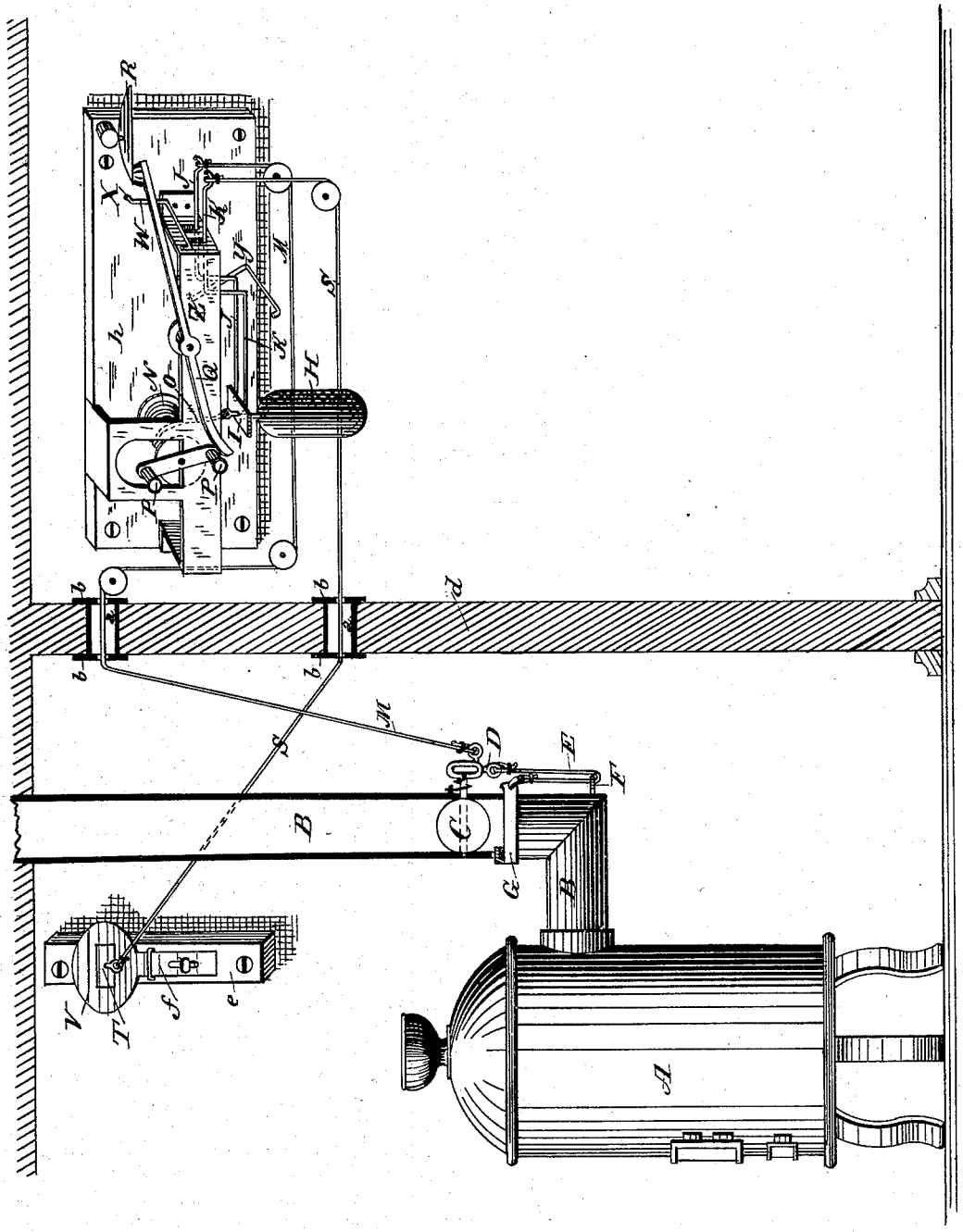
(No Model.)

# J. M. DOLEN.

## AUTOMATIC HEAT REGULATOR AND ALARM.

No. 263,127. Patented Aug. 22, 1882.

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JOHN M. DOLEN, OF WICONISCO, PENNSYLVANIA.

## AUTOMATIC HEAT-REGULATOR AND ALARM.

SPECIFICATION forming part of Letters Patent No. 263,127, dated August 22, 1882.

Application filed April 19, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN M. DOLEN, of Wiconisco, in the county of Dauphin and State of Pennsylvania, have invented a new and Improved Automatic Heat-Regulator and Alarm, of which the following is a full, clear, and exact description.

My invention consists of apparatus to close the damper of a stove and cause an alarm-signal to be sounded in case the heat of the stove, range, or furnace rises to the danger-point, or thereabout. The said apparatus consists of a setting device to hold the damper open, that will be released by melting apart in case the heat rises above the normal temperature and allow the damper to be closed by a spring or weight. The weight is also contrived to set an alarm apparatus in motion by the same movement, and said alarm apparatus is contrived to be set in motion by the melting of a wax-setting device for it in case the damper should not be set free, as hereinafter described.

Reference is to be had to the accompanying drawing, forming part of this specification, in which the figure represents my improved regulating and alarm apparatus partly in side elevation and partly in perspective view.

A represents the stove, range, or furnace, B the pipe, and C the damper in said pipe. The handle D of the damper is connected by cord or wire E and guide-stud F with a tin or other band, G, made in two or more parts fastened together by soft solder or other composition fusible by the heat to which the band will be exposed in the position shown, or in any preferred position thereabout, when the fire in the stove rises much above the normal condition. The band, being thus disengaged, will cease to hold the damper open. Then a weight, H, suspended from the bar I, supported by the tripper-levers J K, pivoted in a bracket of the support *h*, will depress lever J, to which damper C is connected by cord M, and lever J will close the damper. At the same time the weight will escape from levers J K and whirl the drum N, whereon a cord, O, that is attached to said weight is wound, and said drum will, by its tappet-arms P, work the bell-hammer lever Q and sound an alarm on bell R. Should the band G fail to melt off, as proposed, then the alarm is to be sounded all the same by the weight H being tripped by the lever K, which is held in position by a cord, S, attached to a plate, T, secured by wax or equivalent material to a plate, V, fixed upon the wall of the room, near the ceiling, in a part of the room where there will be sufficient heat to melt the wax when the heat of the stove approaches the danger-point.

The cranked rod W, attached to the supporting-plate *h*, so as to turn on the pivot X, is employed in connection with the bell-hammer Q, for it to drop and rest on after striking the bell, so that the tappets P will act upon said lever. By turning rod W on said pivot it may be swung from under the said hammer to allow the hammer to fall and swing out of range of the tappets to allow of winding up the weight H. A similar cranked rod, Y, is fitted on a pivot, Z, to swing under the levers J and K, to hold them from falling while setting the weight H and adjusting the cords M and S. The cords M and S may be extended along the rooms and through partitions *d* to any part of the house, being fixed on suitable guide-pulleys or other guides. Where they pass through partitions I propose to employ thimbles *a*, with covers *b* at the ends, said covers being perforated in the center for the cords to pass through them. The alarm apparatus is to be located close under the ceiling to allow the weight as much fall as possible in order that it may continue to sound the alarm a suitable length of time before being stopped by the floor.

The plate V, to which the plate T is sealed for setting the alarm, is to be mounted upon the wall by a block, *e*, or other device attached in any approved way, and the said plate V will in practice be projected from the said block, except the bar *f*, by which it is attached, in order that both sides of it may be exposed to the action of the air surrounding it to make it more sensitive to the changes of temperature than it would otherwise be.

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

1. The combination, with the damper C, of a setting cord or wire, E, and a fusible band, G, substantially as described.

2. The combination of the weight H, cord M, and trip-lever J, with the damper C, setting cord or wire E, and a fusible band, G, substantially as described.

3. The combination of the weight H, cord M, lever J, drum N, and alarm mechanism, substantially as herein described, with the damper C, cord or wire E, and a fusible band, G, substantially as described.

4. The combination, with the weight H and the alarm mechanism, substantially as herein described, of a lever, K, cord S, and a setting-plate, T, secured by wax or material fusible at low temperature to a disk, V, or other device, substantially as described.

5. The combination, in an alarm and damper-closing apparatus, of a cord, M or S, extended from the setting apparatus to the alarm apparatus through one or more partitions, *b*, and said partition or partitions provided with a thimble, *a*, and covers *d*, and said covers being perforated, as described.

6. The combination of cranked and pivoted rest W with the bell-hammer Q and the damper C, with its operating mechanism, substantially as described.

7. The combination of cranked and pivoted rod Y with the levers J K and weight H, substantially as described.

JOHN M. DOLEN.

Witnesses:
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