

(No Model.)

R. GOSLING.

BAFFLE PLATE FOR FLUES OF BOILERS.

No. 324,552.

Patented Aug. 18, 1885.

fig. 1.

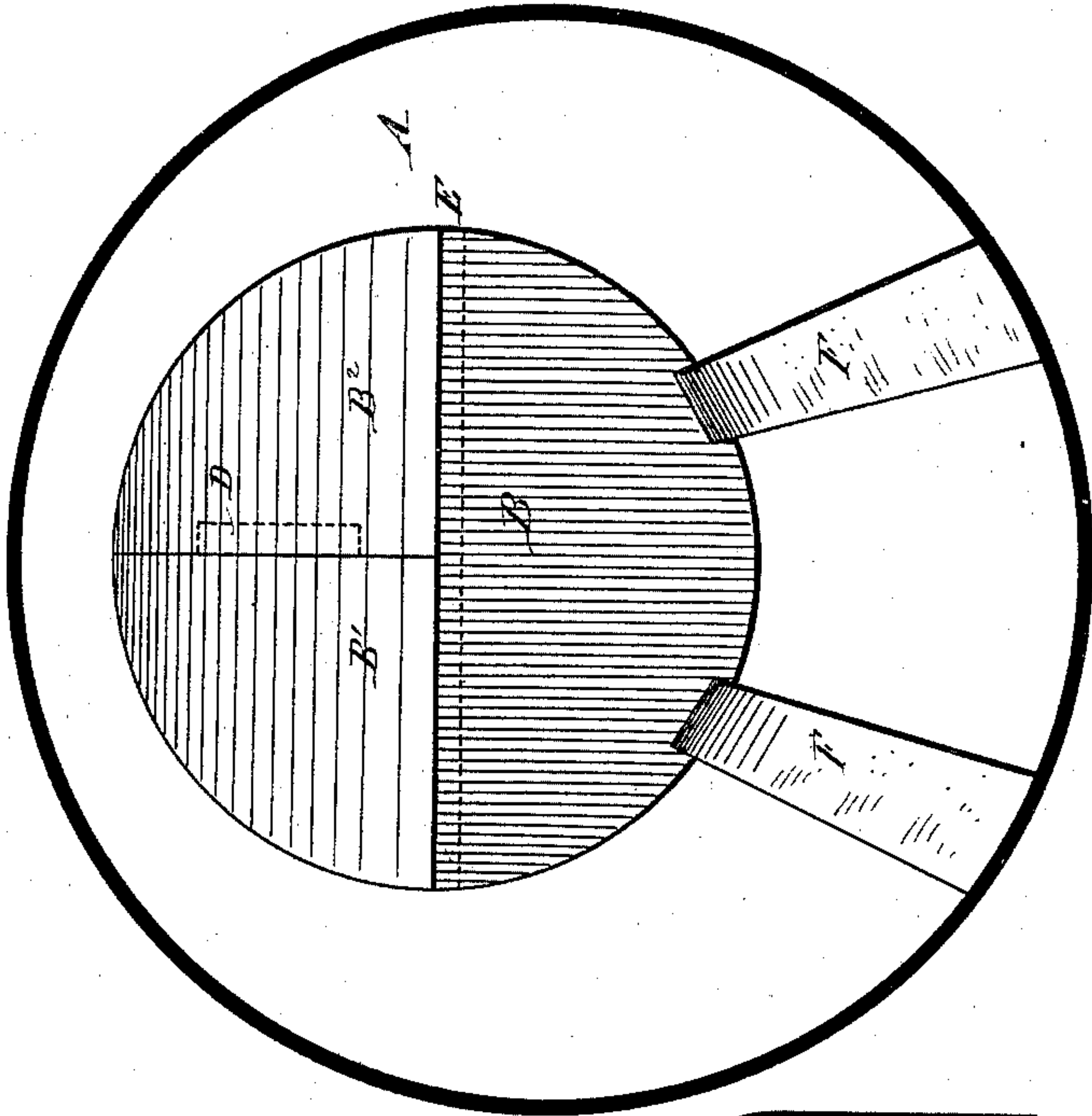


fig. 2.

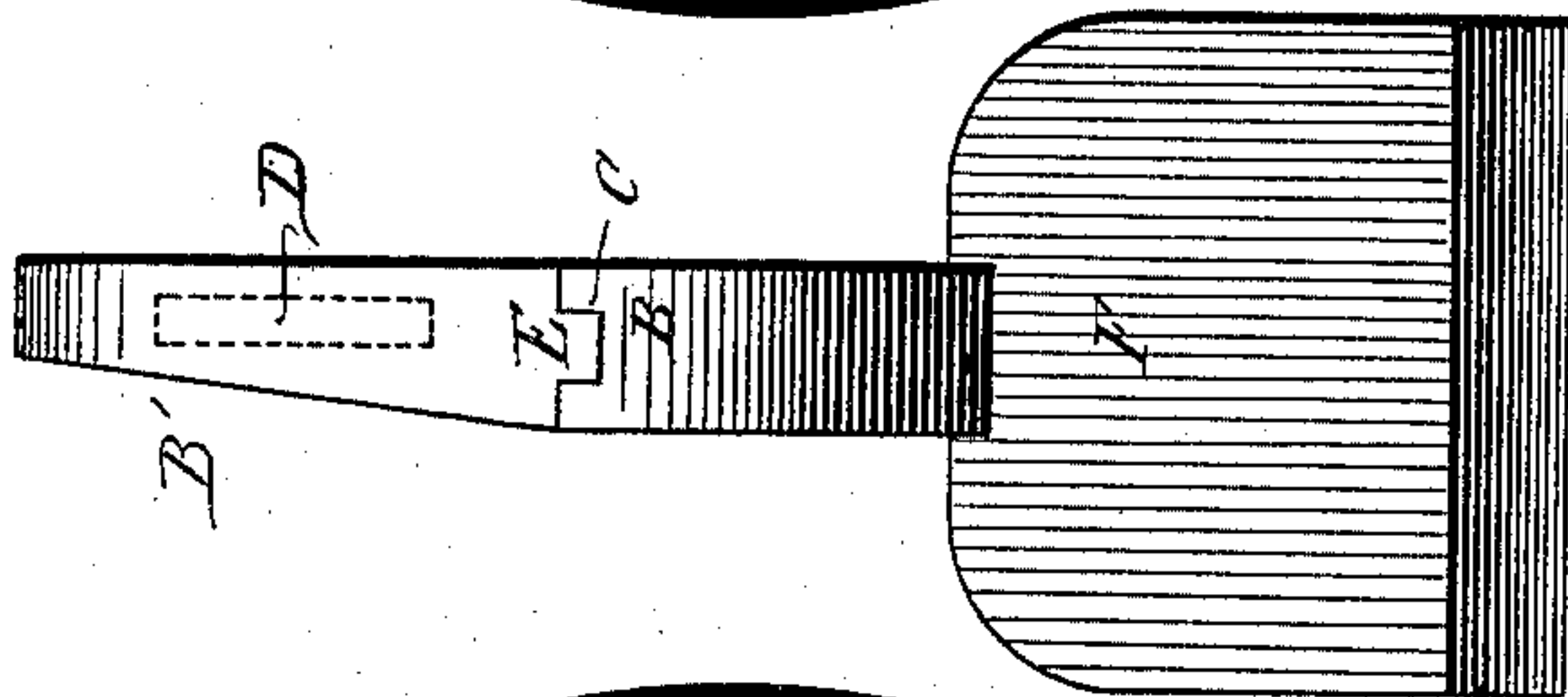
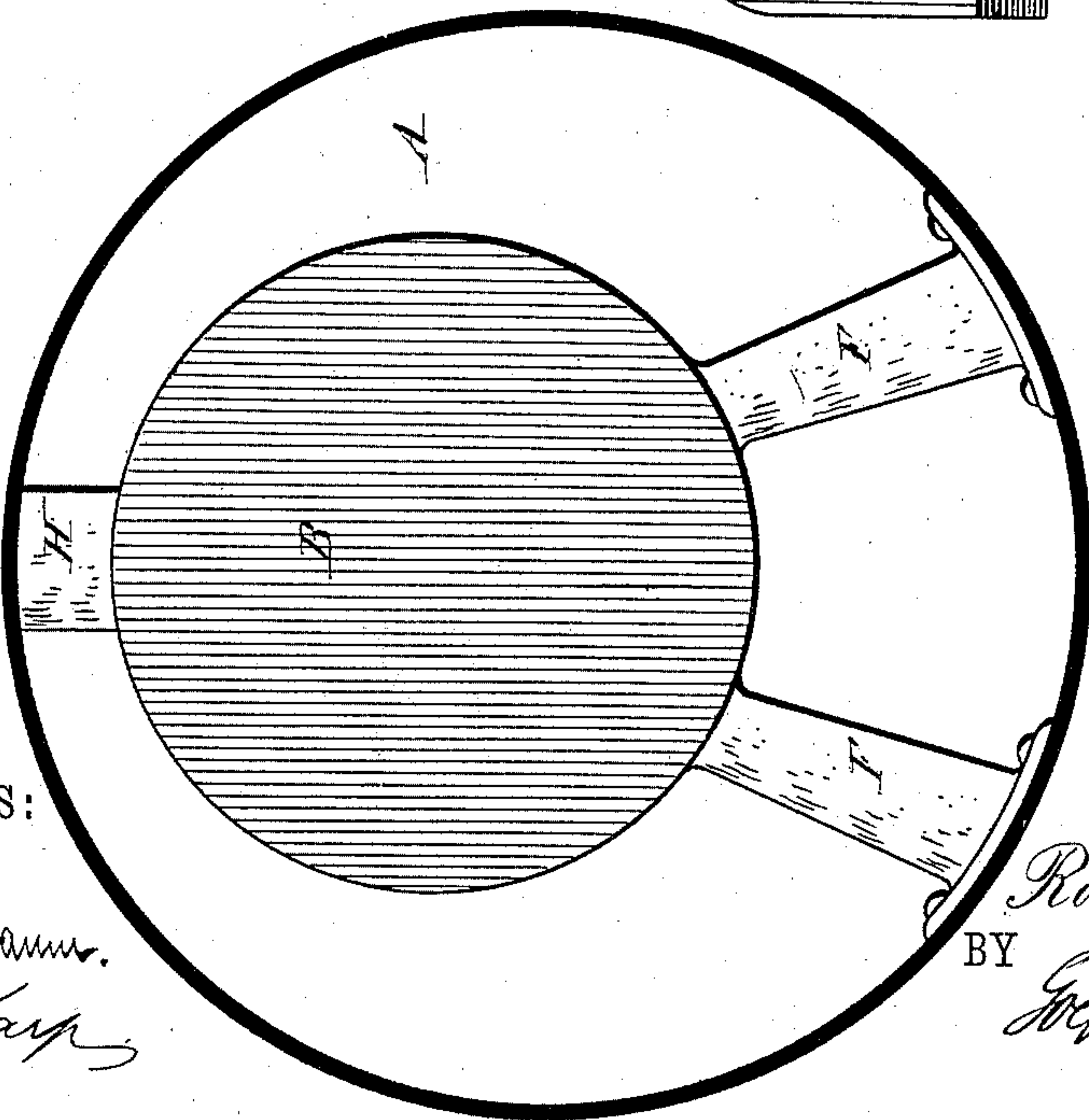


fig. 3.



WITNESSES:

*Wm. H. Rosenbaum.*  
*Carl Kapp*

INVENTOR

*Robert Gosling*

BY

*Ernest Raegenier*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

ROBERT GOSLING, OF HATTON COURT, IPSWICH, COUNTY OF SUFFOLK,  
ENGLAND.

## BAFFLE-PLATE FOR FLUES OF BOILERS.

SPECIFICATION forming part of Letters Patent No. 324,552, dated August 18, 1885.

Application filed January 9, 1885. (No model.) Patented in England May 27, 1884, No. 8,265.

*To all whom it may concern:*

Be it known that I, ROBERT GOSLING, of Hatton Court, Ipswich, in the county of Suffolk, England, engineer, have invented new and useful Improvements in Fire-Proof Disks or Baffle-Plates for Use in the Flues of Steam-Boilers, (for which I have applied for Letters Patent in Great Britain on the 27th day of May, 1884, No. 8,265,) of which the following is a specification.

This invention relates to improvements in fire-proof disks or baffle-plates for use in the flues of stationary, marine, or other horizontally-flued boilers for the purpose of economizing fuel and utilizing the heat passing in the flue inside the boiler, and thereby causing the whole interior surface of the boiler-flue to become an efficient heating-surface.

For this purpose I use a disk mainly composed of ganister material, fire-clay, and silica, compounded in such well-known manner as to produce a good refractory material to stand heat without cracking; or I can use other refractory material to construct my disks suitable for the purpose. For use in the flues of stationary boilers I divide the disk into segments, so that they can be placed or fixed in the flue of the boiler with greater ease, each segment interlocking with key or dovetail or like attachment. The disk rests upon brackets or feet composed of the same or a like refractory material, and placed at right angles to the disk, in each of which is cut a slot or groove to better hold the disk. For fitting the disks into the flues of steam-boilers they are placed advantageously about three feet apart, and with each disk set eccentrically with the axis of the flue—say, for instance, the top of the disk about two inches from the top of the flue and the bottom of the disk about seven inches from the bottom of the flue. Of course the size and spacing of the disks must depend on the size of the flue.

In the accompanying drawings, Figure 1 shows a section of a flue such as is used in a Lancashire or Cornish boiler; Fig. 2, side view of a disk.

A is the flue; B B' B<sup>2</sup>, sections or segments of the disk. B, the lower segment, has a dove-

tail or plain groove, G, in the same. The upper sections, B' B<sup>2</sup>, have respectively a tongue or key, D, in the one to fit a dovetail or plain groove in the other, while a tongue or key, E, fits the dovetail or plain groove C in the section B; or I may instead make the disk in more sections for large disks, or in two pieces for small disks. The whole disk fits into feet or brackets F, as shown, the said brackets or feet being at right angles to the disk, which fits a groove or grooves in the brackets or feet.

For marine boilers I may make the disks and feet in one piece, and with a boss or projection on the top to abut on the flue, and furnish the feet or brackets and boss with grooves to fit on iron lugs riveted in the flue, so as to steady the whole in case of a ship pitching or rolling. Fig. 3 shows this, B being the disk, F the feet, H the boss, I the lugs in the flue.

By using disks placed eccentrically with the axis of the flue, the rising currents of heat are baffled in their attempt to escape over and round the same, and a great deal of heat thus prevented from being wasted.

In place of wholly constructing the disks and feet of refractory material, the same may be used on a metal core or backing. When made in segments, such disks are readily adapted for transit from the factory to the boilers where they are to be set up.

I claim—

A fire-proof disk or baffle-plate for use in the flues of steam-boilers, placed eccentrically with regard to the axis of the flue, the same having a boss or abutment to rest against the top of the flue, and being supported on refractory feet or brackets, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 24th day of December, 1884.

ROBERT GOSLING.

Witnesses:

A. GARDNER COLTON,  
*Fel. Inst. P. A.,*

W. G. SYER,  
*5 Nicholas Lane, London, E. C.*