

(No Model.)

C. H. RESOR.
GRATE FOR STOVES OR RANGES.

No. 507,284.

Patented Oct. 24, 1893.

FIG. 1.

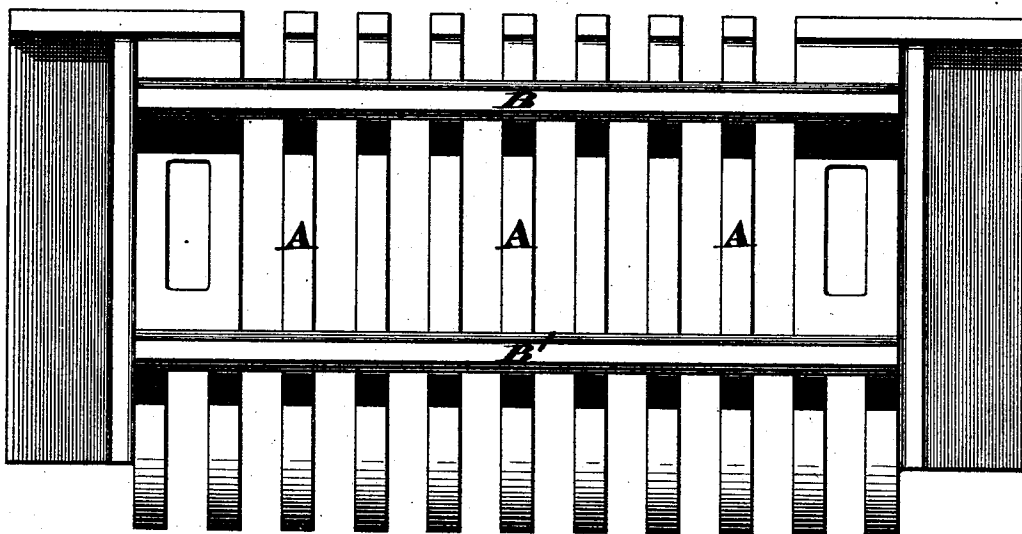


FIG. 2.

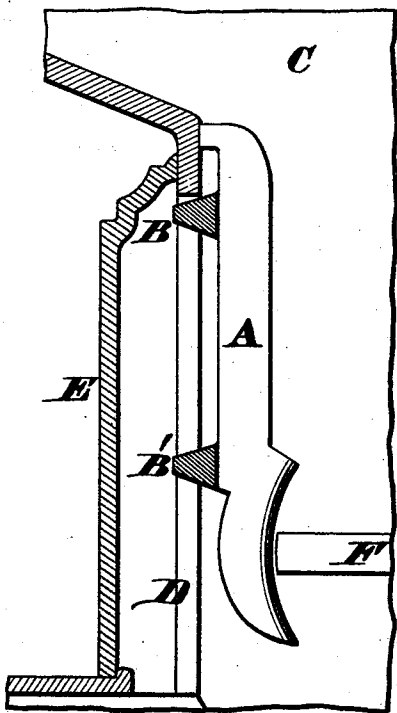


FIG. 3.

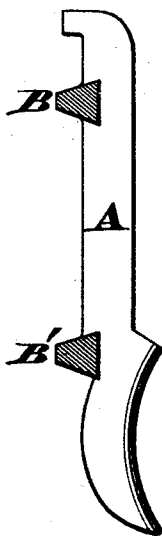
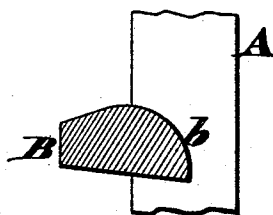


FIG. 4.



FIG. 5.



Attest.
Arthur Moore
Samuel M. Smith

Inventor.
Charles H. Resor.
by James H. Layman.
att'y.

UNITED STATES PATENT OFFICE.

CHARLES H. RESOR, OF CINCINNATI, OHIO, ASSIGNOR TO WILLIAM RESOR & CO., OF SAME PLACE.

GRATE FOR STOVES OR RANGES.

SPECIFICATION forming part of Letters Patent No. 507,284, dated October 24, 1893.

Application filed April 10, 1893. Serial No. 469,733. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. RESOR, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Grates for Stoves or Ranges; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the annexed drawings, which form part of this specification.

In casting front grates for stoves or ranges, the bars are usually vertical and united at top by a plate that extends the entire length of the fire-box and affords considerable surface for fuel to accumulate upon. Consequently, this extended plate soon becomes very highly heated, and as it can not spring outwardly, on account of the stove frame or casing, it must bend inwardly, the result being the speedy destruction of the grate. To overcome this difficulty, I dispense with a top plate, and unite the upright bars by two or more integral binders projecting from the front of the grate. By this construction, the binders occupy the front doorway of the stove or range, and being thereby exposed to the current of cold air flowing into the fire-box, they never become so highly heated as to bend or warp and finally break. These binders may run straight across the face of the grate, or diagonally of the same, or they can be arched from one bar to another, for the purpose of adding to the ornamental appearance of the stove or range, as hereinafter more fully described.

In the annexed drawings, Figure 1 is a front elevation of my improved form of stove grate. Fig. 2 is a vertical section showing said grate fitted within the fire-box of a stove or range. Figs. 3, 4 and 5 are modifications of the invention.

A represents the bars of a front grate for stoves and ranges, which bars are practically vertical and joined together by two or more integral binders B, B', although a pair of them is all that is necessary in most cases. These binders are usually straight, horizontal ribs or webs extending completely across the grate, so as to tie all the bars A rigidly together, the upper binder B, being situated a proper distance below the top of said grate,

while the other binder B', is near the bottom. Furthermore, these binders must extend across the front of the grate, not along the back of the same, nor entirely between the bars thereof, as it is desired to keep said binders as cool as possible, and not allow them to interfere, to any material extent, with a free vertical-passage between each individual bar.

C, in Fig. 2, represents the fire-box of a stove or range, D, an opening in the front of the same, and E the door that closes said opening.

F represents one of the bars of a dumping or shaking grate, but this feature is not essential to my invention, and may be omitted, if desired.

When my grate is fitted within a fire-box, the two binders B, B', project into the opening D, and as soon as a fire is started and door E, or a register of the same is opened, to insure a good draft, the cold air rushing in to support combustion strikes directly against the face of these binders and thus prevents them becoming very highly heated, while the bars A act as guards or fenders that prevent contact of incandescent fuel with the back of said horizontal members B, B'. Therefore, they are the coolest parts of the grate, and have no tendency to bow inwardly and throw the bars A out of vertical, or cause them to separate from the other parts of the casting.

In the modification of my invention, seen in Fig. 3, the binders project in a slight distance between the upright bars, while in Fig. 4, the binder B'', is arched or curved from one vertical bar to another, for the purpose of adding to the ornamental appearance of the stove or range. Also, in Fig. 5, the binder projects in between the upright bars, the rear edge of said binder being rounded off at b, to prevent ashes, &c., lodging thereon.

From this description it is evident that all the advantages of my invention will be obtained by any construction that connects the grate-bars proper with two or more integral binders whose faces are exposed to a current of cool air, while their rear surfaces are guarded against contact with the fuel in the fire-box.

I claim as my invention—

As a new article of manufacture, a grate for stoves and ranges, consisting of a series

of front bars A, entirely disconnected from
each other at their extreme upper-ends, but
united together by binders B, B', projecting
forwardly from said bars, said members A, B,
5 B', of the grate being a single, integral cast-
ing, all as herein described, and for the pur-
pose stated.

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

CHARLES H. RESOR.

Witnesses:

JAMES H. LAYMAN,
SAMUEL M. QUINN.