(No Model.)

S. DARLING.

FASTENING FOR THE DOORS OF FURNACES.

No. 456,403. Patented July 21, 1891.

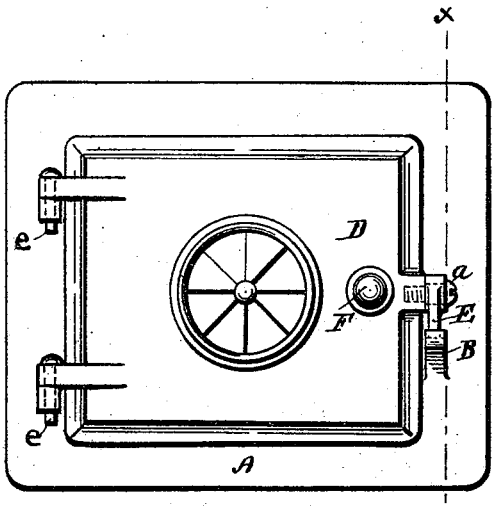

FIG. 1.

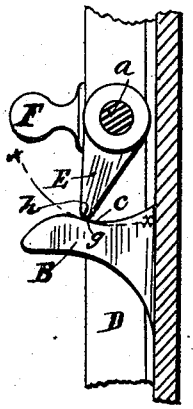

FIG. 2.

WITNESSES.

George E. Lovejoy

John S. Lynch

INVENTOR.

Samuel Darling

per S. Schofield

attorney

UNITED STATES PATENT OFFICE.

SAMUEL DARLING, OF PROVIDENCE, RHODE ISLAND.

FASTENING FOR THE DOORS OF FURNACES.

SPECIFICATION forming part of Letters Patent No. 456,403, dated July 21, 1891.

Application filed March 16, 1891. Serial No. 385,278. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL DARLING, a citizen of the United States, residing at Providence, in the State of Rhode Island, have invented a new and useful Improvement in Fastenings for the Doors of Furnaces, of which the following is a specification.

The nature of my invention consists in the employment of a pivoted brace for engaging the catch and holding the door tightly against the door-frame, and at the same time providing for the ready outward movement of the door upon the occurrence of an explosion of gas in the furnace, as is common when building a fire of light materials.

Figure 1 represents a front elevation of the door and door-frame of a furnace to which my improved fastening-brace is attached. Fig. 2 represents an enlarged detail section taken in the line *x x* of Fig. 1.

In the accompanying drawings, A represents the door-frame of the fire-chamber of a furnace, provided with the catch B, having an engaging recess or depression *c*. The door D is hinged to the frame A by means of the pintles *e e*, and is provided with a knob F and a screw-stud *a*, upon which is pivoted the brace E, the free end of which is adapted to bear against the catch B within the recess *c*, and thus hold the door D in its closed position. The brace E hangs loosely from its pivot *a*, and in closing the door D the brace will be brought to bear within the recess *c* to hold the door tightly against the door-frame; but upon the occurrence of an explosion the door will be readily thrown open, the engagement of the brace E with the upwardly-inclined bottom of the recess *c* causing the outer edge of the door to be slightly raised by the turning of the brace upon its engaged end as the door is thrown outward by the force of the expanding gases, and by the ready opening of the door the furnace will be protected from injury. The bottom of the recess *c* is preferably so formed that the weight of the swinging brace will carry the end *h* of the same to its bearing-seat *g*, as shown in Fig. 2, the arc of swinging movement being indicated by the dotted line *x x;* but I do not limit my invention to the particular form of the recess or notch which receives the end of the brace E.

I claim as my invention—

The combination, with the furnace-door and its frame, of the catch provided with a recess, and the swinging pivoted brace attached to the door and adapted to enter the recess of the catch and brace the door against the door-frame, substantially as described.

SAML. DARLING.

Witnesses:
SOCRATES SCHOLFIELD,
JOHN L. LYNCH.