

(No Model.)

F. D. CLARK & F. RICE.
AUTOMATIC CUT-OFF.

No. 406,877.

Patented July 16, 1889.

Fig. 1.

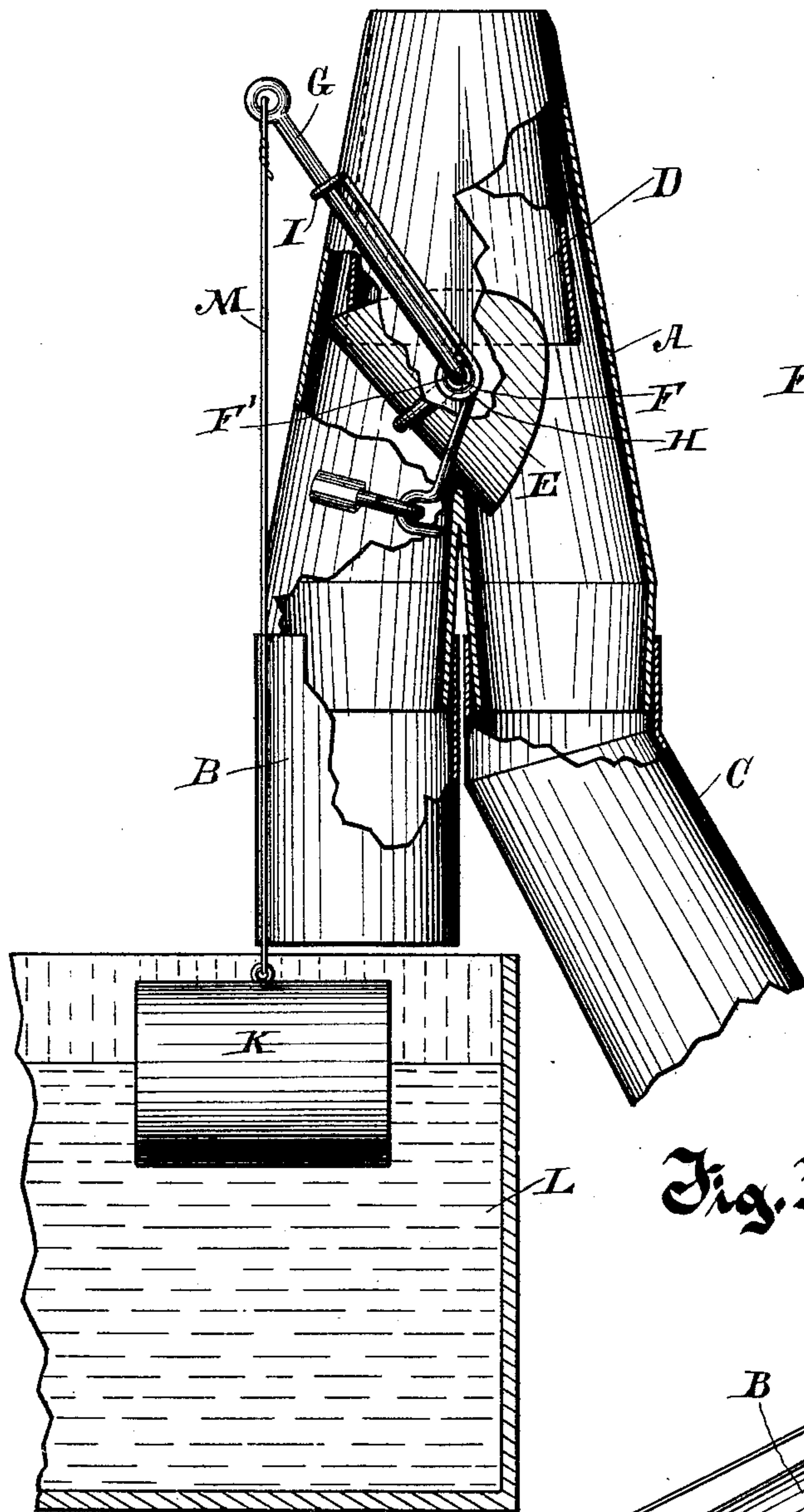


Fig. 2.

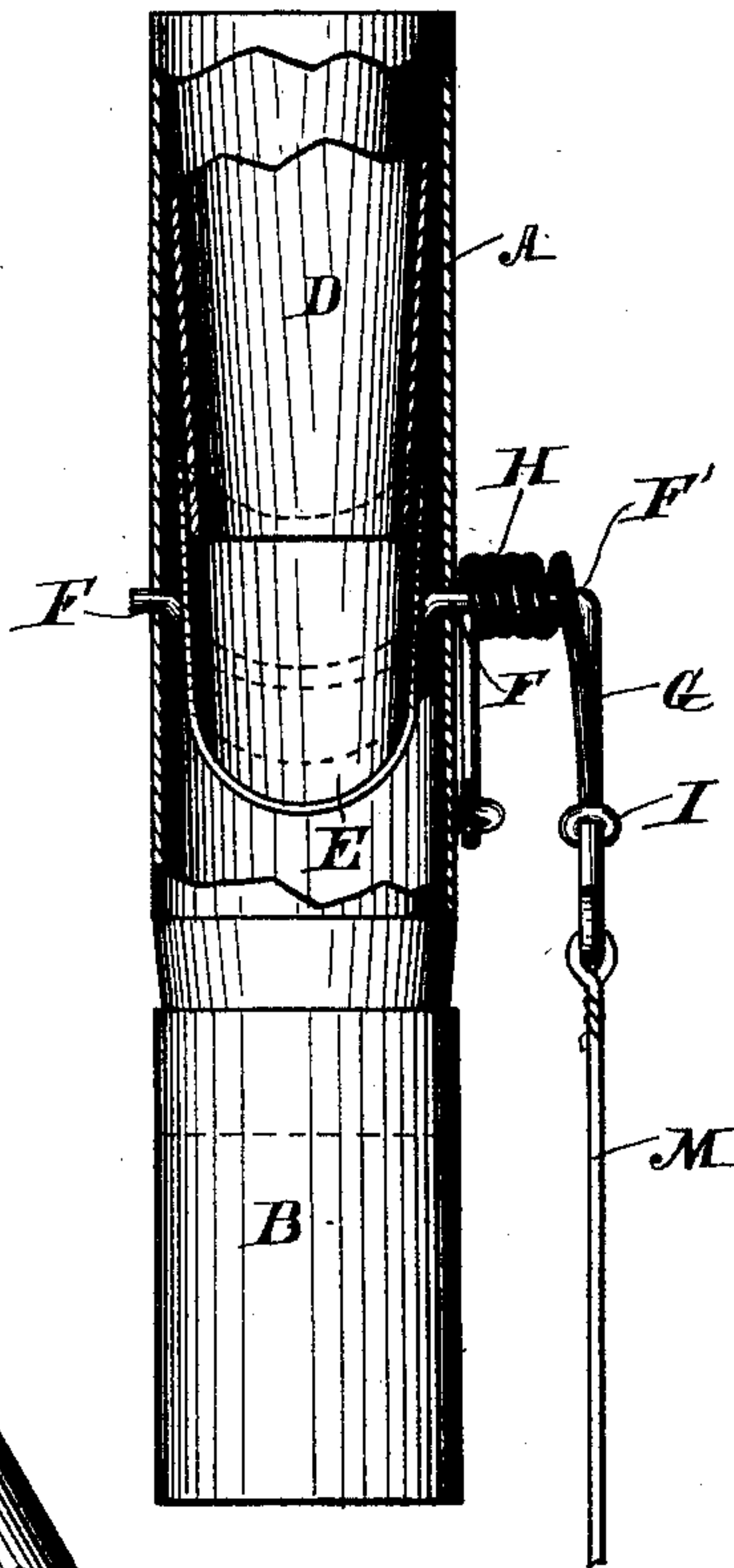
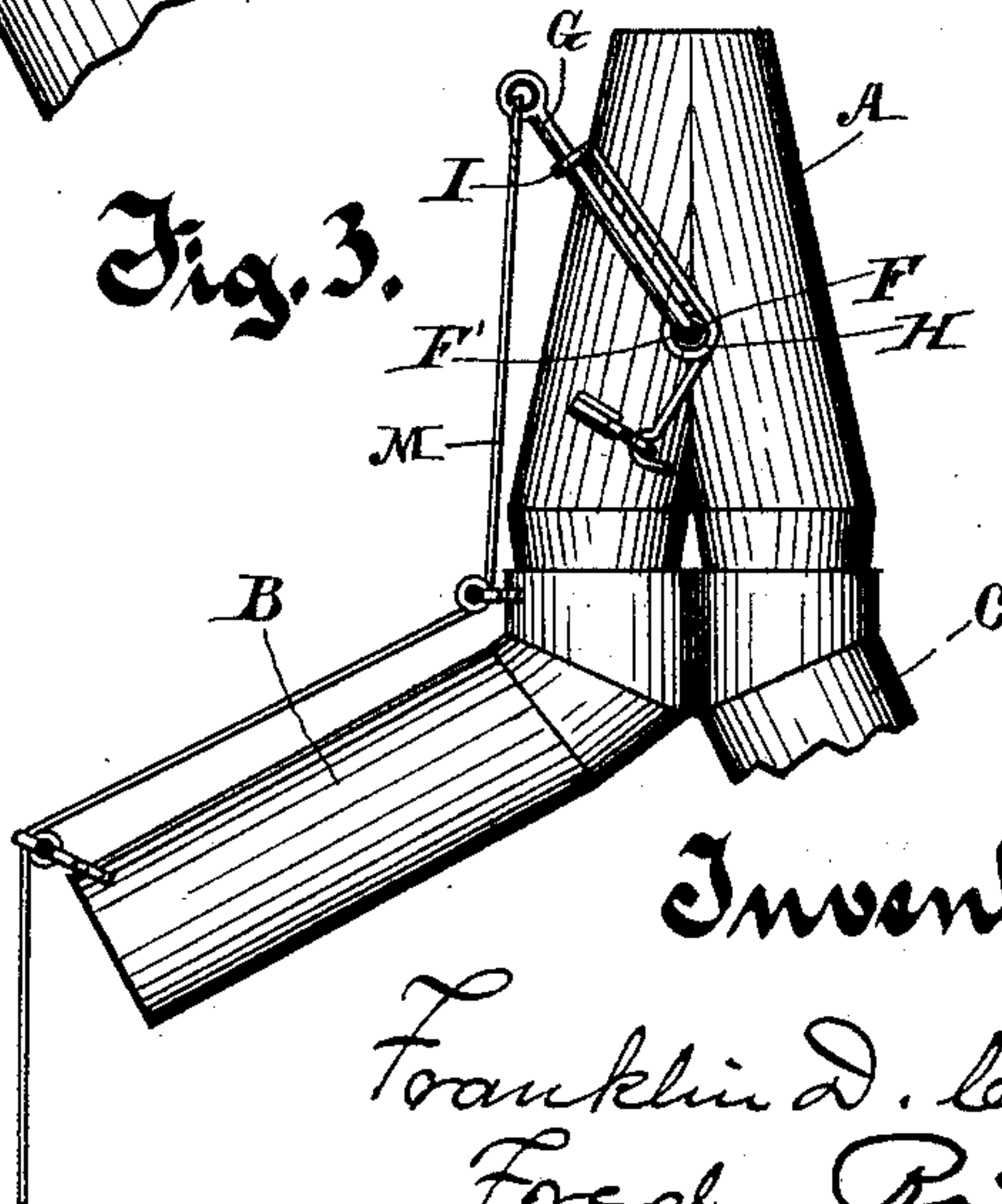


Fig. 3.



Witnesses.

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AUTOMATIC CUT-OFF.

SPECIFICATION forming part of Letters Patent No. 406,877, dated July 16, 1889.

Application filed April 8, 1889. Serial No. 306,327. (No model.)

To all whom it may concern:

Be it known that we, FRANKLIN D. CLARK and FRED RICE, of Waukesha, in the county of Waukesha and State of Wisconsin, have
5 invented new and useful Improvements in Automatic Cut-Offs; and we do hereby declare the following to be a full, clear, and exact description of said invention, reference being had to the accompanying drawings, and
10 to the letters or figures of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in that class of automatic cut-offs in which a float
15 or buoy adapted to be raised or lowered by the rising or falling water in the cistern is used to tilt the dam or cut-off in one direction, and in which, when the float or buoy is raised by the water, other means are used to
20 tilt the dam or cut-off in the opposite direction.

In the drawings, Figure 1 is a view of our improved device in connection with a rain-water pipe and cistern, the pipe being broken
25 away so as to show interior parts, and the cistern being shown in vertical section. Fig. 2 is a view of our improved cut-off, shown at right angles to the view in Fig. 1, the pipe being broken away to show interior parts. Fig.
30 3 is a view of the device shown in Fig. 1 in slightly modified form.

A case A is constructed of sheet metal, and at its upper end is of such size as to adapt it to enter the lower end of a rain-water pipe
35 leading from the gutters of a house, and this case enlarges downwardly and divides into two pipes B and C, the pipe B leading to the cistern, and the pipe C being a waste-pipe intended to permit the discharge and waste of
40 the water therethrough. This case A is usually located in the rain-water leader a short distance above the ground on the outside of the house. Within the case A there is a short pipe D, of the same diameter as the
45 top of the case A, and secured water tight to the inner surface of the case A at its top, which pipe D extends downwardly, having the same diameter throughout its entire length and terminating at a distance above the point
50 where the case A divides into the two pipes

B and C. As the pipe D is of the same diameter at the bottom as at the top, and as the case A is considerably larger in diameter than the pipe D at the lower end of the pipe D, there
is a space between the pipe D and the case A 55 around the lower part of the pipe D. In the chamber in the case A below the end of the pipe D there is a tilting dam or cut-off E, which is constructed of a piece of sheet metal bent in semicircular form, of such diameter 60 as to fit around the pipe D. This tilting dam E is supported on an axle F, which axle has its bearings in the walls of the case A, and is bent around the dam E and is secured rigidly thereto. At one end the axle F extends 65 outwardly for some distance beyond the case A, forming a shank F', at the outer end of which the axle is bent at right angles, forming a crank-arm G. The spring H, constructed of an elastic wire, is coiled around 70 the shank F', and one extremity of this wire is secured to the case A, and the other extremity of the wire extends a short distance up alongside the crank-arm G, and is there turned about the arm, forming a loop I thereabout, 75 in which the arm G has a slightly reciprocating movement when the arm is tilted. The spring H is so constructed and attached to the case and arm G as to throw the arm G and the dam E, secured thereto, into the position 80 shown in Fig. 1, in which position the tilting dam E is so located as to turn the water which comes down upon it through the pipe D into the waste-pipe C. A float K, located in a cistern L, is connected by a cord M 85 to the outer end of the crank-arm G. This float K is so constructed as to be buoyed up by the water to such an extent as that when the water rises to the top of the cistern the spring H will hold the crank-arm G and dam 90 E in the position shown in Fig. 1; but when the water is drawn out of the cistern and the float K follows down on the surface of the water the float K has such weight and is secured to the arm G by such length of cord M 95 as to pull the arm G downward against the resistance of the spring H and tilt the dam E in the other direction, (shown in Fig. 2,) whereby water coming down through the pipe D is directed into the pipe B and therethrough into 100

the cistern. When the cistern is located directly beneath the case A, the cord M supports the float K directly below the arm G; but when the cistern is at a distance at one side from the case A the cord M may be carried laterally to the cistern in the manner shown in Fig. 3, or in any manner similar thereto as would occur to any mechanic.

What we claim as new, and desire to secure by Letters Patent, is—

1. In an automatic cut-off, a case A, having discharge-pipes B and C, in combination with a tilting dam E, having an axle F, shank F', and crank-arm G, a spring H, coiled about the shank F' and secured at one end to the case A and at the other end to the crank-arm G, and a float K, located in a cistern and having sufficient weight to serve for a counterpoise, connected by a cord M with crank-arm G, substantially as described.

2. In an automatic cut-off, the combination of a case A, having discharge-pipes B and C,

and a pipe D within the case A, smaller at its lower end than the surrounding part of the case A, with a tilting dam E, in semicircular form, supported on a bent axle F, having a shank F' and crank-arm G, a spring H, secured at one end to the case A and at the other end movably secured to the crank-arm G and adapted to tilt the dam E in one direction, and a float K in a cistern, the float being of sufficient weight to serve as a counterpoise when unsupported by the water, and being connected by a cord M to the outer end of the crank-arm G, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

FRANKLIN D. CLARK.
FRED RICE.

Witnesses:

JOHN E. JAMES,
PHILIPP HEPP.