J. E. DALTON.

AUTOMATIC DAMPER.

APPLICATION FILED APR. 10, 1911.

1,003,587. Patented Sept. 19, 1911.

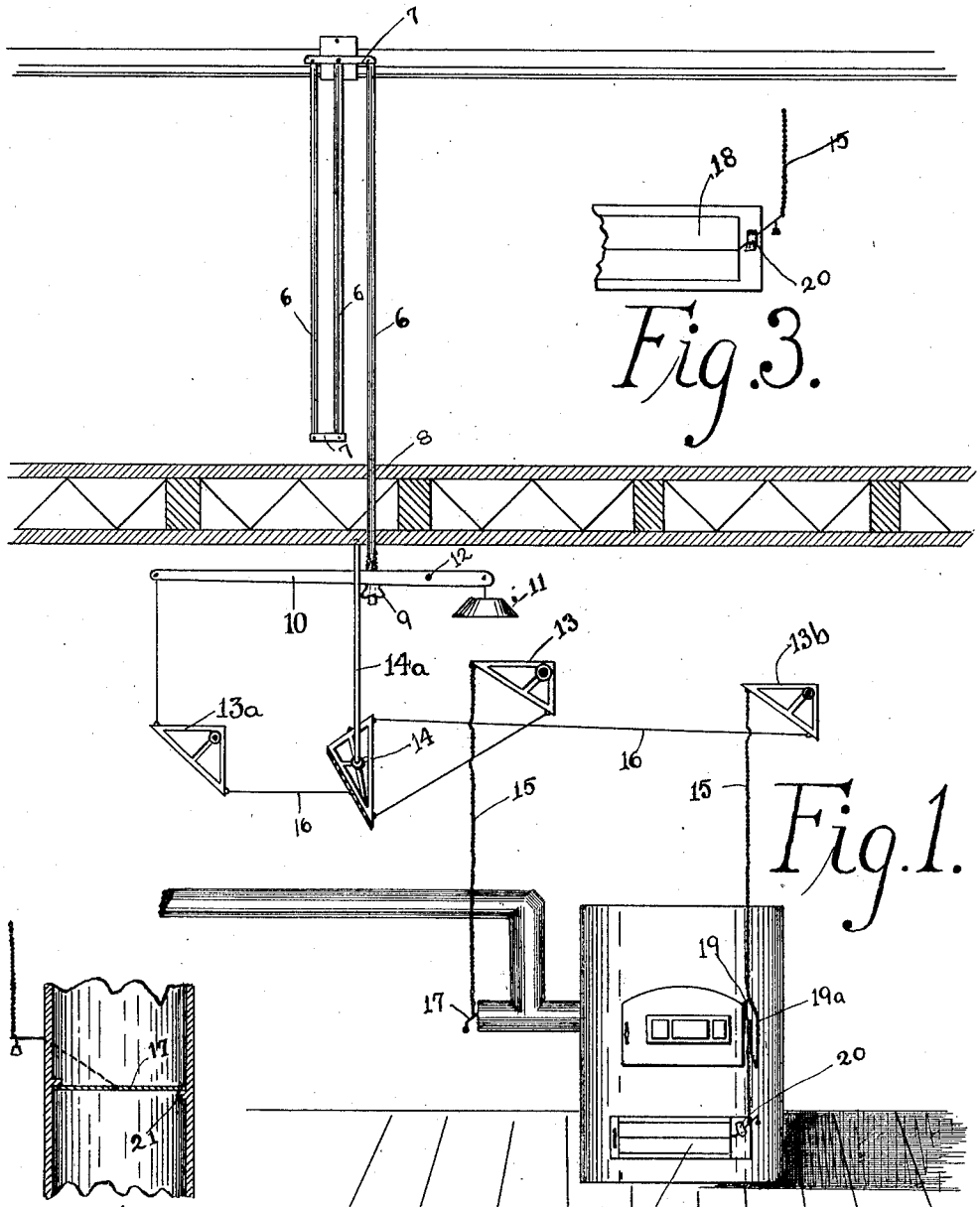

Fig. 3.

Fig. 1.

Fig. 2.

Witnesses.
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UNITED STATES PATENT OFFICE.

JOHN E. DALTON, OF CLEVELAND, OHIO.

AUTOMATIC DAMPER.

1,003,587. Specification of Letters Patent. **Patented Sept. 19, 1911.**

Application filed April 10, 1911. Serial No. 620,181.

To all whom it may concern:

Be it known that I, JOHN E. DALTON, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Automatic Dampers, of which the following is a specification.

This invention relates to automatic dampers, especially applicable to furnaces, and depending for its action on the expansion and contraction of a thermostatic rod located in the room or apartment to be heated, and connected to the draft devices of the furnace so as to open and close the same.

The invention is illustrated in the accompanying drawings in which—

Figure 1 is a side elevation thereof. Fig. 2 is a detail in section of the check damper. Fig. 3 is a detail in elevation of the air or draft damper.

Referring specifically to the drawings, 6 indicate vulcanized rubber rods which will expand and contract according to the degree of heat. Several of these rods are employed, connected by levers 7, so as to avoid excessive length thereof, as would be the case with a single rod employed. As shown, the levers are fulcrumed on suitable brackets or supports attached to the wash board of a room, and hence will take up but little space and will not be unsightly. One rod extends through the floor as indicated at 8 and is connected to a lever 10, by means of a nut 9 screwed on the end of the rod and permitting necessary adjustment. The lever 10 is fulcrumed at 12, and one arm thereof has a weight 11. The other arm thereof is connected to one arm of a bent lever 13^a, which is connected by chain or cord 16 to one arm of a bent lever 14 which is fulcrumed on a bracket 14^a depending from the ceiling of the furnace room. One arm of the lever 14 is connected to a bent lever 13, and the other arm of the latter is connected by a chain 15 to the weighted arm of a check damper 17 which damper stops, when closed against a projection 21 in the smoke pipe of the furnace, and when this damper is open it checks the draft in a well known way.

One arm of the lever 14 is connected by a cord or the like 16^a to one arm of a bent lever 13^b which is connected by a chain 15 to the handle 20 of an air damper 18. The chain 15 is provided with a hook 19 which may be hooked up into the chain to form a slack loop 19^a. When the hook is unhooked the slack is let out, and the damper is not operated. The hook may be engaged to any desired link in the chain to vary the operation of the damper.

In operation, when the thermostatic rods 6 contract the lever 10 is lifted and by means of the bell cranks and connections the check 17 is closed and the damper 18 is opened; and when the thermostatic rods expand the opposite action takes place.

By means of this device an even temperature may be maintained and an automatic control of the furnace effected.

The device is capable of application to a furnace of any type and no limitation in this respect is employed.

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

The combination of a thermostatic rod, a weighted lever to which the rod is connected, dampers and separate levers connected to the dampers and also to the weighted lever, said connections including a lever 14 with opposite arms to which the said separate levers are respectively connected, and one of said connections being adjustable to vary or prevent the operation of one damper independently of the other.

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

JOHN E. DALTON.

Witnesses:

JOHN A. BOMMHARDT,

J. B. DAVIS.