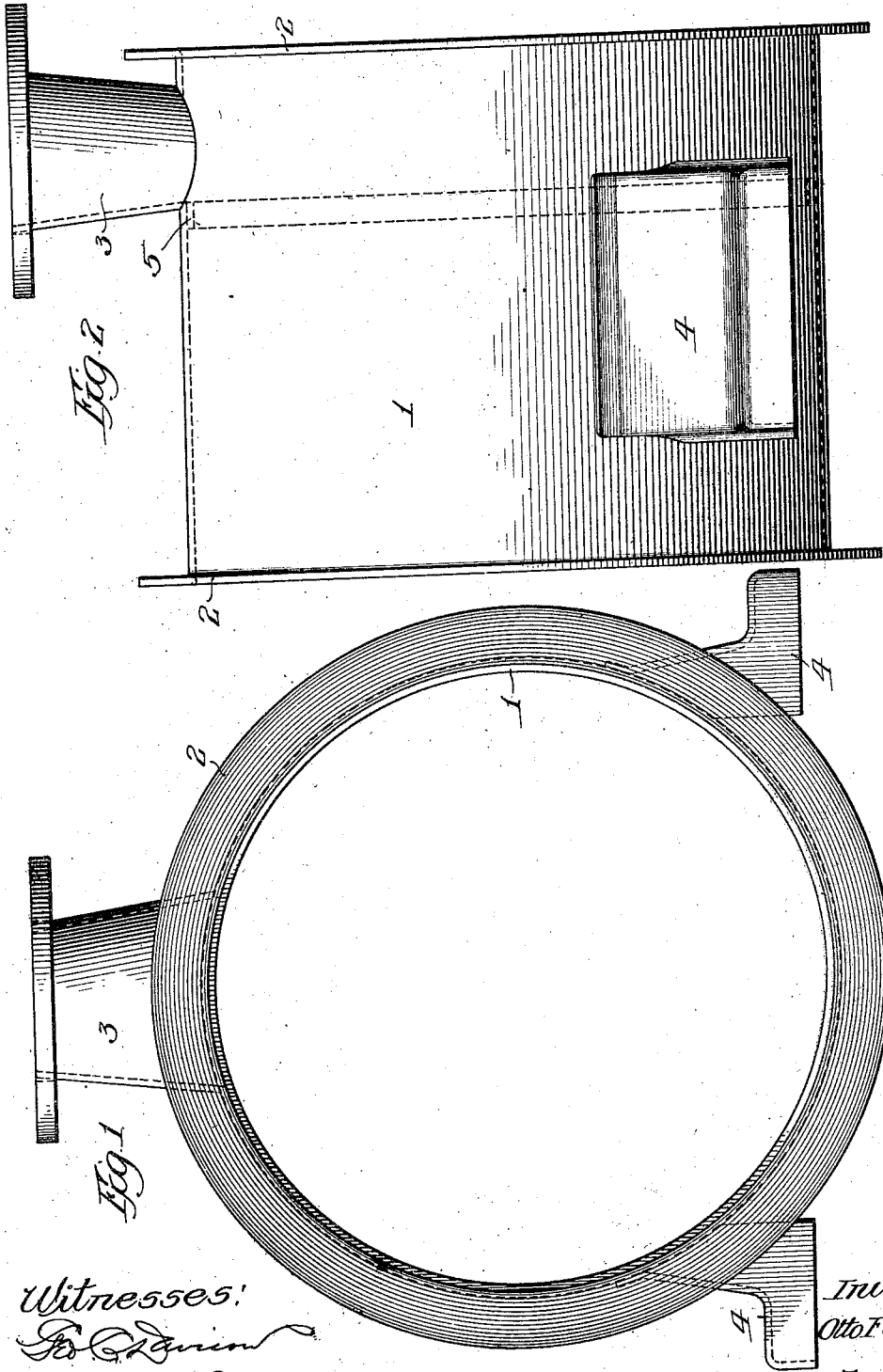


O. F. BRUMAN.
 TURBINE CASING.
 APPLICATION FILED JAN. 2, 1912.

Patented Aug. 20, 1912.

1,036,182.



Witnesses:
Ed. C. Davis
McLellan Young

Inventor:
Otto F. Bruman
By Barton & Folk Attys

UNITED STATES PATENT OFFICE.

OTTO F. BRUMAN, OF BERLIN, GERMANY, ASSIGNOR TO ROBERT S. HOTZ, OF CHICAGO, ILLINOIS.

TURBINE-CASING.

1,036,182.

Specification of Letters Patent.

Patented Aug. 20, 1912.

Application filed January 2, 1912. Serial No. 668,893.

To all whom it may concern:

Be it known that I, OTTO F. BRUMAN, citizen of the Republic of Switzerland, residing at Berlin, Germany, have invented a certain new and useful Improvement in Turbine-Casings, of which the following is a full, clear, concise, and exact description.

My invention relates to a turbine casing made entirely of sheet or plate metal, and its object is to provide a casing which is light in weight and which nevertheless possesses the requisite strength and rigidity, and which is cheap to manufacture.

In ordinary turbine designs, the casing is made of cast iron strengthened by ribs, and, therefore, such casing is heavy and expensive. As distinguished from such structure my invention contemplates a casing made from boiler tube of commercial size. The casing of my invention is not split through the axis as is customary with cast iron casings, but forms a cylinder without flanged seams, thus avoiding leakage.

My invention may be more readily understood by reference to the accompanying drawings, in which—

Figures 1 and 2 are side and end elevations, respectively, of a casing embodying my invention.

The casing wall 1 is made of sheet metal in the form of the ordinary boiler tube, and,

as shown, is of one piece. There is thus no possibility of leakage through the side walls of the casing. At its opposite ends the casing 1 is provided with flanges 2, 2 which may be either bent from the sheet metal or may be welded to the end of the tubing.

The exhaust pipe 3 also consists of sheet metal, the longitudinal seam of which is formed by welding together the two ends of the sheet metal of which said pipe is made.

The supporting feet 4 are made of pressed steel and are welded to the exterior of the casing.

A ring 5 secured upon the interior of the casing serves as a supporting end piece or steady ring for the diaphragms which rest against it.

What I claim is:

In a turbine casing, the combination with a sheet metal tube of one piece, of flanges secured to the end of said tube, a sheet metal exhaust pipe welded to said tube, and sheet metal supporting feet welded upon the exterior of said tube.

In witness whereof, I hereunto subscribe my name this 4th day of December, A. D., 1911.

OTTO F. BRUMAN.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."