

(No Model.)

L. BÉNIER.
FURNACE GRATE.

No. 546,875.

Patented Sept. 24, 1895.

Fig. 1.

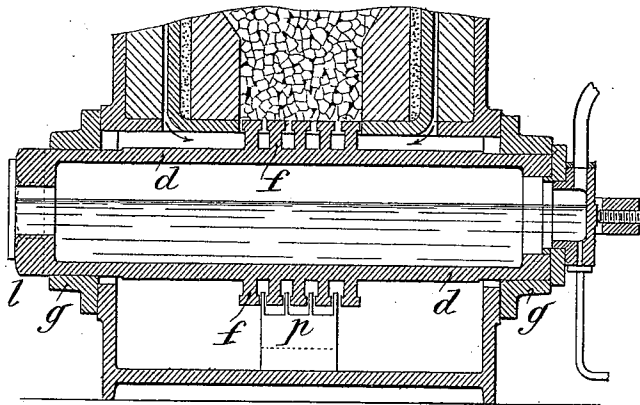
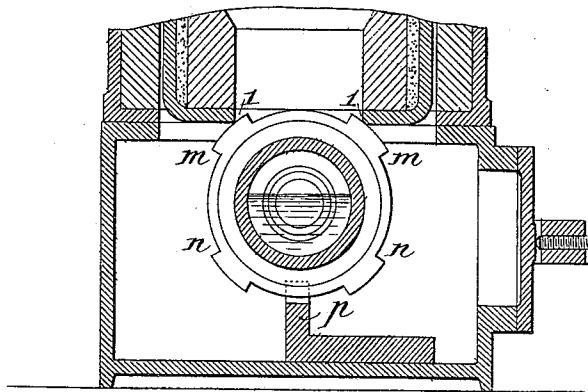


Fig. 2.



Witnesses:

L. C. Connor

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Inventor

Léon Bérier

By his attorneys

Horace B. Brown

UNITED STATES PATENT OFFICE.

LÉON BÉNIER, OF PARIS, FRANCE, ASSIGNOR TO COMPAGNIE GÉNÉRALE
DES MOTEURS-GAZOGÈNES SYSTÈME BÉNIER, OF SAME PLACE.

FURNACE-GRATE.

SPECIFICATION forming part of Letters Patent No. 546,875, dated September 24, 1895.

Application filed June 17, 1895. Serial No. 553,132. (No model.) Patented in France November 9, 1893, No. 233,940; in England April 4, 1894, No. 6,744; in Switzerland April 7, 1894, No. 8,167; in Germany April 12, 1894, No. 81,233; in Belgium April 30, 1894, No. 109,727; in Spain May 14, 1894, No. 15,657; in Italy June 30, 1894, No. 36,126, and in Austria July 14, 1894, No. 44/3,204.

To all whom it may concern:

Be it known that I, LÉON BÉNIER, engineer, a citizen of the Republic of France, residing in Paris, France, have invented a Rotative Grate for Boilers, (for which I have obtained a patent in France November 9, 1893, No. 233,940; in Germany April 12, 1894, No. 81,233; in Austria July 14, 1894, No. 44/3,204; in Great Britain April 4, 1894, No. 6,744; in Switzerland April 7, 1894, No. 8,167; in Italy June 30, 1894, No. 36,126; in Belgium April 30, 1894, No. 109,727, and in Spain May 14, 1894, No. 15,657,) of which the following is a specification.

The present invention relates to a grate for boilers, through the rotation of which a surface of fire-bars can always be brought free of scoriæ under the fireplace.

In the adjoining drawings, Figure 1 shows the grate in a vertical section through its axis of rotation, and Fig. 2 shows the same in a similar section according to a plan perpendicular to the axis of rotation.

The grate consists in a horizontal hollow cylinder *d*, which lies rotative and is provided at its outside face with ribs *f*, cast on or fixed in any other manner. These ribs, with their part turned toward the fireplace, form the grate. The cylinder *d* rotates in its two bearings *g* by means of a key to be introduced at *l*. In order to avoid a fall of fuel on both sides of the ribs *f* these ribs must shut up the fireplace at *l l*, Fig. 2; but in order that the scoriæ produced may be removed when turning the grate and may not interfere with the latter operation through their accumulation at *l l*, the external outline of the ribs *f* is provided with four grooves *m n*, the use of which is to receive the scoriæ, and which answer to four different positions of the grate.

If when the grate has been working for some time the part of the grate situated under the fireplace is covered with scoriæ, the cylinder must then be turned by ninety degrees, and by doing so a clean part of the grate is brought under the fuel.

Under the cylinder *d* a steel comb is disposed, the teeth of which penetrate into the intervals of the ribs *f*, so as to remove the scoriæ from the same when the cylinder rotates.

The cylinder *d* is filled up to its axis with water, through the evaporation of which the grate for boilers can also be used as a generator of steam.

I claim—

1. A rotative grate for boilers, consisting of a hollow cylinder for water, acting as a generator of steam, and adapted to turn around its longitudinal axis, with ribs applied to its outside surface, the part of such ribs which is turned toward the fire-place forming at such time the surface of the fire-bars.

2. A rotative grate for boilers, consisting of a hollow cylinder for water, acting as a generator of steam, and adapted to turn around its longitudinal axis, with ribs applied to its outside surface, the part of such ribs which is turned toward the fire-place forming at such time, the surface of the fire-bars, and a comb, the teeth of which penetrate into the intervals of the said ribs to remove from them the scoriæ when the grate is turned, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LÉON BÉNIER.

Witnesses:

LÉON FRANCKENY,
CLYDE SHROPSHIRE.