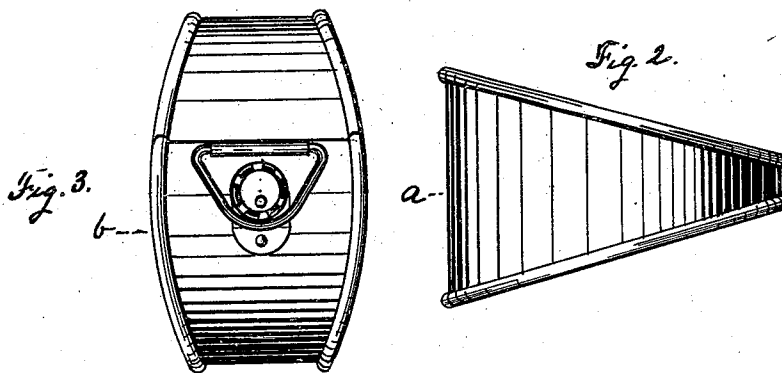
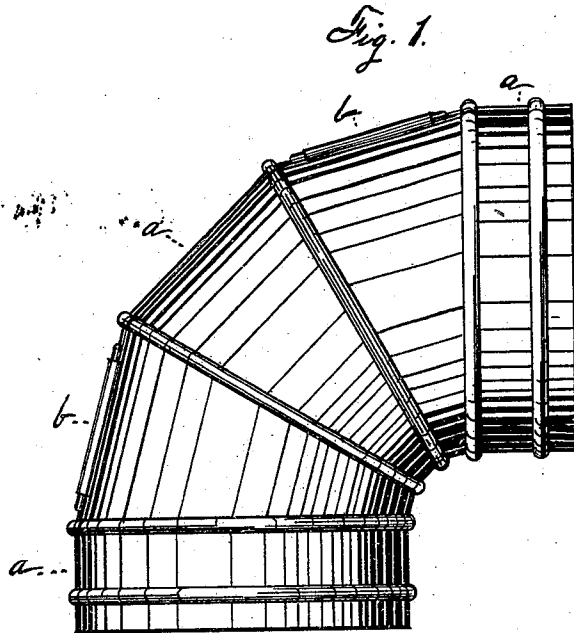


C. F. HENIS.

ELBOWS FOR SHEET-METAL PIPES.

No. 173,169.

Patented Feb. 8, 1876.



Witnesses
Jacob H. Richards
Alfred J. Pike

Inventor
C. F. Henis

UNITED STATES PATENT OFFICE.

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CHARLES F. HENIS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN ELBOWS FOR SHEET-METAL PIPES.

Specification forming part of Letters Patent No. **173,169**, dated February 8, 1876; application filed January 8, 1876.

To all whom it may concern:

Be it known that I, CHAS. F. HENIS, of Philadelphia, State of Pennsylvania, have invented an Elbow for Sheet-Metal Pipes, of which the following is a specification:

My invention consists in constructing a pipe-elbow in sections upon the radius of the circle in which the elbow is curved, and in making the sections alternately solid and open, the open sections being so constructed as to clamp together the solid ones, which are held firmly in any desired position by adjustable clasps.

In the drawing, Figure 1 is a side elevation of the elbow. Fig. 2 is a view of a solid section. Fig. 3 is a view of an open section, showing the adjustable clasp.

These sections may be made in such numbers as may be desired.

When the sections are put together and the open sections loosely clasped, the parts are free to move upon each other, and by a proper

adjustment of them relative to each other the elbow may be given such form as circumstances may require, and when in proper position the clasps are closed, and the open sections secured tightly upon the solid ones, making an elbow perfectly firm and rigid, but which is not liable to set from rust or other adhesions, because, when the clasps are loosened, the parts can always be separated, and can be again reunited in any desired position.

No claim is made for the clasp shown, as numerous devices can be used in its stead.

What I claim as my invention is—

The combination of the solid sections *a* and the open sections *b*, provided with clasps or their equivalent, constructed and operated substantially as shown and described.

CHAS. F. HENIS.

Witnesses:

JAS. H. RICHARDS,
CHAS. F. PIKE.