

G. H. GREGORY.
FURNACE DOOR OPERATING MECHANISM.
APPLICATION FILED MAR. 31, 1910.

962,339.

Patented June 21, 1910.

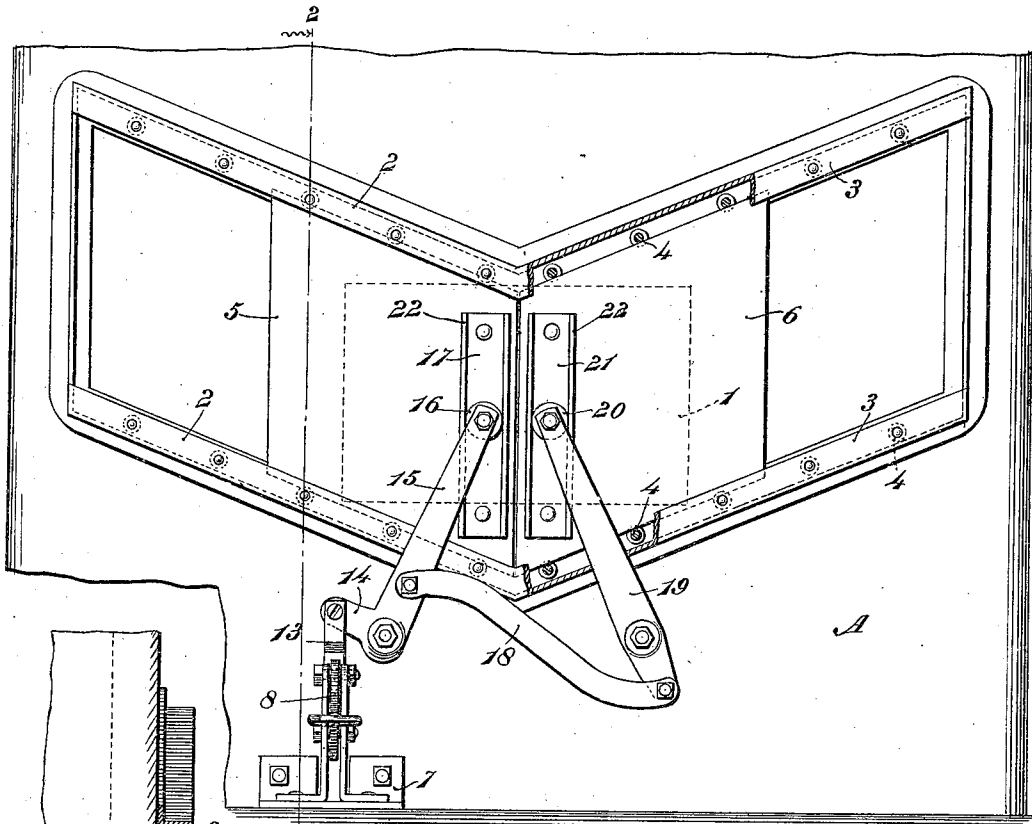


Fig. 1.

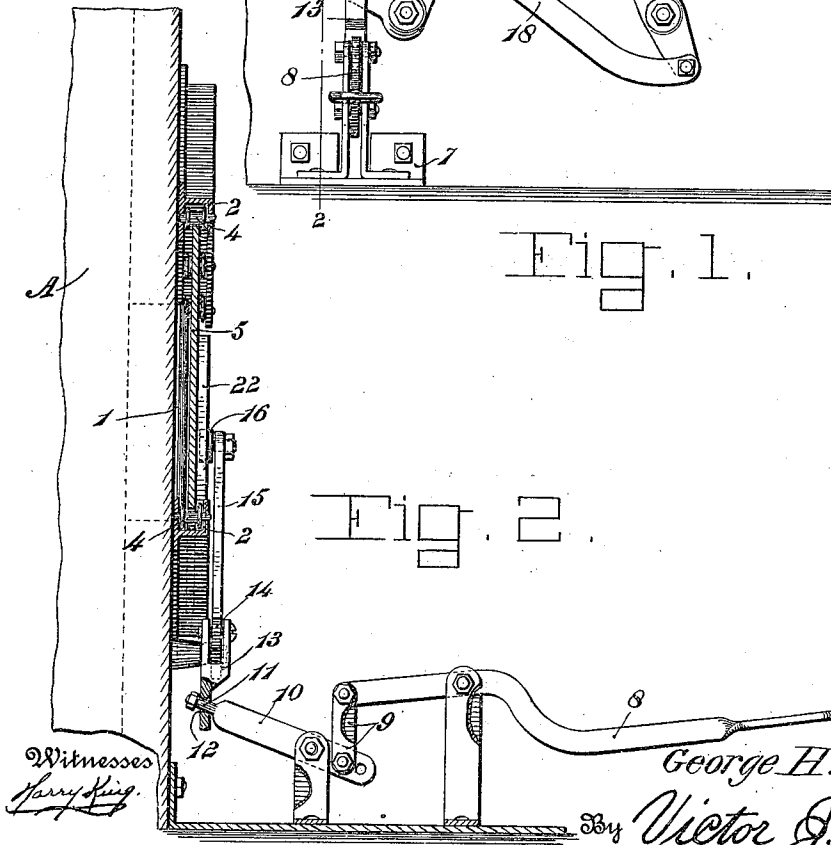


Fig. 2.

Witnesses
Harry King

James A. Bell

Inventor

George H. Gregory

By *Victor J. Evans*

Attorney

UNITED STATES PATENT OFFICE.

GEORGE H. GREGORY, OF MOUNT CARMEL, ILLINOIS.

FURNACE-DOOR-OPERATING MECHANISM.

962,339.

Specification of Letters Patent. **Patented June 21, 1910.**

Application filed March 31, 1910. Serial No. 552,611.

To all whom it may concern:

Be it known that I, GEORGE H. GREGORY, a citizen of the United States of America, residing at Mount Carmel, in the county of Wabash and State of Illinois, have invented new and useful Improvements in Furnace-Door-Operating Mechanism, of which the following is a specification.

This invention relates to furnace door operating mechanism, and it has for an object to provide companion runways in which the sliding door sections are operatively positioned, the said runways being arranged so that those for one door section are disposed upwardly and at an angle opposite to the angle of the runways for the other door section so that the weight of the door sections will be sufficient to hold said sections normally in position to close the fire door opening.

In the drawing, forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views: Figure 1 is a front elevation of my improved furnace door and the operating mechanism therefor showing the same applied to the furnace. Fig. 2 is a detail section taken on the line 2—2 of Fig. 1.

The furnace A is formed to provide a fire door opening 1, and as shown, the said furnace is provided at one side with rails 2 and with rails 3 each being disposed at an angle with respect to the bottom of the furnace and the rails 2 extend upwardly and at an angle opposite to the angle of the rails 3. The herein described rails are secured to the furnace in any suitable well known manner and they are preferably provided with guide rollers 4 on which the door sections 5 and 6 are positioned to travel. Incident to the fact that the rails 2 are disposed at an opposite angle to the rails 3 the said door sections 5 and 6 will operate automatically to normally assume positions to close the fire door opening 1.

The furnace is provided with a bracket 7 on which is pivoted a controlling lever 8. This lever is connected by means of links 9 to a member 10. The forward end of the said member 10 is provided with a cylindrical stem 11 which extends through a relatively large passage 12 in a link 13. This link is pivoted at its upper end to the short arm 14 of an actuating lever 15. This lever is provided at its upper end with a roller 16 which is mounted to travel on the track-

way 17 on the door section 5. The actuating lever 15 is pivoted to the furnace A and immediately above such pivotal connection with the furnace the said lever is pivotally connected with a link 18. The opposite end of the link is pivoted to the lower end of an actuating lever 19. This actuating lever is pivoted to the furnace and such pivot is located immediately above the point of pivotal connection of the lever with the link 18. The upper end of the lever 19 is provided with a roller 20 which is operatively mounted to travel in a trackway 21 on the door section 6.

Incident to the fact that the rails 2 and 3 are disposed in intersecting planes it will obviously appear that the door sections automatically operate to normally close the door opening 1 of the furnace. Upon depressing the rear end of the lever 8 the actuating levers 15 and 19 will be simultaneously operated to cause their rollers to travel on the rails 22 of the trackways so that the door sections will be quickly and accurately moved away from each other to uncover the opening 1. Incident to the peculiar construction of the link 11 and the manner of connecting the member 10 therewith I obviate any possible buckling or binding of such parts upon movements of the controlling lever 8.

I claim:

A furnace having a door opening and downwardly inclined guideways, sliding door sections mounted to travel in the guideways, actuating levers operatively connected with the door sections and pivotally supported upon the furnace and operatively connected with each other, a controlling lever, a pivoted link carried by one of the actuating levers, said link having a passage formed therein, a member mounted for rocking movement and operatively connected with the controlling lever, and a forwardly extending pin supported by the member and extending through the passage in said link and positioned therein so that in movement of the controlling lever the link will be actuated to simultaneously operate the actuating levers.

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

GEORGE H. GREGORY.

Witnesses:

JOHN T. STANSFIELD,
ETHEL D. RIGG.