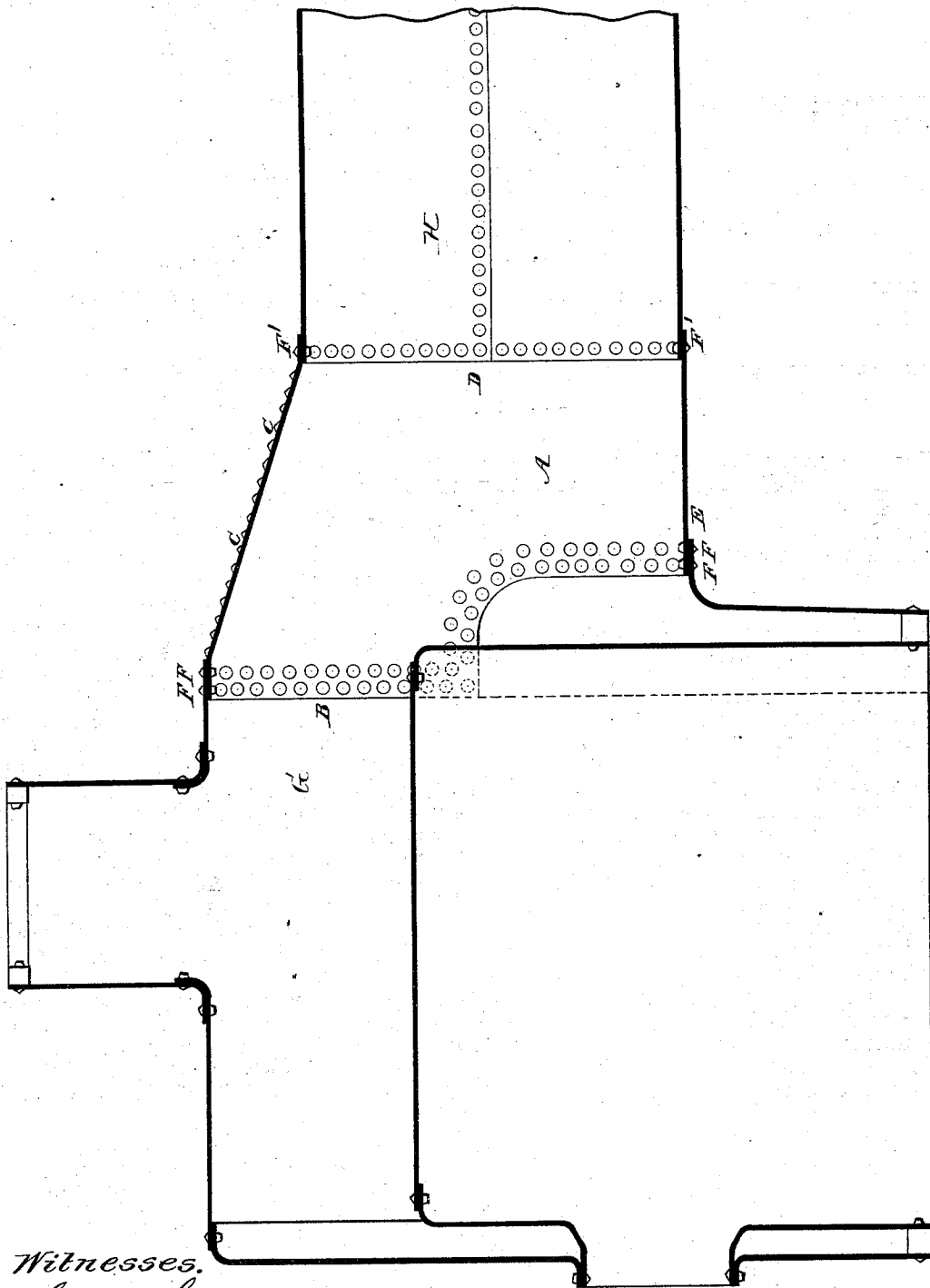


J. T. CONNELLY.

Gusset Connections for Steam-Boilers.

No. 158,037.

Patented Dec. 22, 1874.



Witnesses.

George Cramer.
James Rushton

Inventor.

James T. Connelly.

UNITED STATES PATENT OFFICE.

JAMES T. CONNELLY, OF CONNELLSVILLE, PENNSYLVANIA.

IMPROVEMENT IN GUSSET-CONNECTIONS FOR STEAM-BOILERS.

Specification forming part of Letters Patent No. **158,037**, dated December 22, 1874; application filed October 29, 1874.

To all whom it may concern:

Be it known that I, JAMES T. CONNELLY, of Connellsville, in the county of Fayette and State of Pennsylvania, have invented certain new and useful Improvements in Locomotive Steam-Boilers; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

My invention relates to what is known as the "wagon-top locomotive steam-boiler;" and it consists in the construction of the gusset or connection of one single plate, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which forms a part of this specification, and which represents a longitudinal vertical section of a wagon-top locomotive steam-boiler embodying my invention.

G represents the so-called wagon top of a locomotive steam-boiler, to which the gusset or connection A is riveted, by a single or double row of rivets, F F, as desired. The gusset or connection A is made of a single plate, cut in proper shape, and bent around and fastened by a double row of rivets, C, the same being on top. The large end B of the

gusset is fastened to the wagon-top throat, and the smaller end D is riveted to the front shell H by a single row of rivets, F'.

By the construction of the gusset or connection A of a single plate, so as to have only a single seam, the strength and durability of the boiler are materially increased, as the liability of leakage and breakage is very much reduced just at the point where the greatest strain and expansion are by the reduction in the number of seams.

Gussets have heretofore been made of a number of plates, necessitating a number of seams; and it is well known that nearly all accidents occur by seams giving way and leaking. This has been attempted to be remedied by calking, but this is even more destructive than the rivet-holes. This is entirely obviated by the construction of the gusset of a single plate properly cut out, as described.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The gusset or connection A of a boiler, made of a single piece, tapered from its top, and provided with offsets, whereby more than one seam is avoided, substantially as set forth.

JAMES T. CONNELLY.

Witnesses:

GEORGE CRAMER,
JAMES RUSHTON.