



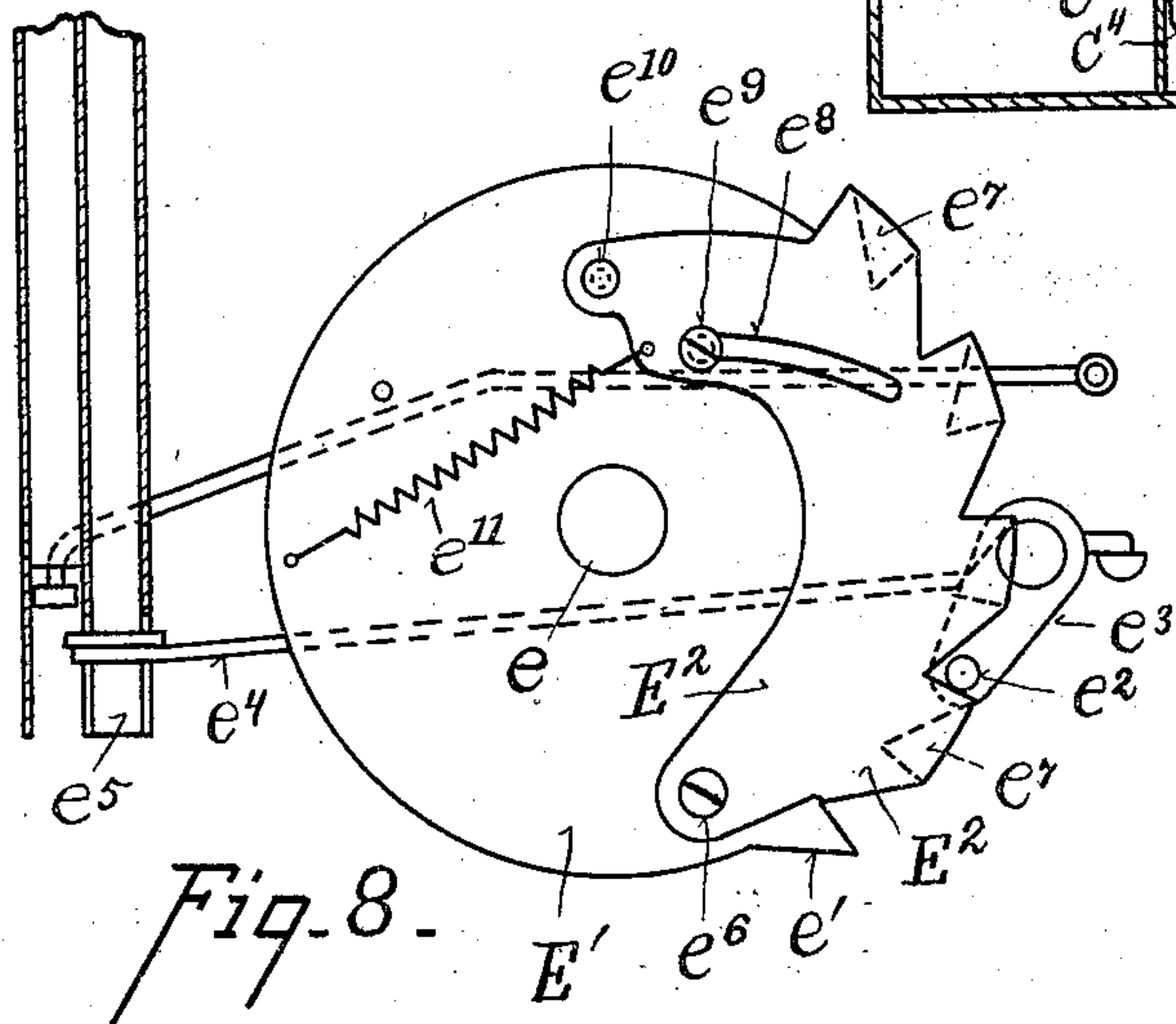
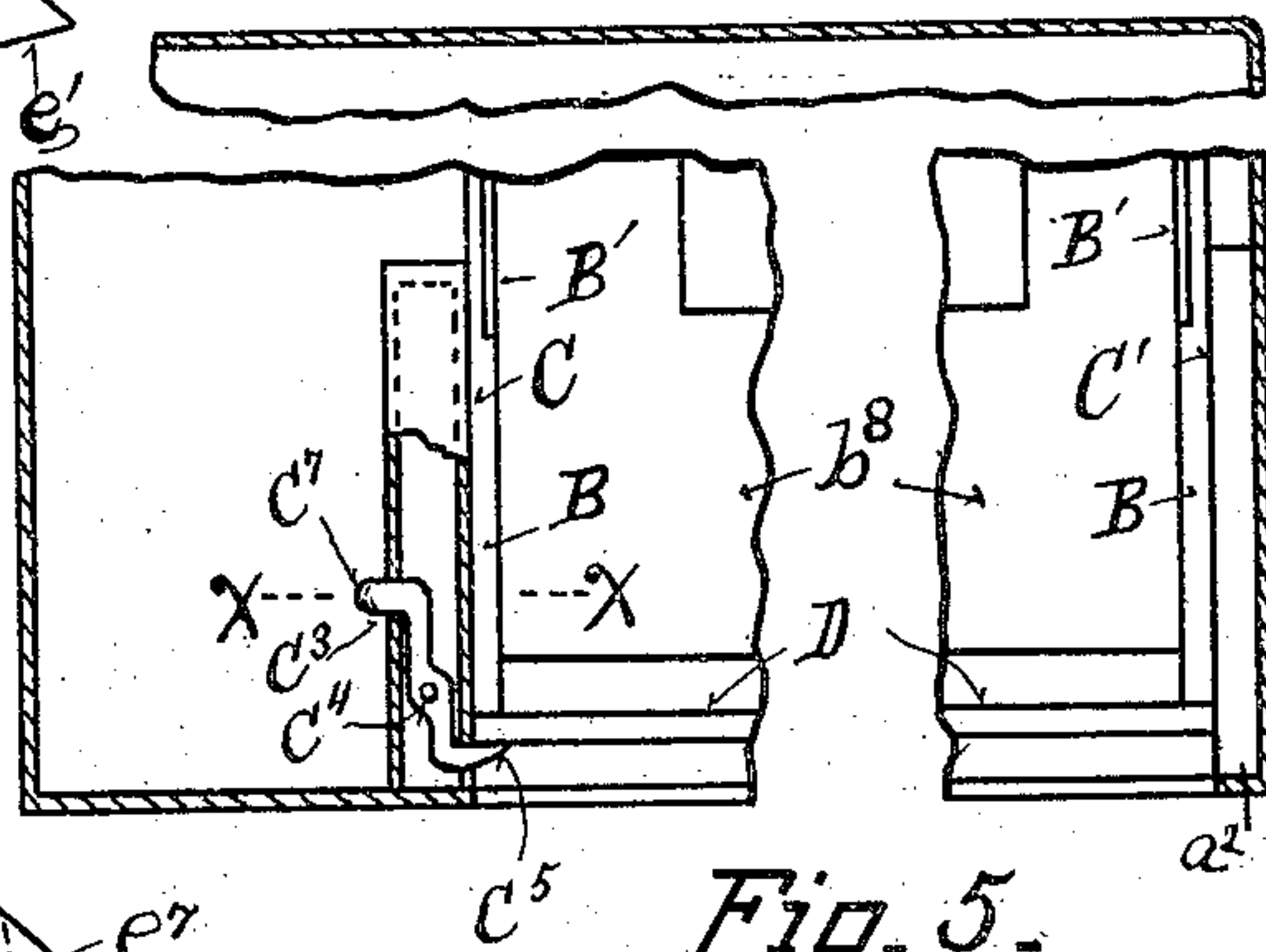
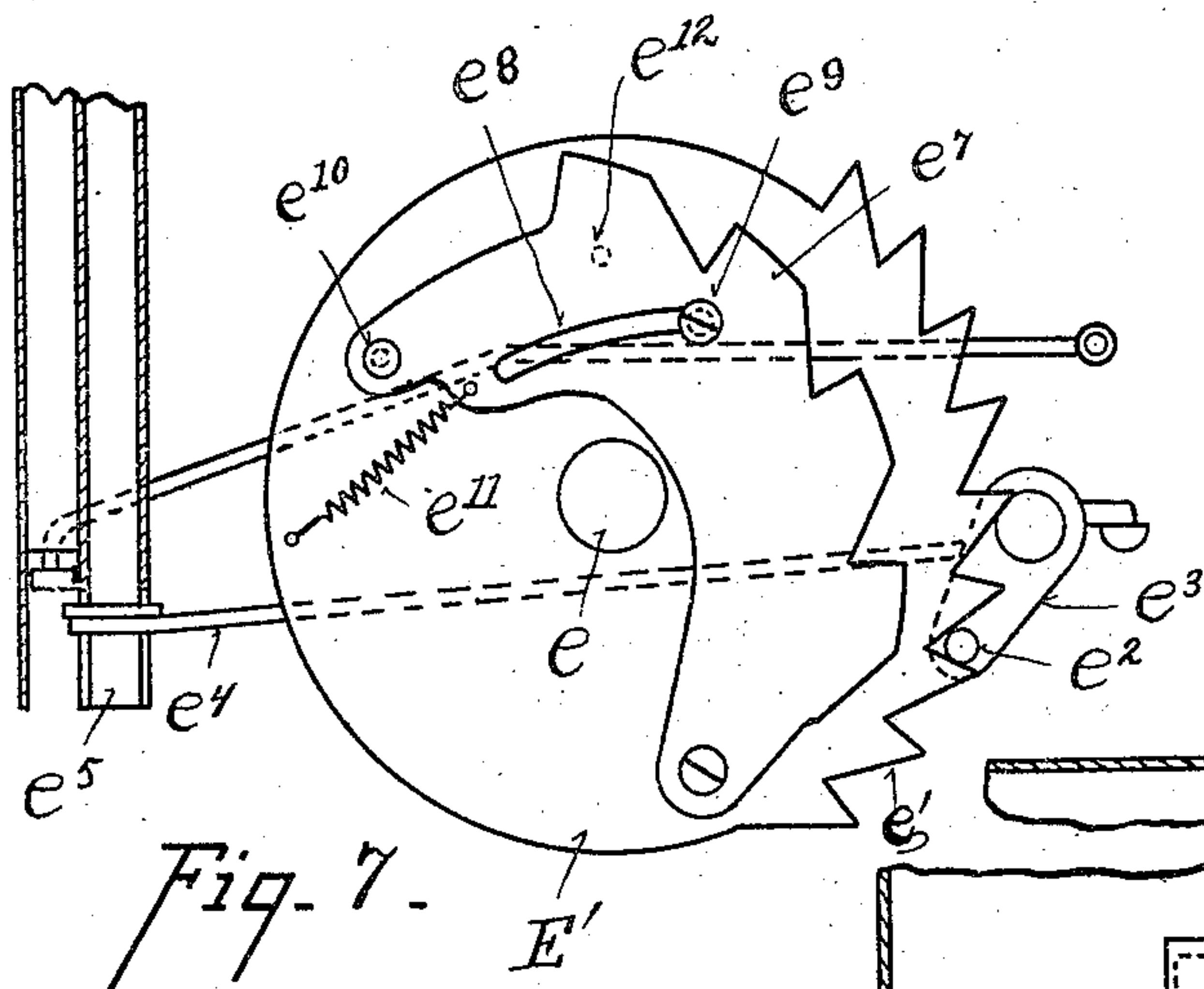
No. 845,199.

PATENTED FEB. 26, 1907.

J. A. RULE.  
NEWSPAPER VENDING MACHINE.

APPLICATION FILED DEC. 10, 1906.

2 SHEETS—SHEET 2.



Witnesses  
C. W. Miles  
A. M. Cornack.

Inventor  
John A. Rule  
By Walter F. Murray  
Attorney



# UNITED STATES PATENT OFFICE.

JOHN A. RULE, OF CINCINNATI, OHIO.

## NEWSPAPER-VENDING MACHINE.

No. 845,199.

Specification of Letters Patent.

Patented Feb. 26, 1907.

Application filed December 10, 1906. Serial No. 347,165.

*To all whom it may concern:*

Be it known that I, JOHN A. RULE, a citizen of the United States of America, and a resident of Cincinnati, county of Hamilton, State of Ohio, have invented certain new and useful Improvements in Newspaper-Vending Machines, of which the following is a specification.

My invention relates to a machine where-  
in there are compartments beneath which  
are swinging doors, which are held closed by  
latches which may be successively and auto-  
matically opened by a coin-operated arm, so  
as to release a newspaper from a compart-  
ment at each motion of the arm.

It is the object of my invention to provide  
a receptacle for the newspapers, which is pro-  
vided with a means which may be readily ad-  
justed for vending papers of varying thick-  
nesses.

A further object of the invention is to pro-  
vide a convenient lock for securing the news-  
paper-receptacle in the housing of the vend-  
ing-machine. This object is attained by the  
means illustrated in the accompanying  
drawings, in which—

Figure 1 is an end view of a newspaper-re-  
ceptacle embodying my invention. Fig. 2  
is a vertical sectional view of the receptacle,  
taken upon line *vv* of Fig. 3. Fig. 3 is a plan  
view of the newspaper-receptacle. Fig. 4 is  
a transverse sectional view through the hous-  
ing into which the newspaper-receptacle is to  
be placed. Fig. 5 is a detail showing the  
transverse partition in the housing upon  
which the latches for holding the doors in the  
bottom of the housing are mounted. Fig. 6  
is a detail horizontal sectional view taken  
upon line *xx* of Fig. 5. Fig. 7 is a detail side  
elevation of the ratchet-wheel which controls  
the rotation of the shaft upon which the  
swinging arm, which successively contacts  
the latches, is mounted. This view shows the  
ratchet-wheel in the condition for permitting  
the shorter strokes of the swinging arm as  
used when vending the thinner newspapers.  
Fig. 8 is a view similar to Fig. 7, but showing  
the ratchet in condition for vending the  
thicker newspapers.

Referring to the parts, A is an elongated  
rectangular casing having on one side a door  
*a*, which may be swung open for the purpose  
of placing therein the newspaper-receptacle  
B. Bottom *a'* of casing A is open. Within  
casing A is a vertical shallow box C, having

an L-shaped notch *c* and two recesses *c'* *c''* in  
its upper edge. At one end of the casing is a  
ledge *a''* (shown at the right-hand side of  
Fig. 5) and having notches similar to the  
notches *c*, *c'*, and *c''* in its upper edge. Be-  
tween the box C and the ledge *a''* the swing-  
ing doors D are mounted. Each of these  
doors is made of two strips *d* and *d'*. The  
strip *d'* has pivots *d''* and *d'''*, which are jour-  
naled in the box C and the ledge *a''*. The  
strips *d'* carry journal-pins *d''* *d'''*, upon which  
lugs *d''* *d'''*, projecting from the strips *d*, are  
journaled. Within box C a series of latches  
*c''* are pivoted upon a wire *c''*, latches *c''* pro-  
jecting at their lower ends *c''* through perfor-  
ations *c''* in the walls of the box C, to engage  
the doors D. There is a latch *c''* for each  
strip *d* *d'*. These latches have knobs *c''* at  
their upper ends, which project through the  
perforations of the wall of the box C in the  
path of the swinging arm E, the latches being  
made of a length such that the knobs *c''* stand  
upon a circle whose center is the shaft *e*, upon  
which the swinging arm E is mounted.

Upon the opposite end of the shaft *e* from  
the swinging arm E is a ratchet-wheel E',  
which has in its periphery a series of teeth *e''*,  
which are engaged by a pin *e''* upon an arm *e''*,  
which is carried by a lever *e''*, whose end pro-  
jects into a coin-chute *e''*, as shown in Fig. 7.  
The shaft *e* is normally under pressure of a  
spring which tends to rotate it, the rotation  
being checked by pin *e''* until a coin strikes  
the lever *e''* and carries the pin *e''* out of en-  
gagement with a tooth to permit the shaft *e*  
to rotate through one step, so that the pin *e''*  
takes into the next tooth. The teeth *e''* are  
made of a size such that the movement of the  
pin *e''* from one tooth into the adjacent tooth  
permits a rotation of the shaft *e* sufficient to  
carry the swinging arm E from one latch *c''* to  
the next adjacent latch, so that when the  
wheel E' is in the condition shown in Fig. 7  
the successive striking of the lever *e''* by coins  
will open first the strip *d* and then the strip *d'*  
of each door D.

To cause each movement of the lever *e''* to  
open the full door D—that is, to open both  
strips *d* and *d'*—ratchet-wheel E' is supplied  
with a segment E'', which is pivoted at *e''* to  
the ratchet-wheel E'. This segment is pro-  
vided with a series of teeth *e''*, which are of a  
width equal to the distance between the ends  
of the successive teeth *e''*. The notch be-  
tween the teeth *e''* is the same as that between



the successive teeth  $e'$ . The segment  $E^2$  is pivoted in a position such that when it is thrown to its outer position, as shown in Fig. 8, the teeth  $e'$  register with two of the consecutive teeth  $e'$ . To render the adjustment of this segment  $E^2$  easy, it is provided with a slot  $e^8$ , which engages a stud  $e^9$ , projecting from the ratchet  $E'$ , a set-screw, and a spring  $e^{11}$ . The segment  $E^2$  is held in the position shown in Fig. 8 by set-screw  $e^{10}$ , engaging perforation  $e^{12}$  in the wheel  $E'$ . The spring  $e^{11}$  holds the segment  $E^2$  in the position shown in Fig. 7. When the ratchet  $E'$  and segment  $E^2$  occupy the relative positions shown in Fig. 8, each time the pin  $e^2$  is disengaged from the ratchet  $E'$  the ratchet is permitted to move through a distance equal to twice the space between the teeth  $e'$ . Thus both strips  $d$  and  $d'$  of the door are released at each motion of the swinging arm  $E$ .

The newspaper-receptacle  $B$  consists of end walls  $b$ , connected by longitudinal rods  $b'$ . Upon the outside of the walls  $b$  are arms  $b^2$ , which have downwardly-projecting fingers  $b^3$ . Arm  $b^2$  has slots  $b^4$  to fit over studs  $b^5$ . Arms  $b^2$  are normally held in forward positions by springs  $b^6$ , attached to the walls  $b$ . The newspaper-receptacle is of a length equal to the distance between box  $C$  and the ledge  $a^2$ . When the receptacle is placed within the casing, the fingers  $b^3$  pass down into the notch  $c$  and the corresponding notch in the ledge  $a^2$ , while pins  $b^7$  upon the ends  $b$  pass into the notches  $c'$   $c^2$  and the corresponding notches in the ledge  $a^2$ . The length of the fingers  $b^3$  is equal to the width of the neck of the notch  $c$ . When the door  $a$  of the casing is closed, it contacts the projecting ends of the arms  $b^2$  and forces the projecting end of the finger  $b^3$  under the projecting lug of the notch  $c$ , so that while the door  $a$  remains closed the fingers  $b^3$  lock the receptacle firmly in place within the casing and that when the door  $a$  is opened the springs  $b^6$  bring the arms  $b^2$  to a position such that the receptacle may be readily lifted out of the casing. A temporary floor for holding newspapers in receptacle  $B$  while it is being placed in casing  $A$  is provided in frame  $F$ , Fig. 2, to be removed as soon as receptacle  $B$  is placed in casing  $A$ .

Within the newspaper-receptacle are a series of partitions fixed in relation to the ends  $b$ . These fixed partitions each consist of a horizontal strip  $b^8$  and a horizontal rod  $b^9$  and vertical rods  $b^{10}$ . Between the fixed partitions are located sliding partitions which consist of horizontal members  $b^{11}$   $b^{12}$ , connected by vertical members  $b^{13}$ . The sliding partitions are connected at their opposite ends to sliding horizontal bars  $B'$ , which are located in horizontal ways  $B^2$  in the ends  $b$  and on which are secured knobs  $B^3$ , which project through slots  $b^{14}$  in the ends  $b$ . By moving the knobs  $B^3$  the movable partitions may be brought to bear against the fixed partitions,

as shown in full line in Fig. 2, or may be moved to occupy a position midway between the fixed partitions, as shown in dotted line, Fig. 2, in either of which positions they may be locked by means of the knob  $B^3$ , which is made in the form of a set-screw.

When the receptacle is placed within the casing, the fixed partitions stand above the pivot-pins  $d^2$ . When the newspaper-receptacle is adjusted so that the fixed and sliding partitions stand together, the ratchet-wheel  $E'$  is adjusted so that the segment  $E^2$  is in its outermost position, and when the movable partitions of the newspaper-receptacle stand midway between the fixed partitions the segment  $E^2$  is in its innermost position, as shown in Fig. 7. The former position is that occupied by the parts when it is desired to vend a thick newspaper, in which it is seen that the receptacle has fewer but larger compartments and that the full door  $D$  is opened at each movement of the swinging arm, whereas in the latter position there are more compartments, but thinner to accommodate the thinner newspaper, and that each movement of the swinging arm  $E$  opens but half of the door  $D$ , and thus opens only one of the narrower compartments.

What I claim is—

1. In a newspaper-vending machine the combination of a newspaper-receptacle, a series of partitions in the receptacle made movable relatively to each other, means for moving the partitions to divide the receptacle into a greater or less number of compartments, doors beneath the receptacle and means for opening them an amount which corresponds to the size of the compartments.

2. In a newspaper-vending machine the combination of a newspaper-receptacle, a series of partitions in the receptacle made movable relatively to each other, means for moving the partitions to divide the receptacle into a greater or less number of compartments, doors made of sections hinged together pivoted beneath the compartments, latches for supporting the sections and means for releasing one or more of the latches at a time.

3. In a newspaper-vending machine the combination of a newspaper-receptacle, a series of partitions in the receptacle made movable relatively to each other, means for moving the partitions to divide the receptacle into a greater or less number of compartments, doors made of sections hinged together pivoted beneath the compartments, latches for supporting the sections, a swinging arm for engaging the latches, means for imparting a step-by-step movement to the arm and a means for regulating the size of the step-by-step movement of the arm to release one or more latches at each step.

4. A newspaper-receptacle for use in a vending-machine consisting of a frame, a series of fixed partitions in the frame, movable



partitions between the fixed partitions, sliding members mounted in the frame, and coupled to the movable partitions.

5 In a newspaper-vending machine the combination of a casing, key-seats formed upon the interior walls of the casing, a door hinged to the casing, a newspaper-receptacle, sliding keys mounted upon the receptacle so as to project beyond the casing when the re-

ceptacle is placed therein and to register with the key-seats so that the closing of the door contacts the keys and seats them in their seats to hold the receptacle firmly in the casing.

JOHN A. RULE.

Witnesses:

WALTER F. MURRAY,  
AGNES McCORMACK.