No. 685,682. Patented Oct. 29, 1901.

C. W. HUNT.

FIRE BOX.

(Application filed Apr. 29, 1901.)

(No Model.)

Fig. 1.

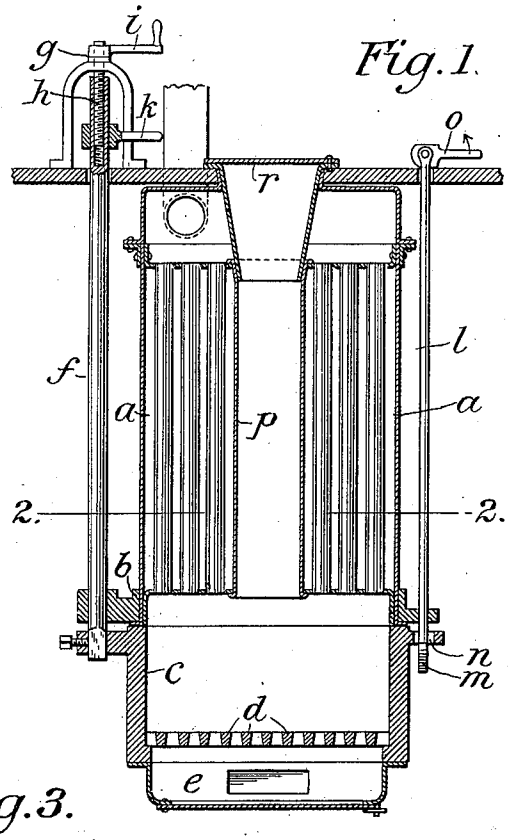


Fig. 3.

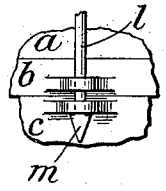
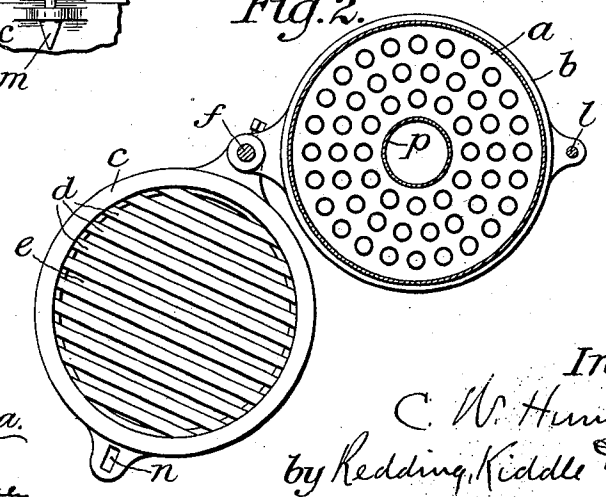


Fig. 2.



Attest:

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UNITED STATES PATENT OFFICE.

CHARLES W. HUNT, OF WEST NEW BRIGHTON, NEW YORK.

FIRE-BOX.

SPECIFICATION forming part of Letters Patent No. 685,682, dated October 29, 1901.

Application filed April 29, 1901. Serial No. 57,871. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. HUNT, a citizen of the United States, residing at West New Brighton, in the borough of Richmond, city and State of New York, have invented certain new and useful Improvements in Fire-Boxes, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

This invention is concerned particularly with means for supporting the fire-boxes of comparatively small boilers—such, for example, as the boilers of steam-driven motor-vehicles and boilers for other like uses. In such cases it is oftentimes desirable to reduce quickly the heat-supply beneath the boiler, and, furthermore, the desire for economy of space, the location of the boiler and the fire-box, and the necessity for ready access to the fire-box, either for replenishing the fuel or building, examining, or extinguishing the fire, impose other conditions which are not satisfactorily met in the structures heretofore employed. It is therefore the object of this invention to provide for the support of fire-boxes in such a manner as to answer the various requirements above mentioned, and to that end the fire-box is made bodily movable, either to a limited extent for the purpose of admitting cold air freely above the fire to reduce quickly the supply of heat to the boiler or to a greater extent for the purpose of building or extinguishing the fire. At the same time provision is made for the convenient supply of fuel to the fire-box without necessitating the movement or opening of the fire-box.

The invention will be more fully described hereinafter with reference to the convenient and practical embodiment thereof which has been chosen for illustration in the accompanying drawings, in which—

Figure 1 is a view in vertical central section of a boiler and fire-box. Fig. 2 is a view in section on the plane indicated by the line 2 2 of Fig. 1 with the fire-box swung out. Fig. 3 is a detail view of one of the devices shown in Fig. 1.

The boiler to which the fire-box is to be applied in accordance with the invention may be of any suitable type. The boiler *a* shown in the drawings is of the vertical tubular type and is supported independently of the fire-box in any convenient manner, as by means of the base-plate *b*. The fire-box *c* may also be of any suitable form and construction, being shown in the drawings as having grate-bars *d* and an ash-pan *e*. No door in the fire-box proper is required, but the ash-pan may have a door or other opening for the admission of air and for the removal of ashes.

The fire-box is not, as is usually the case, rigidly secured to the bottom of the boiler, but is made movable with respect thereto, preferably in a direction away from or toward the boiler and also in a lateral direction with respect to the boiler.

As represented in the drawings, the fire-box is secured to a rod or shaft *f*, which is supported from a point or bearing, as at *g*, which is fixed with respect to the boiler. In this instance a screw *h* is threaded into the bore of the rod or shaft *f* and having its bearing at *g* is provided with a suitable handle *i*. By the rotation of the screw *h* the fire-box *c* may be lowered away from the bottom of the boiler to permit cold air to enter freely above the fire, thus reducing the supply of heat, or to permit the fire to be examined, relaid, or extinguished. The rod or shaft *f* is adapted to be rotated upon its own axis for the purpose of swinging the fire-box to one side from its position beneath the boiler, thus providing for the reduction of the supply of heat or, in combination with the vertical movement, for the relaying or extinguishing of the fire when for any reason it is inconvenient or undesirable to move the fire-box vertically from the boiler to a sufficient distance to permit the relaying or extinguishing of the fire. A handle *k* is shown as applied to the rod or shaft *f* to facilitate the rotation of the shaft with the lateral swinging of the fire-box.

For the purpose of holding the fire-box rigidly in position a latch may be provided to engage the other side of the fire-box. As shown in Figs. 1 and 3, the latch may be a rod *l*, rotatable in suitable bearings and having a flat head *m* to enter a slot *n* in the edge of the fire-box. The head *m* may be long enough to form a guide for the fire-box when it is lowered for the admission of air and is

given a quarter-turn when the fire-box is drawn up into position, so that it may engage the sides of the slot and hold the fire-box rigidly in position. The rod may be provided with a pivoted cam-handle *o* for the purpose of drawing up the fire-box closely against the bottom of the boiler.

For the purpose of adding fresh fuel to the fire a large tube *p* may be provided in the boiler and may have a suitable cap or cover *r*. The condition of the fire may also be observed at any time through this tube.

The advantages of this invention in the way of compactness, convenience in location, ease in manipulation, and in the provision of means for quickly and easily reducing the supply of heat will be readily understood and appreciated without further explanation. It will also be understood that the invention is not to be limited to the precise construction and arrangement of parts shown and described herein.

I claim as my invention—

1. The combination with a boiler of a fire-box pivotally supported at one side of said boiler to swing laterally and movable vertically upon the pivotal axis, whereby said fire-box may be moved both vertically and laterally toward and from the boiler, substantially as shown and described.

2. The combination with a boiler and means for supporting the same, of a vertical rod or shaft having a bearing in the boiler-support and movable both vertically and rotatably, a fire-box secured to and supported by said rod or shaft, and means for moving said rod or shaft to move the fire-box with respect to the boiler, substantially as shown and described.

3. The combination with a boiler and means for supporting the same, of a vertical rod or shaft having a bearing in the boiler-support and movable both vertically and rotatably, a fire-box secured to and supported by a rod or shaft, means for moving said rod or shaft, and a latch to engage said fire-box and hold it rigidly in position, substantially as shown and described.

In testimony whereof I sign this application, in the presence of two witnesses, this 25th day of April, 1901.

CHAS. W. HUNT.

Witnesses:
ANTHONY N. JESBERA,
LUCIUS E. VARNEY.