

A. BRYNTESON.
VENTILATOR.
APPLICATION FILED JUNE 28, 1909.

952,505.

Patented Mar. 22, 1910.

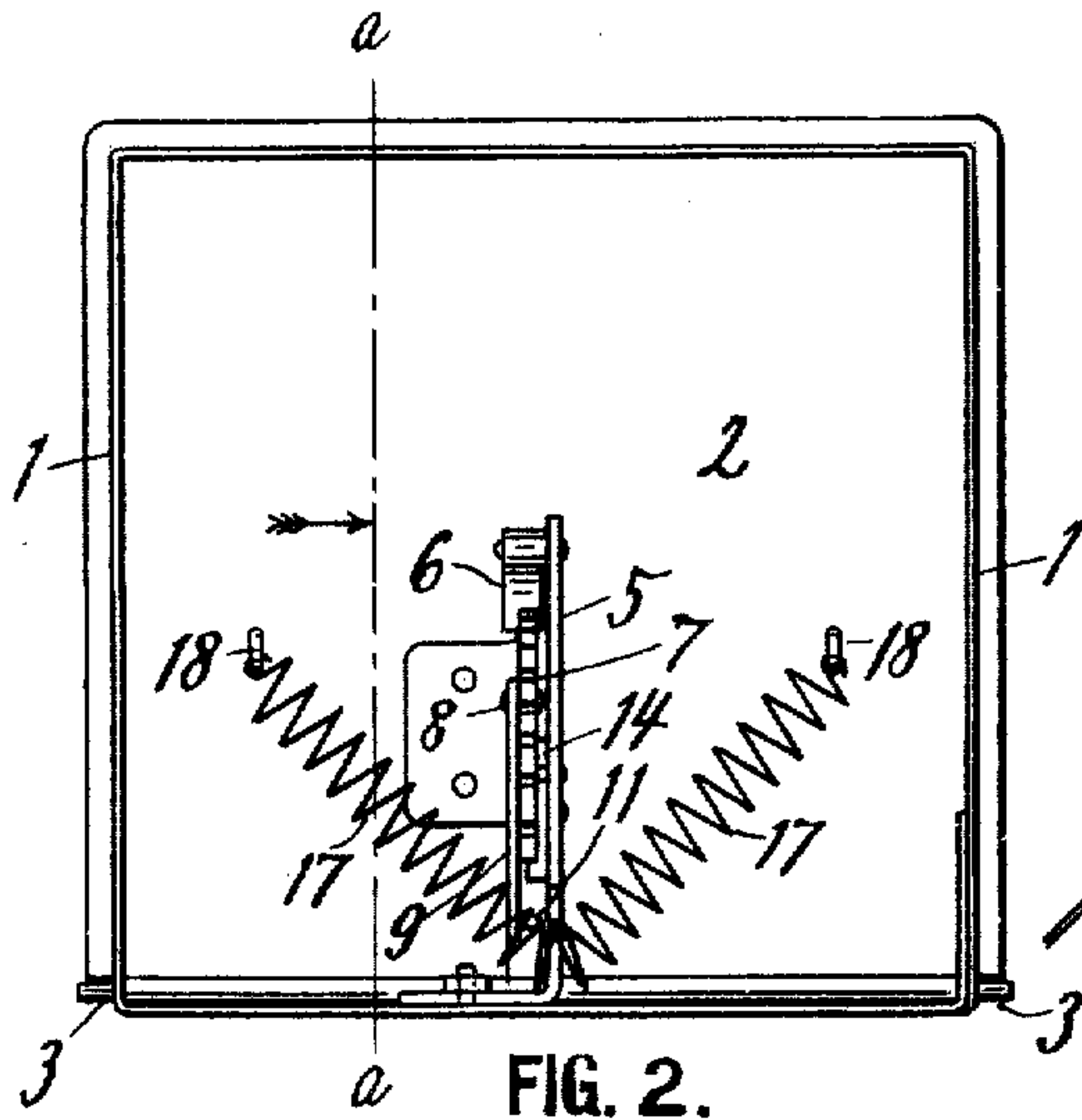


FIG. 2.

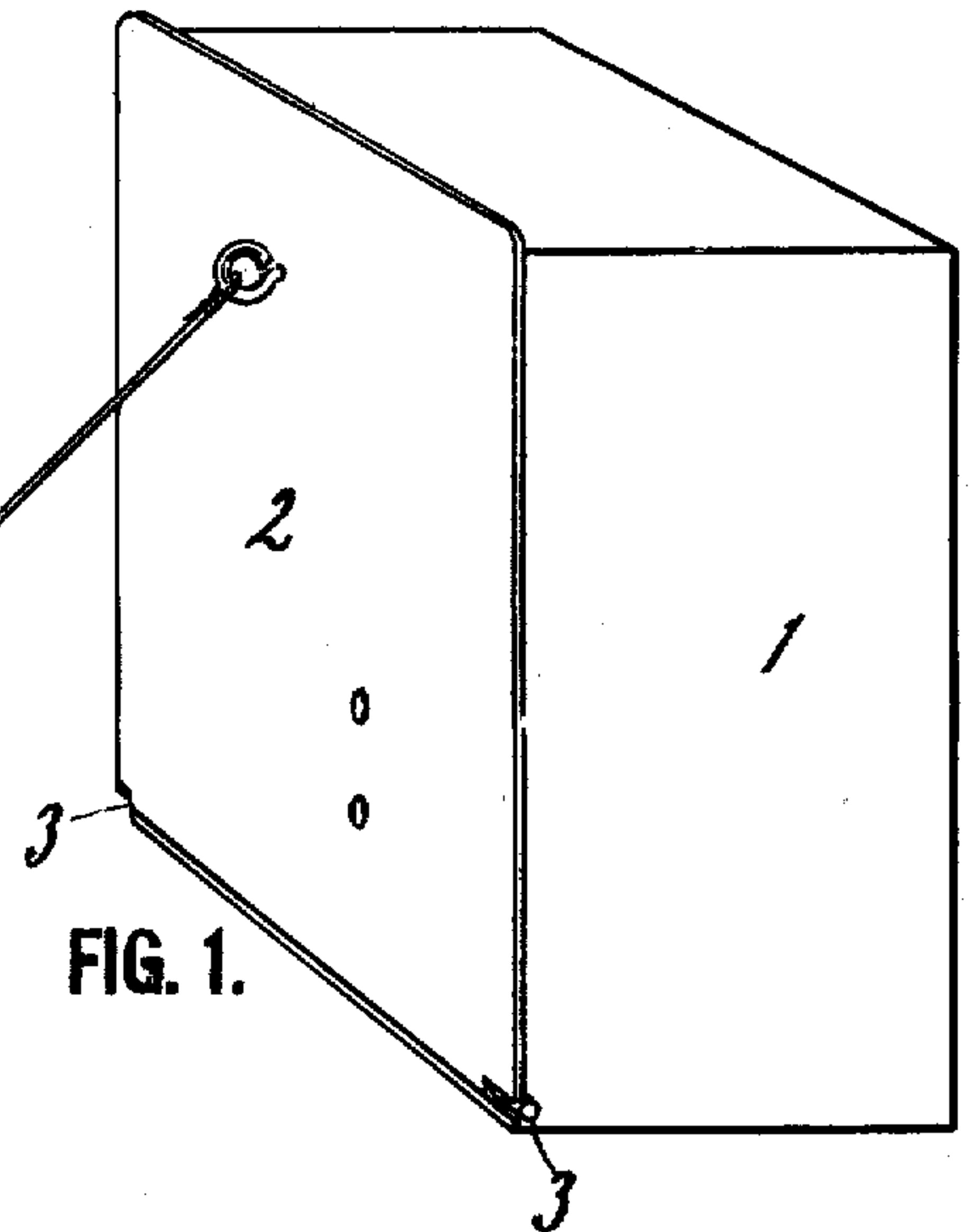


FIG. 1.

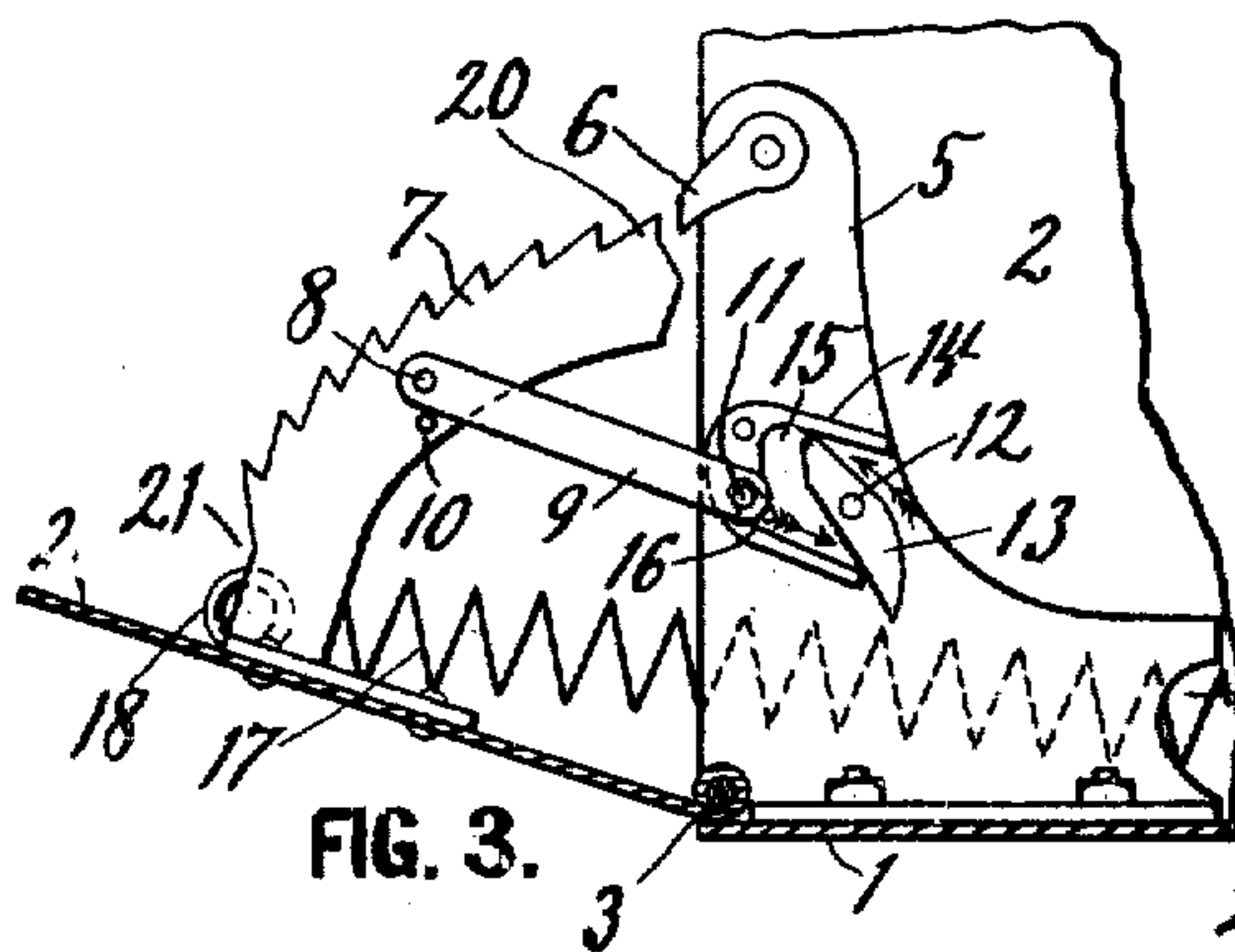


FIG. 3.

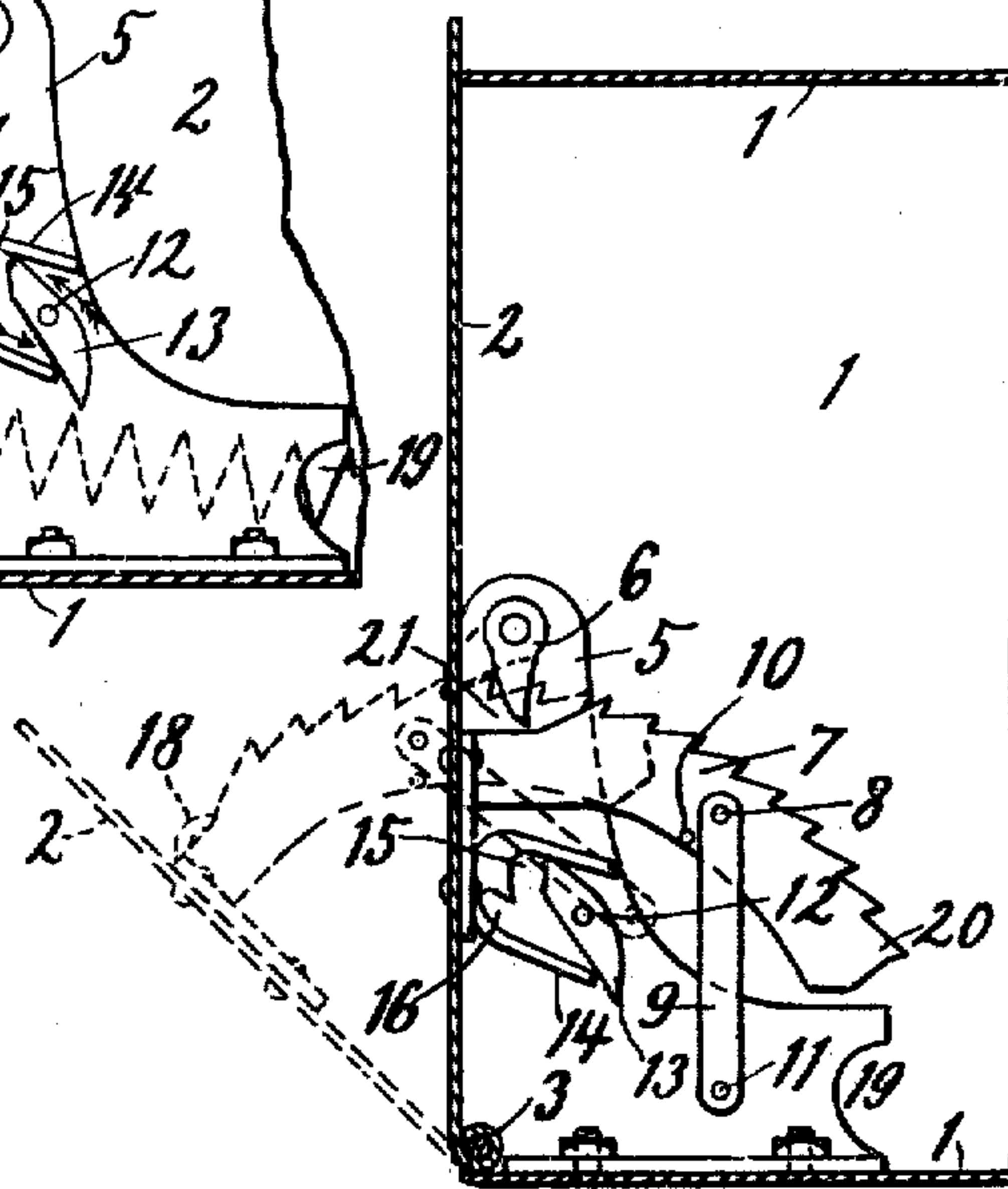


FIG. 4.

WITNESSES:

D. E. Carlson.
A. E. Carlson.

INVENTOR:

Alfred Brynteson.
BY HIS ATTORNEY:
A. M. Carlson.

UNITED STATES PATENT OFFICE.

ALFRED BRYNTESON, OF ST. PAUL, MINNESOTA.

VENTILATOR.

952,505.

Specification of Letters Patent.

Patented Mar. 22, 1910.

Application filed June 28, 1909. Serial No. 504,692.

To all whom it may concern:

Be it known that I, ALFRED BRYNTESON, a subject of the King of Sweden, having declared my intention to become a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented a new and useful Ventilator, of which the following is a specification.

My invention relates to ventilators for dwellings, offices, school houses and other buildings in which it is desirable to have circulation of air through apertures in the walls; and the object is to provide an efficient and convenient ventilator of said class.

In the accompanying drawing, Figure 1 is a perspective view of my improved ventilator ready to be inserted in a wall. Fig. 2 is an outside elevation of the device looking into the frame or casing of the device. Fig. 3 is a section on the line *a-a* in Fig. 2 with the lid of the ventilator fully opened. Fig. 4 is a view similar to Fig. 3 but with the lid closed, and in dotted lines partly opened.

Referring to the drawing by reference numerals, 1 designates a rectangular frame adapted for insertion in an angular opening formed in the wall of the building (not shown). The inner end of the frame is normally closed by a lid 2, which is hinged with its lower corners to the frame at 3 in any suitable manner. As such ventilators are usually placed high up in a room the lid is provided with a suspended cord 4 by which it may be pulled more or less open and also so manipulated that it will close by spring force when desired. The mechanism employed for this purpose is as follows. In the bottom side of the frame 1 is fixed a bracket 5 near the top of which is pivoted a pawl 6 adapted to engage the teeth of a segmental ratchet rack 7 which is fixed with one end to the outer side of the lid 2. On said rack is pivoted at 8 an arm 9, which normally rests upon a pin 10 at the side of the rack. The free end of this arm is at the side nearest the bracket 5 provided with a pin 11 moving close to the side of the bracket. At said side of the bracket is pivoted at 12 an elongated tumbler 13, near which is fixed on the bracket a guard 14 having a shallow notch 15 and a deep notch 16 (see Fig. 4). The lid is closed by a spring which may be of any suitable con-

struction but I prefer to employ a helical spring 17 fastened with both ends at 18 to the lid and having its middle portion placed in a notch 19 in the bracket 5.

In the operation of the device the frame 1 is inserted in an aperture in the wall with the lid 2 inside the room. When the lid is to be opened more or less this is done by pulling downward or inward and downward with the cord 4, which is suspended in the room to be ventilated, the dog 6 engaging the rack 7 and holding the lid in any desired position. When the lid is almost fully open the pin 11 rides on the top of the tumbler 13 until it stops in the notch 15 and the dog 6 rests upon the last tooth 20 of the rack, if the cord 4 be now relaxed the door will be held fully open by the dog 6. Thus a single full jerk or pull on the cord, as well as any shorter pull, will leave the lid more or less open, but if after the lid is fully opened the cord be pulled a second time the rack will move entirely past the dog 6 and allow it to drop to a hanging position so that by releasing the cord 4 the lid will be closed by the spring 17, the dog 6 turning its back down upon the moving rack 7 until the lid is closed and the dog 6, reaching the notch 21 of the rack turns by its own weight into position to again engage the teeth of the rack. To more fully understand the said movement of the rack and lid it should be observed that while the pin 11 is held by the cord 4 in the notch 15 and the dog 6 rests in the last notch of the rack, the tumbler 13 being heaviest at its outer end tilts its short end upward, as in Fig. 3, so that when the cord is released and the spring acts on the lid to move the pin 11 out of notch 15 the said pin finds no tumbler to support it, but drops down to a level with the deeper notch 16, and as the cord is pulled a second time the deeper notch permits the pin to move far enough to permit the dog or pawl 6 to drop by the end of the rack. The operator may thus stand on the floor and by simply pulling and releasing the cord he may close the ventilator or cause it to be open more or less and remain open until the cord is again operated.

It is impossible to here mention all the purposes and places for which such a ventilator and its improved mechanism may be employed. It is also obvious that the struc-

ture may be considerably varied without diverging from the scope and spirit of the invention.

The various kinds of closures, netting, screens or blinds often employed upon the outer end of ventilator frames I have omitted from the drawing not because I may not use them but because they are well known in the art of ventilation.

10 What I claim is:

1. A ventilator for buildings, the same comprising a frame adapted for insertion in an aperture in the wall of the building, a lid hinged to the lower edge of the frame and adapted to open into the building, an operating cord suspended from the lid, a spring arm arranged to close the lid, a segmental ratchet rack projecting from the lid into the frame and having near the lid a notch, a bracket fixed in the frame and having at one side a guard with a deep and a shallow notch therein and a tumbler pivoted near the guard and weighted to stay in normal position, an arm pivoted with one end to the rack and having in its other end a lateral pin adapted to engage alternately in the shallow notch and then in the deep notch, said tumbler serving to guide the pin first into the shallow notch and then permitting it to drop to a level with and engage the deep notch, and a dog on the bracket for engaging the segmental rack, all operated substantially as set forth.

2. A ventilator for buildings, the same

comprising a frame adapted for insertion 35
in an aperture in the wall of the building,
a lid hinged to the lower edge of the frame
and adapted to open into the building, an
operating cord suspended from the lid, a
spring arm arranged to close the lid, a seg- 40
mental ratchet rack projecting from the lid
into the frame and having near the lid a
notch, a bracket fixed in the frame and hav-
ing at one side a guard with a deep and a
shallow notch therein and a tumbler piv- 45
oted near the guard and weighted to stay in
normal position, an arm pivoted with one
end to the rack and having in its other end
a lateral pin adapted to engage alternately
in the shallow notch and then in the deep 50
notch, said tumbler serving to guide the
pin first into the shallow notch and then
permitting it to drop to a level with and
engage the deep notch, and a dog on the
bracket for engaging the segmental rack, 55
all operated substantially as set forth, said
spring that closes the lid being a coiled
wire spring attached with both ends to the
door and having its middle portion engaged
with the bracket, the bracket having a notch 60
for such engagement.

In testimony whereof I affix my signature, in presence of two witnesses.

ALFRED BRYNTESON.

Witnesses:

OLA PETERSON,

ANDREW J. NEWGREN.