

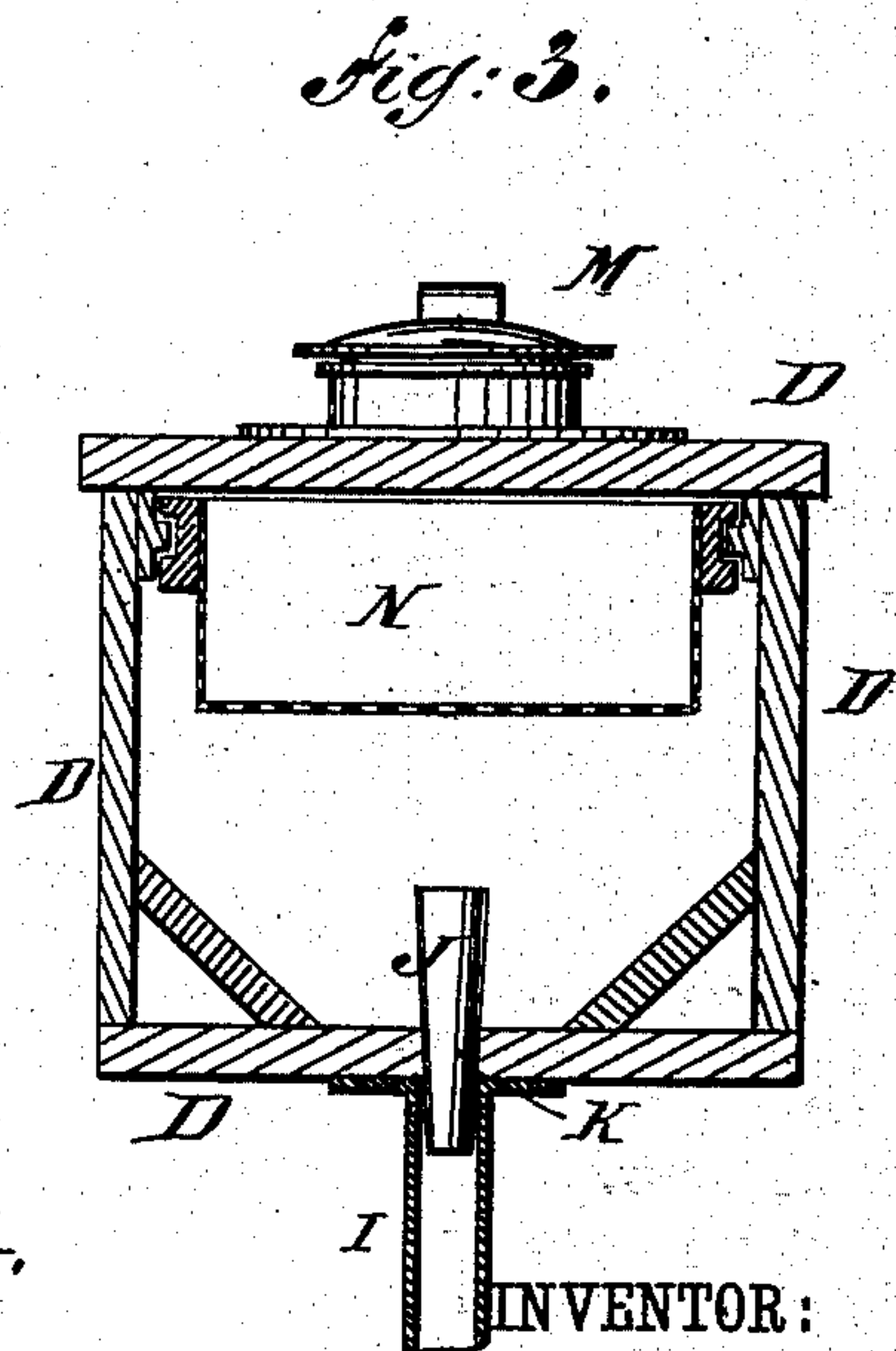
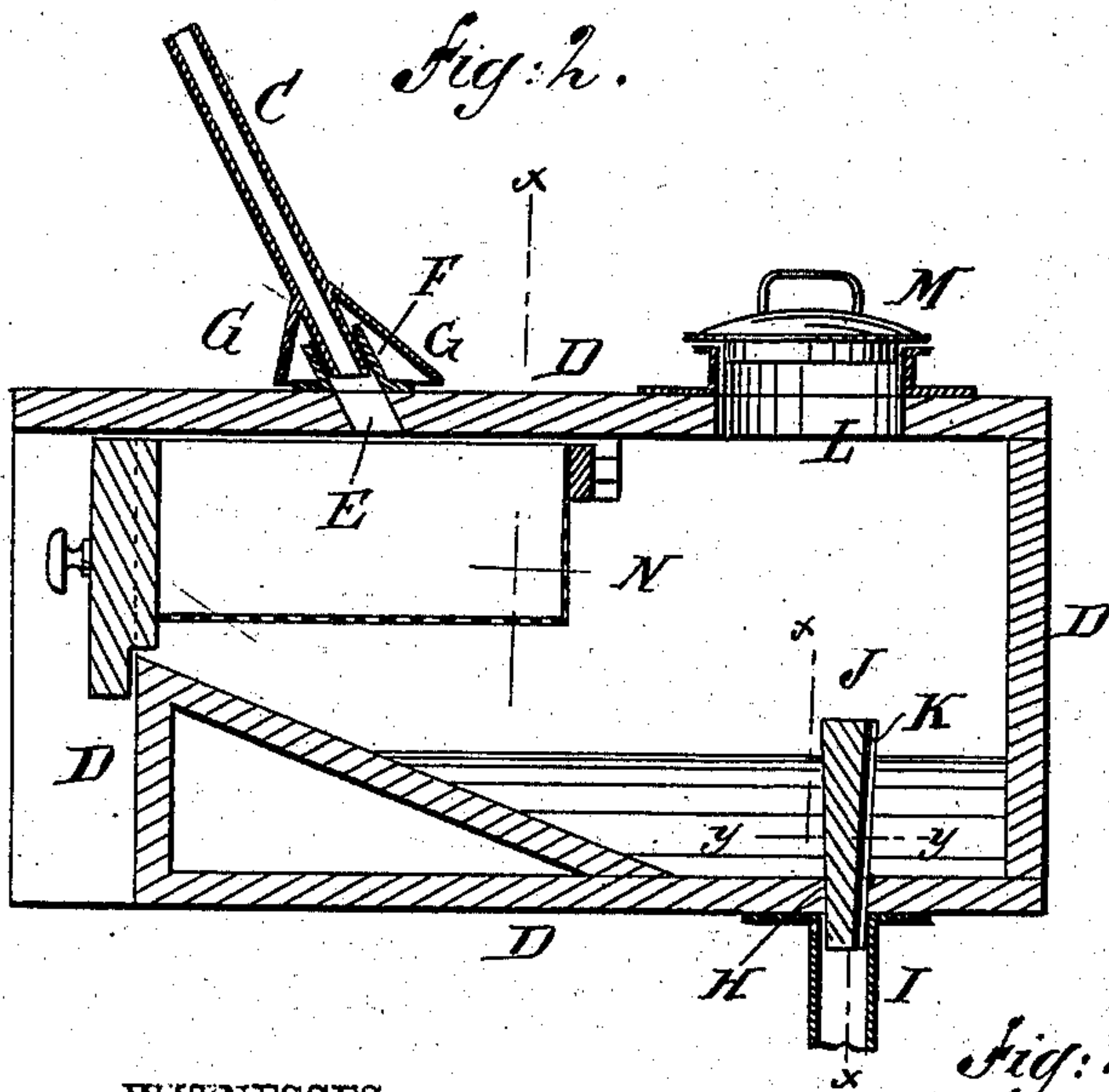
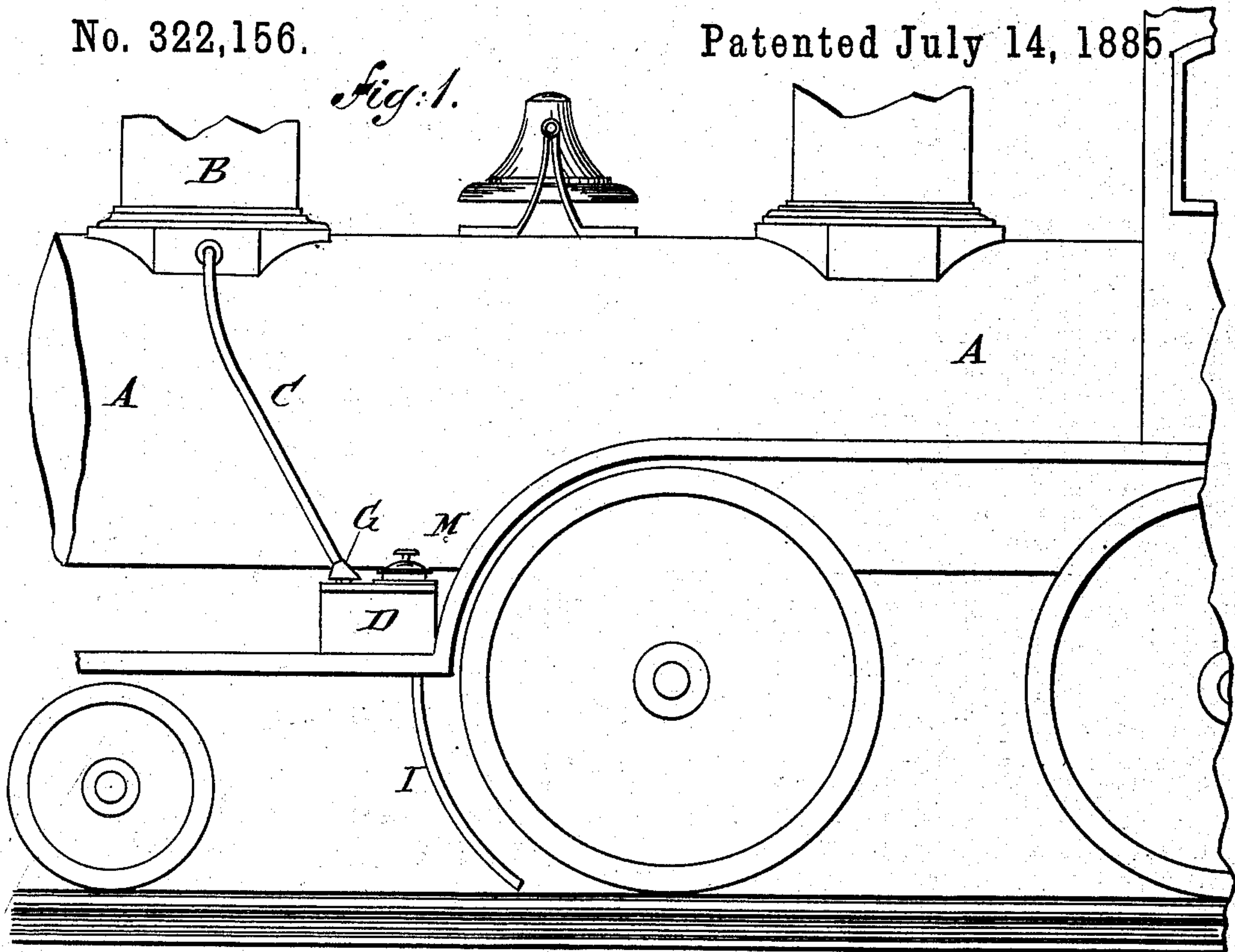
(No Model.)

H. R. CAMPFIELD.

SAND FEEDER FOR LOCOMOTIVES.

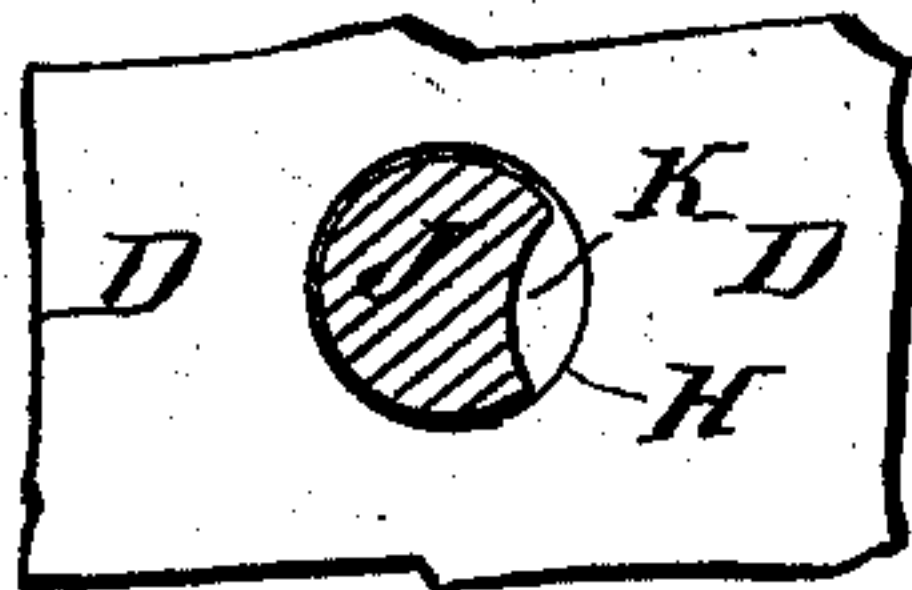
No. 322,156.

Patented July 14, 1885



WITNESSES:

*Chas. Nida*  
*C. Bedgwick*



INVENTOR:

*H. R. Campfield*  
BY *Munn & Co*  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

HAMPTON R. CAMPFIELD, OF SUSQUEHANNA, PENNSYLVANIA.

## SAND-FEEDER FOR LOCOMOTIVES.

SPECIFICATION forming part of Letters Patent No. 322,156, dated July 14, 1885.

Application filed February 6, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, HAMPTON R. CAMPFIELD, of Susquehanna, in the county of Susquehanna and State of Pennsylvania, have  
5 invented certain new and useful Improvements in Sand-Feeders for Locomotives, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying  
10 drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of my improvement shown as applied to a locomotive, part  
15 of the locomotive being broken away. Fig. 2 is a sectional side elevation of my improvement. Fig. 3 is a sectional end elevation of the same, taken through the broken line *x x*, Fig. 2. Fig. 4 is a plan view of a part of the  
20 bottom of the same, the plug being shown in section through the line *y y*, Fig. 2.

The invention consists of the combinations of parts and their construction, substantially as hereinafter fully set forth and claimed.

25 A represents an ordinary locomotive. B represents the sand-box usually carried by a locomotive, and C is a discharge-pipe.

30 D is a feed-box, which is secured to the foot-board or other convenient part of the locomotive A in front of the drive-wheels.

In the top of the feed-box D is formed an inlet-opening, E, with which is connected a short inlet-tube, F, of such a size that the end of the discharge-pipe C will enter it readily  
35 and slide freely therein.

The inward movement of the discharge-pipe C within the inlet-tube F is limited, and the joint is protected by a funnel-shaped flange-cap, G, attached to the said discharge-pipe C,  
40 and which surrounds the said inlet-tube F and comes in contact with the top of the feed-box D.

In the bottom of the feed-box D is formed an outlet-opening, H, in which is secured the upper end of the outlet-pipe I, which passes  
45 down in front of the drive-wheel of the locomotive A, and terminates near the rail of the track.

In the outlet-opening H is inserted a plug,

J, in one side of which is formed a groove, K, 50 of such a size as to permit a stream of sand of the desired amount to flow out into and through the outlet-pipe I. The amount of sand discharged is regulated by using plugs J with larger or smaller grooves K. 55

In the top of the box D, directly over the outlet-opening H, is formed a large opening, L, to admit a hand for removing, inserting, or changing the plug J. The opening L is closed  
60 by a cover, M. 65

In the box D, directly under the inlet-opening E, is placed a drawer, N, the bottom sides and inner end of which is formed of woven wire, and its outer end is solid. The upper edge of the drawer is strengthened by bars attached to it, the side ones of which are tongued  
65 to slide on grooved bars attached to the sides of the box D. 70

The drawer N is designed to retain any pebbles, coarse sand, or refuse that would be  
70 liable to stop or clog the outlet-groove K in the plug J. 75

With this construction the sand will be delivered upon the rails regularly and in uniform quantities. 80

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

1. In a sand-feeder, the combination, with the sand-box B and its discharge-pipe, of the feed-box D, having inlet and outlet openings, and provided with a hand-hole, L, having cover M, and a plug, J, having side groove, K, substantially as herein shown and described, whereby the sand will be delivered  
85 regularly and in uniform quantities, as set forth. 90

2. In a sand-feeder, the combination, with the feed-box D, the inlet-tube F, and the discharge-pipe C, of the cap-flange G, substantially as herein shown and described, whereby the inward movement of the discharge-pipe is limited and the joint is protected, as set forth.

HAMPTON R. CAMPFIELD.

Witnesses:

CHAS. F. CURTIS,

W. W. LIVINGSTON.