

No. 632,939.

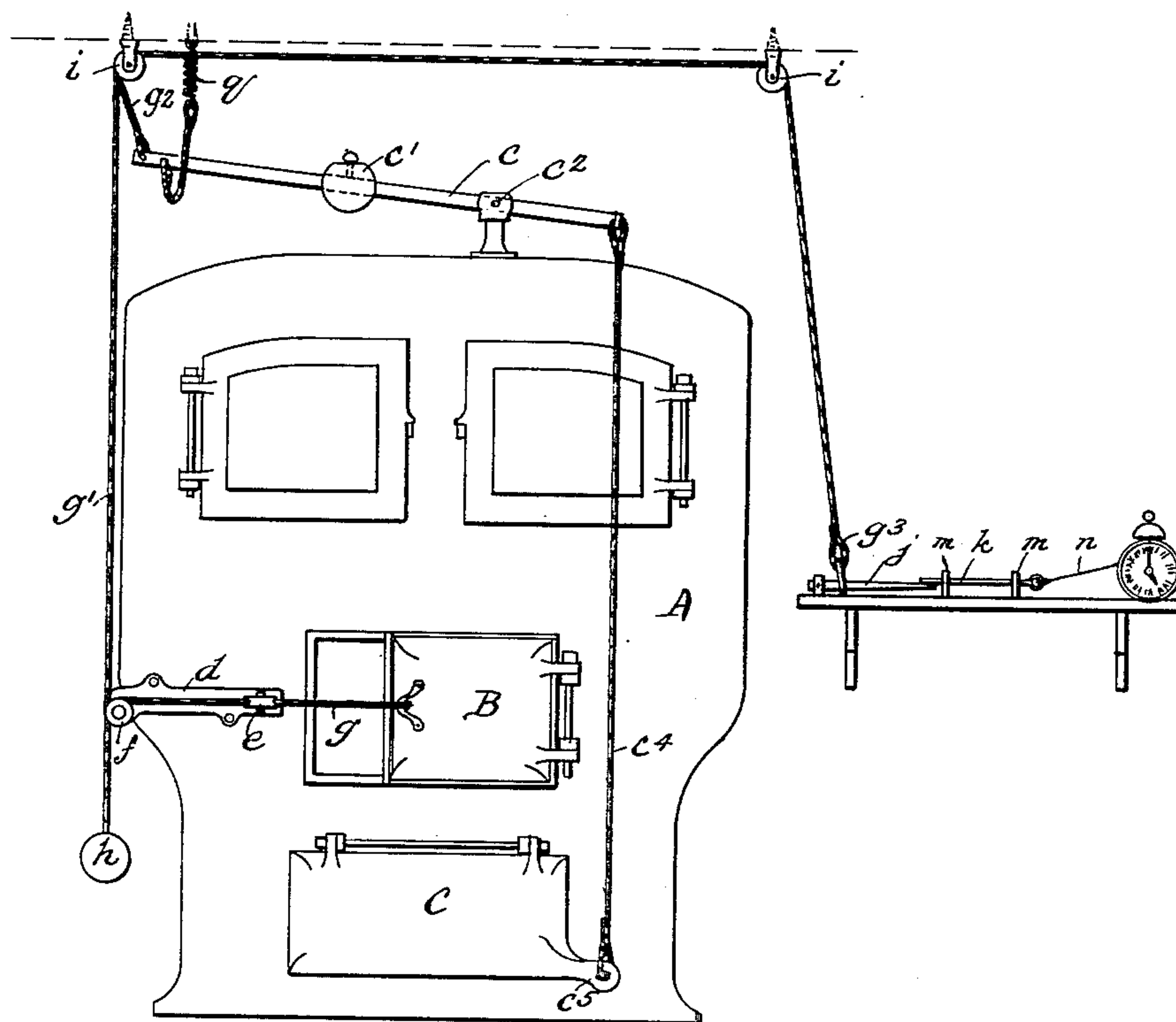
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M. I. HAIN.

TIME DAMPER MECHANISM FOR FURNACES.

(Application filed June 7, 1899.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

MILTON I. HAIN, OF WERNERSVILLE, PENNSYLVANIA.

## TIME DAMPER MECHANISM FOR FURNACES.

SPECIFICATION forming part of Letters Patent No. 632,939, dated September 12, 1899.

Application filed June 7, 1899. Serial No. 719,727. (No model.)

*To all whom it may concern:*

Be it known that I, MILTON I. HAIN, a citizen of the United States of America, and a resident of Wernersville, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Draft Mechanism for Heaters, of which the following is a specification.

My invention relates to an improved mechanism to be applied to heating furnaces or stoves for the purpose of automatically putting on the draft at a predetermined time.

The invention is fully described in connection with the accompanying drawing, which shows my improved apparatus applied to an ordinary form of heater.

A represents the body of a heater, B the fire-door, and C the ash-pit door, the latter being provided with an arm  $c^5$ , which is connected by a cord or chain  $c^4$  to one end of an ordinary lever  $c$ , which is pivoted to a fixed point  $c^2$  and the opposite end of which is provided with a weight  $c'$ , tending to normally open the door C.

My apparatus comprises a cord or chain  $g$ , one end of which is connected to the fire-door B and the other to a weight  $h$ , which is adapted to normally close said door, the chain  $g$  being passed over guide-pulleys  $f$  and  $e$ , mounted in a frame  $d$ , fixed to the front of the furnace, as shown. This weight  $h$  also pulls upon a branch cord or chain  $g'$ , which passes over suitably-located pulleys  $i$  and connects at its end  $g^2$  with a pivoted lever  $j$ , the free end of which is engaged when in the set position indicated in the drawing by a trigger-pin  $k$ . The latter is movably mounted in guides  $m$  and connected by a cord to a time mechanism, such as that of an "alarm-clock."

Another branch  $g^2$  of the weighted chain or cord connects with one end of the weighted lever  $c$ . A spring  $q$  is preferably employed in connection with this lever  $c$ , as shown, to prevent a jarring stop of the moving parts.

In fixing the fire for the night, for instance, the lever  $j$  is locked by the trigger-pin  $k$ , as indicated, thus raising the weighted end of the lever  $c$  and slacking the chain  $g$ , so that the ash-pit door C may be closed and the fire-door B opened. The clock mechanism is then set so as to automatically withdraw the trigger-pin  $k$  from its engagement with the lever  $j$  at a certain time, the result of which release is that the weight  $h$  will drop, thus directly closing the door B and slacking the chain or cord  $g^2$ , so as to permit the weighted end of the lever  $c$  to drop, thereby opening the ash-pit door, thus applying full draft to the fire.

What I claim is—

The combination with a stove or furnace of the weighted lever  $c$  connected with the ash-pit door, the weighted main cord  $g'$  passing over a series of guide-pulleys and having one branch  $g^2$  connected with the weighted end of said lever and another branch  $g$  connected with the fire-door, a spring  $q$  having a cord connection to said weighted lever and adapted to control the fall of the connected ash-pit door, a trigger connected to the opposite end of said main cord, and a clock mechanism arranged to release said trigger, all substantially as set forth.

Signed by me at Reading, Pennsylvania, this 26th day of May 1899.

MILTON I. HAIN.

Witnesses:

D. M. STEWART,  
HEBER Y. YOST.