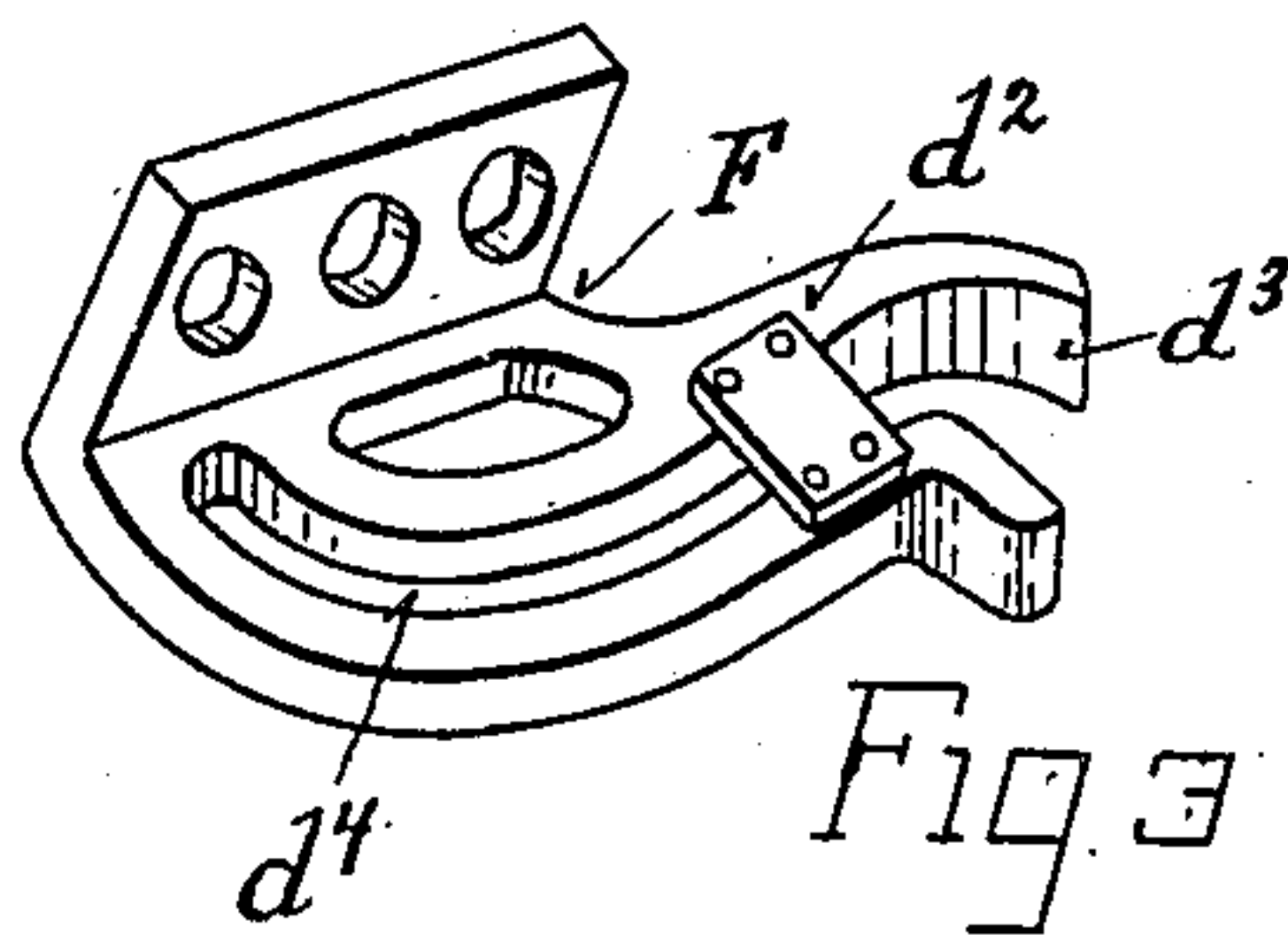
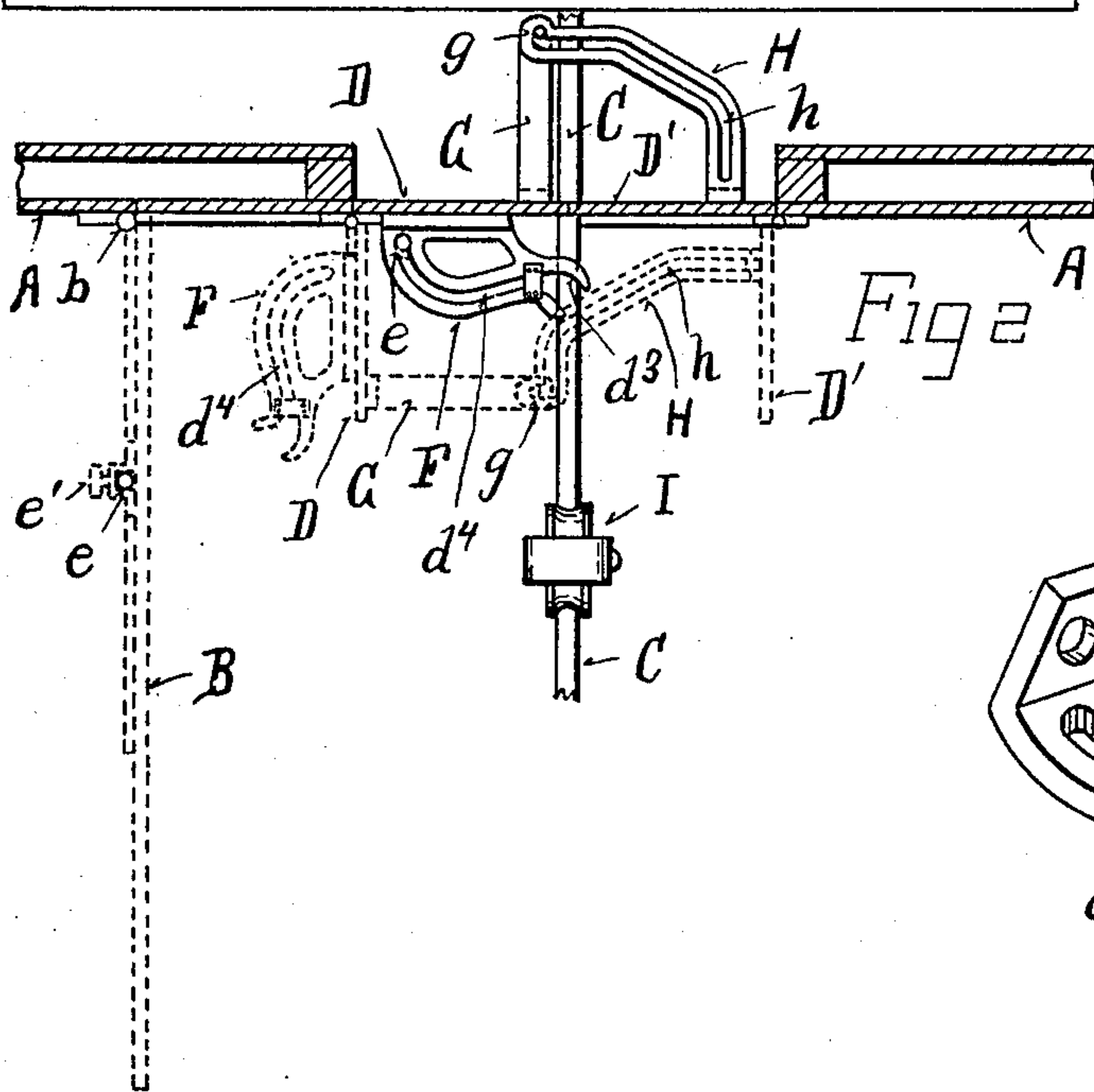
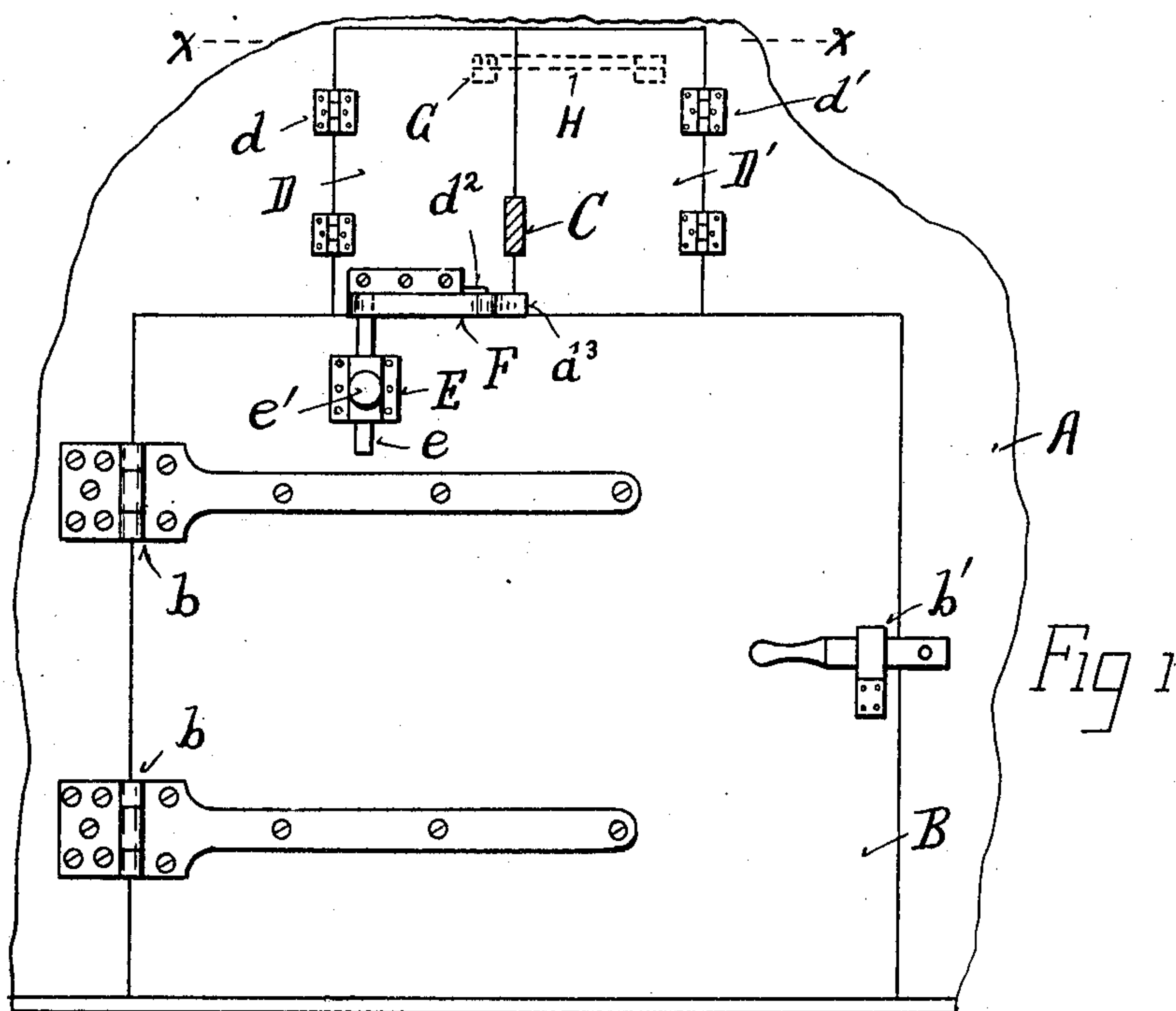


No. 885,431.

PATENTED APR. 21, 1908.

J. BRUNZWICK.  
DOOR ACTUATING MECHANISM.  
APPLICATION FILED JAN. 13, 1908.



Witnesses

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## DOOR-ACTUATING MECHANISM.

No. 885,431.

Specification of Letters Patent.

Patented April 21, 1908.

Application filed January 13, 1908. Serial No. 410,607.

*To all whom it may concern:*

Be it known that I, JOHN BRUNZWICK, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Door-Actuating Mechanism, of which the following is a specification.

My invention relates to improved mechanism for actuating doors.

One of its objects is to provide mechanism whereby the movements of the main door of cold storage rooms and similar compartments serve to automatically open and close small or auxiliary doors, such, for instance, as serve to furnish a passage for the operative parts of an overhead track.

Another object is to provide improved simple and reliable mechanism for the above purpose, which will serve to lock the doors in both open and closed position against accidental displacement.

It further consists in certain details of form, combination and arrangement, all of which will be more fully set forth in the description of the accompanying drawings, in which,

Figure 1 is a front elevation of a portion of a cold storage room, showing the main and auxiliary doors in the closed position. Fig. 2 is a horizontal section through the same on line  $x-x$  of Fig. 1, showing the doors in the closed position in full line, and in the open position in dotted line. Fig. 3 is a perspective view of a cam plate by means of which motion is imparted from the main door to the auxiliary doors.

In the accompanying drawings, A, represents the wall of a cold storage or similar room.

B, represents the main door which furnishes access to the room, and which is hinged at,  $b$ , and latched at,  $b'$ .

C represents an overhead rail or track by means of which meat or other heavy articles may be transported to and from the room.

D, D', represent two small or auxiliary doors, which when open, provide for the free passage of the rollers or trucks which travel along the rail, C, in transporting goods to and from the room, and when closed, serve to prevent the passage of air at that point either to or from the room and thus to retain the desired temperature in the room. The doors, D, D', are hinged at  $d$ ,  $d'$ , and their

free or meeting edges abut in line with the rail, C, the meeting edges of the doors being recessed for the passage of rail, C.

In order that the doors, D, D', may be automatically opened whenever the main door is opened, and automatically closed whenever the main door is closed, I attach to the main door a boss, or bracket, E, which carries a rod,  $e$ , which passes through a hole in bracket, E, and is adjusted endwise to the desired height, where it may be locked by means of a set-screw,  $e'$ .

F represents a cam-plate attached to the outside of the door, D, and provided with a curved slot,  $d^4$  which slot is engaged by the projecting upper end of rod,  $e$ , and as the door, B, is opened or closed, serves also to open or close the door, D. The position and relative proportions of the parts are such that when the doors, B, D, are closed, the end of rod  $e$ , engages the extreme inner end of slot,  $d^4$ , and as door, B, is opened, the end of rod,  $e$ , travels the length of the slot,  $d^4$ , and escapes at the open end of the slot when the door, D, has been opened by the engagement of the rod,  $e$ , and slot,  $d^4$ , to a position at right angles to the face of wall, A, as indicated in dotted line Fig. 2. The door, B, may then be opened as much further as required, but upon again being closed, the rod,  $e$ , will strike the projecting lip,  $d^3$ , and enter slot,  $d$ , thereby closing door, D.

In order that the opening and closing of door, D, shall also result in the automatic opening and closing of door, D', I provide on the inside of door, D, and preferably near its upper edge, in order to be out of the way of passing trucks on the rail, an arm or bracket, G, having a stud or pin,  $g$ , at its projecting or free end.

H represents a curved arm or bracket attached to door, D', and provided with a slot,  $h$ , which engages the pin,  $g$ . When the doors, D, D', are closed, the pin,  $g$ , occupies the extreme outer end of slot,  $h$ , as shown in full line Fig. 2. It will be noted that in this position the doors, D, D', are locked in position against accidental displacement by reason of the shape of slot,  $h$ . When door, D, is pulled open by rod,  $e$ , the pin,  $g$ , travels in slot,  $h$ , and serves to open door, D', at the same time to a position at right angles to the wall, A, as indicated in dotted line, Fig. 2, the position of parts, G, H, being also indicated in dotted line. In



this position the pin, *g*, and slot, *h*, are such that an accidental knock is not liable to close either door, *D*, or *D'*. When the doors, *D*, *D'*, are open the rollers or trucks, *I*, are free to pass in and out along track, *C*, and when the door, *B*, is closed, the doors, *D*, *D'*, are automatically closed to maintain the desired temperature in the storage room. In practice the rod, *e*, is of slender diameter so as to spring slightly when striking lip, *d*<sup>3</sup>, so as not to start the door, *D*, with a too sudden jar or stroke. For some purposes a single door, *D*, may be employed instead of doors, *D* and *D'*. By reversing cam plate, *F*, and attaching strap *d*<sup>2</sup> to the opposite side thereof, plate, *F*, may be used with either a right or left hand main door.

The mechanism herein shown and described is capable of considerable modification without departing from the principle of my invention.

Having described my invention, what I claim is:

1. In a mechanism of the character indicated a main door, an auxiliary door, a stud carried by the main door, and a plate attached to the auxiliary door, projecting outwardly at substantially right angles to said auxiliary door, and having a curved slot open at its outer end to engage the stud of the main door to cause the auxiliary door to automatically open and close whenever the main door is opened or closed.

2. In a mechanism of the character indicated, a main door, a plurality of auxiliary doors, a stud carried by the main door, a plate carried by said first auxiliary door, said

plate being provided with a curved slot to engage said stud to automatically open and close said first auxiliary door whenever the main door is opened or closed, an arm having a pin near its free end carried by said first auxiliary door, and an arm having a curved slot engaging said pin and said last named arm being carried by the second auxiliary door.

3. In a mechanism of the character indicated, a main door, a plurality of auxiliary doors, a stud carried by the main door, a plate having a curved slot carried by the first auxiliary door, and adapted to be engaged by said stud to automatically open and close said first auxiliary door, and means connecting the second auxiliary door with said first auxiliary door to cause said second auxiliary door to automatically open and close.

4. In a mechanism of the character indicated, a main door, an auxiliary door, a stud carried by the main door, a plate carried by the auxiliary door projecting into the path traveled by said stud, said plate being provided with a curved slot open at one end and diverging lips at the open end of said slot to cause said stud to enter and travel in said slot to close the auxiliary door in unison with the closing of the main door, and to open the auxiliary door when the main door is again opened.

In testimony whereof I have affixed my signature in presence of two witnesses.

JOHN BRUNZWICK.

Witnesses:

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WALTER I. MURRAY.