

P. S. CAPEL.
 AUTOMATIC CUT-OFF.
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966,997.

Patented Aug. 9, 1910.

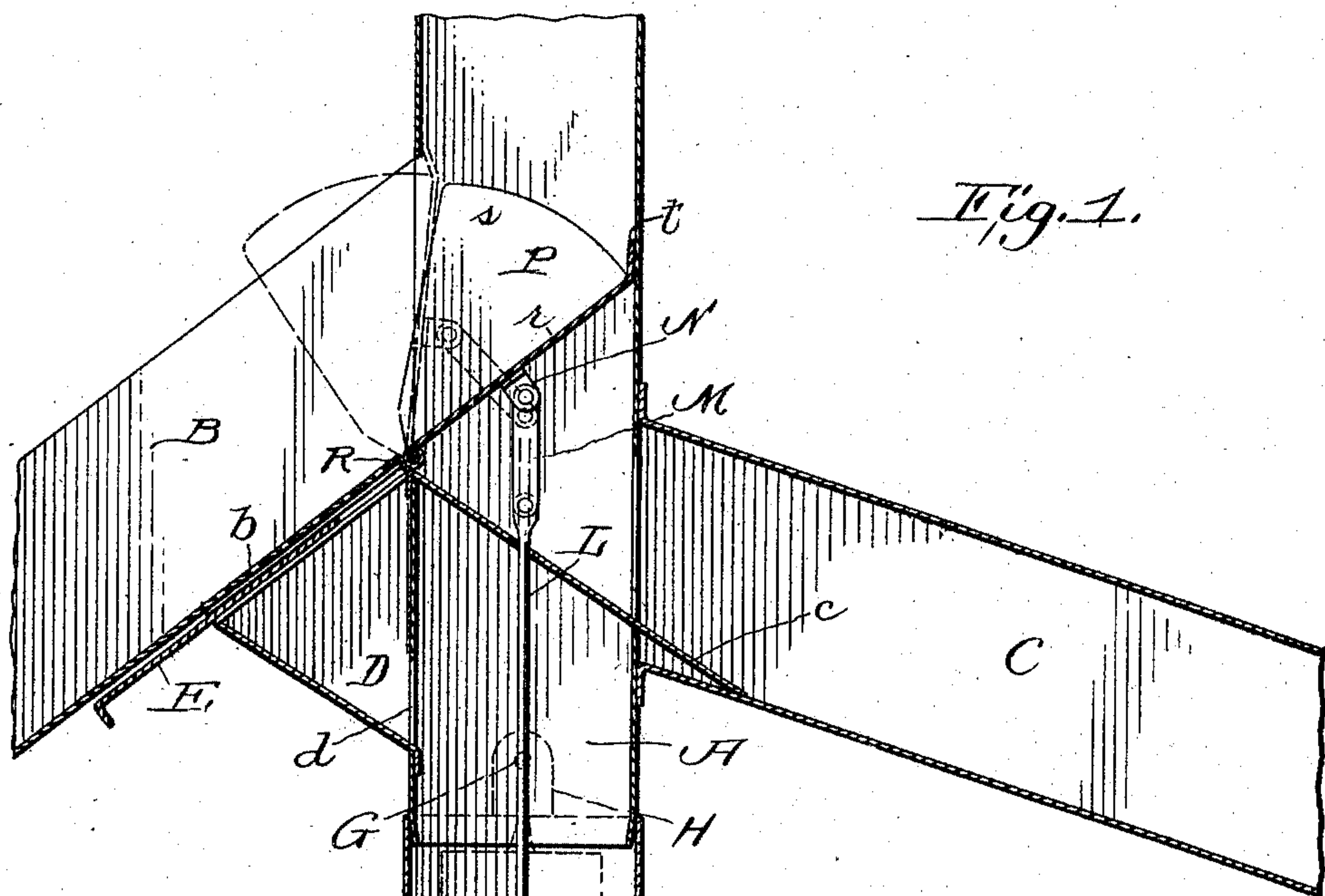


Fig. 1.

Fig. 2.

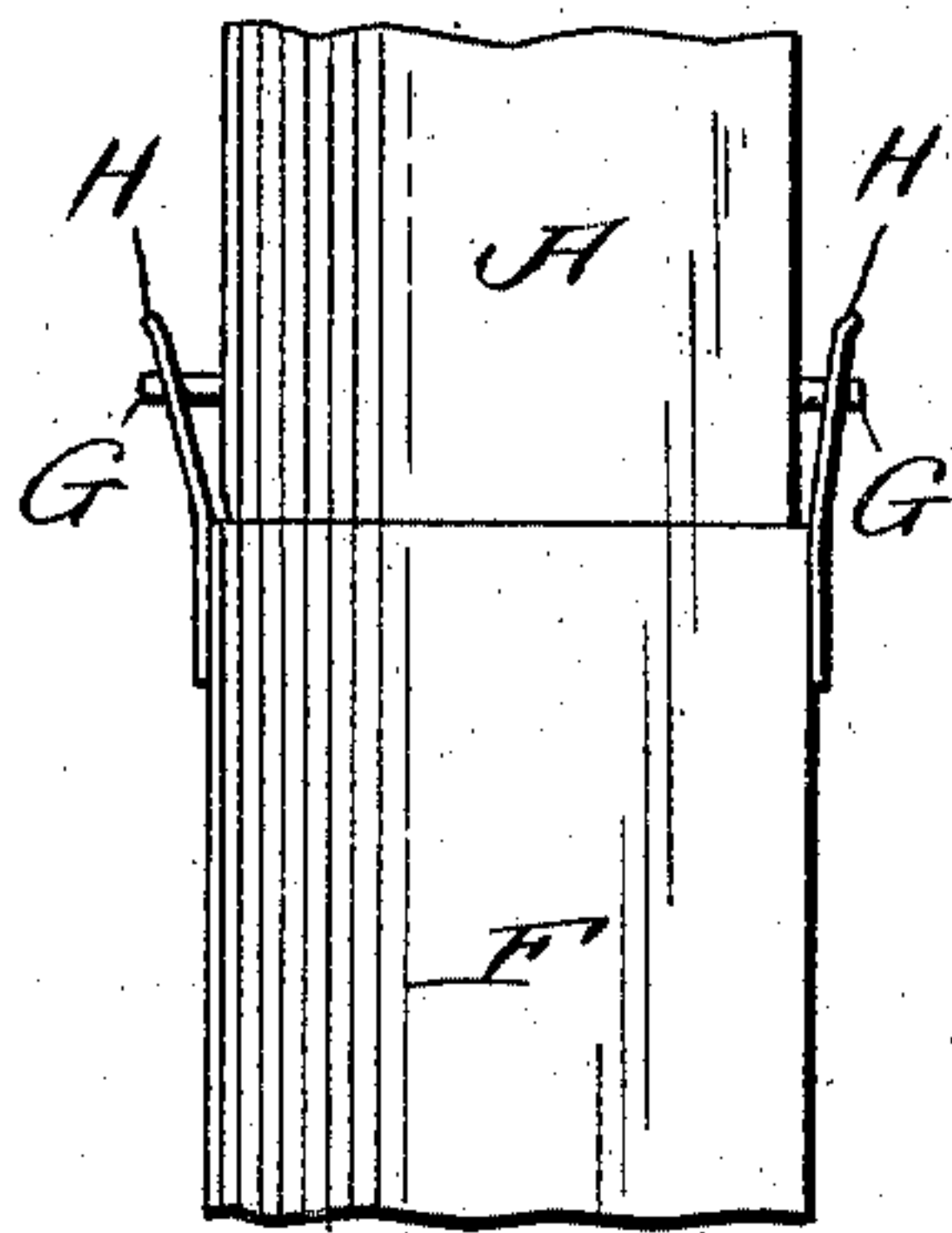


Fig. 4.

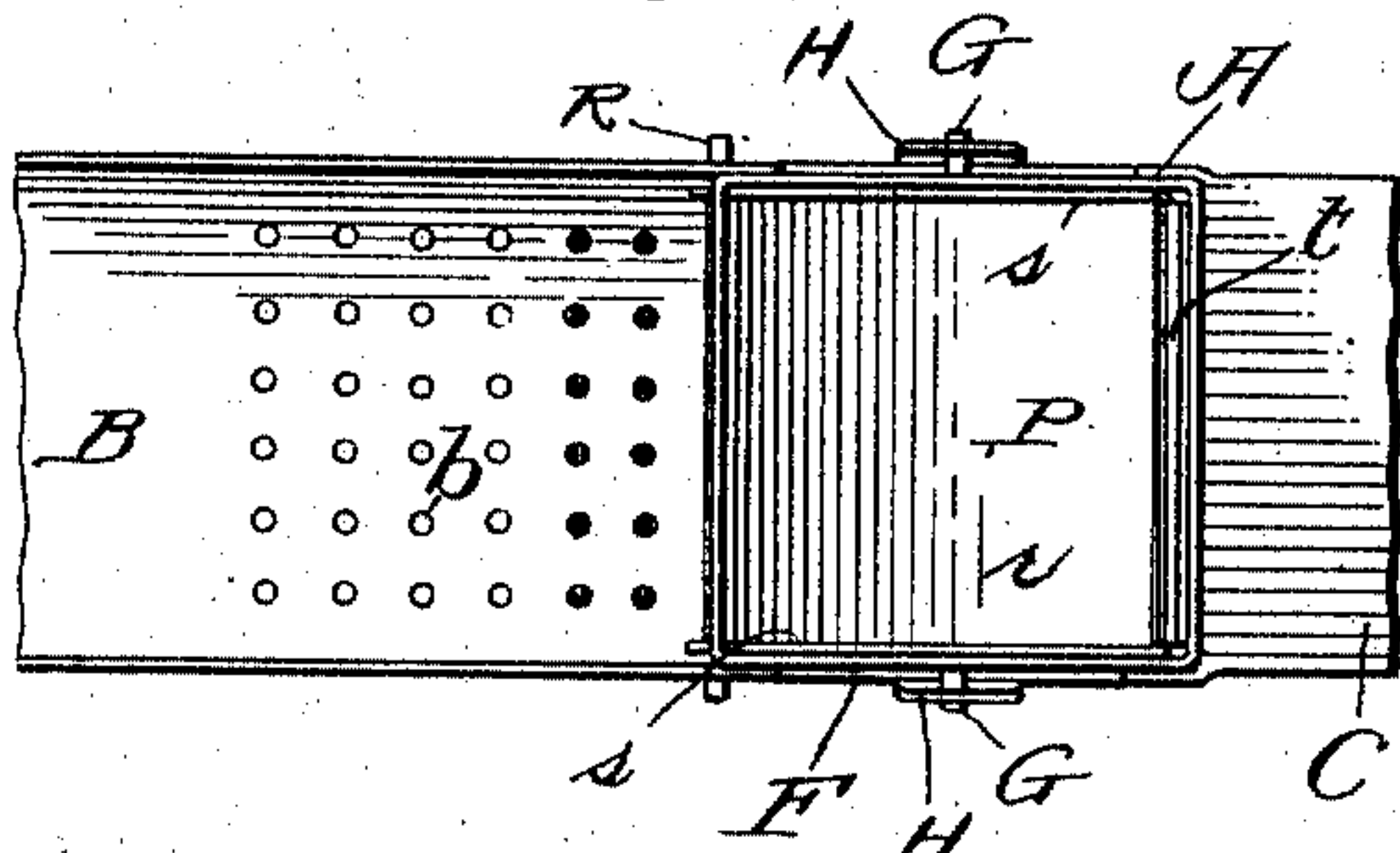
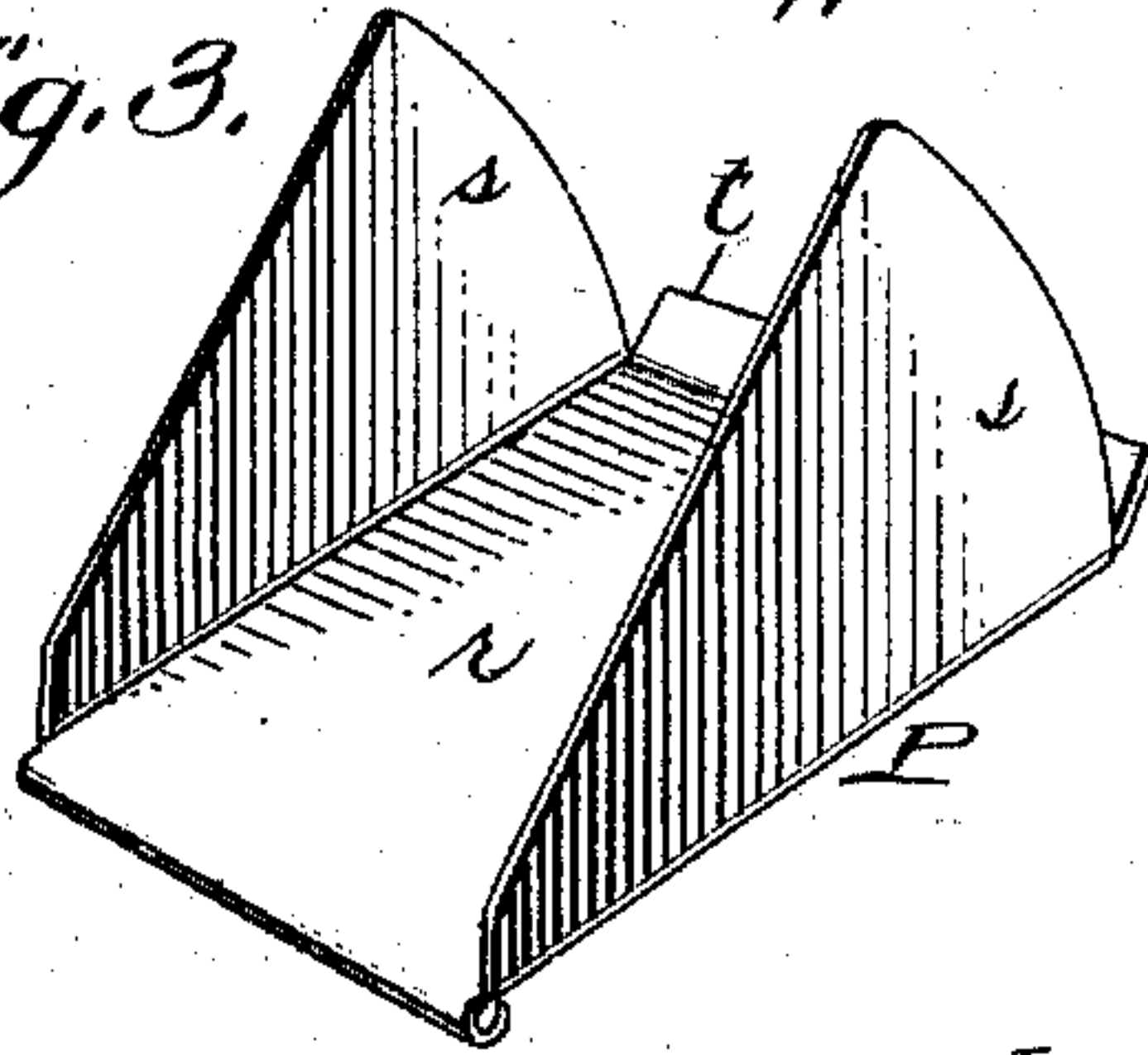


Fig. 3.



Witnesses

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AUTOMATIC CUT-OFF.

966,997.

Specification of Letters Patent.

Patented Aug. 9, 1910.

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To all whom it may concern:

Be it known that I, PAUL S. CAPEL, citizen of the United States, residing at Shreveport, in the parish of Caddo and State of Louisiana, have invented new and useful Improvements in Automatic Cut-Offs, of which the following is a specification.

My invention relates to automatic cut-offs for use intermediate roofs and cisterns; and it consists in the peculiar and advantageous cut-off hereinafter described and claimed.

In the drawings accompanying and forming part hereof: Figure 1 is a vertical section of a cut-off constructed in accordance with my invention, and showing the movable parts in their normal positions by full lines and in their other positions by dotted lines. Fig. 2 is a detail elevation, taken at a right angle to Fig. 1 and illustrating the preferred manner of connecting the float receptacle to the main casing. Fig. 3 is a detail perspective view of the valve *per se* of the cut-off. Fig. 4 is a detail plan of the cut-off.

Similar letters designate corresponding parts in all of the views of the drawings.

The main-casing of my novel cut-off is preferably formed of sheet-metal, and comprises an upright portion A, an inclined conduit B, preferably of U-shape in cross-section, extending from one side of the upright portion and having a foraminous bottom *b*, an inclined conduit C extending from the opposite side of the upright portion and having an inclined bottom *c* extending across the upright portion to the upper and inner end of the foraminous bottom *b*, and a chamber D disposed under the foraminous bottom *b* and having its lower portion connected with the interior of the upright portion through an opening *d* formed in the wall of the latter.

Suitably guided in the main casing A and located immediately below the foraminous bottom *b* of conduit B is a slide valve E through the medium of which the passage of water from the conduit B through the foraminous bottom *b* and chamber D may be controlled.

The float-receptacle F is preferably formed separately from the main casing, and is detachably connected to the upright portion A thereof in the manner shown—that is to say, the upright portion A is equipped near its lower end with opposite studs G, and the float-receptacle is adapted

to slip on the said lower end of the casing portion A and is provided with upwardly extending resilient and apertured hangers H adapted to be sprung into and out of engagement with the studs G.

The float I has a depending stem J, fitting snugly in a vertically-disposed aperture K in the bottom of the receptacle F, and also has an upwardly extending stem L, connected through a pivoted link M with a lug N on the valve P. Consequently it will be understood that the float may be readily positioned and connected with the valve P, and then the float receptacle may be expeditiously and easily connected with the main casing portion A; also that when it is necessary to gain access to the float or to the interior of the receptacle F for cleaning or other purposes, the same can be easily accomplished after the hangers H are sprung out of engagement with the studs G, and the receptacle is lowered away from the main casing.

The valve P is of the swinging type, being pivoted at R, and it preferably comprises a bottom *r*, side walls *s* and a rear flange *t*; the said side walls *s* and flange *t* being designed and adapted, when the valve is in the position shown by full lines in Fig. 1, to lessen the liability of the water from a roof working its way past the valve and into the conduit C.

As before stated the movable parts are shown by full lines in Fig. 1 in their normal positions; the valve E being opened to a greater or less extent according to whether it is desired to have the receptacle F fill quickly or slowly.

With the parts normally arranged as set forth, it will be understood that the first run or first portion of a rainfall will pass from a roof down the upper end of the casing portion A, over the valve P, and down the conduit B to a suitable point of discharge, and consequently the roof and the connections between the same will be cleared of foreign substances of all kinds. It will also be understood that incidental to the passage of the volume of water down the conduit B, some of the water will pass through the upper orifices of the foraminous bottom *b* into the chamber D and from thence into the receptacle F, and will gradually rise in the later until it raises the float I and through the medium of the same shifts the valve P to and retains said valve

in the position shown by the dotted lines in Fig. 1. The said shifting of valve P cuts off the flow through the conduit B and establishes the flow through the cistern-supply conduit C, and this latter flow will be maintained so long as the rainfall continues. When, however, the rain ceases, the water collected in the receptacle F will leak through the opening K, and after a certain lapse of time, the float I will gravitate to its normal position, and in so doing will return the valve P to and hold the same in its normal position, so as to assure the cut-off operating as before described when another rainfall takes place.

Inasmuch as the restoration of the working parts to their normal positions depends on the leakage of water through the opening K, it will be appreciated that it is important to exclude from the receptacle F foreign substances such as would be likely to obstruct said opening K and prevent the leakage mentioned. This function is performed by the foraminous bottom b of the conduit B.

Having described my invention, what I claim and desire to secure by Letters-Patent; is:

1. The combination in an automatic cut-off, of a casing having an inlet and two outlets for water and also having a foraminous bottom in one outlet and in communication with the interior of the lower portion of the casing; a receptacle carried by and adapted to receive water from the lower portion of the casing and having an aperture in its bottom, a float movable in said receptacle

and having a depending stem guided in and partly occupying the aperture in the bottom of the receptacle; and a valve arranged in the casing and connected with and movable by the float and adapted, in one position, to establish communication between the inlet and one outlet, and, in its other position, to cut off the first named communication and establish communication between the inlet and the other outlet.

2. An automatic cut-off, comprising a casing having an inlet and two outlets for water and also having a foraminous bottom in one outlet and in communication with the interior of the lower portion of the casing, a receptacle receiving and detachably connected with the lower portion of the casing in position to receive water therefrom and having an aperture in its bottom, a float movable in said receptacle and having an upwardly extending stem and also having a depending stem which latter is guided in and partly occupies the aperture in the receptacle bottom, a valve pivoted at one end in the casing and having upwardly extending side walls and an upwardly extending flange on its swinging edge, and a link connecting the upwardly extending stem of the float with said valve.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

PAUL S. CAPEL.

Witnesses:

J. B. SLATTERY,
R. A. SLATTERY.