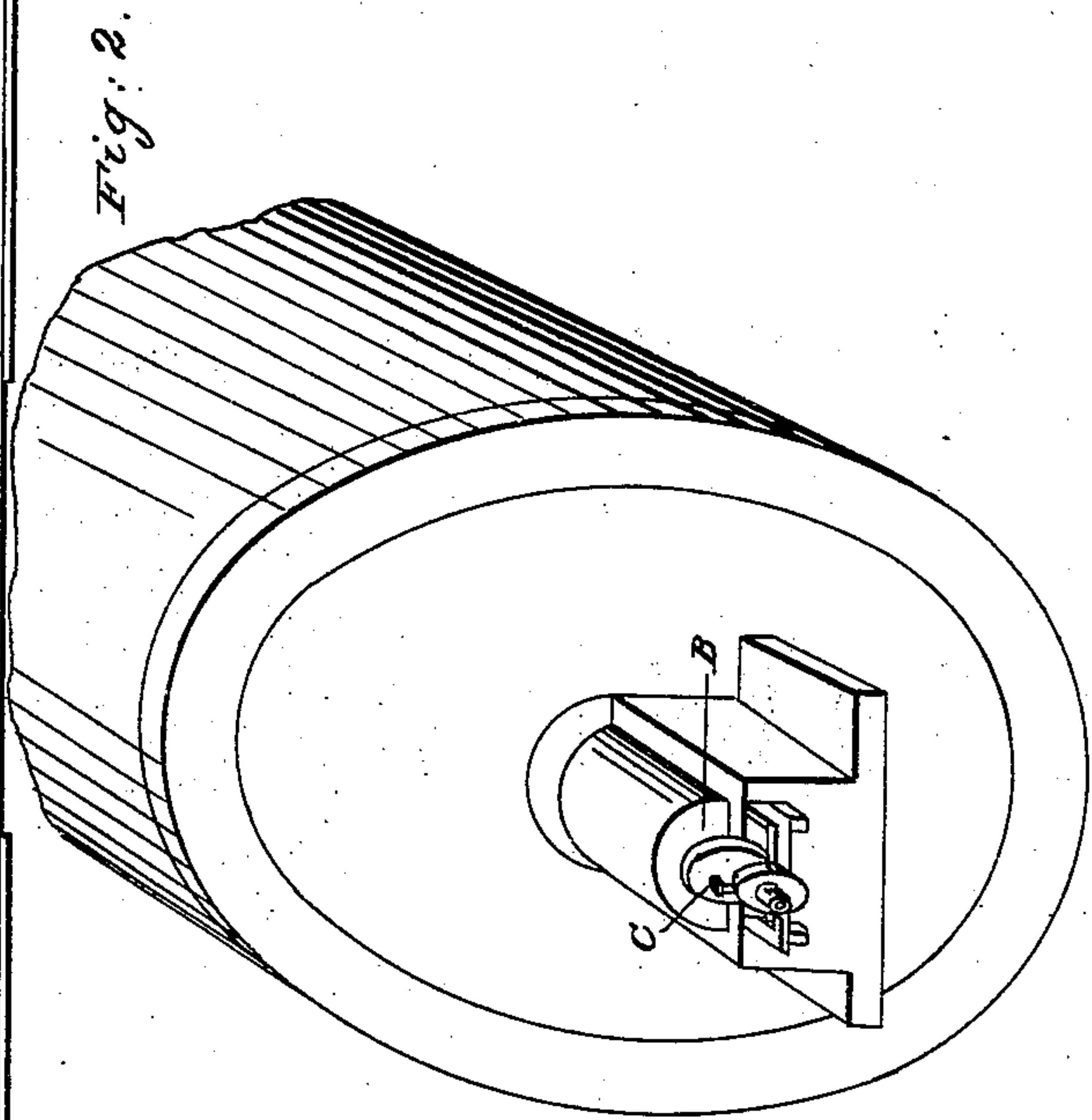
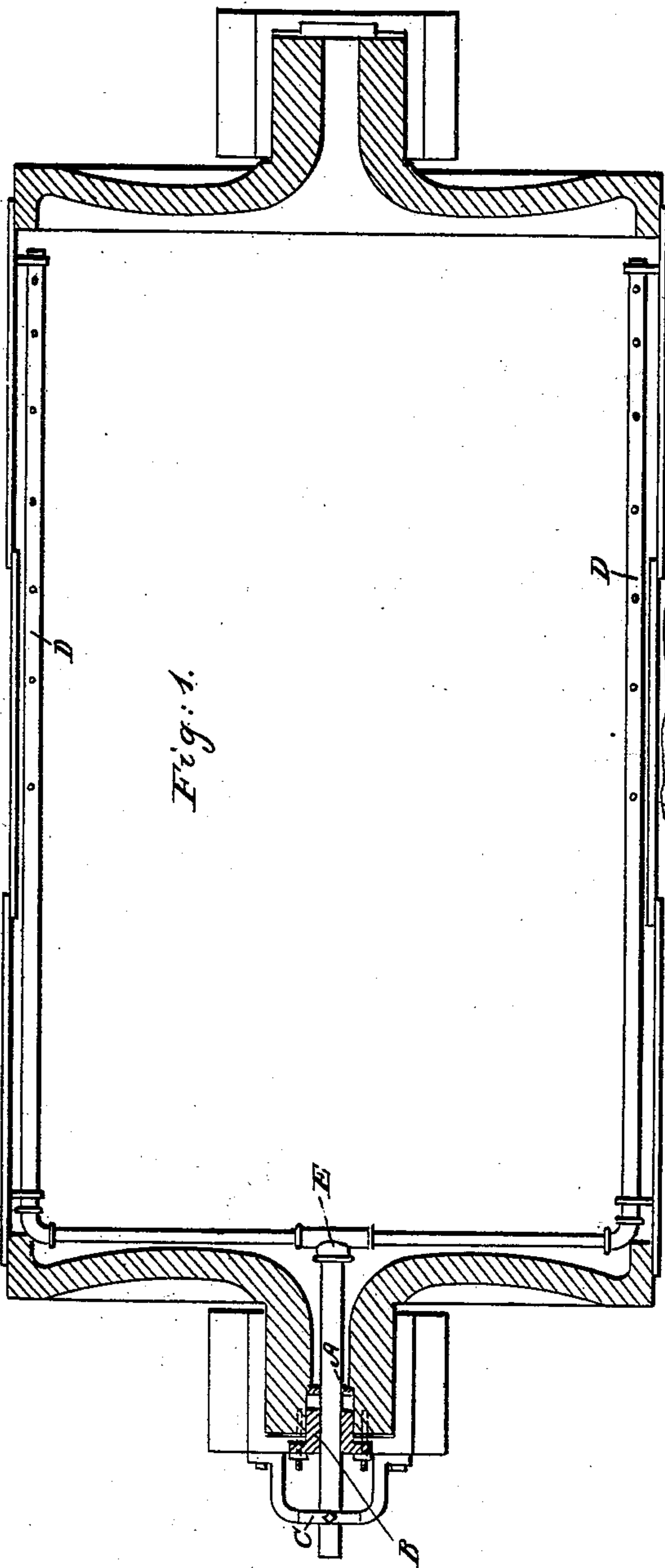


H. LORING.

Apparatus for Bleaching Rags.

No. 13,008.

Patented June 5, 1855.



Witnesses:  
Chas. B. B. B.

Inventor:  
Hanson Loring

# UNITED STATES PATENT OFFICE.

HARRISON LORING, OF BOSTON, MASSACHUSETTS.

## APPARATUS FOR BLEACHING RAGS.

Specification of Letters Patent No. 13,008, dated June 5, 1855.

*To all whom it may concern:*

Be it known that I, HARRISON LORING, of Boston, in the county of Suffolk, in the State of Massachusetts, have invented a  
5 new and Improved Method of Introducing and Connecting the Steam-Induction Pipe in Rag-Bleaches; and I do hereby declare that the following is a full and exact description thereof, reference being had to the  
10 accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in so arranging the induction pipe as to allow of the expansion and contraction of the  
15 bleach without affecting it; also the admitting of steam to all parts of the bleach at the same moment which I effect by means of perforated pipes running lengthwise of the bleach. This prevents the rags from  
20 being forced compactly into one end of the bleach (as they are when steam is admitted directly at any one point as has been done heretofore) and allows by the equal distribution of the rags, the bleaching liquor  
25 more thoroughly to perform its functions; also in introducing the induction pipe through the journal of a revolving bleach, securing it in a fixed position and allowing the bleach to revolve around it, making the  
30 connection steam tight by packing in the same manner as the piston rod to a steam engine, by means of "stuffing box" and "gland"; thus avoiding the friction and liability to leakage occasioned by the pres-  
35 ent method of connecting the pipes by butting the end of the pipe against the end of the journal, which soon insures a leakage by the unequal wearing away of the surfaces in contact.

40 To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct my "revolving bleach" in

any of the known forms. Through the trunnion of one end of the bleach I have  
45 cast a hole larger than the pipe so as to allow of introducing hemp or other packing around the outside of pipe inserting a collar which is made to fit the hole through the trunnion on its outside circumference  
50 and its inside to fit the induction pipe as shown at A, forcing the packing around the joint by means of a gland as shown at B, securing the induction pipe in a fixed  
55 position by means of a yoke attached to the pedestal and passing around and fastened to the pipe by a key or set screw as shown at C.

On the interior of the bleach I fasten perforated pipes running lengthwise of the  
60 bleach as shown at D, D, the adjacent ends of which are connected by pipes terminating in socket joint revolving around the end of the stationary pipe as shown at E.  
(Figure 1 of the drawing.) 65

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

The manner of introducing the steam to all parts of the revolving bleach at the same moment by means of a perforated  
70 pipe attached to the interior of the bleach, the adjacent ends of which are connected by a socket joint to a stationary induction pipe arranged as set forth in my specification so as to allow of the expansion, contraction and movement of the bleach without  
75 derangement; for the purpose and in the manner substantially as described.

I do not claim the revolving bleach or bleaching by steam at a high temperature as  
80 I am aware that it has been known and patented before.

HARRISON LORING.

Witnesses:

CHAS. H. HERSEY,  
G. A. HINCKLEY.