

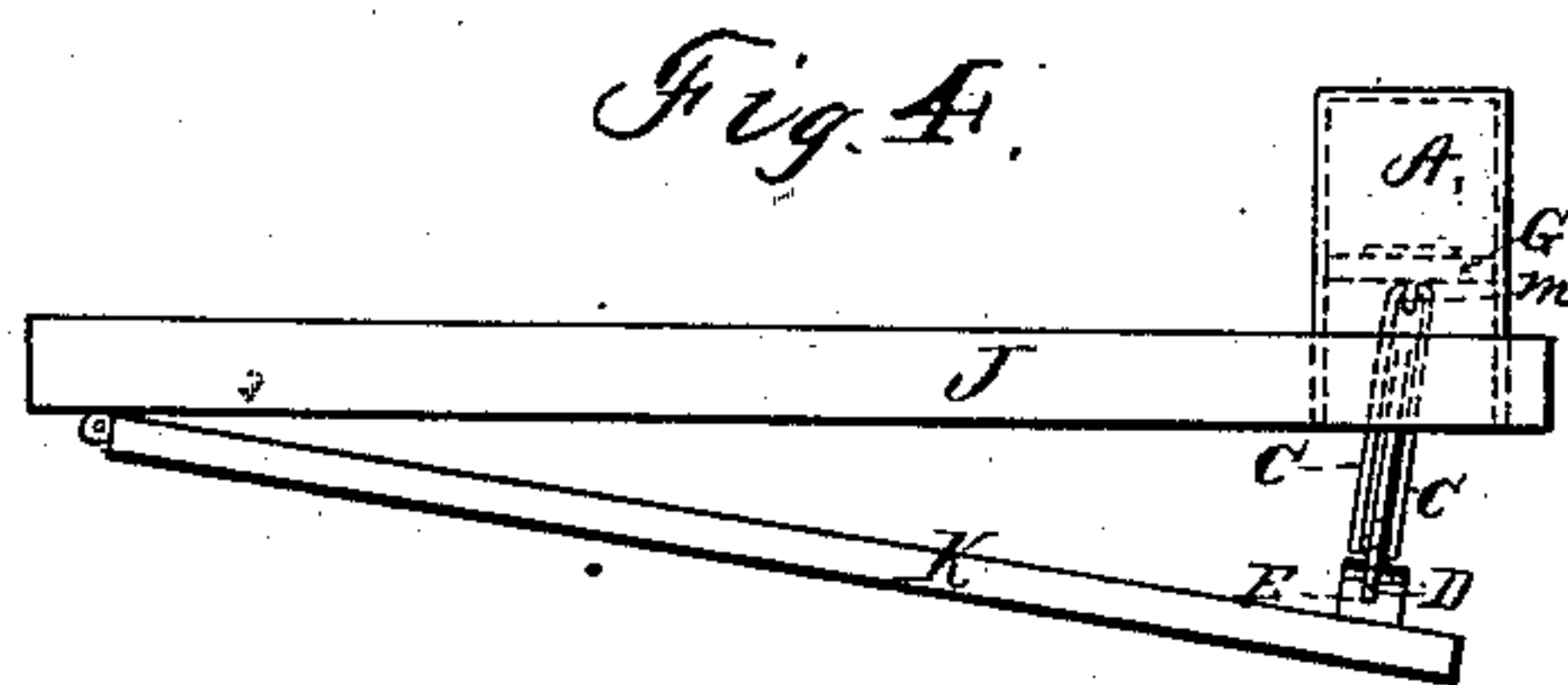
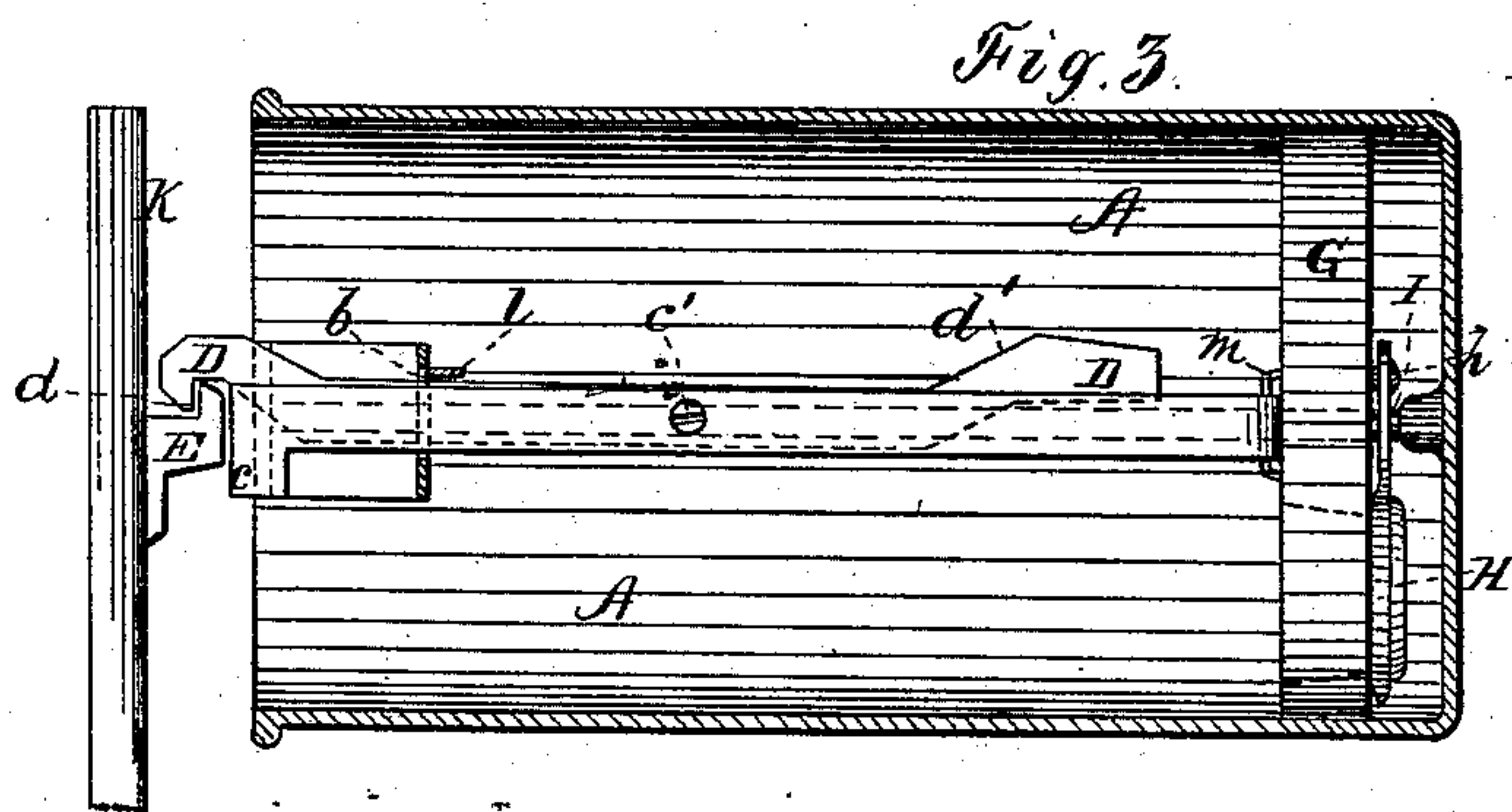
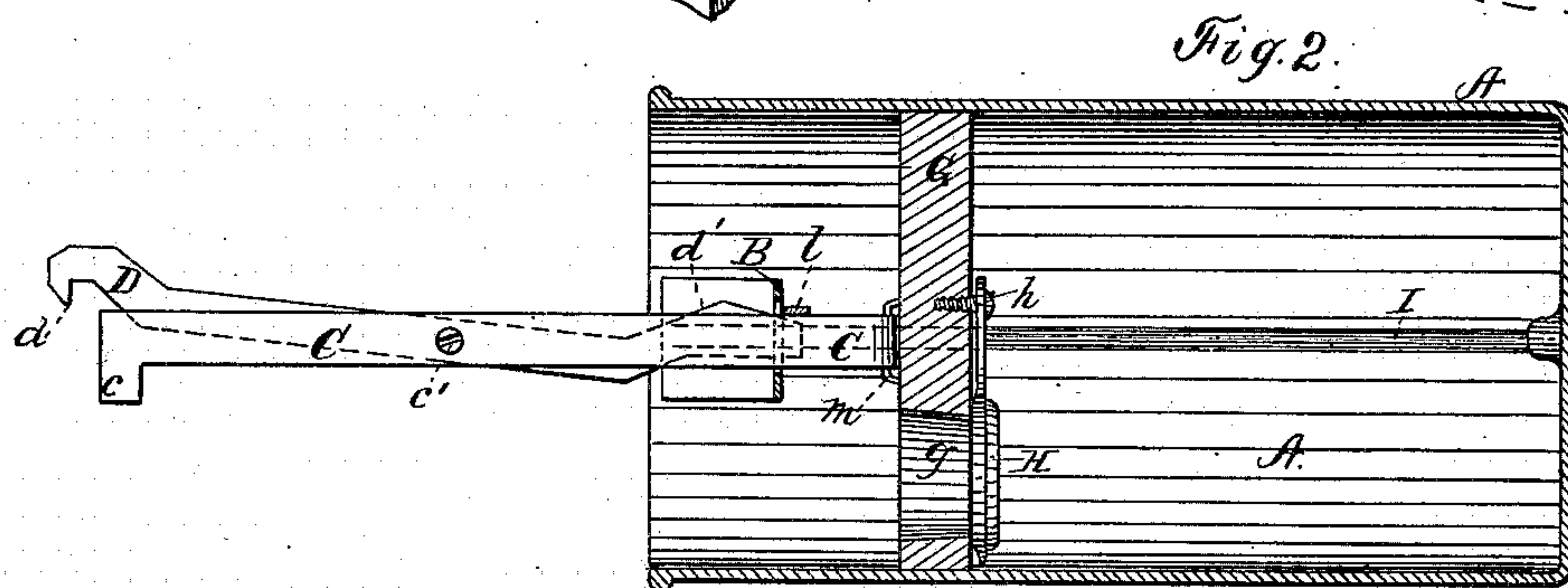
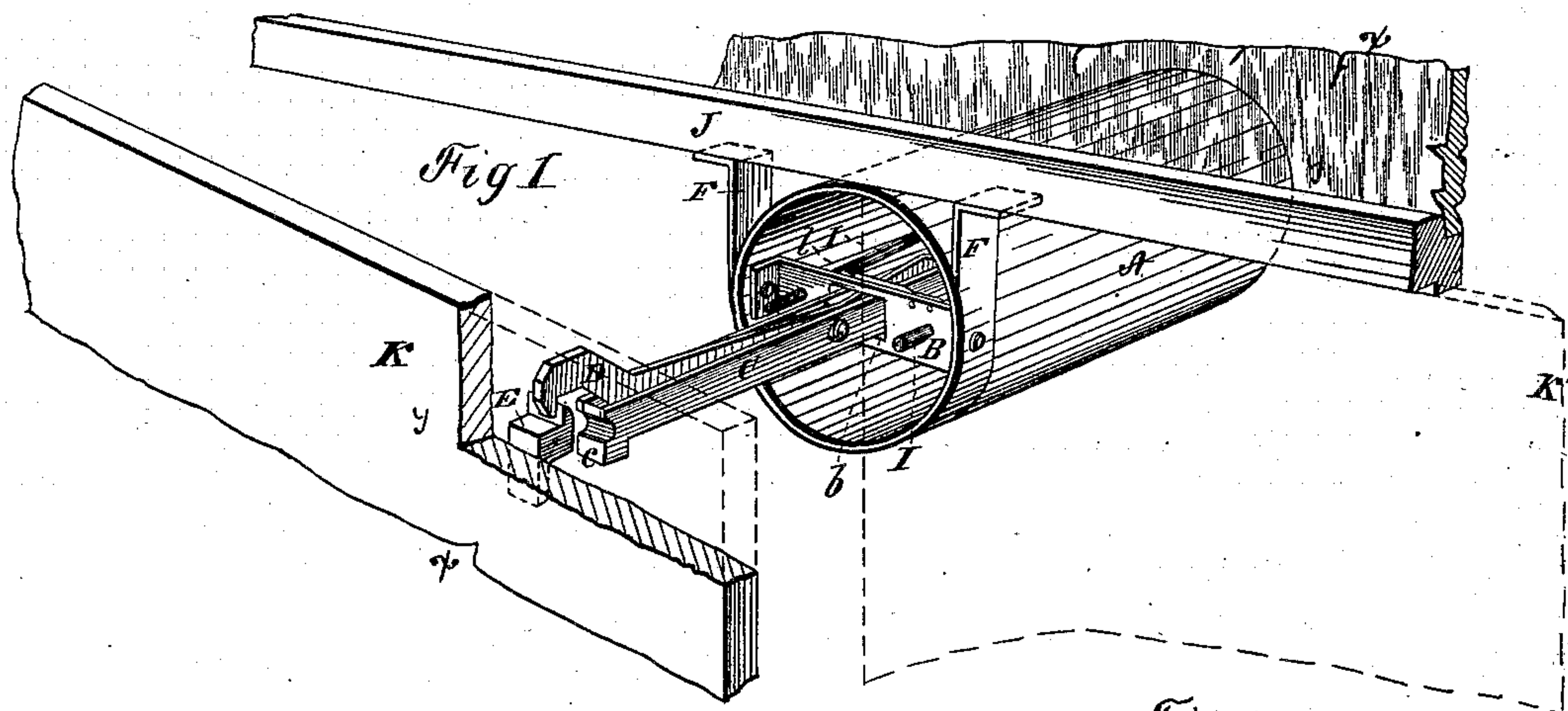
(No Model.)

J. W. WETMORE.

DOOR CHECK.

No. 255,226.

Patented Mar. 21, 1882.



Witnesses

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JEROME W. WETMORE, OF ERIE, PENNSYLVANIA.

DOOR-CHECK.

SPECIFICATION forming part of Letters Patent No. 255,226, dated March 21, 1882.

Application filed July 11, 1881. (No model.)

To all whom it may concern:

Be it known that I, JEROME W. WETMORE, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented a new and useful Improvement in Air-Cushions for Doors, of which the following is a specification.

My invention relates to improvements in the means of preventing the slamming of doors closed by springs.

The object of my improvement is to have the piston of the air-cylinder remain in it and be connected with it by a catch and latch. I attain this object by the devices illustrated in the accompanying drawings, of which—

Figure 1 is a perspective view of the air-cylinder placed on the top casing of double doors; Fig. 2, a vertical longitudinal section through plane *x x* when the piston is drawn out and the door open; Fig. 3, a vertical longitudinal section through plane *x x* when the door is closed, and Fig. 4 a horizontal section through plane *y y*.

A, Fig. 1, is the air-cylinder, the open end of which is toward the spectator, and in the bottom of which the air is condensed by the piston as the door closes.

B is the bar or head of the cylinder, holding the forward ends of the two rods on which the piston slides and carrying the piston-rod. If a disk or head be used to exclude the dust, it will not be so close as to prevent the air from passing freely.

C is the piston rod or bar.

b is a slot in which C slides. C is composed of one or two bars, bumper *c*, latch D, having a catch, *d*, and hinged at *c'*, back of its (D's) center of gravity. C is hinged on the piston at *m*, as shown in Fig. 4, so as to accommodate the curve described by the door in opening and closing. D, the latch of the piston-rod C, has a cam end, *d'*. As the door opens this is pressed by the spring *l* on bar or disk B, and the catch *d* is lifted out of the catch E, which is attached to the door, and the latch D is held in that position until the piston and rod are driven partly back into the cylinder, when the latch D drops into the catch E. The bars of the rod C take the force and pressure of the door, and the latch D is free to perform its functions.

F is the strap for fastening the cylinder in place.

G is the piston.

g is the opening for the passage of the air into the cylinder as the piston is drawn out.

H is a valve to hold the air for compression as the piston is driven into the cylinder. This valve is hinged at *h*.

I are rods on which the piston slides. The purpose of these rods is to avoid the necessity, when deemed best, of having the piston made so accurate as to work without binding under the irregular pressure of the hinged piston-rod.

K is one of the double doors commonly used. K' is the other door. Fig. 1 shows glass over the doors. The cylinder can be more conveniently applied to a single door.

l is a stiff spring riveted inside of the bar B, nearly touching the upper side of the piston-rod C, the slot for the piston-rod C through the bar B having some space above C. Ordinarily the latch would work without such space in B above C; but if the piston happens to be partially drawn out and *c'* has not passed B, and the door K should then be driven by its spring at its hinges, the latch D would not rise, and it and the piston-rod C would be in danger of being broken. D could be made with flexibility enough to answer the purpose of preventing breakage.

The operation of the cushion is as follows: When the door is opened and the piston drawn out the latch D is released by the cam. When the door is left to be closed by the spring at its hinges the catch E, applied to the door with an elastic base, strikes the buffer *c*, driving the piston to a point near the bottom of the cylinder, when the door is stopped by the compressed air. The piston and valve not being perfectly tight, the air escapes and the door slowly closes the rest of the distance. The catch E and buffer *c* have such elastic surfaces as will deaden the sound of the concussion.

What I claim is—

1. The latch D, with its cam *d'*, in combination with the piston, piston-rod, and cylinder on the casing, and the catch on the spring-door, substantially as described.

2. The air-cylinder, in combination with the detachable piston-rod, latch, and catch, constructed and operated substantially as described.

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Witnesses:

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