

2 Sheets—Sheet 1.

AUTOMATIC VENDING MACHINE.

Patented Apr. 23, 1895.

Fig. 1.

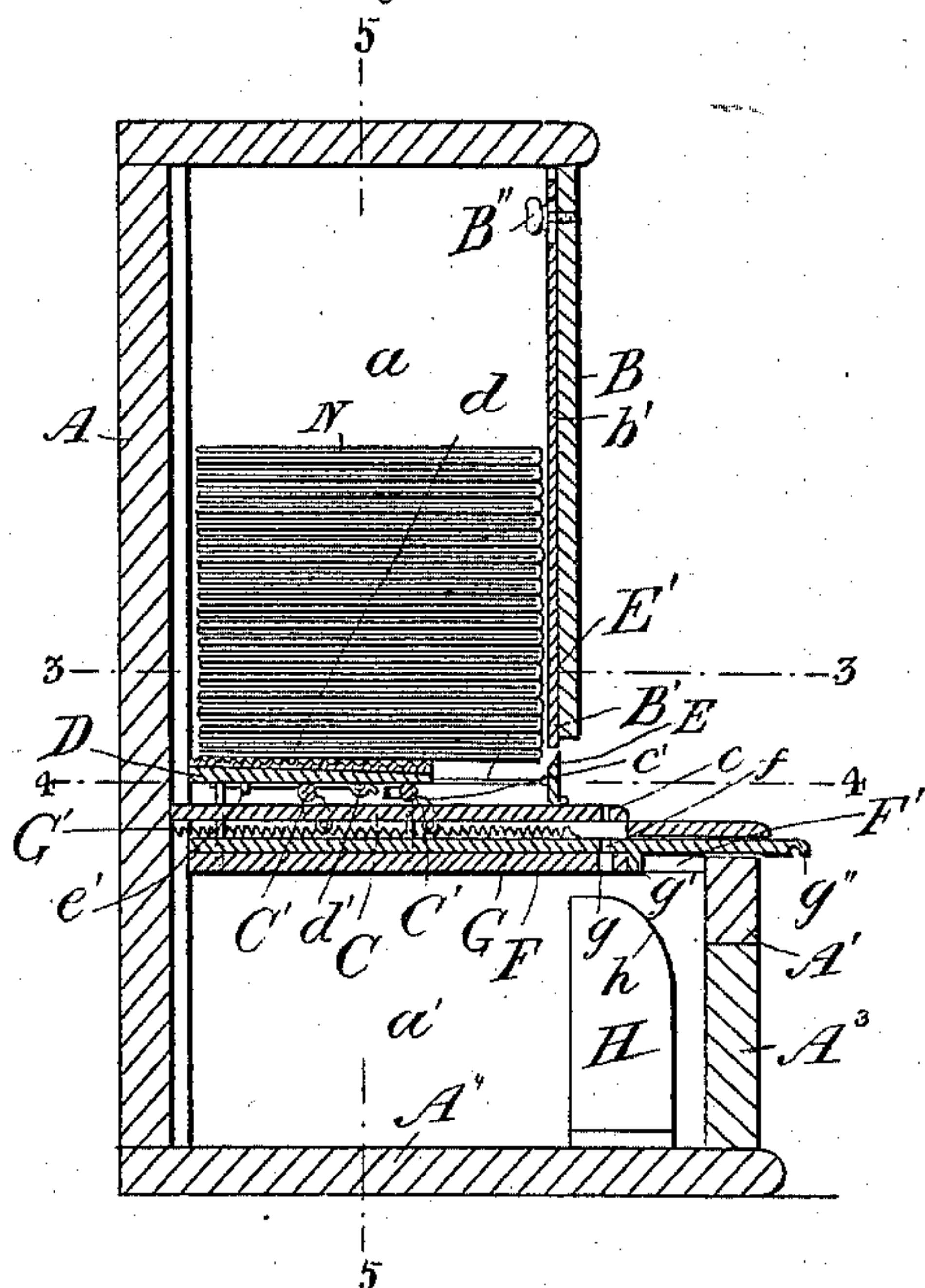


Fig. 2.

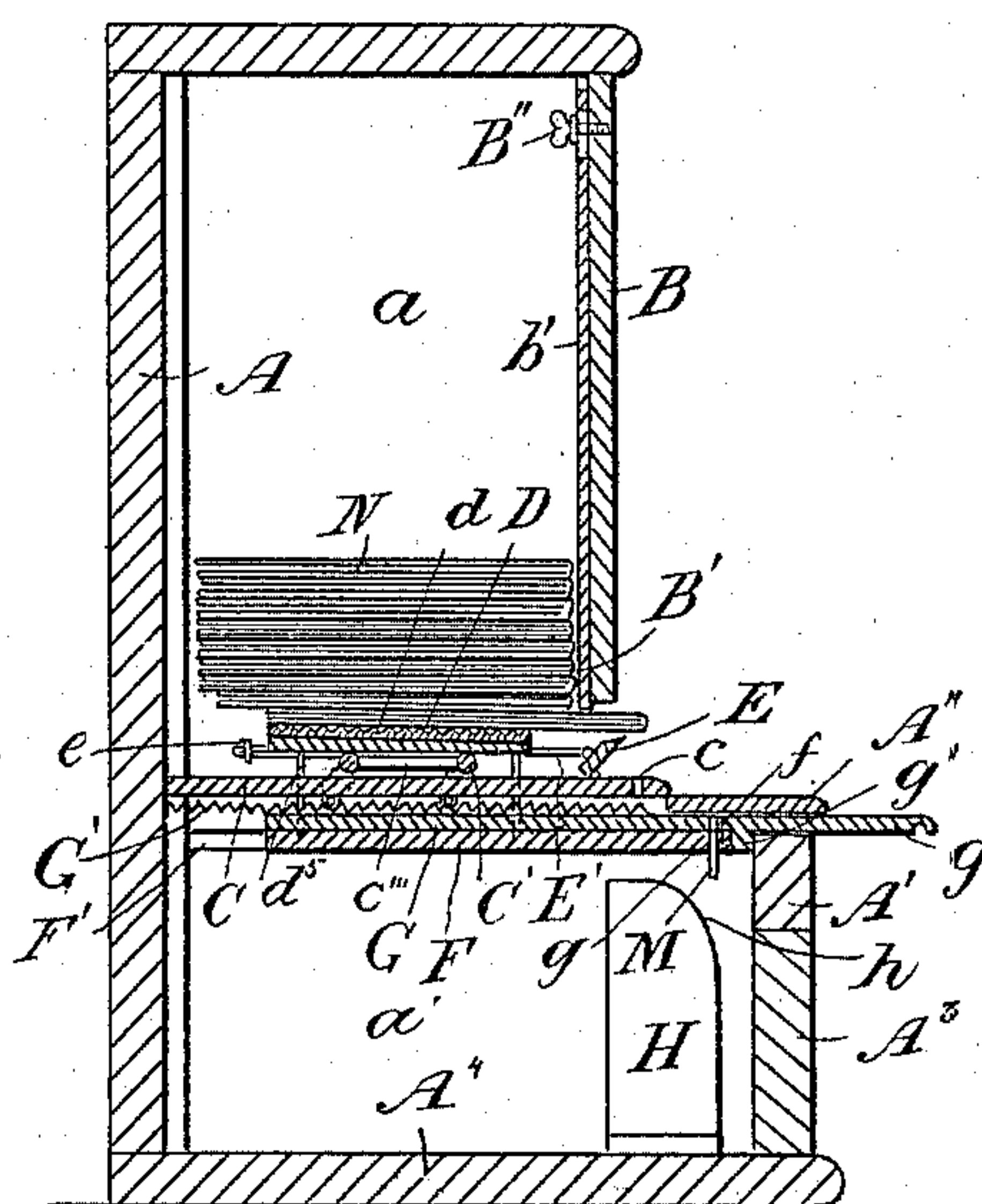


Fig. 3.

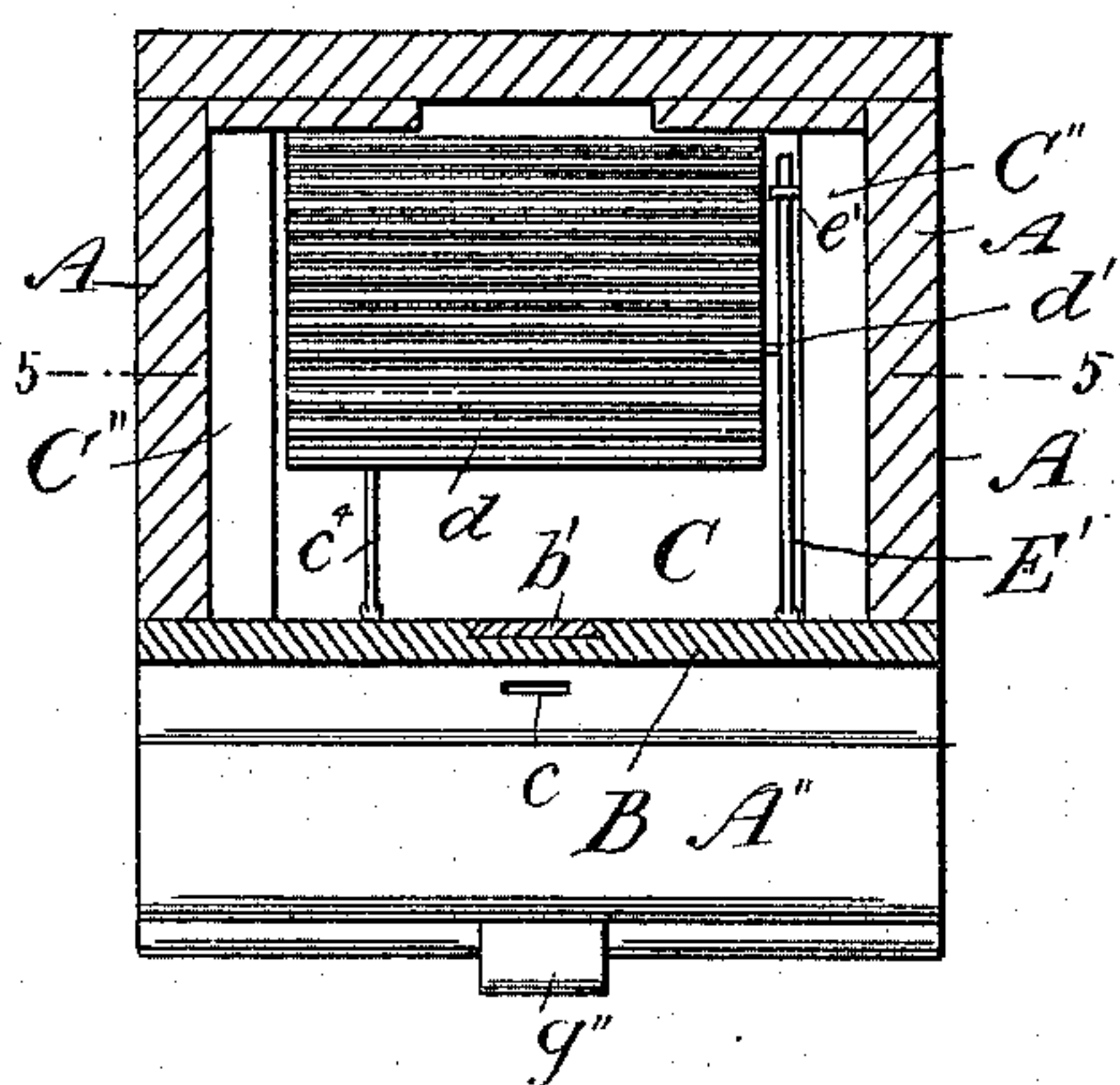
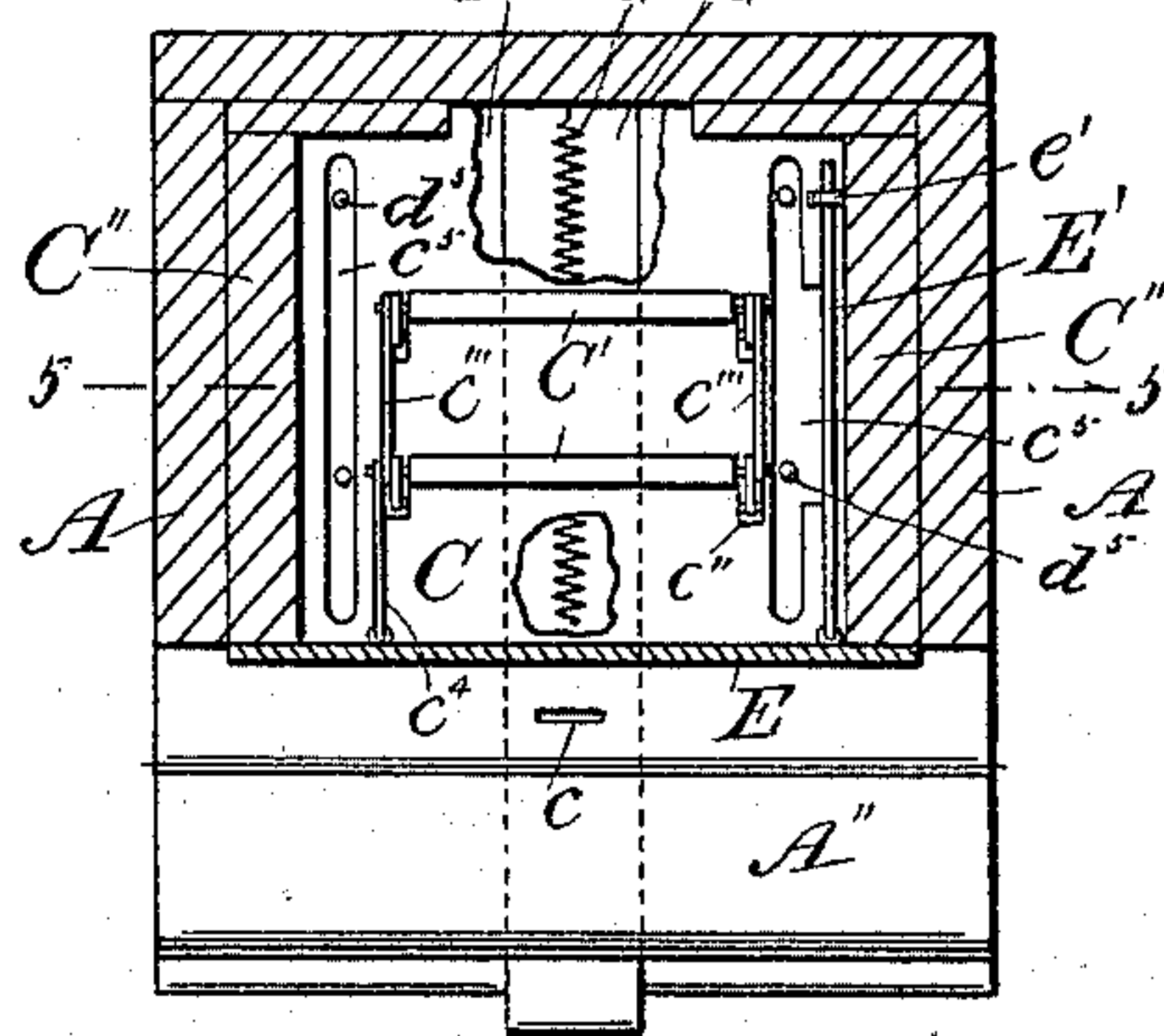


Fig. 4.
F' G' C



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(No Model.)

2 Sheets—Sheet 2.

G. H. BOWIE, J. C. ROGER & T. LARKIN.
AUTOMATIC VENDING MACHINE.

No. 537,811.

Patented Apr. 23, 1895.

Fig. 6.

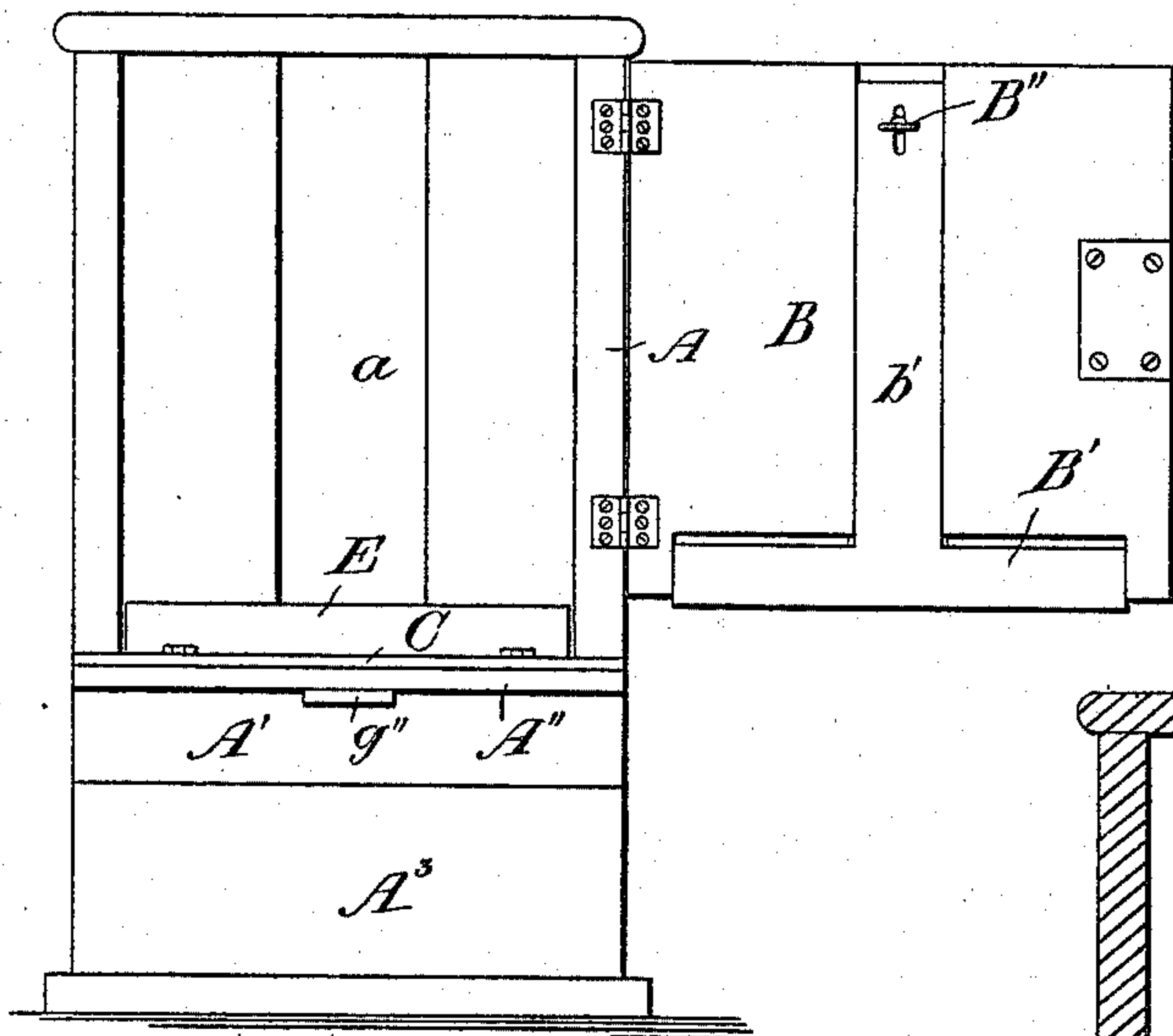


Fig. 5.

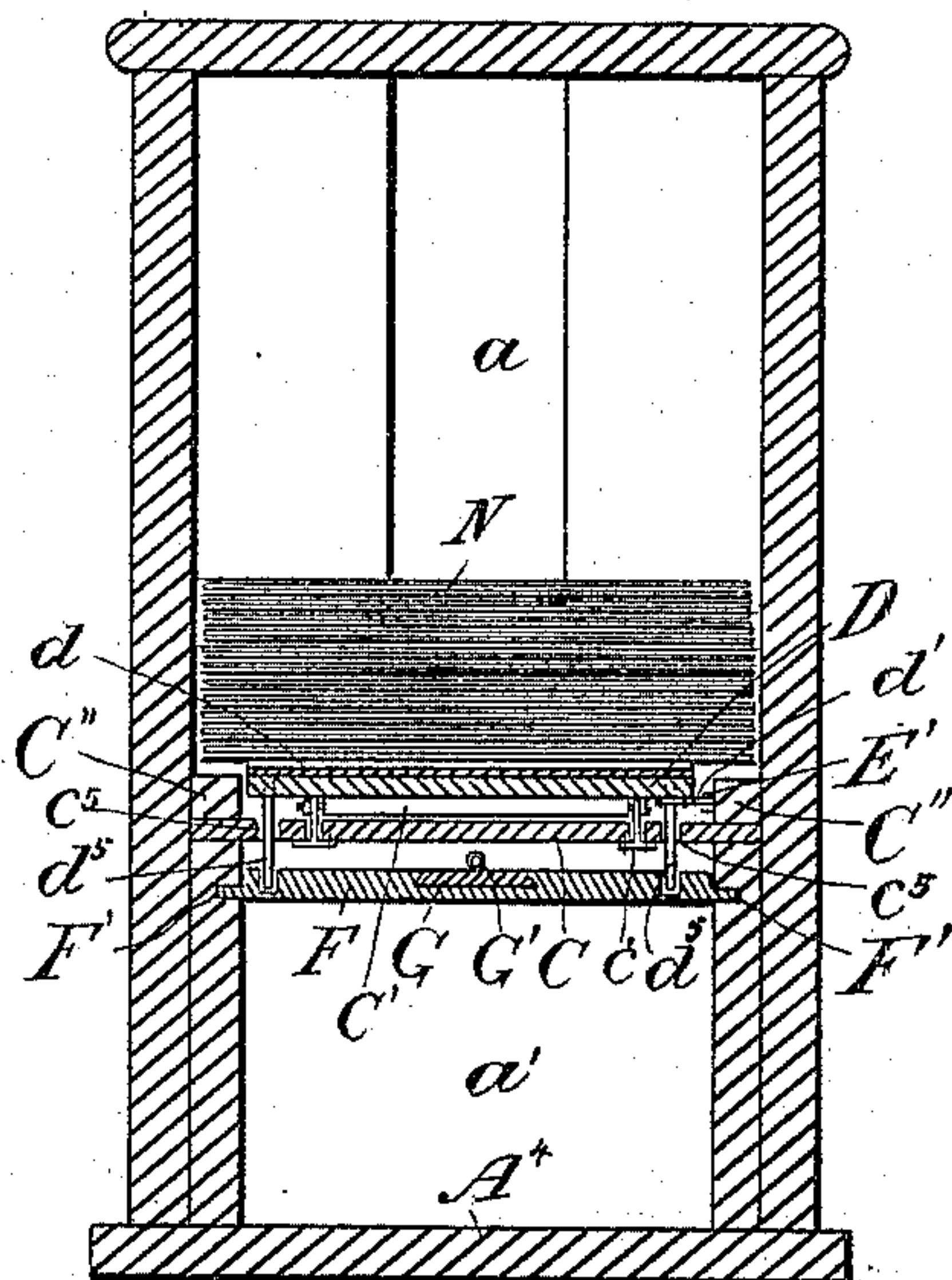


Fig. 8.

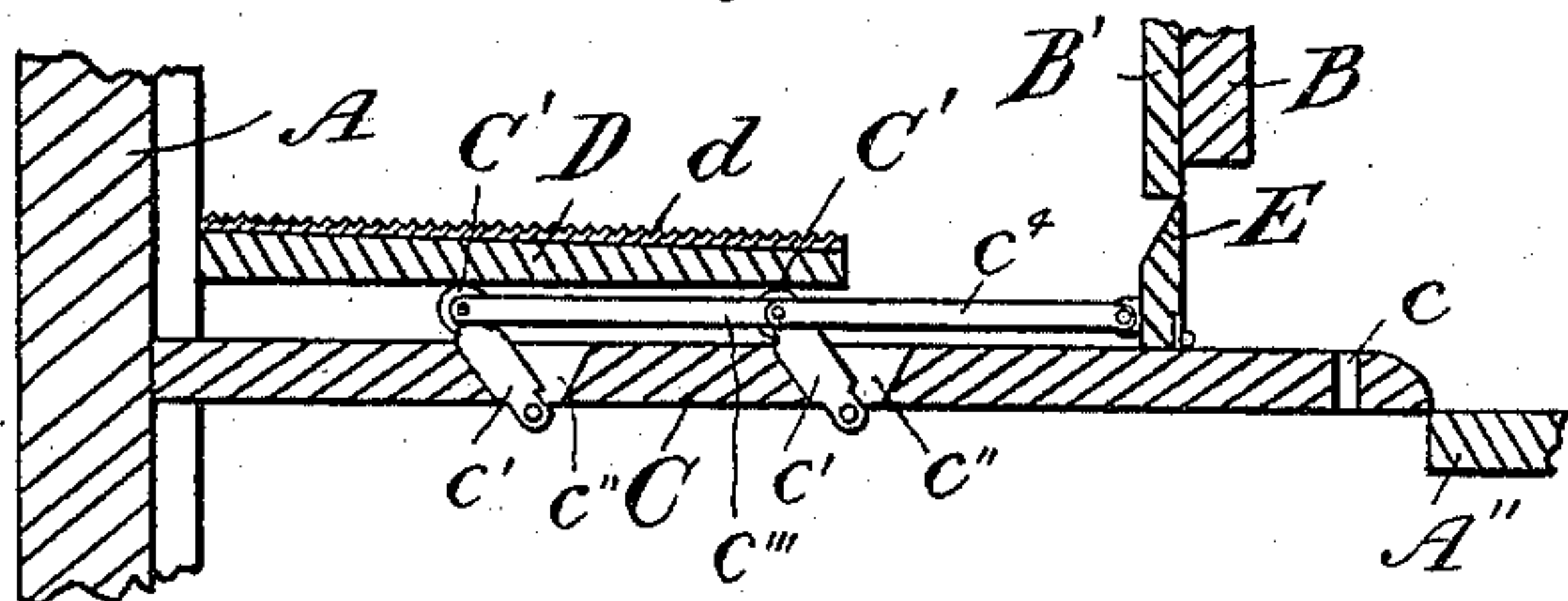
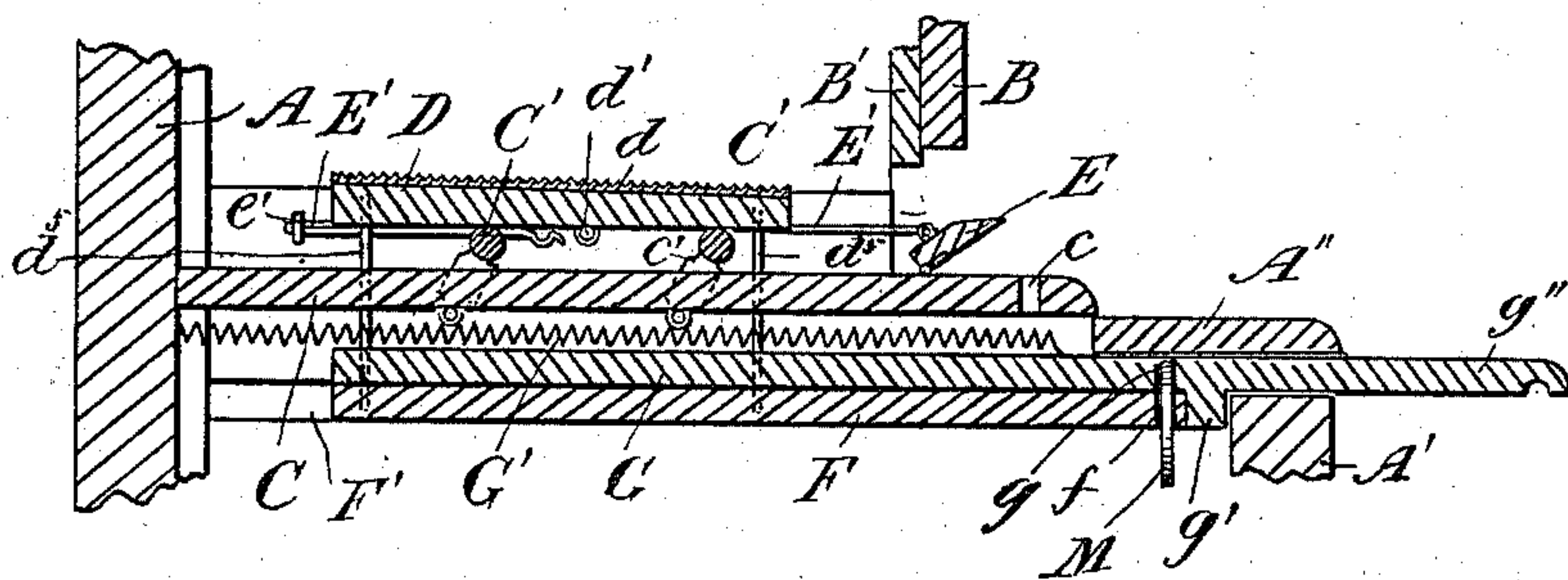


Fig. 7.



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UNITED STATES PATENT OFFICE.

GEORGE H. BOWIE AND JOHN C. ROGER, OF OTTAWA, AND THOMAS LARKIN, OF MONTREAL, CANADA.

AUTOMATIC VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 537,811, dated April 23, 1895.

Application filed October 16, 1894. Serial No. 525,917. (No model.)

To all whom it may concern:

Be it known that we, GEORGE H. BOWIE and JOHN C. ROGER, of the city of Ottawa, in the county of Carleton and Province of Ontario, and THOMAS LARKIN, of the city of Montreal, in the Province of Quebec, in the Dominion of Canada, have invented certain new and useful Improvements in Automatic Vending-Machines; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part hereof.

Our invention, which will be hereinafter fully set forth and claimed, relates to machines or devices for releasing or presenting a specific article upon the insertion of a specific coin.

The object of our invention is a machine that shall upon the insertion or deposit of a certain coin, say a cent, release and present for removal, a newspaper or article of a similar description.

Figure 1 is a longitudinal section of our improved automatic vender filled with newspapers and at rest. Fig. 2 is a similar section of the same, shown in the act of delivering papers. Fig. 3 is a horizontal section of the same on line 3 3 Fig. 1, showing a top view of the part upon which the papers rest. Fig. 4 is a horizontal section of the same on line 4 4 Fig. 1, showing a top view of the parts below those shown in Fig. 3. Fig. 5 is a transverse section of the same on line 5 5 Figs. 1, 3 and 4. Fig. 6 is an elevation of the same with the door open and showing the gage thereon. Fig. 7 is an enlarged view of a part of Fig. 2 showing the mechanism in detail. Fig. 8 is a detail showing the friction rollers and connections.

A casing, A, is provided, the upper part, *a*, of which forms a plain cupboard and is of such capacity in horizontal section as to freely hold flat the folded newspaper, N, or other similar article which it is desired to dispense and high enough to hold any desired number of them. The lower part, *a'*, is deeper, projecting forward in the shape of a desk and adapted to receive and hold the coins. The upper part is closed with a hinged door, B, secured by lock, or in any other convenient manner. Said door has its bottom edge made

adjustable by a cross piece, B', adapted to project below said edge and secured to a vertical piece, *b'*, which slides in said door and is held in any desired position by a thumb-screw, B'', or its equivalent, on the inside. The bottom of said cupboard or upper part of the box consists of a fixed partition, C, which projects a little in front of the door, covering part of the projecting lower part *a'*, and is provided near its front edge with a slot, *c*, adapted to pass a certain coin. Upon this partition or bottom is placed a platform, D, resting on friction rollers, C', and adapted to move forward and backward. Said rollers are journaled in bearings consisting of links, *c'*, which project through slots, *c''*, in the bottom C and are journaled at the lower face of the latter, being a little longer than would be required to hold the rollers in their lowest position above the surface of the partition C, and the slots *c''* are of such a length that they limit the motion of the links *c'* and the heads of the latter are supported at each end of said slot without the rollers touching the bottom. The rollers C' are linked together at the end by couplings, *c'''*, and the front end of one of them is coupled to the inner face of the lip E by a coupling, *c⁴*. The upper face of the platform is covered with a gripping medium, such as a sheet of corrugated rubber, *d*. A lip, E, having its upper inner edge beveled off, is hinged to the bottom C, under the gage B' of the door B and adapted to fold outwardly. This lip is connected near one or both ends by a link E' to the platform, a pin, *d'*, projecting from the edge of the latter and engaging an eye in the link, the latter being kept in a slide, *e'*, at the rear and pivoted to the lip at the front end. Side slats, C'', secured to the ends of the bottom C, may be used if desired, between the ends of the platform and the sides of the box, their upper surface being even with the platform when in its rearward position. Pins or downward projections, *d⁵*, are secured to the platform rigidly near each end, projecting through corresponding slots, *c⁵*, in the bottom C and engaging eyes in the slide below.

Below the fixed bottom C is a movable one, F, adapted to slide forward and guided in grooved side runners, F', upon which the bottom C is secured, so as to leave a little space

between their respective upper and lower surfaces for clearance. It is as much shorter as it requires space to move from the rear to the front A' of the lower part of the casing a', against which it may abut when drawn forward and extending as far as the front edge of the bottom C. In said movable bottom F is slidably secured a slide, G, which passes through the front A' and projects beyond it sufficiently to afford a finger-hold, g''. It is drawn backward by a spring, G', secured to it and the back of the casing and is adapted to move independently in the slide F, or together with it when specially connected. The stop g' on the slide G moves the slide F back with the slide G after it has been drawn out. Both slides F and G are provided with corresponding slots f and g, transverse to the line of their motion, which also correspond with the slot c in the bottom C, all three adapted to pass a certain coin, M. This coin forms the connection between the slides F and G. Being inserted in the slot c, it drops into the slots f and g, clearing the bottom C, but remaining in the slides F and G, where it is sustained by a rib, H. This is secured to the bottom A' of the lower part of the box a' and extends up close to the slide F and in the center of the slot f, but transversely to the same, and sufficiently toward the front to keep the coin in position until the slide G has drawn the slide F out far enough to enable the platform D to have pushed an article N into the slot formed by the gage B' and the lip E. The front corner is well rounded at h to allow the coin to drop during its forward progress or at the commencement of the return movement of the slides.

The lower part of the casing or receptacle a' may be closed by a door, A'', with lock and key, for the removal of the coins; the part in front of the bottom C being rigidly covered by a piece A''.

The device operates as follows: Newspapers or other articles, N, for which it is adapted, are piled in the cupboard a upon the platform D. If the slide G is pulled without having first inserted the necessary coin in the slot c for which it is constructed and of which due notice is given on a conspicuous part of it, it will have no effect, as it will not move the slide F. If, however, the proper coin, M, is inserted in the slot c, it drops into the slots f and g resting upon the rib H. The slide G is now drawn out. It brings with it the slide F, and this, by the connections of the pins d⁵ moves forward the platform D. As this moves forward, it also rises as the lip E is being tilted outward and pulls the links c' and with them the rollers C' by the couplings c''' and c⁴, causing the rollers C' to rise and the adhesive surface d takes with it the lowermost article or newspaper N and projects it into the slot formed by the gage B' and the lip E. This latter has in the meanwhile been tilted over by the link E', operated by the platform D by means of the pin d' and has in turn operated the links c'. The

newspaper or other article may then be withdrawn entirely. The slide G being let go, the coin M, having been moved into a position where it is no longer supported by the rib H, drops into the receptacle a' and both slides G and F as well as the platform D and lip E resume their normal positions.

We claim as our invention—

1. In an automatic vending machine for newspapers and similar articles, the combination of a receptacle of the capacity to contain a pile of the articles, a platform upon which said pile will rest provided with an adhesive surface and downwardly extending projections and movable from rear to front, a rigid partition under said platform having slots through which the projections of the platform pass and carrying friction rollers upon which said platform travels, a lip hinged to said rigid bottom and connected by a pivoted link to said platform, an adjustable slot over said lip, a sliding bottom under said rigid bottom adapted to engage the projections of said platform and carrying another slide, a spring retracted slide in said sliding bottom a part of which projects in front of the receptacle, transverse registering slots in the rigid and sliding bottoms and slide adapted to pass a certain coin, a rib having a rounded front placed transversely under said slots and the lower part of the receptacle containing said rib and adapted to receive the coins, substantially as set forth.

2. In an automatic vending machine for newspapers and similar articles, the combination with a suitable receptacle adapted to hold a pile of the articles and receptacle below adapted to hold coins, of a platform having an adhesive upper surface and downward projections, a sliding bottom under said platform adapted to engage the downward projections of the same and to carry a slide, a spring retracted slide in said sliding bottom having a part projecting to afford a finger-hold, a slot formed between the lower edge of the front of the upper part of the receptacle and the lower projecting part opposite the top of said platform and adapted to pass the article to be delivered, registering slots in the top of said projecting part, sliding bottom and slide and a rib under said registering slots extending partly forward and having a rounded upper front corner, substantially as set forth.

3. In an automatic vending machine for newspapers and similar articles, the combination with a suitable casing or receptacle of a rigid partition or bottom C secured thereto, links c' pivoted below the upper surface of said partition and working in limiting slots, friction rollers C' journaled in said links at the upper surface of said partition, a platform D having an adhesive upper surface and supported by said friction rollers and having pins or projections d' projecting downwardly, a sliding partition F below said rigid partition adapted to engage said downward projections,

a slide G in said sliding partition projecting in front of the casing, a spring G' secured to said slide and the rear of the casing and adapted to draw said slide rearwardly and
5 said slides F and G provided with registering slots by means of which the two may be connected by the insertion of a suitable object, substantially as set forth.

4. In an automatic vending machine for
10 newspapers and similar articles, the combination with a suitable casing or receptacle of a rigid partition or bottom C secured thereto links c' pivoted below the upper surface of said partition and working in limited slots,
15 friction rollers C' journaled in said links at the upper surface of said partition, couplings c''' connecting said rollers, a coupling c⁴ connecting one of said couplings c''' with an outwardly moving lip, a lip E hinged to said bot-
20 tom and having the coupling c⁴ pivoted to it, a platform D adapted to move on said friction rollers and a link E' connecting said platform to said lip, substantially as set forth.

5. In an automatic vending machine for

newspapers and similar articles, the combina- 25
tion with a suitable casing or receptacle of a horizontal sliding partition F, a spring retracted slide G in said partition, registering transverse slots f and g in said sliding parti-
tion and slide and a rib H secured to the cas- 30
ing at a right angle under said slots and centrally to the same and having its front corner well rounded so as to support a certain coin inserted in said slots at first and then allow-
ing it to drop when brought over its rounded 35
front corner, substantially as set forth.

In testimony whereof we have signed in the presence of the undersigned witnesses.

GEORGE H. BOWIE.

JOHN C. ROGER.

THOS. LARKIN.

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