(No Model.)

W. J. GORDON & E. D. GILBERT.

SHEET METAL PIPE ELBOW.

No. 399,664. Patented Mar. 19, 1889.

Fig. 1

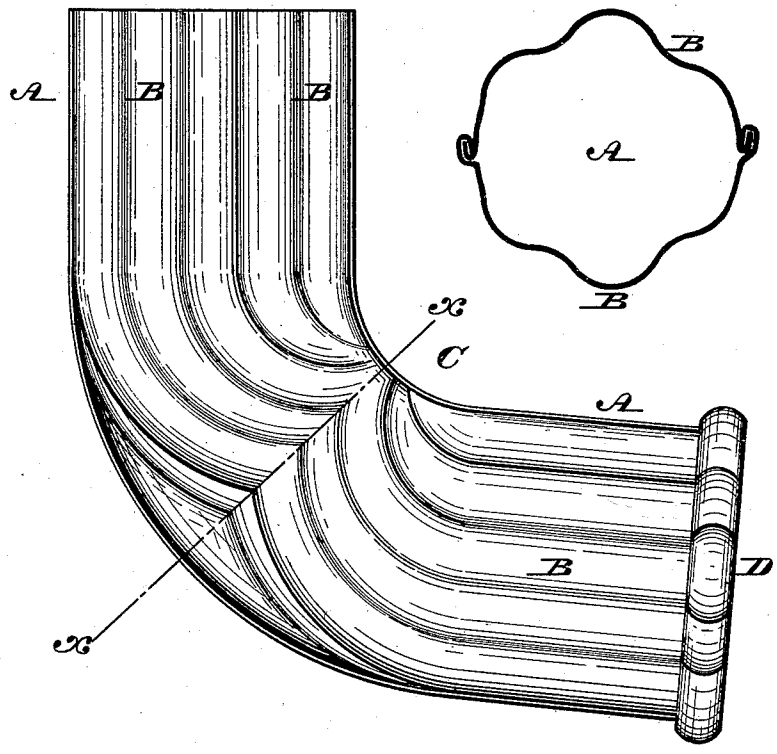
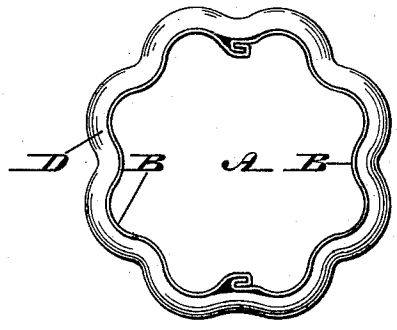


Fig. 2

Fig. 3



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UNITED STATES PATENT OFFICE.

WILLIAM J. GORDON AND EDMUND D. GILBERT, OF PHILADELPHIA, PENNSYLVANIA.

SHEET-METAL PIPE-ELBOW.

SPECIFICATION forming part of Letters Patent No. 399,664, dated March 19, 1889.

Application filed August 30, 1888. Serial No. 284,182. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM J. GORDON and EDMUND D. GILBERT, citizens of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Sheet-Metal Pipe-Elbows, which improvement is fully set forth in the following specification and accompanying drawings.

Our invention relates to improvements in sheet-metal pipe-elbows; and it consists of a corrugated elbow, the corrugations whereof converge at the centre of the bend of the elbow, thereby avoiding buckling, and also stiffening and strengthening the elbow.

Figure 1 represents a side elevation of a sheet-metal pipe-elbow embodying our invention. Fig. 2 represents a sectional view on line *x x*, Fig. 1. Fig. 3 represents an end view of the elbow and the collar or sleeve thereon.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a sheet-metal pipe-elbow having corrugations B. The corrugations run parallel with the sides of the elbow, and at the center C of the bend thereof converge, thus taking up the metal at the bend, avoiding buckling, and also stiffening or strengthening the elbow portion.

D designates a metal collar or sleeve, the interior surface of which is shaped to fit snugly over the corrugated end of the pipe, and its outer face is round or circular. This collar or sleeve forms a shield or guard for the elbow when used as a water spout or conduit, in which case it prevents damage to the elbow if subjected to blows.

It will be seen that in the manufacture of the pipe the converging of the corrugations B takes up the flow of the metal as it naturally inclines to the center, and causes said corrugations to be regular, the surplus metal being displaced without producing pleats, creases, or breaks, or "buckling" as sometimes termed in metal-working.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A corrugated sheet-metal pipe-elbow, the corrugations whereof are converged at the center of the bend of the elbow, in the manner and for the purpose described.

2. A sheet-metal pipe-elbow having converging corrugations at the central portion of the bend thereof, substantially as and for the purpose described.

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