

(No Model.)

M. N. LOVELL & B. A. WALKER.

* SPRING COUNTER BALANCE FOR STOVE OR RANGE DOORS.

No. 467,541.

Patented Jan. 26, 1892.

Fig. 1.

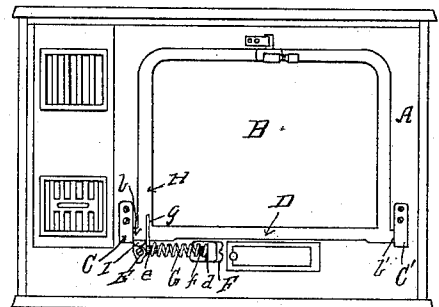


Fig. 3.

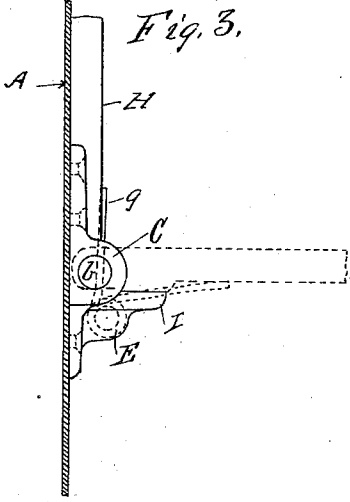
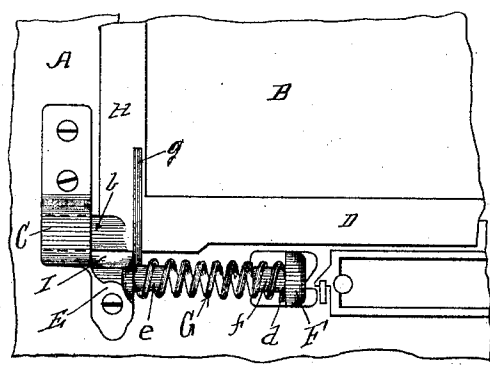


Fig. 2.



WITNESSES

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att'y.

UNITED STATES PATENT OFFICE.

MELVIN N. LOVELL AND BYRON A. WALKER, OF ERIE, PENNSYLVANIA,
ASSIGNORS TO THE CHICAGO AND ERIE STOVE COMPANY, LIMITED, OF
SAME PLACE.

SPRING COUNTER-BALANCE FOR STOVE OR RANGE DOORS.

SPECIFICATION forming part of Letters Patent No. 467,541, dated January 26, 1892.

Application filed August 10, 1891. Serial No. 402,311. (No model.)

To all whom it may concern:

Be it known that we, MELVIN N. LOVELL and BYRON A. WALKER, citizens of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Spring Counter-Balances for Stove or Range Doors; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, forming part of this specification.

Our invention consists in improvements in spring mechanism for counterbalancing range and stove doors, hereinafter set forth and explained, and illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of a range embodying our invention. Fig. 2 is an enlarged view of a section of a front elevation of same, showing our device. Fig. 3 is an enlarged end view of our device.

In the construction of our invention shown, A is the front of a range, and B the oven-door, having pintles *b b'* at the lower corners thereof, operating in bearings C C', secured to the range-front A, so that the door B will open outward and downward thereon, as illustrated in Fig. 3.

Below the lower edge D of the door B, preferably near one end thereof, we secure to the range-front A spring-supports E and F, provided with inwardly-projecting studs or bearings *e* and *f*, adapted to enter the ends of a spiral spring G and support the same out of contact with the range-front A. At one end of the spring G is a downwardly-projecting extension *d*, thereof which rests against the base of the bearing F, and at the other end

of the spring G is an upwardly-projecting extension or arm *g* thereon, which extends upward in contact with the outside of the frame H of the door B, so that when the door B is opened the arm *g* is moved therewith so as to wind up the spring G and produce such tension thereof as will operate to counterbalance the weight of the door B. On the upper part of the spring-bearing support E is an outwardly-projecting ledge I, adapted to engage with the frame H of the door when it is fully opened and limit the downward movement thereof, as illustrated in Fig. 3.

In operation the spring G so nearly counterbalances the weight of the door B that it raises and lowers without any jar, and the spring, being out of contact with the front A of the range, is not perceptibly affected with the heat thereof.

Having thus fully described our invention so as to enable others to construct and use the same, what we claim as new, and desire to secure by Letters Patent of the United States, is—

The combination, in a range or stove, of a door, as B, swinging outward and downward on pintles, as *b* and *b'*, with spring-supports, as E and F, secured to the outside of the front A of such range or stove and having inwardly-projecting studs, as *e* and *f*, thereon, and a spiral spring, as G, supported on said studs *e* and *f*, having an arm *g* thereon engaging with the frame of said door B, substantially as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

MELVIN N. LOVELL.
BYRON A. WALKER.

Witnesses:

JOHN S. RILLING,
E. A. WALLING.