

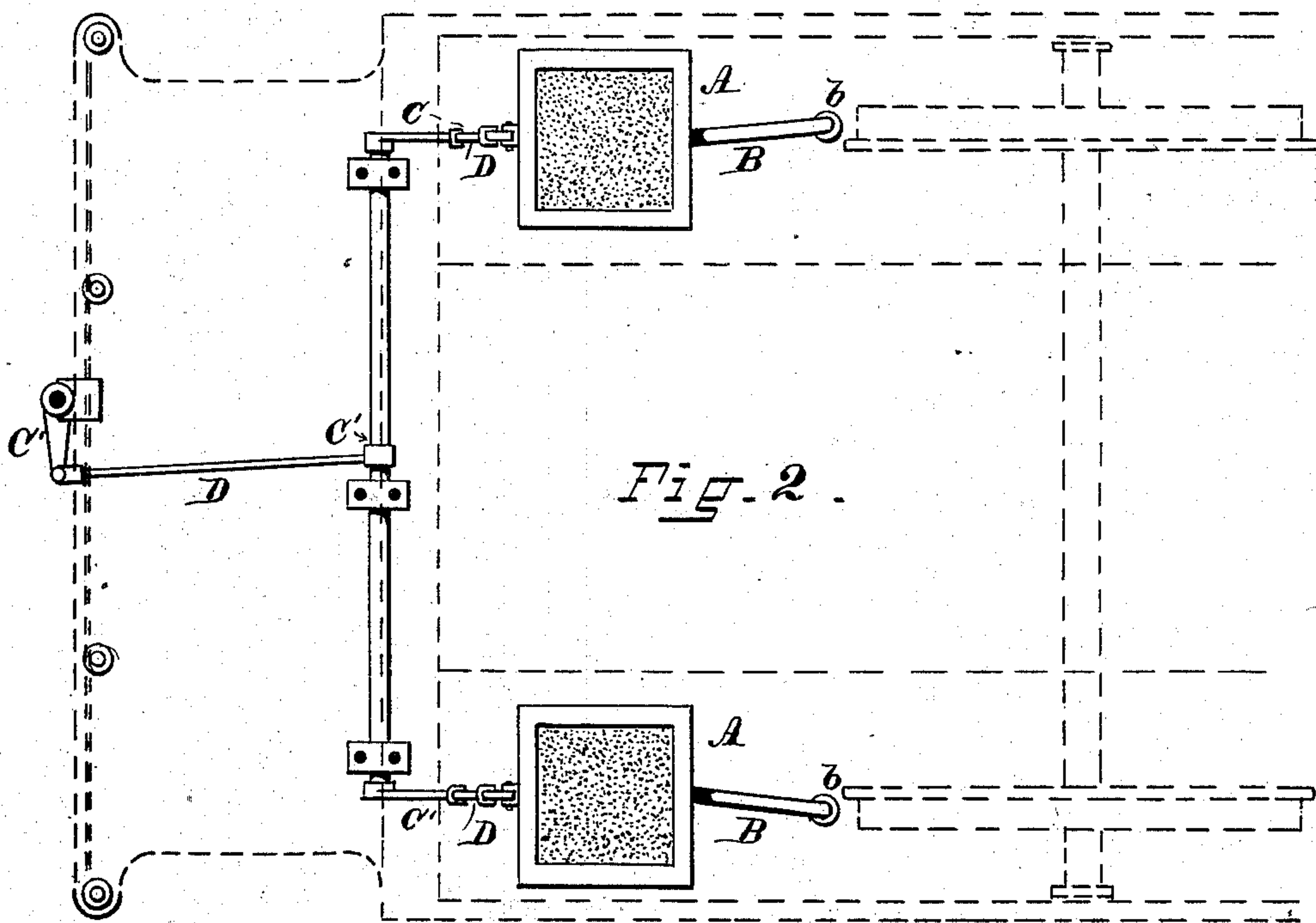
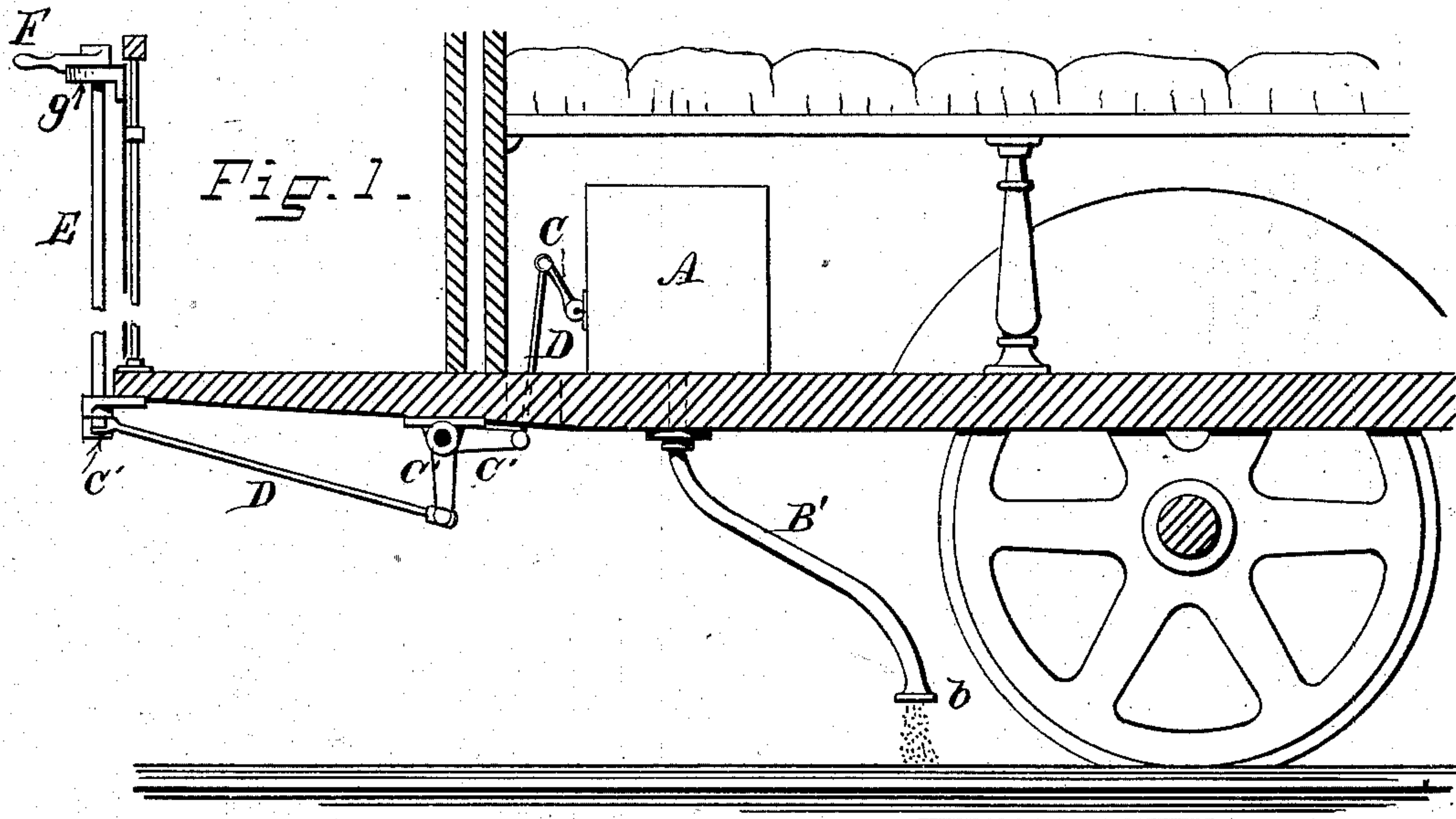
(No Model.)

3 Sheets—Sheet 1.

G. H. HATHAWAY.
SAND BOX FOR STREET CARS.

No. 291,341.

Patented Jan. 1, 1884.



WITNESSES:

Geo. Davis
Geo. Hathaway

INVENTOR:

George H. Hathaway

(No Model.)

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Fig. 3.

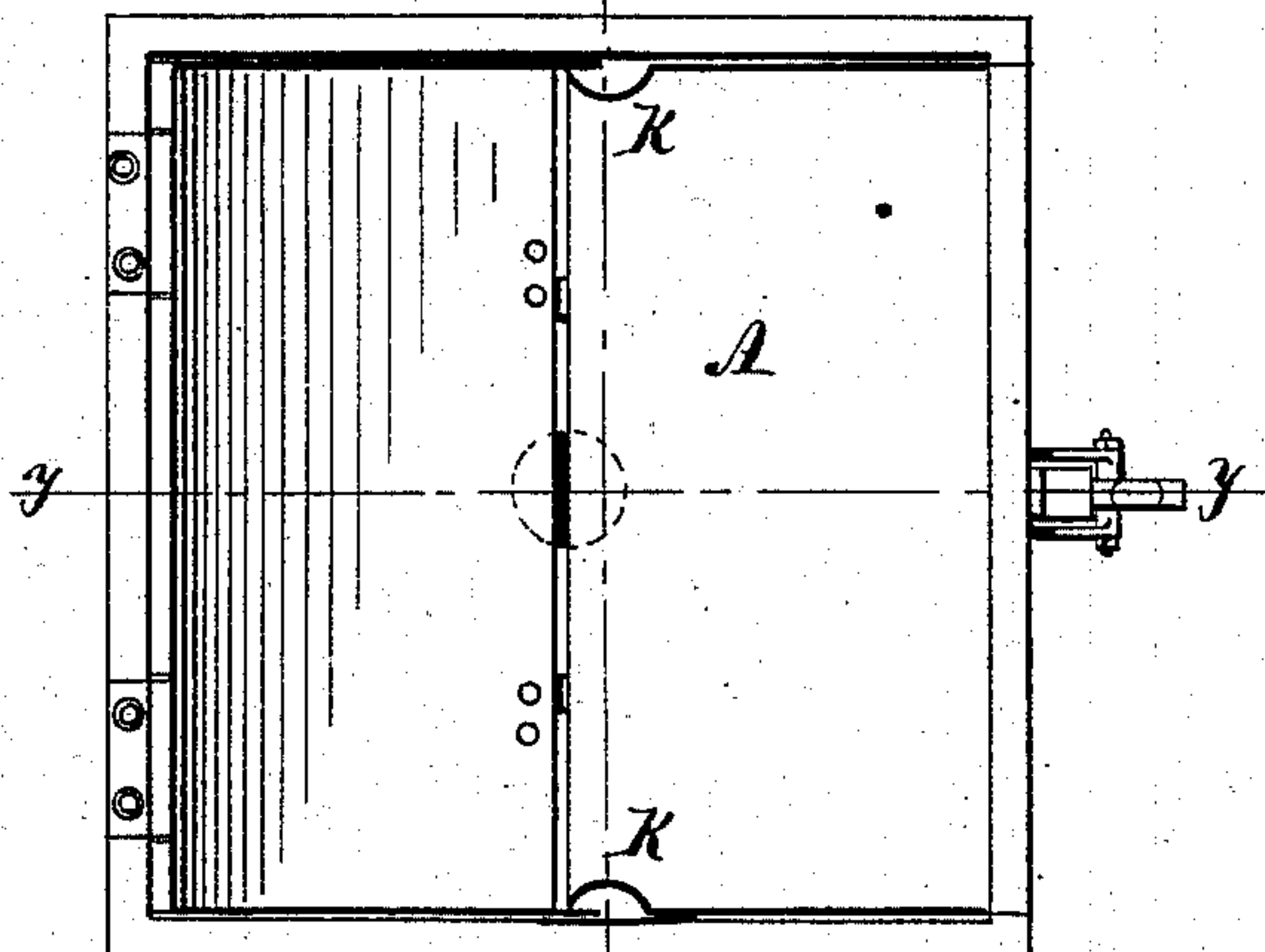


Fig. 4

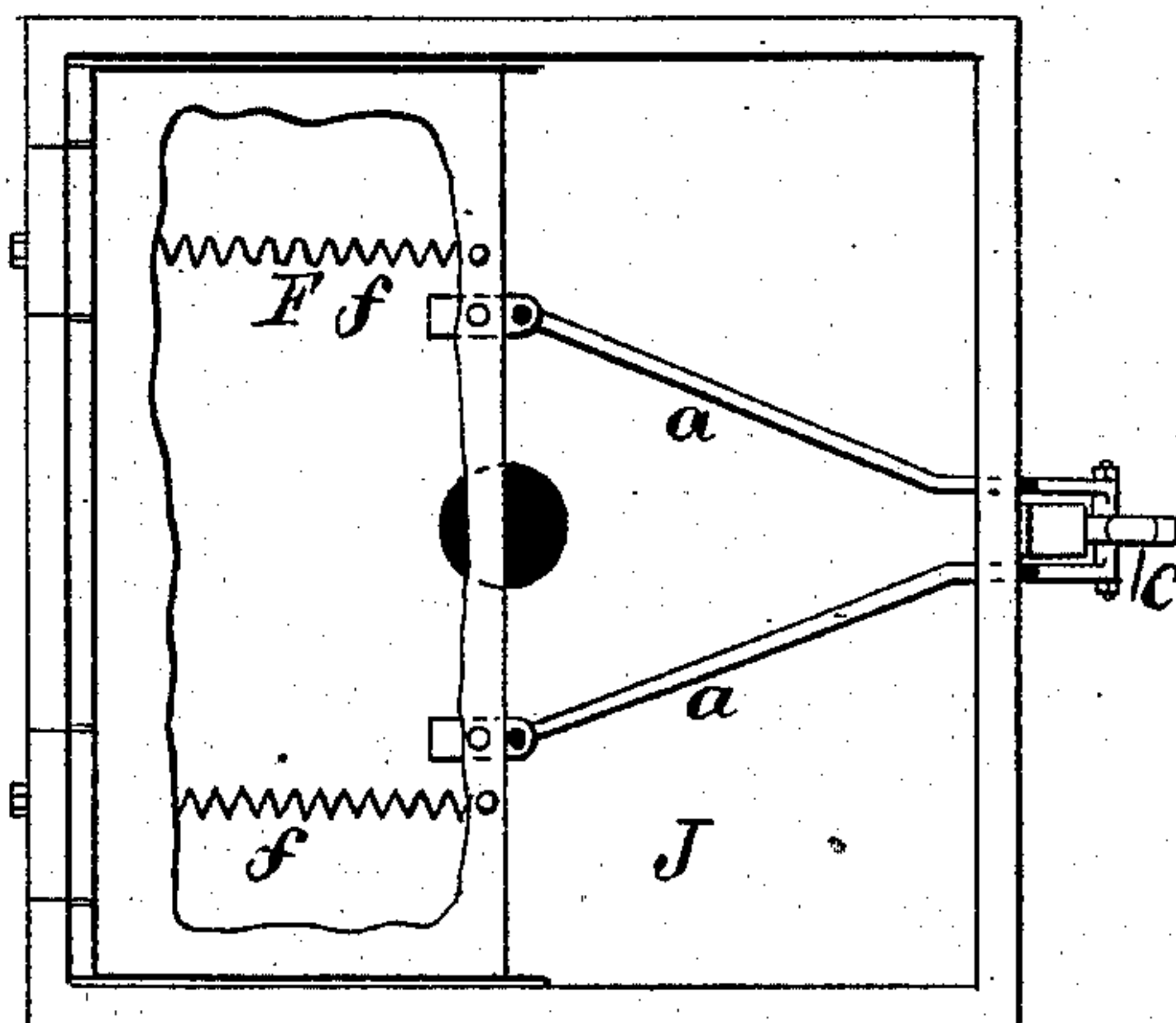
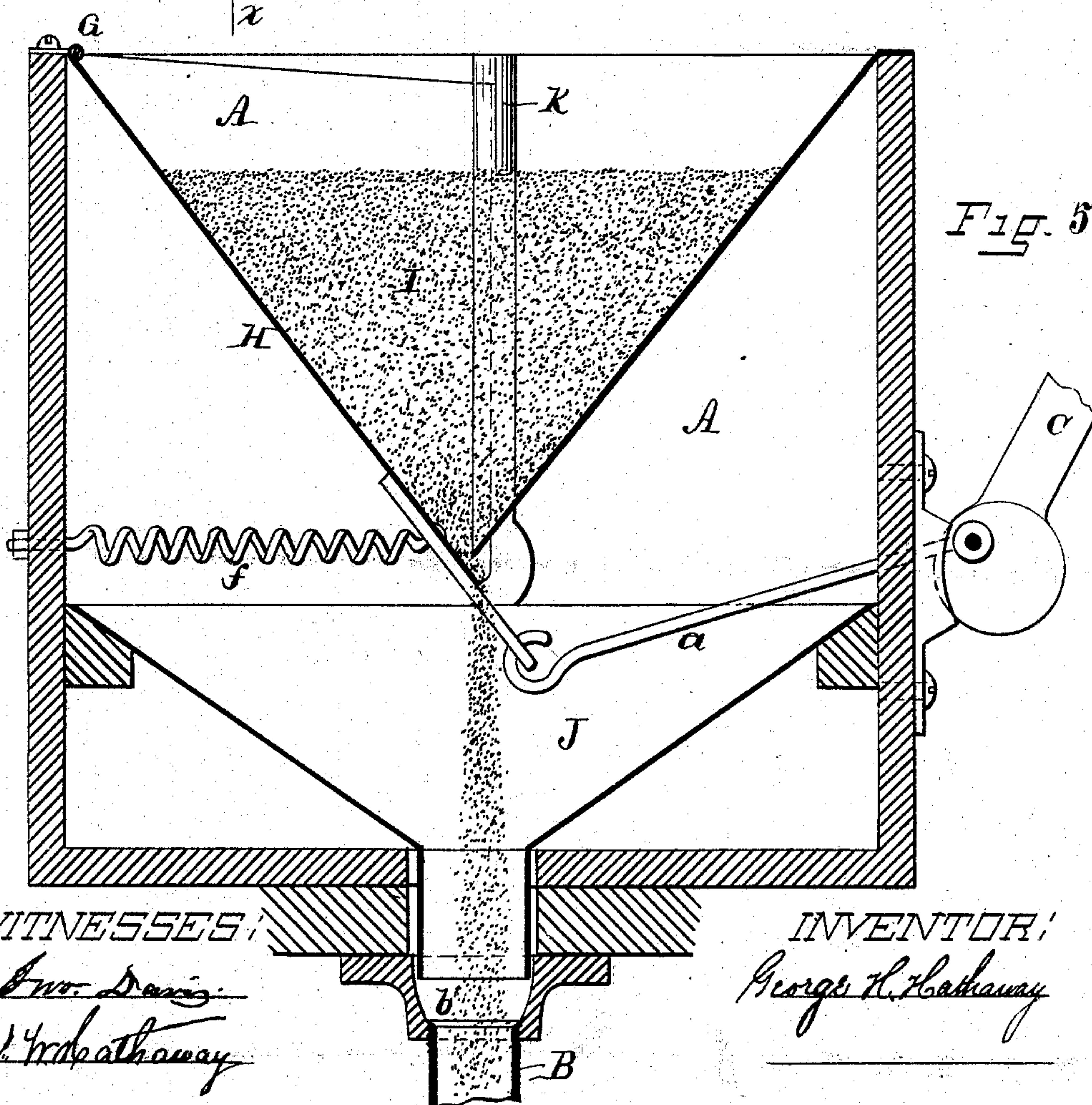


Fig. 5.



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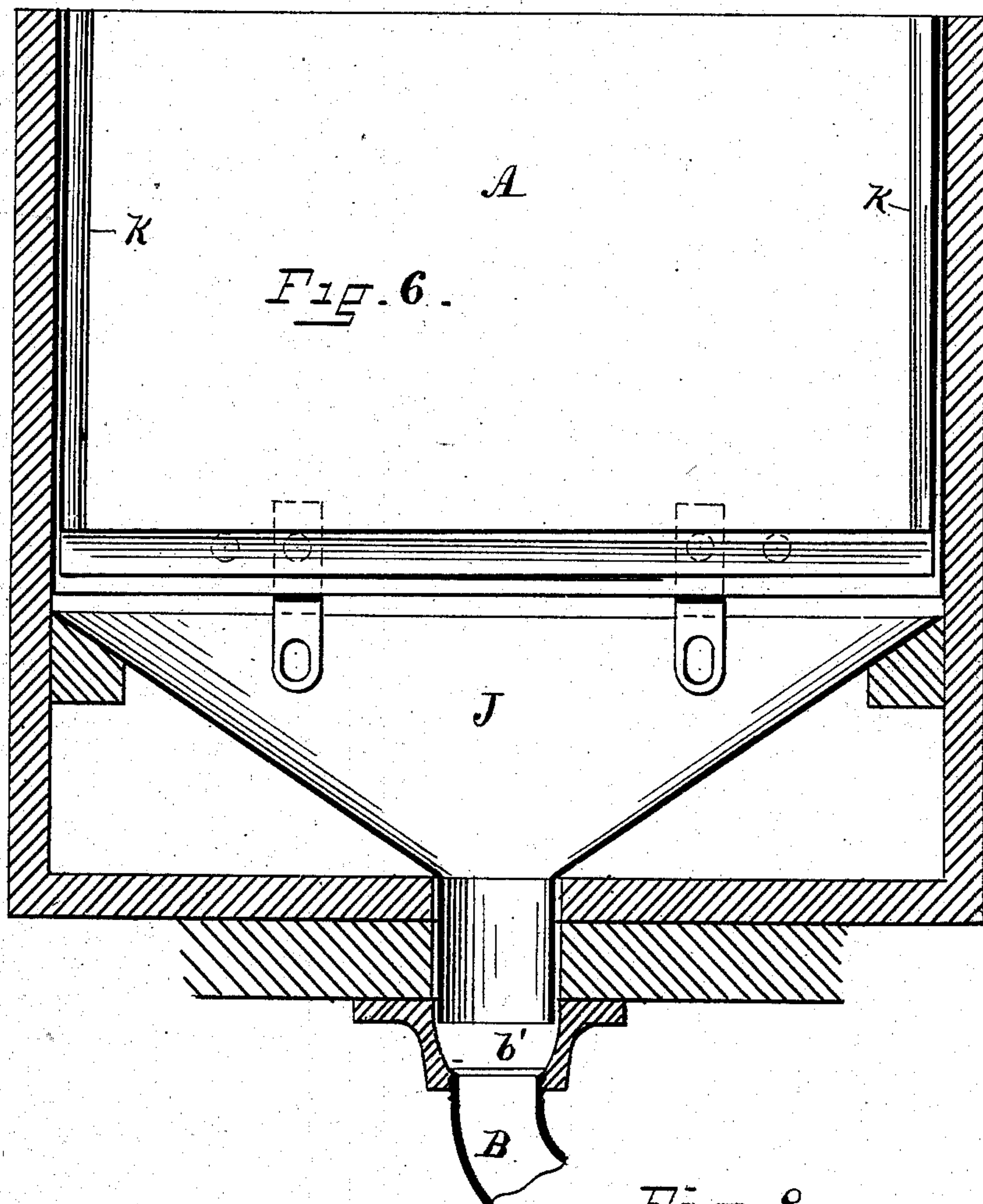


Fig. 8 -

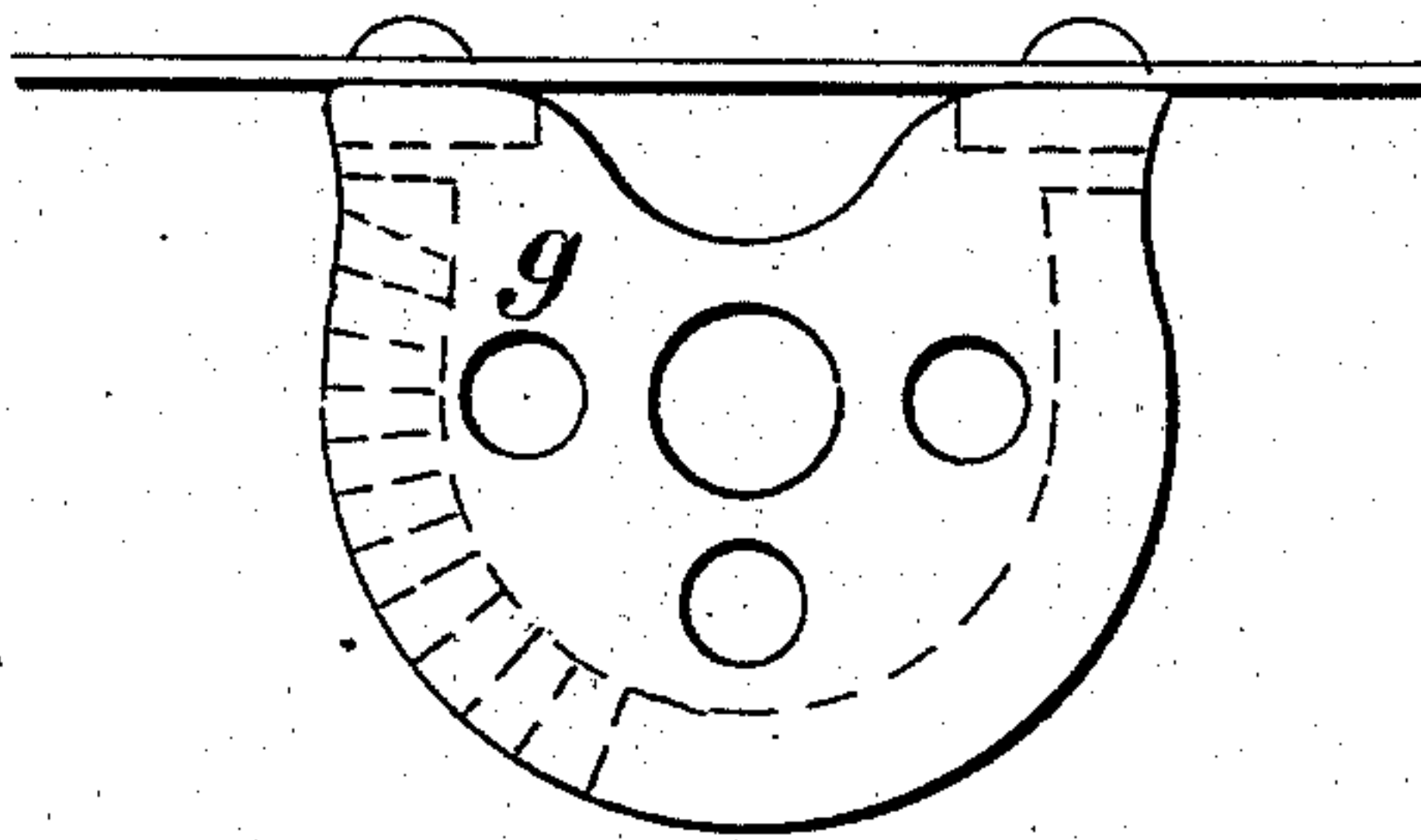
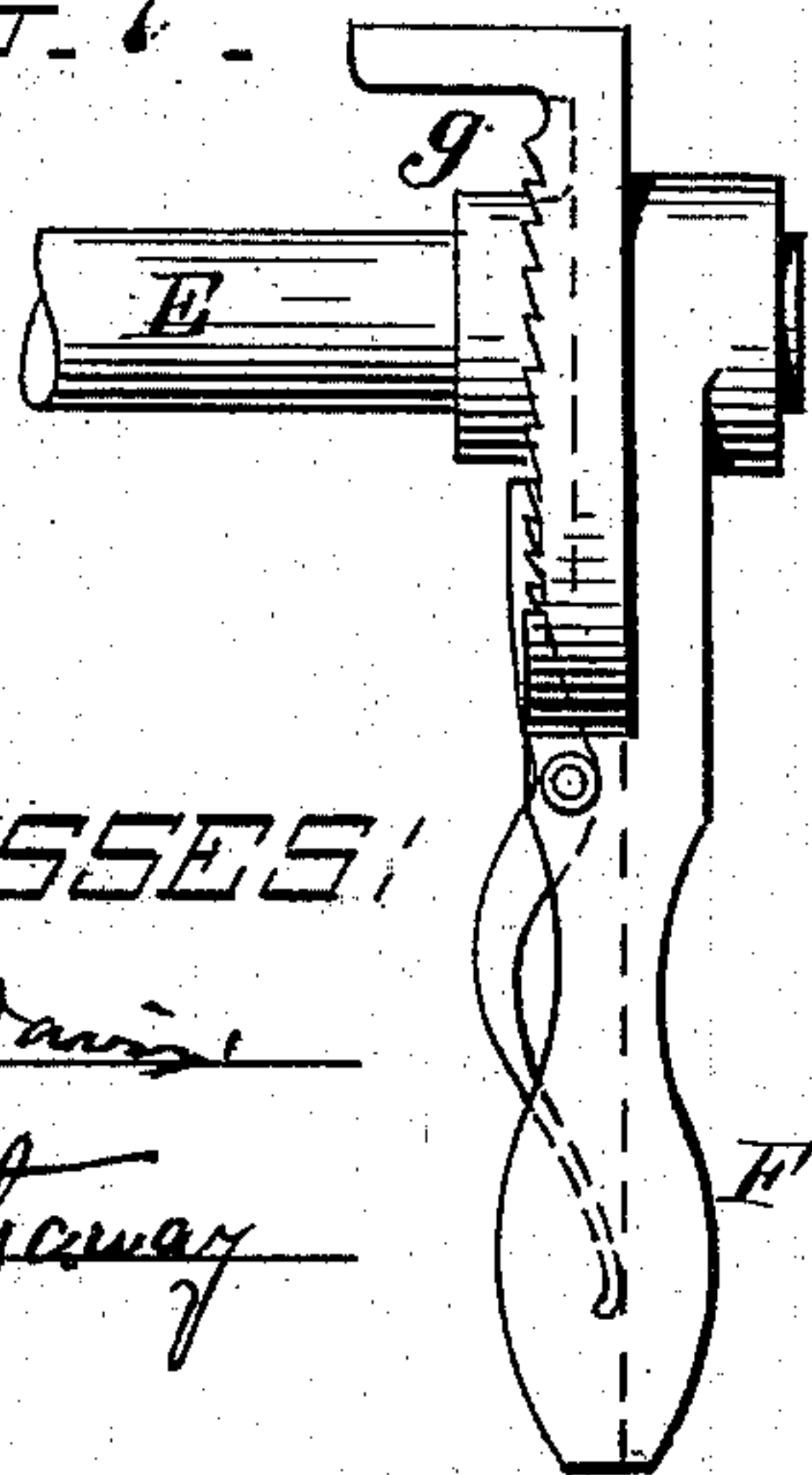


Fig. 7 -



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE H. HATHAWAY, OF FAIRHAVEN, MASSACHUSETTS.

SAND-BOX FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 291,341, dated January 1, 1884.

Application filed November 16, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. HATHAWAY, a citizen of the United States, residing at Fairhaven, in the county of Bristol and State of Massachusetts, have invented new and useful improvements in sand-boxes for equally scattering sand on the rails of railroads, to prevent the wheels from slipping when the brakes are applied.

My invention consists in a sand-box with gate, tunnel, and a hopper operated by cams, shafts, cranks, springs, and rods, with bell-shaped-mouth distributing-pipes for distributing the sand equally on the rails and to prevent the pipes from being choked.

Figure 1 is a side elevation of the sand-box as seen in operation when applied to a horse-car. Fig. 2 is a plan view of Fig. 1. Fig. 3 is a plan view, showing the stops which prevent the sand from passing the valve. Fig. 4 is a reversed view of the cams and gate, showing the springs for operating the gate. Fig. 5 is a transverse section of Fig. 3 on line *y y*, showing spring, gate, rod, and cam for operating. Fig. 6 is Fig. 5 reversed, showing where the rods connect to the valve. Fig. 7 is a section showing the ratchet and handle for operating the distributing-valve. Fig. 8 is a reverse view of Fig. 7.

A is the sand-box, which may be made of wood or metal, of any convenient size. These sand-boxes may be located under the seats of a horse-car, on both sides of the car, and between or in front of the wheels.

B is the delivery-pipe for conducting the sand from the box A to the rail, with bell-shaped mouth *b*.

C is a cam, and C' C' C' are crank-arms.

D D are rods by which the crank-arms and cam are operated.

E is a shaft.

F is a handle for operating the gate.

G is a hinge-joint, which permits the side or valve H to be swung off and opened the length of the box.

I is the sand in the box.

J is a tunnel, which has a large mouth, and resembles the grocer's tunnel for dry groceries.

K K are concave pieces of metal, and prevent the sand from passing the end of the valve.

a a are rods connecting the valve and cam.

b b are the bell-shaped mouths of pipes.

b' is a concave flange, and prevents the conducting-pipe B from being choked with mud or sand in wet and freezing weather.

Operation: The within-described sand-box being constructed with gate, tunnel, flange-pipes, and other devices, as herein described, its operation may be noted as follows: By revolving handle F the bottom of the triangular box A, by means of the shafts, rods, and cams, is opened the length of the box, and the sand falls into the tunnel J, and its gravity causes it, in striking the inner surface of the tunnel, to be separated and shaken, scattered, and whirled in the tunnel, falling from it equally distributed through the conducting-pipes onto the tread of the rail, as will be seen. The ratchet *g* secures the handle F, and, through the connections, the valve H in any desired position.

In this invention I do not confine myself to any particular proportions of box or tunnel or other devices for operating or for sanding railroad-rails, or for scattering sand, as any other suitable substance may be used instead of sand.

What I claim as my invention, and desire to secure by Letters Patent, is—

The within-described sand-box for sanding the rails of railroads, constructed with gate, hopper, and tunnel, as herein shown, located under the seats, between or before the wheels, over the rails, with other devices for operating it, all combined and operating as and for the purpose set forth and described.

GEORGE H. HATHAWAY.

Witnesses:

JNO. DAVIS,

JAS. W. HATHAWAY.