

(No Model.)

T. B. MERRILL.  
BOILER BEARING.

No. 432,950.

Patented July 22, 1890.

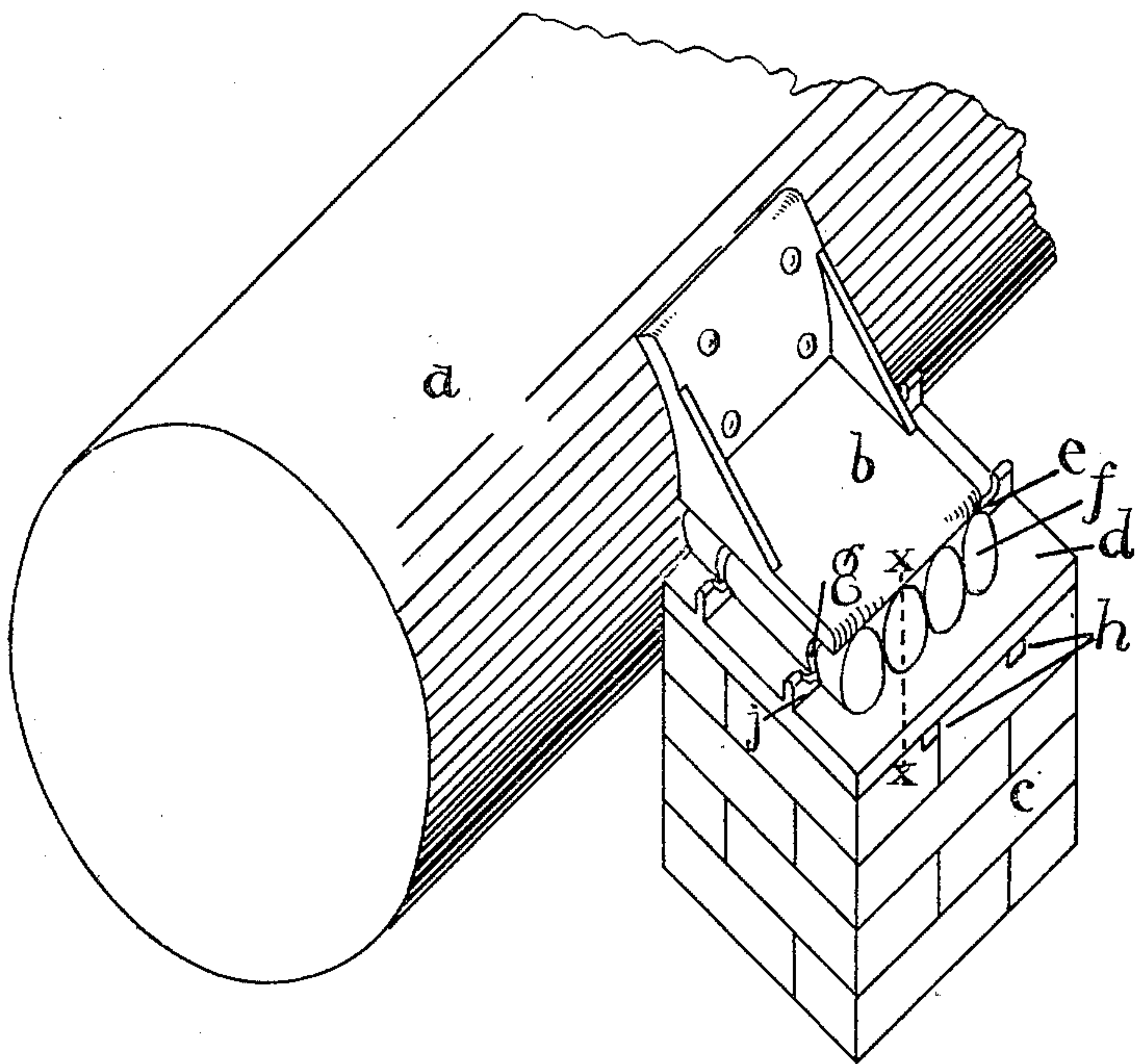


Fig. 1.

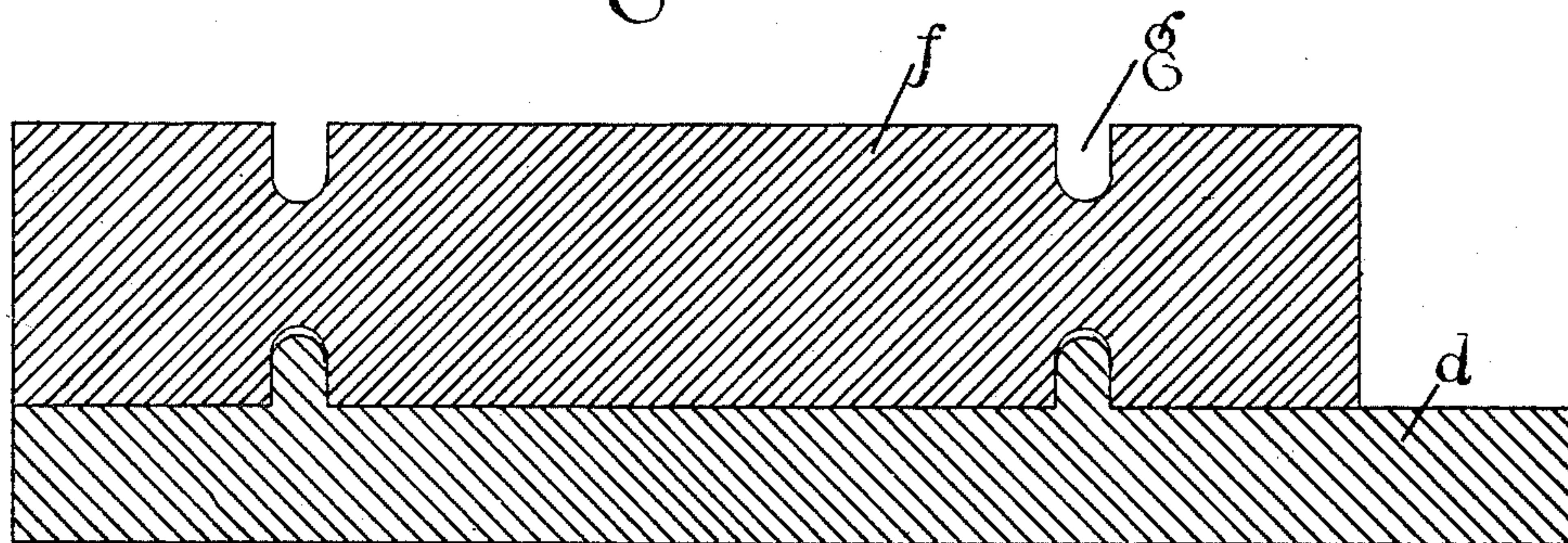


Fig. 2.

Witnesses.

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# UNITED STATES PATENT OFFICE.

THOMAS B. MERRILL, OF PORTLAND, MAINE, ASSIGNOR TO HIMSELF AND  
JAMES QUINN, OF SAME PLACE.

## BOILER-BEARING.

SPECIFICATION forming part of Letters Patent No. 432,950, dated July 22, 1890.

Application filed December 4, 1889. Serial No. 332,562. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS B. MERRILL, of Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Boiler-Bearings; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in boiler-bearings and other bodies that are subject to alternate contraction and expansion, and especially to those cases where the boiler-supports rest on a series of rolls.

It consists in placing on a bed-plate firmly set in or on the masonry raised tracks parallel with each other and with the line of direction of the movement of the supported body and interposing between the lugs that support the boiler and the bed-plate a series of rolls having grooves or channels adapted to receive the tracks on the bed-plate.

In the drawings herewith accompanying and making a part of this application, Figure 1 is an isometric view showing boiler, lug, plate, and rolls. Fig. 2 is a section of a roll and plate, and same letters refer to like parts.

In said drawings, *a* represents the boiler, *b* the lugs bolted to the boiler, and *c* the masonry upon which the whole is to rest. The number of lugs and bearings will of course vary, according to the size of the boiler. The base-plate may have on its under side projections or flanges to aid in retaining said plate in position by extending into the masonry, and on the upper face thereof are raised tracks or guideways *e*. On these guideways is then set a series of rolls *f*, having grooves *g* cut therein, so as to receive the ways and permit the rolls to travel over them. The ways extending up into the grooves keep the rolls in proper position, the sides of the grooves pressing against the sides of the ways, unless the rolls travel in the same direction. The grooves *g* are made deep enough to prevent the rolls from resting on the ways, thus per-

mitting the body of the rolls to bear directly on the bed-plate, so as not to lessen the supporting power of said rolls. The ends of the ways may have abutments *j* to limit the travel of the rolls; but these should be sufficiently distant to allow of the free travel of the lugs as far as the greatest expansion of the boiler would require. If the rolls be placed upon the bed-plate without the guideways, as aforesaid, they soon get out of their true position, which is parallel with the direction of the movement of the supported body and with each other, those on the outside first and then others, whereby the friction is much increased, and consequently the strain on the boiler-supports and masonry.

The operation of my improved bearing is as follows: The lugs rest on the rolls, and as the boiler expands and contracts they move back and forth, the rolls traveling on the bed-plate beneath them lessening the friction and being kept in their true relative positions by the ways, as set forth. If the ways on the bed-plate were placed close to the ends of the rolls and at right angles thereto, the rolls would be kept in position much better than by the old way.

I am aware that boilers have been supported by lugs bolted to the sides thereof, said lugs resting on rolls placed upon a bed-plate, and I do not claim, broadly, rolls placed on a bed-plate to serve as a bearing, but only the specific forms hereinafter claimed.

Having thus described my invention and its use, what I claim, and desire to secure by Letters Patent of the United States, is—

The combination, with a boiler having supporting-lugs attached thereto, of a bed-plate resting on the foundation and having raised parallel ways thereon and rolls having grooves therein to receive said ways, substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

Portland, Maine, November 30, 1889.

THOMAS B. MERRILL.

Witnesses:

ELGIN C. VERRILL,

WILLIAM H. LOWERY.