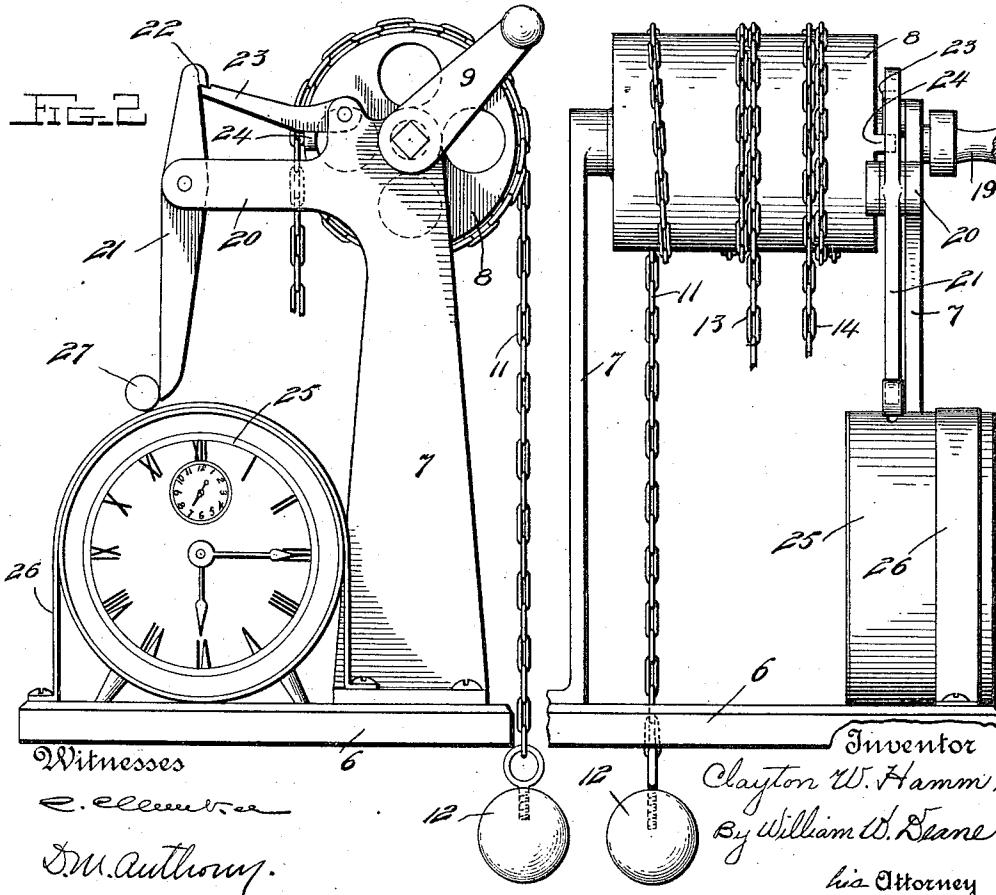
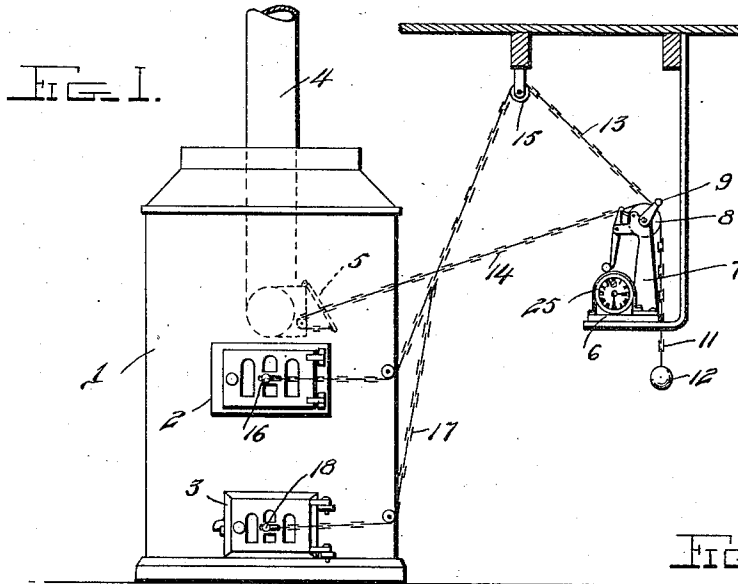


C. W. HAMM.
DAMPER CONTROLLING APPARATUS.
APPLICATION FILED MAY 9, 1912.

1,059,728.

Patented Apr. 22, 1913.

2 SHEETS—SHEET 1.



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2 SHEETS-SHEET 2.

FIG. 4.

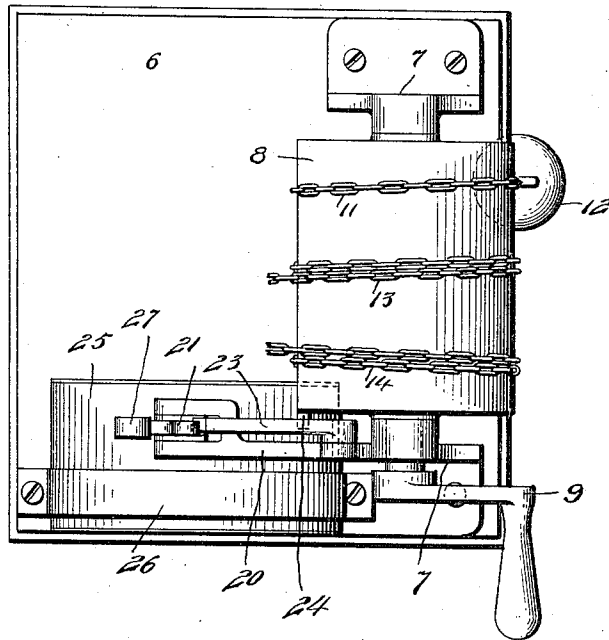


FIG. 5.

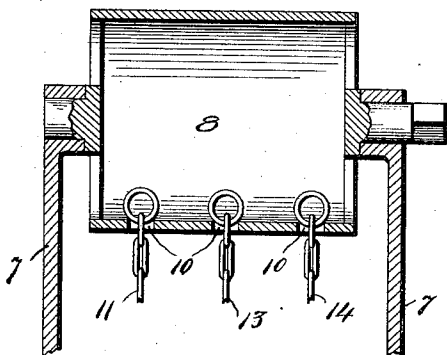
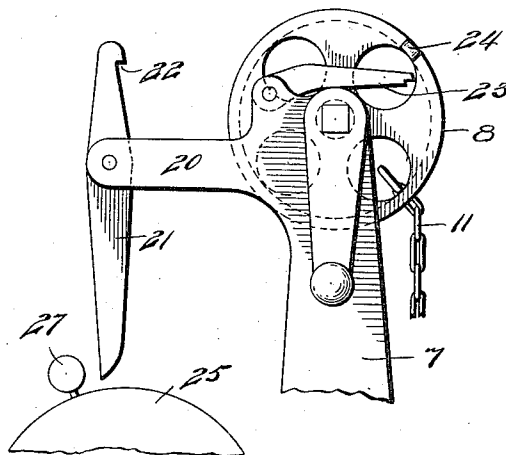


FIG. 6.



Witnesses

E. E. E. E. E.

J. M. Anthony.

Inventor

Clayton W. Hamm

By William D. Seane

his Attorney

UNITED STATES PATENT OFFICE.

CLAYTON W. HAMM, OF YORK, PENNSYLVANIA.

DAMPER-CONTROLLING APPARATUS.

1,059,728.

Specification of Letters Patent.

Patented Apr. 22, 1913.

Application filed May 9, 1912. Serial No. 696,189.

To all whom it may concern:

Be it known that I, CLAYTON W. HAMM, a citizen of the United States, residing at York, in the county of York and State of Pennsylvania, have invented certain new and useful Improvements in Damper-Controlling Apparatus, of which the following is a specification.

This invention has relation to damper controls, and has for its object to provide in a unitary assemblage means for operating one or more dampers or doors of a heating apparatus. In conjunction with this means a clock is provided in which the hammer which usually sounds an alarm is employed for the purpose of operating the damper control mechanism. The clock is assembled together with the means for retaining the operative parts of the apparatus, and it follows that when the clock is set at a particular hour (as is usual in alarm clocks) the hammer will cause the device to operate at such time and therefore the dampers or doors of a heating apparatus are opened or closed, as may be desired, automatically and at a specific determined time.

In the accompanying drawings; Figure 1 is a diagrammatic view illustrative of a furnace provided with my damper control means. Fig. 2 is a front elevation of the damper control means. Fig. 3 is an end view thereof. Fig. 4 is a plan view thereof. Fig. 5 is a detail vertical section through the cylinder of said damper control means, taken on a line with the pintles. Fig. 6 is a fragmentary side view of a portion of the draft control means, before being set.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

As illustrated in the accompanying drawings the heating apparatus is represented at 1 which is in the form of a furnace, of any desired style or pattern. This furnace is provided with the usual doors, 2 representing the door to the fire box and 3 representing the door to the ash pit. The heating apparatus is provided with a smoke pipe 4 which in turn is provided with a hinged door 5.

The damper control consists of a base 6 upon which standards 7 are mounted. A drum 8 is journaled between the standards and the shaft of the drum is provided with a crank handle 9. The drum is preferably in the form of a hollow metallic cylinder

having in its periphery a series of apertures 10 and in one of these apertures the end of a chain 11 is secured in any suitable manner. The chain 11 is arranged to wind upon the drum and carries at that end opposite the end which is attached to the drum a weight 12. As shown in the present application of the device the drum is provided with two or more apertures 10, although the number of apertures may be more or less, as desired. In each of the apertures 10 is secured in any suitable manner the end of a chain designated 13 and 14. The chain 13 is laid over a pulley 15 supported at any suitable point about the building and then extends down to the damper slide 16 upon the door 2 of the fire box. From the chain 13 a branch chain 17 extends down to the damper slide 18 of the door of the ash pit 3. A chain 19 is engaged in any appropriate manner with one of the apertures 10 and passes directly from the drum 8 to the door 5 upon the smoke pipe 4. These chains are so arranged that when the drum 8 is rotated in consequence of the descent of the weight 12, as will be hereinafter explained, that the door in the smoke pipe is closed, while the damper slides in the doors of the fire box and ash pit are opened, or any other suitable arrangement may be made, as is desired.

One of the standards 7 is provided with a laterally disposed arm 20 to which is fulcrumed a lever 21. This lever is provided at its upper end portion and at one edge with a notch 22. A pawl 23 is pivoted to the same standard which carries the arm 20 and is provided with a free end portion which is adapted to engage the notch 22. The drum 8 is provided at one end with a fixed lug 24 into the path of movement of which the intermediate portion of the lever 21 lies. When the lug 24 is at a point between the pivot of the pawl and the free end thereof it is adapted to engage the pawl but the diameter of the drum and the position of the lug thereon is such that when the drum rotates and the pawl 23 is swung so that its intermediate portion lies across the center of the drum the lug will clear the free end of the said pawl and therefore the said drum is free to rotate so long as the weight 12 may descend.

A clock 25, preferably of the alarm pattern is mounted upon the base 6 and is held in a predetermined relation with respect to that standard to which the arm 20 is at-

5 tached by means of a band 26 or equivalent securing member. The lower end of the lever 21 extends into the path of movement of the hammer 27 which is a part of the clock 25. This hammer is the usual hammer employed for sounding a bell or an alarm, usually provided at the top of a clock of this character. It therefore follows that when the clock is wound and is set at a particular hour that the hammer 27 will become active and operate against the lower end of the lever 21.

10 The operation of the device is as follows: Presuming that it is attached to the furnace of a building or structure as above indicated and it is desired to have the dampers and doors of the furnace closed or moved at a certain predetermined hour, the following morning, the clock 25 is wound and set to the particular hour or time desired in the usual manner and the occupants of the building are not required to give further consideration to the heating apparatus until the clock requires rewinding, for the reason that at the particular hour designated the hammer 27 becomes active and operates against the lower end of the lever 21 and swings the same so that the free end of the pawl 23 is liberated and inasmuch as the lug 24 is bearing against the lower edge of the pawl the said pawl is swung so that its intermediate portion will lie transversely across the axis of the drum 8. Therefore the drum is free to rotate in response to the descent of the weight 12. As the chain 11 unwinds from the drum the chains 13 and 14 are wound thereon and by reason of the movement of these chains the dampers and doors of the heating apparatus are operated to open or check the draft through the heating apparatus, as may have been previously decided. Therefore the heating apparatus is governed automatically by the damper control mechanism.

The parts remain in such condition until the chain which is connected with the weight is rewound upon the drum and the pawl is set in engagement with the notch at the upper end of the lever with the lug under the lower edge of the said pawl and the clock is wound and set for the time at which the next operation is to occur. Therefore it will be seen that a unitary assemblage is provided which may be positioned at any convenient point adjacent a heating apparatus and may be easily and quickly connected up with the dampers or doors thereof, and when properly positioned and connected the device is automatic in its action to open or close the doors as may be desired or required.

Having thus described the invention, what is claimed as new is:

A mechanism for controlling dampers comprising a base, standards mounted upon the base, a drum journaled between the standards and having at its end a lug, an arm carried by one of the standards, a lever fulcrumed to the arm, a clock mechanism having an operable part into the path of movement of which the lever projects, a pawl pivoted to the standard at a point between the axis of the drum and the point of connection between the lever and arm and engageable with the lever to hold the same and when in engagement with the lever lying in the path of movement of the lug upon the drum, means for rotating the drum when the pawl is liberated by the lever, and means connected with the drum and adapted to be connected with the dampers or doors of a heating apparatus.

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

CLAYTON W. HAMM.

Witnesses:

WILLIS L. SMYSER,
NOAH C. MAY.