

F. TERRAMORSE.
ADJUSTABLE VENTILATOR.
APPLICATION FILED MAY 22, 1909.

944,831.

Patented Dec. 28, 1909.

Fig. 1.

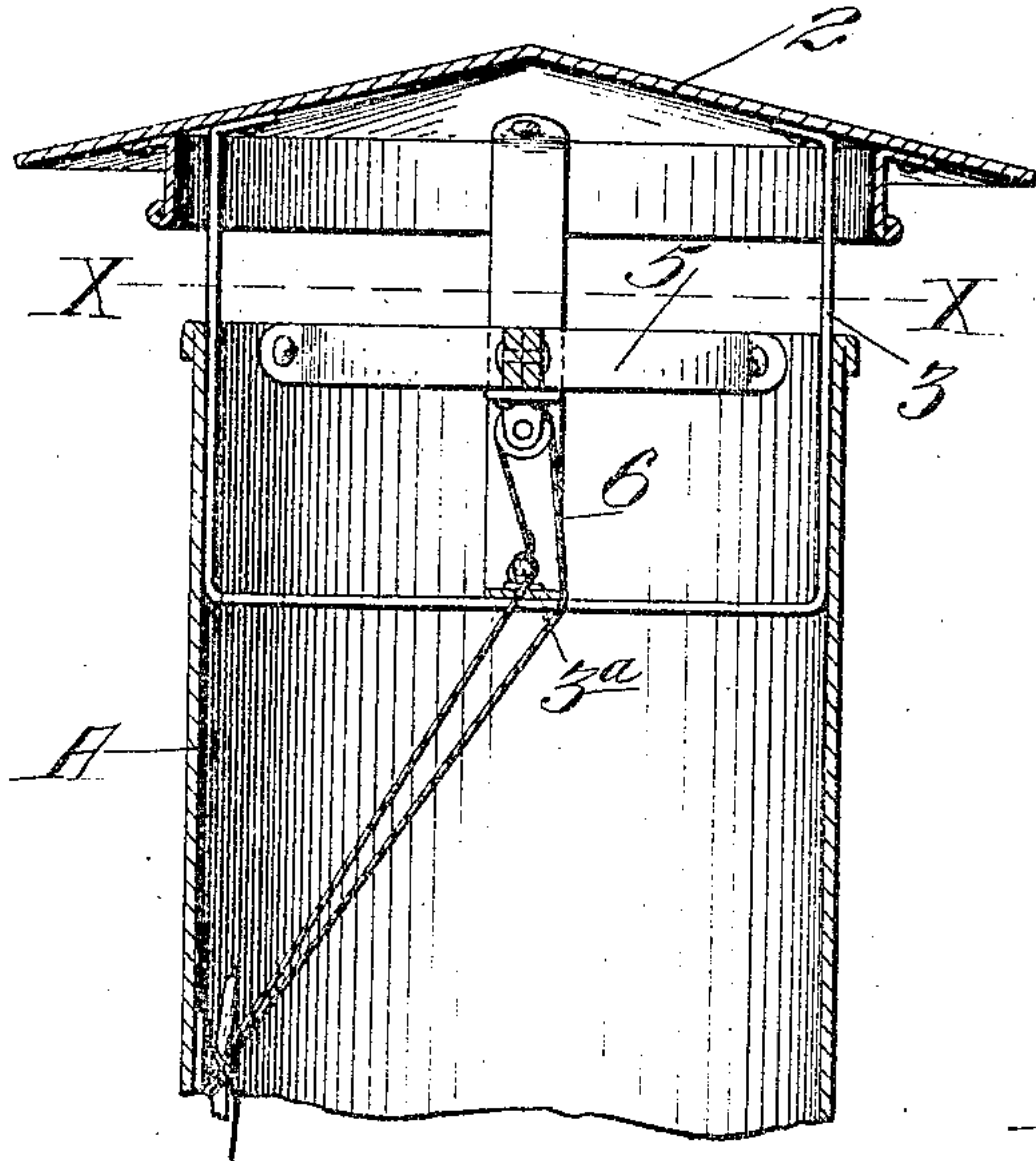


Fig. 4.

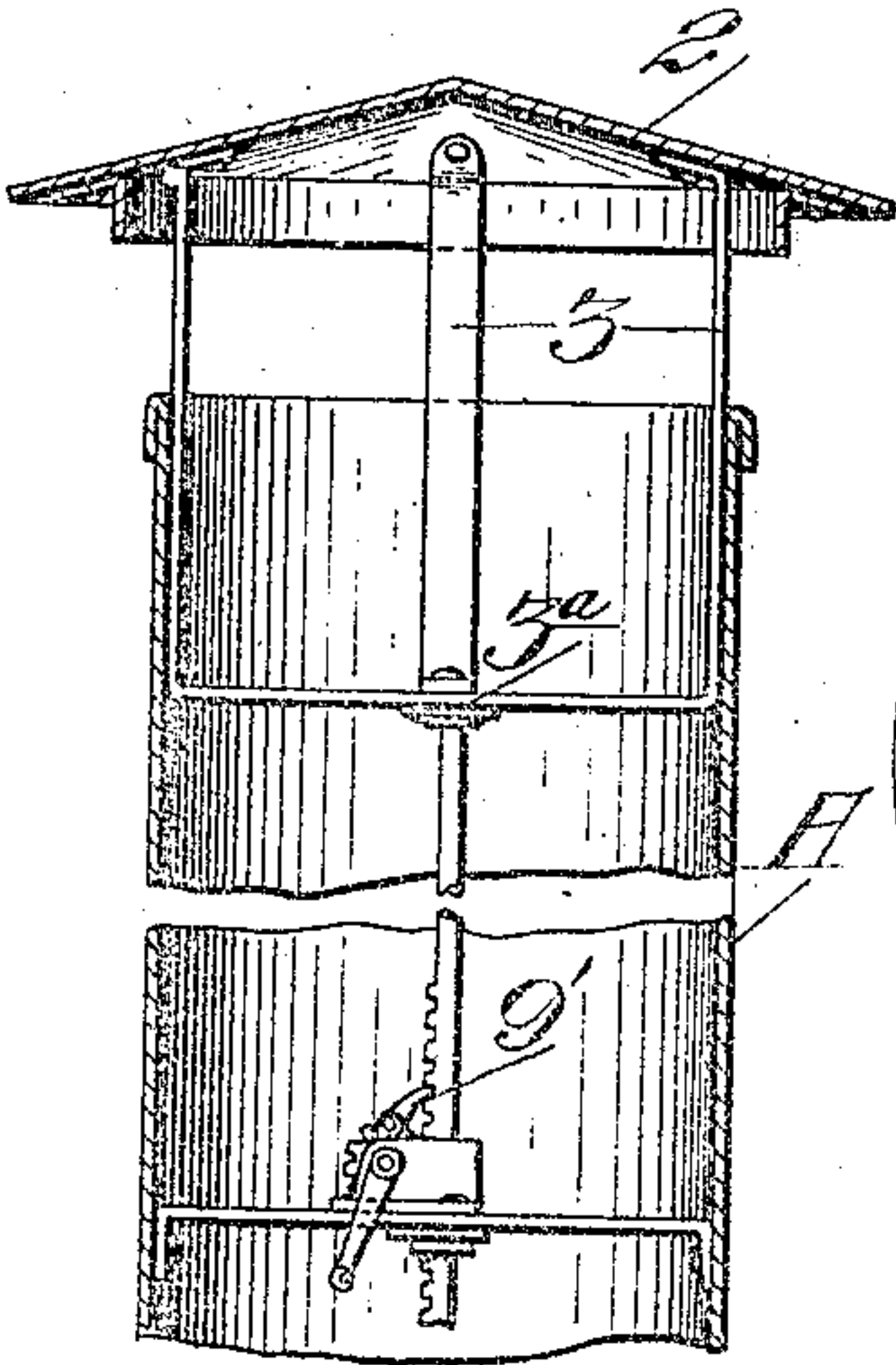


Fig. 2.

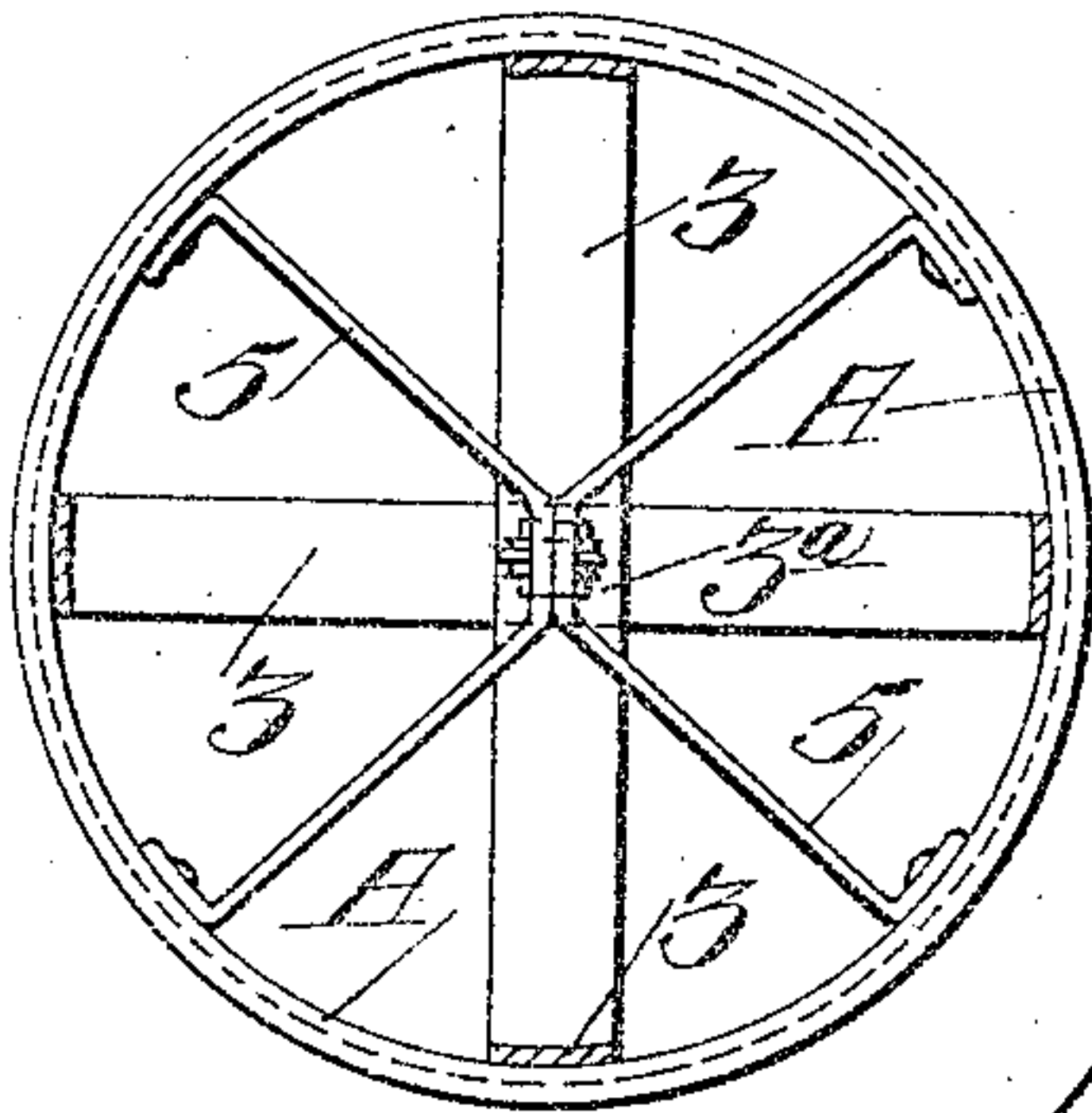
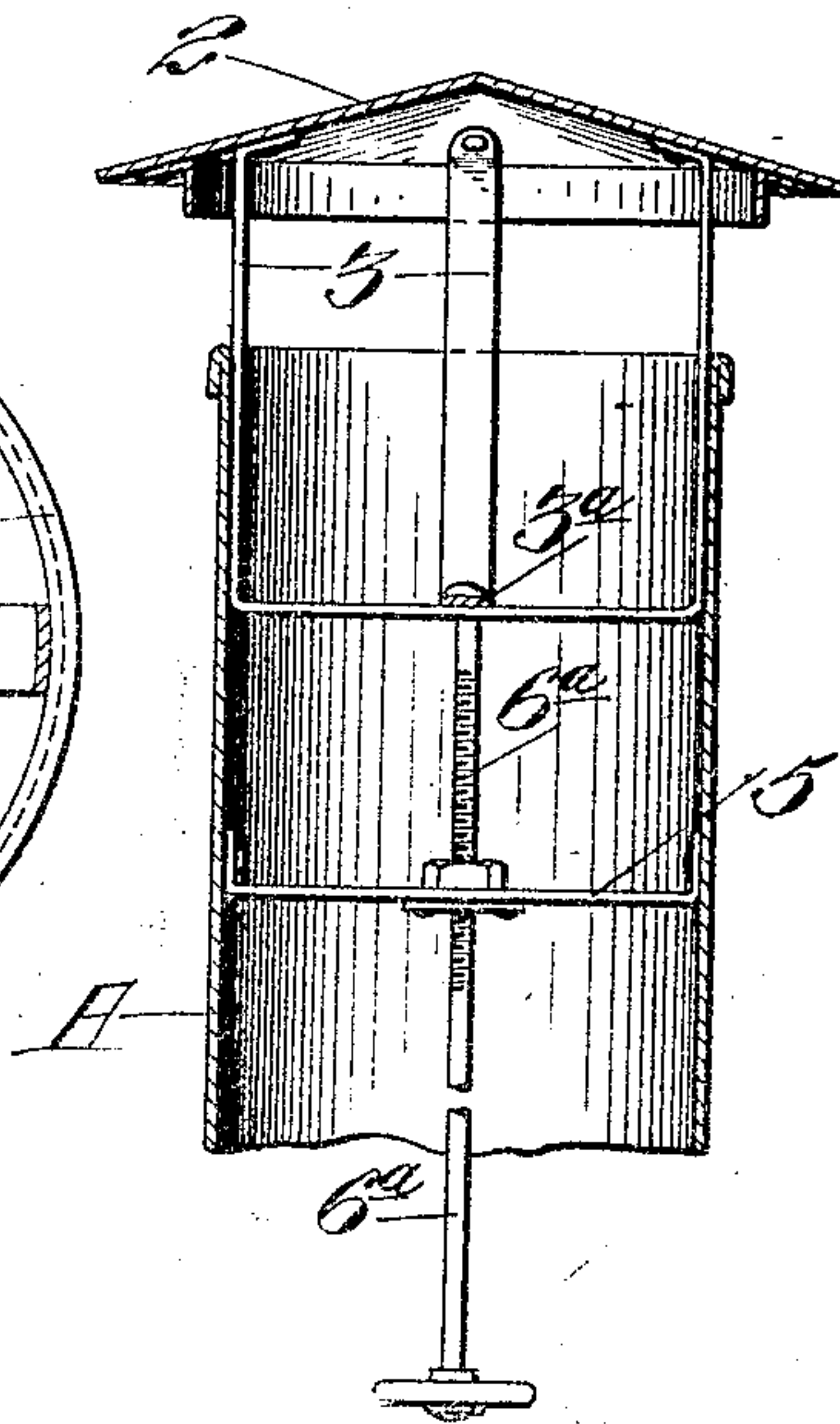


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

FRANK TERRAMORSE, OF SAN FRANCISCO, CALIFORNIA.

ADJUSTABLE VENTILATOR.

944,831.

Specification of Letters Patent.

Patented Dec. 28. 1909.

Application filed May 22, 1909. Serial No. 497,739.

To all whom it may concern:

Be it known that I, FRANK TERRAMORSE, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Adjustable Ventilators, of which the following is a specification.

My invention relates to a ventilating device for buildings and the like, and in means for opening and regulating the same.

It consists in the combination of an outer shell, a guided, slidable cap therefor, and means for operating the same.

It also comprises details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a central section of the ventilator. Fig. 2 is a section on line $x-x$ of Fig. 1. Figs. 3 and 4 show modifications in the construction of my ventilator.

It is the object of my invention to provide a ventilating apparatus which is especially applicable to rooms, buildings and other points where a change of air is required, and a means by which the opening and closing of the ventilator may be readily effected and regulated. The ventilating apparatus includes a tubular shell A of any desired form and size. This shell is fixed in the ceiling or roof of the apartment or space to be ventilated.

2 is a flanged cap or cover which may be closed down upon the top of the tube A, and thus prevent ingress of rain or wind. This cap has guide arms 3 extending downward, preferably within the shell A, which shell gives direction to the movements of the arms on the cap, so that the latter may be moved outward or inward, having the same axis as that of the tube.

In the upper part of the tube A, I have shown cross bars or supports 5, and the lower ends of the arms 3 are also united so as to form a central point of attachment 3^a in line with that of the arms. The operating device for the ventilator cap is so attached as to operate between the arms 3^a and 5.

In Fig. 1, I have shown a pulley attached to the central portion of the arms 5. Over this pulley passes a cord 6, and this cord has the opposite end attached at the junction of the arms 3^a . The cord may ex-

tend any distance downwardly to be within reach of an operator, and the opposite end may be attached directly to 3^a as shown.

The operation will then be as follows: The cap being closed, the overhanging flange prevents any ingress of wind or storm to the upper part of the tube A. If it is desired to open the ventilator, it is only necessary to pull upon that portion of the cord 6 which passes over the pulley, and the pull acting upon the point of attachment 3^a will raise the arms 3 and the cap to any desired extent.

A suitable hook or attachment may be made for the engagement of the cord 6 to retain the ventilator in its open position. If it is desired to close the ventilator wholly or in part, the cord will be detached, and if the cap does not descend by gravitation, a pull upon the opposite portion of the cord will bring it down. In lieu of the cord, a rack and pinion, or a screw may be connected with the movable part for the purpose of raising it.

In Fig. 3, I have shown a screw attachment in which the screw 6^a passes through a threaded nut at the junction of the fixed cross arms 5, and the shaft of this screw may extend downwardly to a point within reach of an operator, so that by turning it, the ventilator cap will be raised and depressed as previously described. With this construction, the screw itself forms a supporting attachment, the threads being of such a pitch that the friction within the nut will be sufficient to retain the ventilator cap at any point where it is desired to leave it, and when fully closed the screw will act as a lock to prevent the elevator being opened from the outside. By substituting a rack bar and an engaging pinion, as shown in Fig. 4, a similar result may be obtained, the parts being held in any desired position by means of a pawl as shown at 9.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. A ventilator of the character described having in combination a tubular casing, a cap positioned above the same having downwardly extending arms entering said casing and being slidably guided thereby, the lower ends of said arms being united and crossing each other at a central point, and means for adjusting the cap, said means including a

power device connecting with the arms and with a fixed point, and means for locking the cap in its adjustment.

2. An improved ventilator having in combination a tubular casing, a cap above the same having arms extended downwardly into the casing and turned inwardly and crossing each other at a central point, said casing forming a guide for the arms, a raising and lowering mechanism connected with the arms at their point of crossing whereby

the cap may be adjusted relatively to the end of the casing, and a locking device for engaging the raising and lowering mechanism and holding the cap in its adjusted position. 15

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FRANK TERRAMORSE.

Witnesses:

A. F. RUNYON,
S. RADEMACHER.