

No. 860,287.

PATENTED JULY 16, 1907.

J. F. FLEWWELLING.  
TWYER.

APPLICATION FILED APR. 19, 1906.

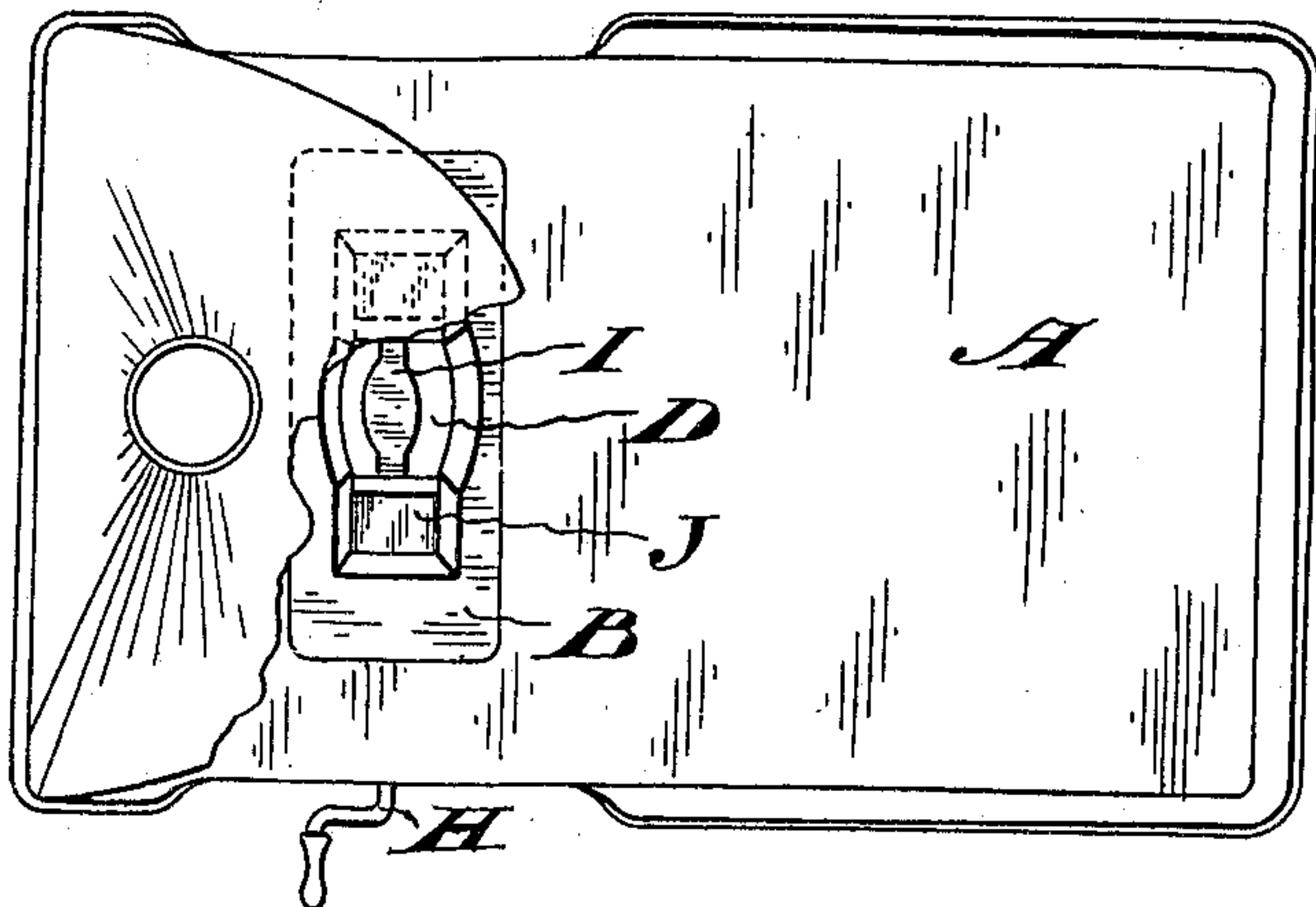


Fig. 1.

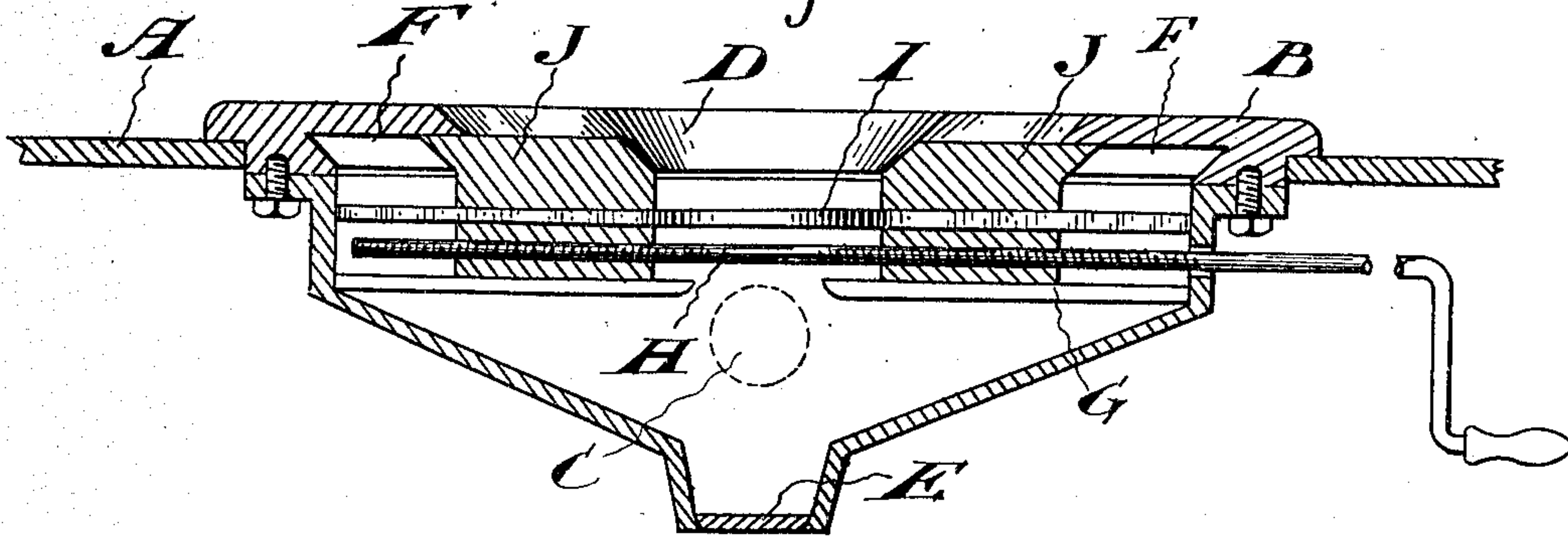


Fig. 2.

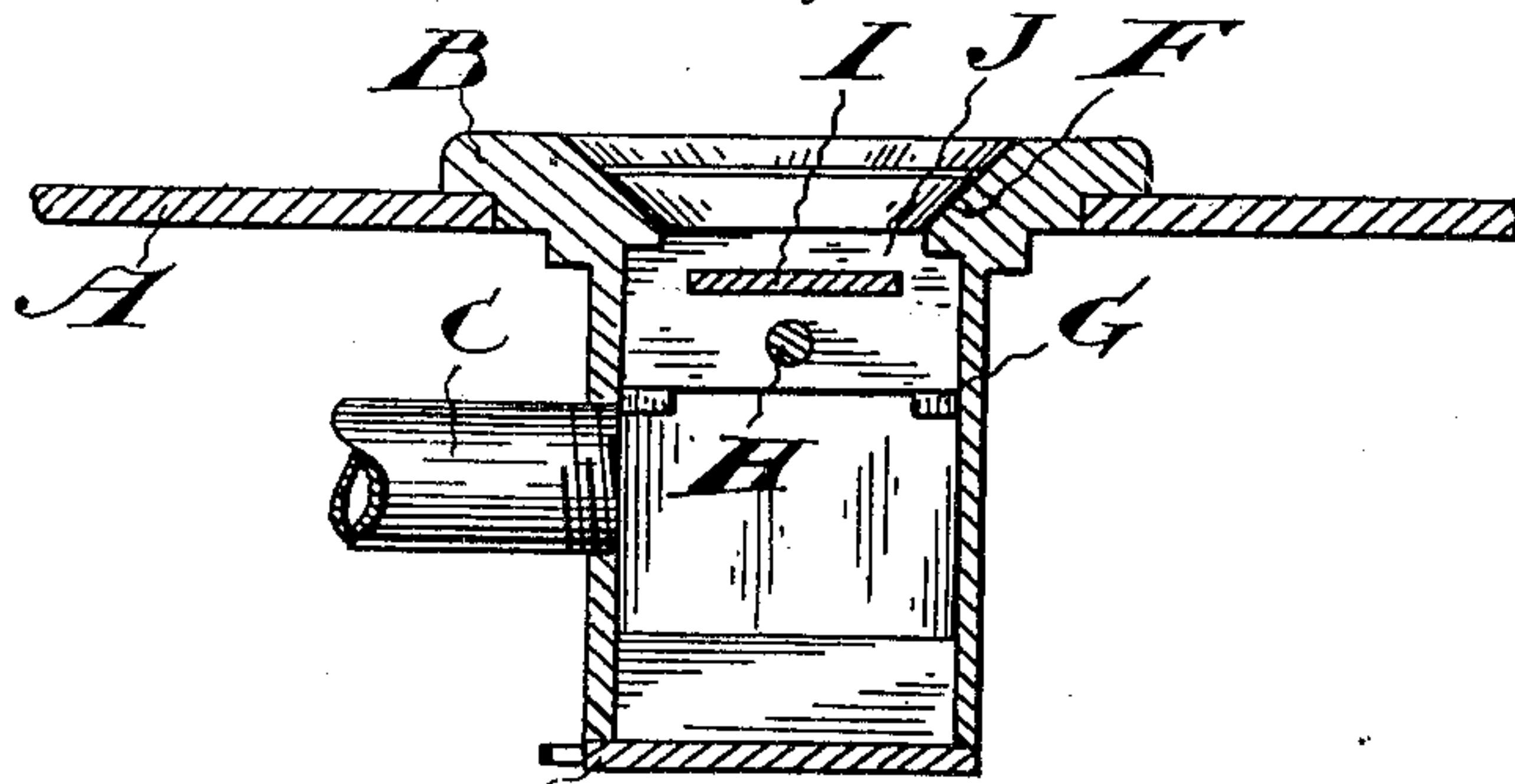


Fig. 3.

WITNESSES:

*Chas. B. C.*  
*F. J. Kendrick*

INVENTOR.

*James F. Flewwelling*  
BY *Ridout & Mayhew*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JAMES FRANCIS FLEWWELLING, OF KENTON, MANITOBA, CANADA.

## TWYER.

No. 860,287.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed April 19, 1906. Serial No. 312,722.

*To all whom it may concern:*

Be it known that I, JAMES FRANCIS FLEWWELLING, of Kenton, in the Province of Manitoba, Canada, have invented certain new and useful Improvements in  
5 Twyers, of which the following is a specification.

My object is to devise a twyer for forges which will give better control of the blast and the fire than those ordinarily employed, and my invention consists essentially of a twyer having its blast opening adjustable in  
10 length, and likewise longitudinally adjustable to bring it under any desired part of the fire above, substantially as hereinafter more specifically described, and then definitely claimed.

Figure 1 is a plan view of a forge provided with my  
15 improved twyer. Fig. 2 is a longitudinal section of a twyer on a larger scale. Fig. 3 is a cross section at right angles to Fig. 2.

In the drawings like letters of reference indicate corresponding parts in the different figures.

20 Referring particularly to Fig. 1, A represents a forge and B the casing of the twyer fitted into the bottom of the forge in any ordinary manner, the construction of the casing being better illustrated in Figs. 2 and 3.

In the side of the twyer casing is formed the air inlet  
25 C, in the top of the casing a longitudinal blast opening D, and in its bottom an ash opening, closed by the removable slide E. Above the ash opening the casing is preferably trough shaped, the bottom of the casing sloping down on each side to the trough. Below the  
30 blast opening are located two sliding gates J longitudinally movable to restrict the said opening. These gates are preferably shaped to engage the guides F formed at each side of the casing. Their lower edges may also engage the flat guides G formed at each side  
35 of the casing.

The gates are moved by means of a threaded rod H suitably engaging each of the gates. The rod is preferably right and left hand threaded, as shown, in order that the gates may be moved simultaneously. The  
40 end of this rod extends outside the casing, and is preferably formed with a crank handle, as shown. As this

rod is not connected in any way with the casing it follows that not only may the gates be adjusted closer together or further apart but that they may also be moved as a pair to bring the blast under any desired part of  
45 the fire above.

In order to prevent the fire dropping through I employ a longitudinal bar I, which passes through suitable slots formed in the sliding gates. This bar therefore effects its purpose without interfering with the free  
50 movement of the sliding gates.

The advantages of my device are many. I can with ease obtain any desired size of blast opening, vastly increasing the convenience and usefulness of the forge to which the twyer is applied. I am also enabled to  
55 bring the blast opening under any desired part of the fire within the limits of adjustment of the apparatus. This enables me to blow up any part of the fire I may desire, which is in itself a great advantage, even independent of the adjustment of the size of the opening.  
60 While most of the fire and ashes is held up by the bar I, any ashes and dust which may fall through will be collected in the bottom of the casing, and may be removed through the ash opening.

What I claim as my invention is:

1. A twyer for forges having an elongated blast opening; two sliding gates longitudinally movable to restrict said opening; and a longitudinal bar central of the opening, adapted to prevent fuel dropping through the twyer, substantially as described. 65
2. A twyer for forges having an elongated blast opening; two sliding gates longitudinally movable to restrict said opening; and a longitudinal bar on which the gates slide central of the opening, and adapted to prevent fuel dropping through the twyer, substantially as described. 70
3. A twyer for forges having an elongated blast opening; two sliding gates longitudinally movable to restrict said opening; and a right and left hand threaded rod suitably engaging said gates whereby they may be adjusted to and from one another or shifted as a unit, substantially as described. 75

Kenton, Manitoba, March, 1906.

JAMES FRANCIS FLEWWELLING.

Signed in the presence of—

M. B. JACKSON,  
CHAS. OAKES.