

No. 748,315.

PATENTED DEC. 29, 1903.

W. J. SCHUMACHER.
VENTILATOR.

APPLICATION FILED JUNE 5, 1903.

NO MODEL.

Fig. 1.

A

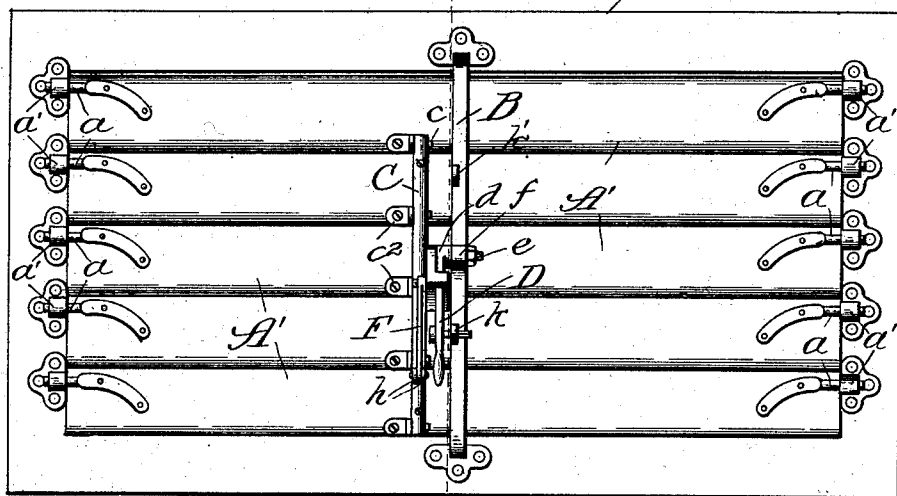


Fig. 2.

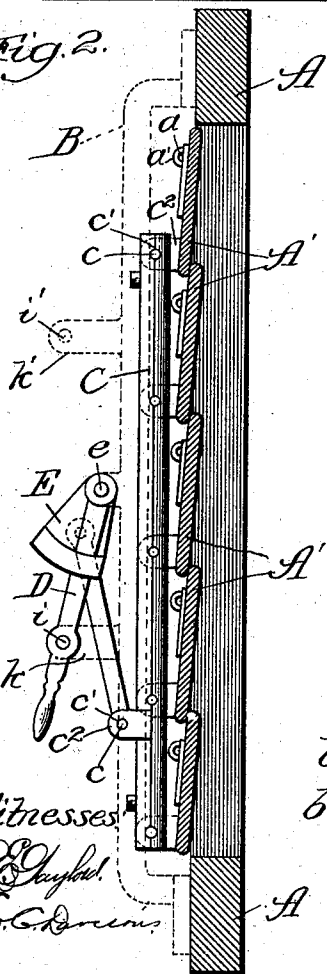
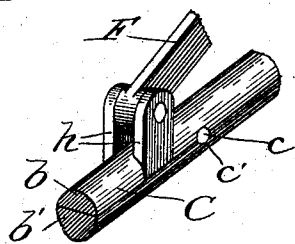
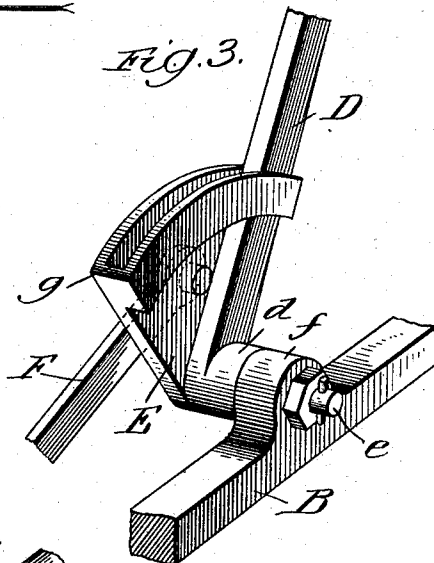


Fig. 3.



Witnesses

[Signature]
[Signature]

Inventor:

Walter J. Schumacher,
By *[Signature]*,
Attys.

UNITED STATES PATENT OFFICE.

WALTER J. SCHUMACHER, OF CHICAGO, ILLINOIS.

VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 748,315, dated December 29, 1903.

Application filed June 5, 1903. Serial No. 160,193. (No model.)

To all whom it may concern:

Be it known that I, WALTER J. SCHUMACHER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Ventilators, of which the following is a specification.

My invention relates to an improvement in ventilators of the shutter-slat type, in which a series of mutually-overlapping pivotal slats are connected in a frame to adapt them to be opened for ventilation and closed for shutting out air; and it relates more particularly to an improvement in the means for operating the shutter-slats and locking them in their open and closed conditions, my primary object being to provide a novel and comparatively simple, durable, and effective construction of such means.

Referring to the accompanying drawings, Figure 1 is a view in side elevation of a ventilator of the type referred to provided with my improvement; Fig. 2, a section taken at the line 2 on Fig. 1, viewed in the direction of the arrow and enlarged; and Fig. 3, a broken perspective view of the shutter-operating mechanism.

A is the frame of the ventilator, which I have primarily devised for use on railway-cars for shipping live stock, though it is also intended for use on ice-boxes and in other situations. In the application to a stock-car the frame A will form that portion of the side of the car which extends between an end thereof and the door between its ends, and four of the ventilators will be provided on the car, two on each side, to form its sides. On the opposite end bars of the frame are secured in vertical series bearings a' for trunnions a , projecting from the ends of slats A' above their longitudinal centers, whereby the slats are pivotally supported in the frame to extend parallel with its side bars in mutually-overlapping relation.

B is a bearing-bar rigidly fastened at its ends to the side bars of the frame to extend transversely across the slats, from which it is sufficiently spaced to permit them to open.

C is the slat-connecting rod, shown to be formed of two semi-cylindrical sections b and b' , fastened lengthwise together and forming transverse journal-bearings c' at intervals be-

tween them into each of which extends a journal-pin c , projecting from a bracket c^2 on each slat. Thus the slats are pivotally connected together to adapt them to be simultaneously opened or closed in the manner of shutters by moving the rod C longitudinally. For actuating the slats I provide a lever D, pivotally supported at a boss d on one end upon a journal e in a bearing f , projecting outward from the bearing-bar B, the journal e carrying on one end a head E, shown in its preferred form of a segment having a longitudinally slotted outer end g , through which the operating-lever extends to engage with it at its opposite extremities by throwing the lever. A link F pivotally connects the head E with the rod C at a bearing h thereon. Between its ends the lever D is provided at an enlargement k with an eye i to register at each end of its throw with an eye i' in a lug k' in proper position on the bar B and permit the lever to be locked by a car-seal, a pin and cotter, or the like by passing the locking medium through the coincident eyes i i' .

To describe the operation of my improvement with reference to a stock-car when it is desired to regulate the temperature of the car or to maintain the ventilator open during the moderate or warm season, the lever D is thrown in the direction to abut against the end of the head g in its path and turn in attaining the end of its throw, the head E on its journal, thereby causing the link F to draw the rod C, with the effect of turning the slats on their trunnions into relatively parallel horizontal positions, wherein they extend flatwise one over the other, and the lever is locked at that end of its throw, and when closure of the ventilator is desired for permanency during the cold season or temporarily the lever is thrown in the opposite direction to engage and turn the segment on its bearing, with the effect on the link of causing it to move the rod C in the direction to produce the necessary overlapping relation of the slats. The journaled connection between the slats and lever afforded by the slotted segment E provides sufficient lost motion to the lever to adapt it to be turned through an arc of sufficient length for each throw to bring it in each of its two positions for locking parallel, or approximately parallel, with the side of the

ventilator, whereby its outward projection is avoided to keep it out of the way.

What I claim as new, and desire to secure by Letters Patent, is—

- 5 1. The combination with a ventilator-frame having slats journaled therein to mutually overlap one another by their closure and a rod at which the slats are pivotally connected together, of means for actuating the slats to
10 open and close them, comprising a bearing, a head journaled on said bearing and linked to said rod, and an operating-lever having a lost-motion connection with said head, substantially as and for the purpose set forth.
- 15 2. The combination with a ventilator-frame having slats journaled therein to mutually overlap one another by their closure and a rod at which the slats are pivotally connected together, of means for actuating the slats to
20 open and close them, comprising a bearing, a head journaled on said bearing and linked to said rod, and an operating-lever having a lost-motion connection with said head, and means for locking said lever at the ends of its throw,
25 substantially as and for the purpose set forth.
3. The combination with a ventilator-frame having slats journaled therein to mutually overlap one another by their closure, and a rod at which the slats are pivotally connected
30 together, of means for actuating the slats to open and close them, comprising a bearing-bar extending across the slats, a slotted head journaled on said bar, a link connecting said head and rod, and an operating-lever ful-
35 crumed on said bar and extending through the slot of said head, substantially as and for the purpose set forth.

4. The combination with a ventilator-frame having slats journaled therein to mutually overlap one another by their closure and a 40 rod at which the slats are pivotally connected together, of means for actuating the slats to open and close them, comprising a bearing-bar extending across the slats, a slotted head 45 journaled on said bar, a link connecting said head and rod, and an operating-lever fulcrumed on the journal of said head and extending through the slot thereof, and means for locking said lever at the opposite ends of its throw, substantially as and for the pur- 50 pose set forth.

5. In combination, a ventilator-frame having slats journaled therein to mutually overlap one another by their closure, and carrying brackets provided with pins, a rod cross- 55 ing said slats and pivotally connected therewith at said pins, a bar extending from the side members of the frame across the slats and provided with a journal-bearing, a segmental slotted head carrying a journal confined in 60 said bearing, a link connecting said head and rod, an operating-lever fulcrumed on said journal and extending through the slot of said head, and having an eye to receive a locking medium, and lugs on said bar at the 65 opposite ends of the throw of the lever, having eyes to receive said locking medium when the lever-eye registers therewith, substantially as and for the purpose set forth.

WALTER J. SCHUMACHER.

In presence of—

WALTER N. WINBERG,
L. HEISLAR.