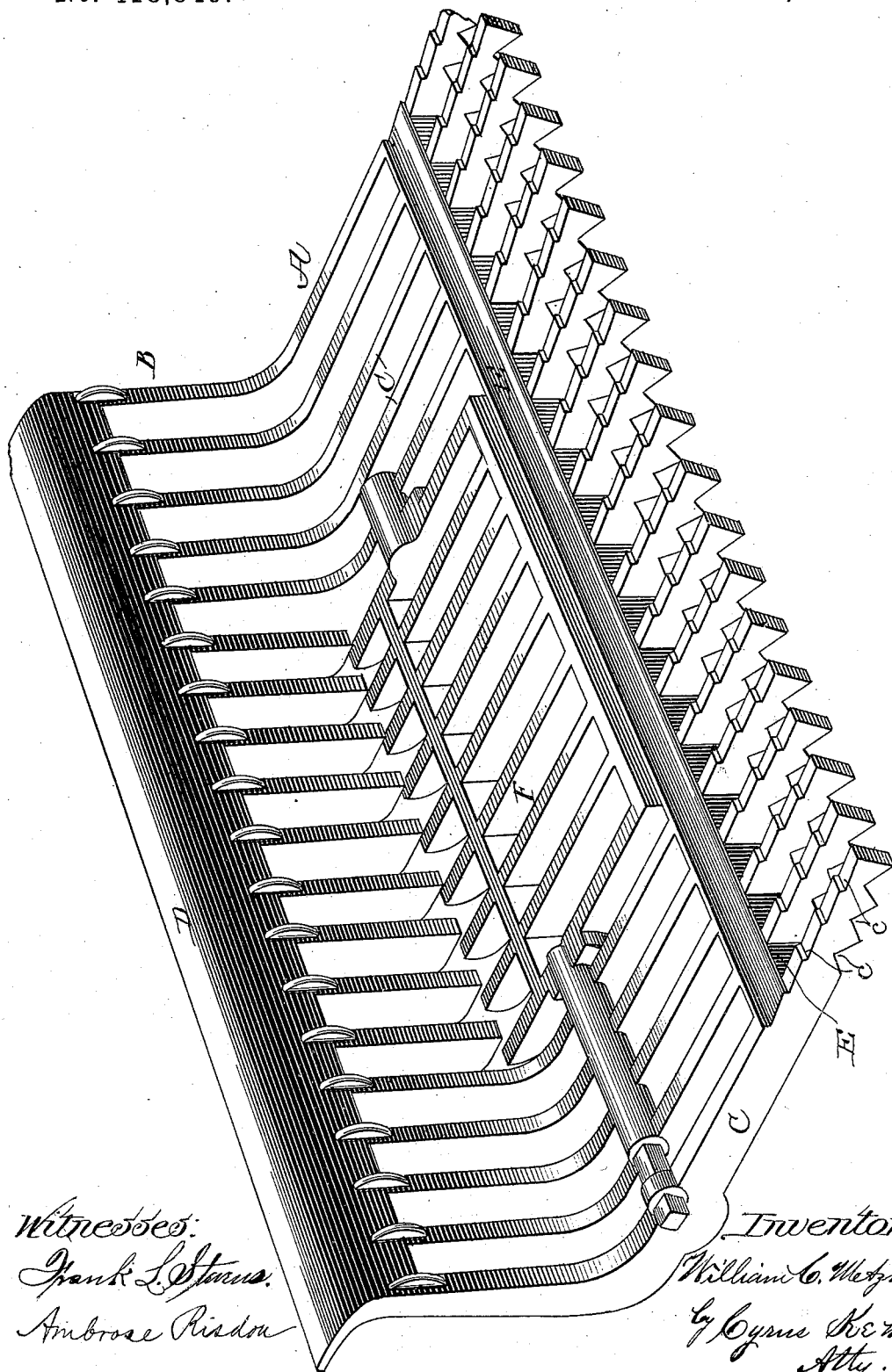


(No Model.)

W. C. METZNER.
STOVE GRATE.

No. 418,849.

Patented Jan. 7, 1890.



Witnesses:
Frank L. Stevens.
Ambrose Risdon

Inventor:
William C. Metzner
by Cyrus K. Smith
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM C. METZNER, OF CHICAGO, ILLINOIS.

STOVE-GRATE.

SPECIFICATION forming part of Letters Patent No. 418,849, dated January 7, 1890.

Application filed November 2, 1889. Serial No. 329,046. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. METZNER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Stove-Grates; and I 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 drawing, and to letters of reference marked thereon, which form a part of this specification.

This invention relates more particularly to grates for the fire-pots of cook-stoves; and the invention has for its object to provide a grate which shall be adapted to be fitted into fire-pots of different sizes, and which shall at the same time be of simple and cheap construction.

The drawing is a perspective view of a grate embodying my improvement.

The grate extends horizontally from its rear portion forward a distance equal to the usual width of the fire-pot, and then rises a short distance at the front. The entire horizontal portion is designated by the letter A, and the upright portion by the letter B. The grate is constituted, mainly, of the horizontal and substantially-parallel ribs C. These are united at the front by a web D, which latter constitutes the upper portion of the part B of the grate. The opposite ends of said ribs are united by a web E, extending transversely across the grate at a short distance from the rear edge of the grate, so that the rear ends of said ribs are left free. The portions of said ribs between their ends and the web E are preferably provided with breaking-grooves *c*. The web E may be of the full depth of the ribs C, and may consequently be narrow, so as to offer little obstruction to the rising of the air and the falling of the ashes. The entire portion of the grate at the rear of said web E is then open in the same manner as the portion of the grate between the webs E and D are open. Consequently that portion of the grate is, in fact, a grate and allows the passage of air and ashes as freely as does the portion of the grate in front of the web E.

It is to be noted that a grate for a cook-stove must be open as far to the rear as possible, in order to avoid the accumulation of ashes upon the rear of the grate and against the wall of the baking-oven. If said part of the grate is closed, ashes accumulate there and keep the heat of the fire from the wall of the oven. By leaving the same open the portion of the fire-pot adjacent to the oven-wall may be kept clear of ashes, and air may be constantly delivered to the portion of the fire-pot adjacent to the oven, so that an effective fire may be maintained adjacent to the oven-wall.

It is well known that in the use of an ordinary cook-stove the intelligent cook or house-keeper carefully removes all ashes and dead fuel from the rear portion of the fire-pot, so as to establish a strong fire contiguous to the oven-wall. The more open a grate is at its rear portion the better this rear fire may be made. By moving the web E forward from the rear portion of the grate I am enabled to fit the grate into fire-pots of different sizes. If the entire grate is too wide, the ends of the ribs C may be broken across the entire length of the grate. If the fire-pot is irregular in width from warping or other cause, then only a portion of the ribs may be broken off, or some may be broken more than others. Thus the grate may be fitted to a fire-pot having a back which is irregular. The breaking-grooves *c* facilitate the breaking of the ribs. The fact that the ribs may be broken at different lengths to cause the grate to fit an irregular back aids in arranging the grate with the largest possible amount of opening along the rear or oven wall of the fire-pot.

The grate may or may not have a movable section F, located forward of the web E.

I claim as my invention—

1. In a stove-grate, ribs C, supported at their front by a web D and forward of their rear ends by a web E, whereby the rear ends of said ribs are left free and the rear portion of the grate is left open and the ends of said ribs are adapted to be broken off, substantially as shown, and for the purposes set forth.

2. In a stove-grate, ribs C, supported at their front by a web D and forward of their rear

ends by a web E, and the portions of said ribs
at the rear of said web E provided with
breaking-grooves, whereby the rear ends of
said ribs are left free and the rear portion of
5 the grate is left open and the ends of said ribs
are adapted to be broken off, substantially as
shown, and for the purposes set forth.

In testimony whereof I affix my signature,
in presence of two witnesses, this 21st day of
September, 1889.

WILLIAM C. METZNER.

Witnesses:

CYRUS KEHR,

EDWARD J. HRDLICKA.