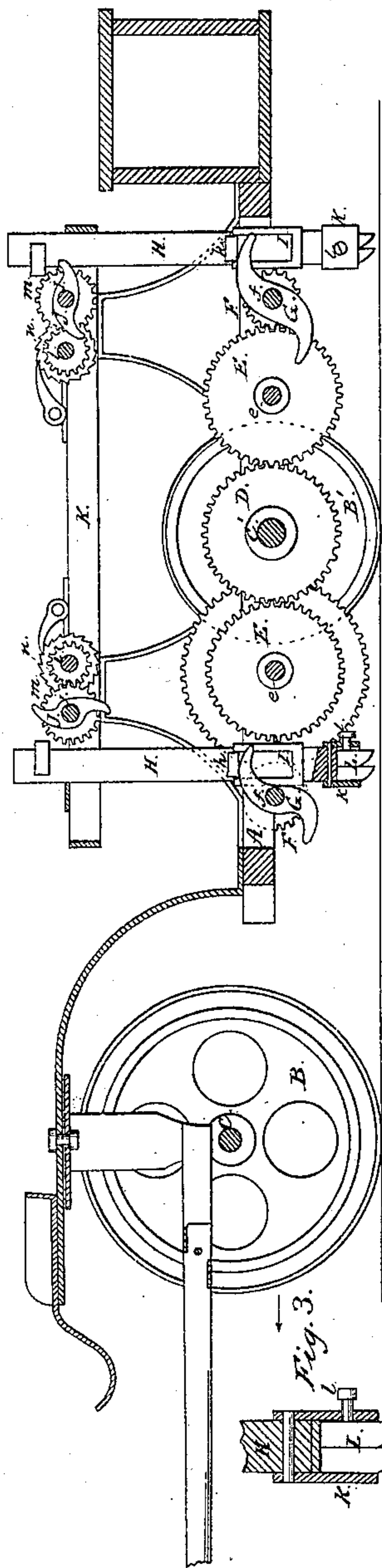


Fig. 2.

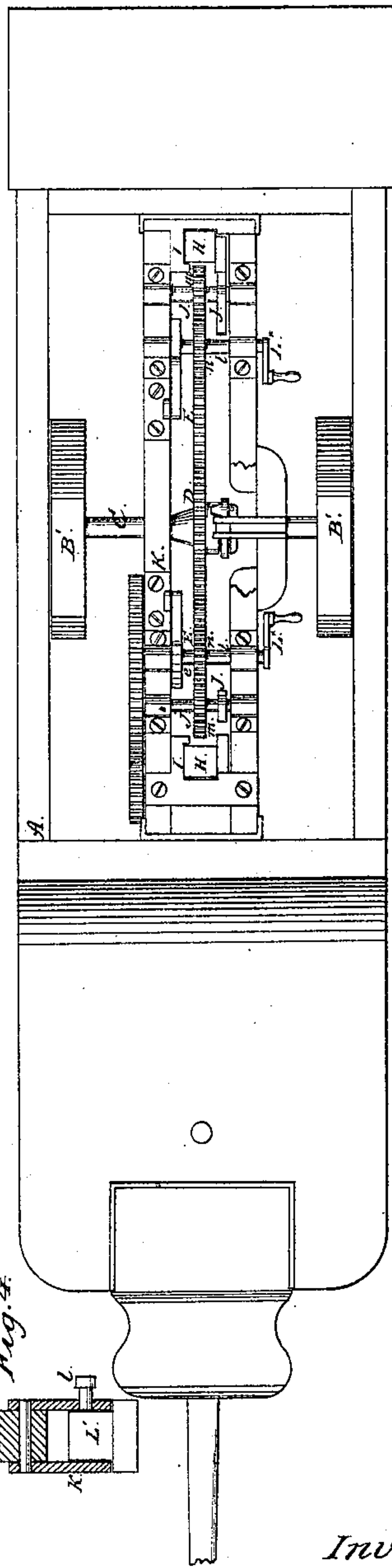


Fig. 3.

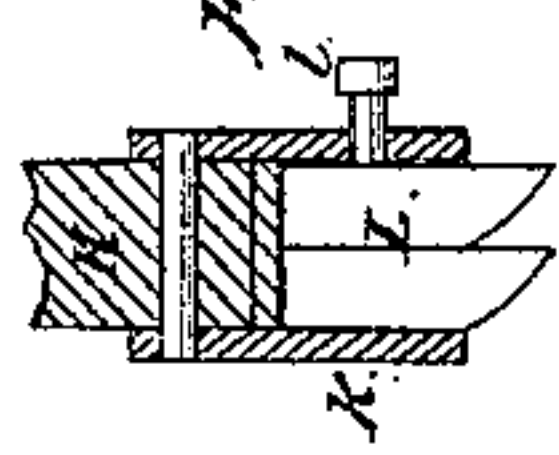
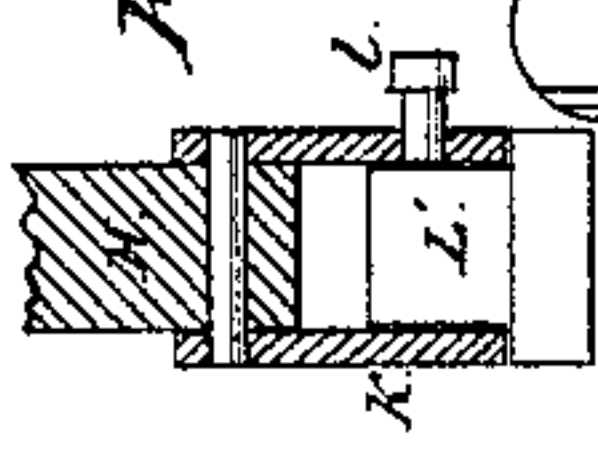


Fig. 4.



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UNITED STATES PATENT OFFICE.

EPHRAIM HAMBUJER, OF NEW YORK, N. Y.

IMPROVED MACHINE FOR ROUGHENING PAVEMENTS.

Specification forming part of Letters Patent No. 43,687, dated August 2, 1864.

To all whom it may concern:

Be it known that I, EPHRAIM HAMBUJER, of the city, county, and State of New York, have invented a new and Improved Machine for Roughening the Pavement in Streets, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a longitudinal vertical section of this invention. Fig. 2 is a plan or top view of the same. Figs. 3 and 4 are detached views of the tool-holders with different tools, in a larger scale than the previous figures.

Similar letters of reference indicate like parts.

This invention consists in the application to a truck of one or more pounders and suitable cams and gear-wheels in such a manner that by the action of said cams the pounders can be raised and dropped automatically by the action of the machine, if desired, or by hand, if the machine is stationary, and by these means the surface of pavements in streets, or flags on sidewalks, can be roughened, or ice can be removed; or, by changing the shape of the tools used in the pounders, the machine may be used for leveling a street or other surface.

A represents the platform of a truck, which is supported by four wheels, B B', two in front and two in the rear, or, if desired, only one wheel may be placed in front. These wheels run on axles C C', and the axle C' of the rear or driving wheels, B', bears a cog-wheel, D, which gears in two cog-wheels, E, mounted on shafts e and these cog-wheels gear in pinions F, which are mounted on shafts f. The shafts f also carry the cams G, which act upon tappets h, projecting from the pounders H. The cams may be made with two arms each, as shown in the drawings, or with only one or more, and the number of gear-wheels between the axle C' and the cam-shafts may be increased or diminished, as circumstances may dictate. The pounders H are guided in suitable boxes, I, secured to the platform of the truck, and as the truck is pro-

pelled in the direction of the arrow marked near it the cams G act on the tappets h, and the pounders are raised and dropped in quick succession.

In order to operate the pounders when the truck is stationary, I use cams J, which are mounted on shafts j. These shafts have their bearings in a frame, K, rising from the platform A, and a rotary motion is imparted to them by the action of cranks L*, secured to shafts l, which connect with the shafts j by gear-wheels m n. By this arrangement the pounders can be dropped repeatedly on the same place, and the pavement of a street or the flags of a sidewalk can be roughened in a short time and with comparatively little labor. The lower ends of the pounders form sockets k, which are pivoted to the stems, as clearly shown in Figs. 3 and 4, so that they can accommodate themselves to the sinuosities of the ground, and allow the tools to come down flat under all circumstances. The tools L L' are secured in the sockets by set-screws l, and if chisel shaped tools L are used the depth of the socket is regulated by plates o, which are placed in the same, according to the length of the tools. If the tools are flat and provided with a shoulder, as shown at L', these plates can be dispensed with.

The tools L are particularly used for the purpose of roughening the pavement in a street, or the flags of a sidewalk, and they may also be used for loosening the ice in streets or on sidewalks.

The tools L' are particularly intended to level the surface of a street or any other surface before or after the paving-stones are put down.

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

The adjustable hinged sockets k, applied to the pounders H, in combination with the tools L or L', constructed and operating substantially as and for the purpose shown and described.

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Witnesses:

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