

H. LORING.  
Rotary Bleaching Boilers.

No. 166,117.

Patented July 27, 1875.

Fig 2.

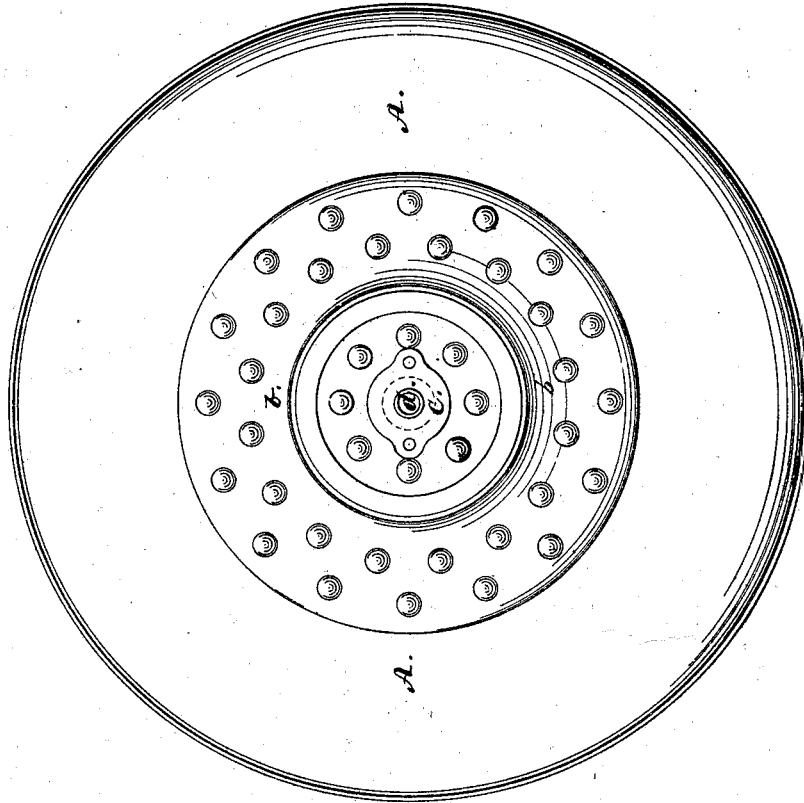
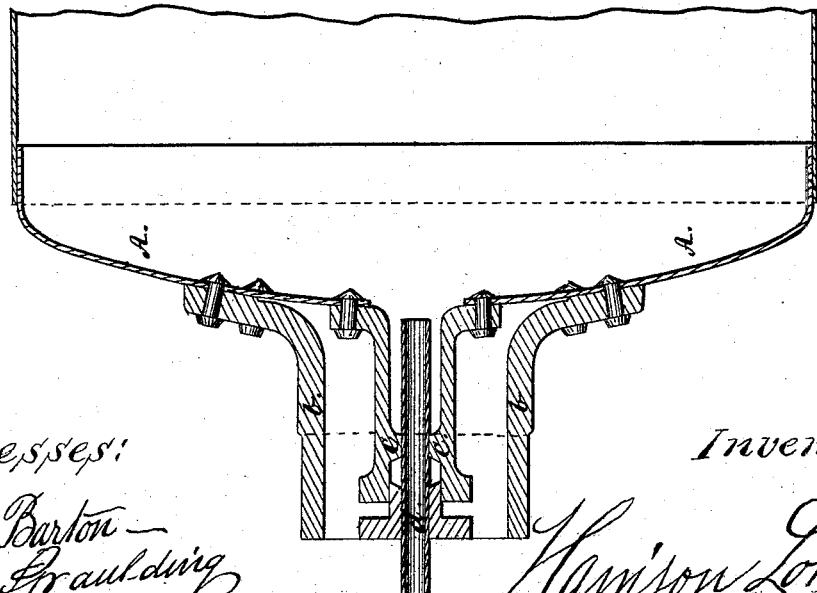


Fig 1.



Witnesses:  
E. H. Barton  
W. C. Graubding

Inventor:  
Harrison Loring

# UNITED STATES PATENT OFFICE.

HARRISON LORING, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN ROTARY BLEACHING-BOILERS.

Specification forming part of Letters Patent No. **166,117**, dated July 27, 1875; application filed October 7, 1874.

*To all whom it may concern:*

Be it known that I, HARRISON LORING, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Rotary Bleaching-Boiler; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure I represents a longitudinal section of this invention. Fig. II is an end elevation.

Similar letters of reference indicate like parts.

A represents the end or head of the boiler; b, a section of the gudgeon attached to the same; c, the stuffing-box, also attached to the boiler-head within the gudgeon; and d, the induction-pipe passing through the stuffing-box.

The nature of my invention consists of so constructing and arranging the gudgeons and induction-pipes for rotary bleaching-boilers of all the known forms that the induction-pipes pass into the boiler separate and independent of the gudgeons or trunnions, and the latter made hollow, in the form of an annular ring,

with flanges attached to the head of the boiler, thus enabling me to obtain a larger bearing-surface of the journal, greatly strengthening the head, and avoid cutting a large hole in the center of the same, as is necessary in the old form of solid gudgeon; to distribute the metal in a uniform manner, thereby avoiding any strain of the casting in cooling, and by making the induction-pipes separate prevent heating and expanding of the gudgeons; also, to enable me to make the gudgeons so that there shall be no communication between the outer casting and the inside of the boiler, thereby removing all liability of explosion by reason of defects in or accidental breaking of the casting.

What I claim as my invention, and desire to secure by Letters Patent, is—

A hollow cylindrical gudgeon, with flanges, attached to the head of a rotary bleaching-boiler so as to surround the induction-pipe and be separated therefrom, substantially as described.

HARRISON LORING.

Witnesses:

E. H. BARTON,  
W. C. SPAULDING.