

(No Model.)

R. H. D. MORRISON.

PIPE RETURN.

No. 293,976.

Patented Feb. 19, 1884.

Fig. 1.

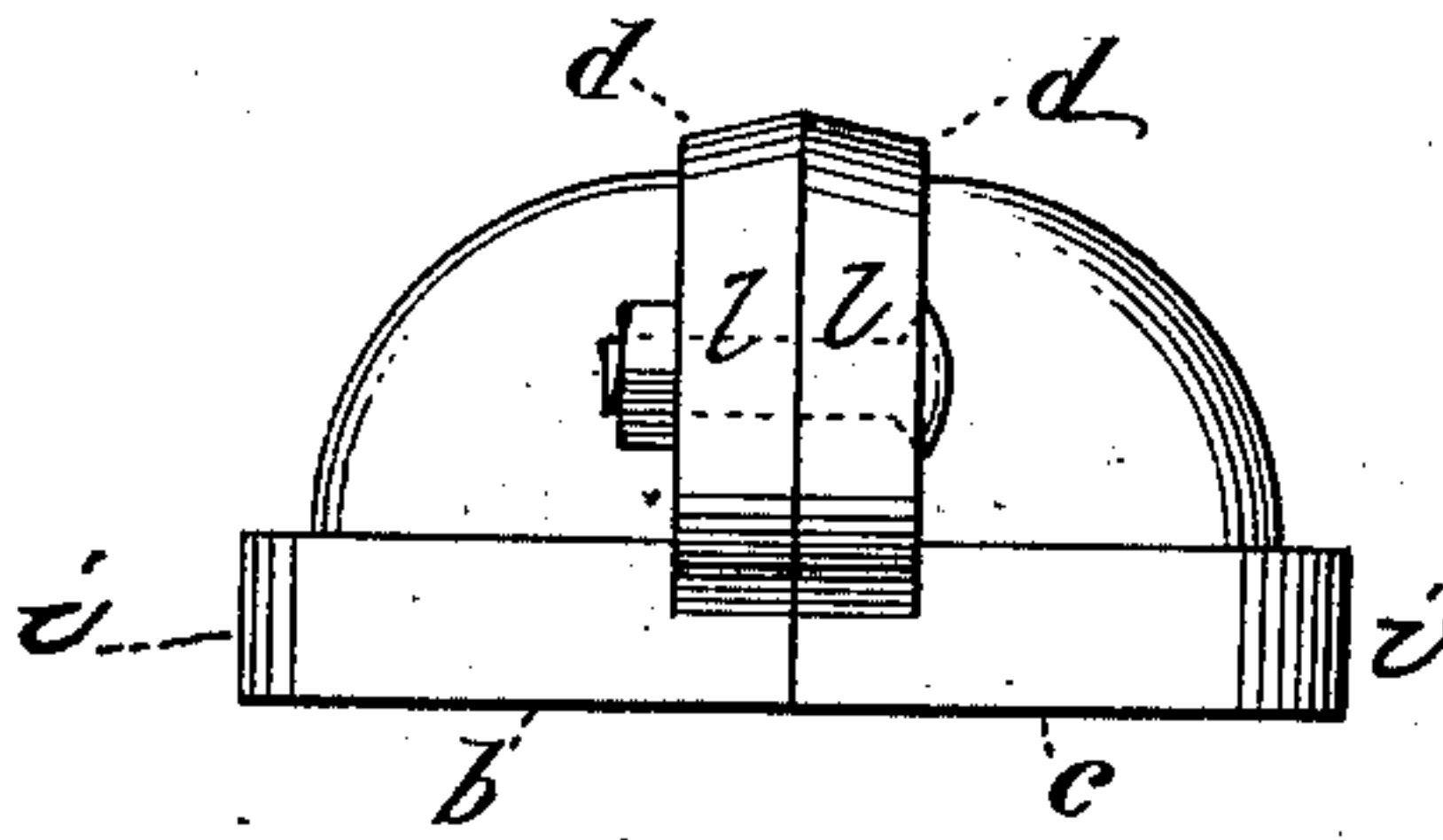


Fig. 2.

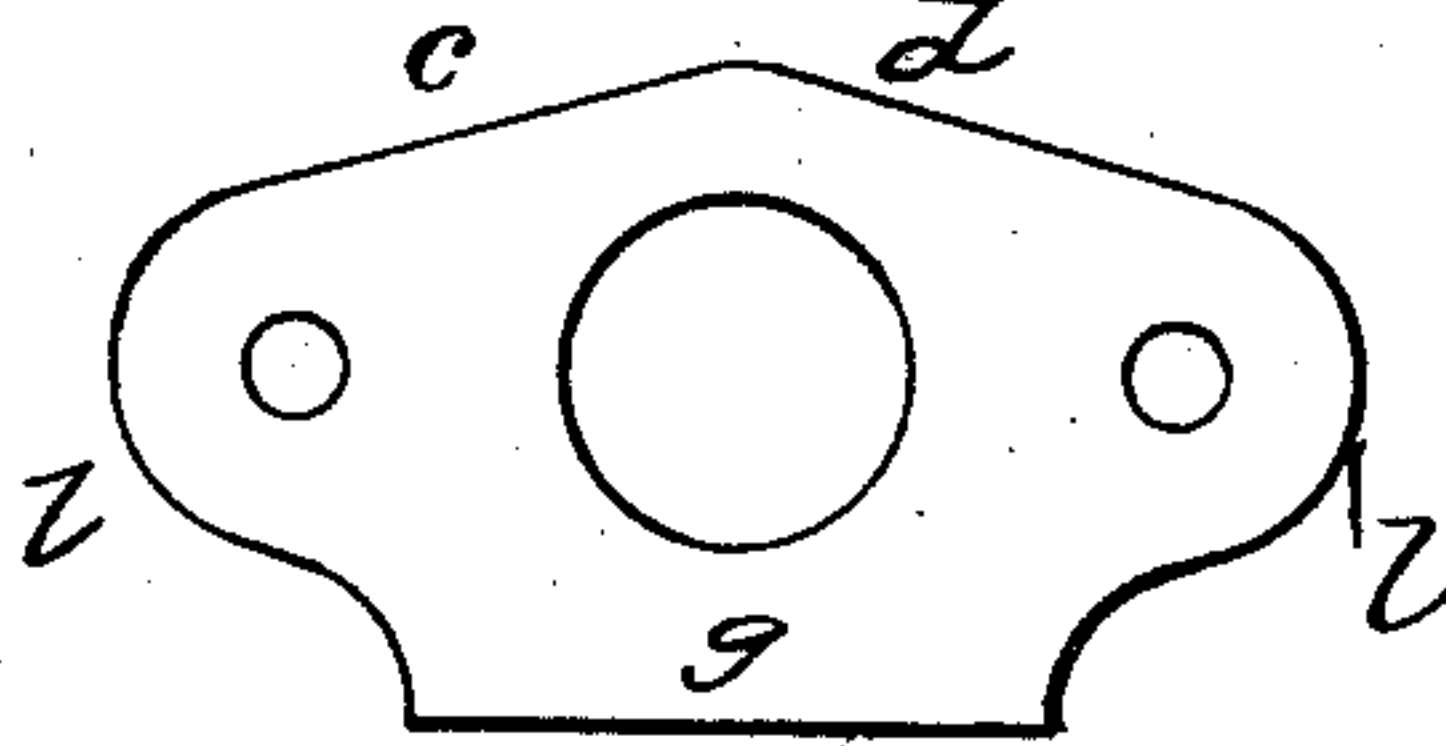
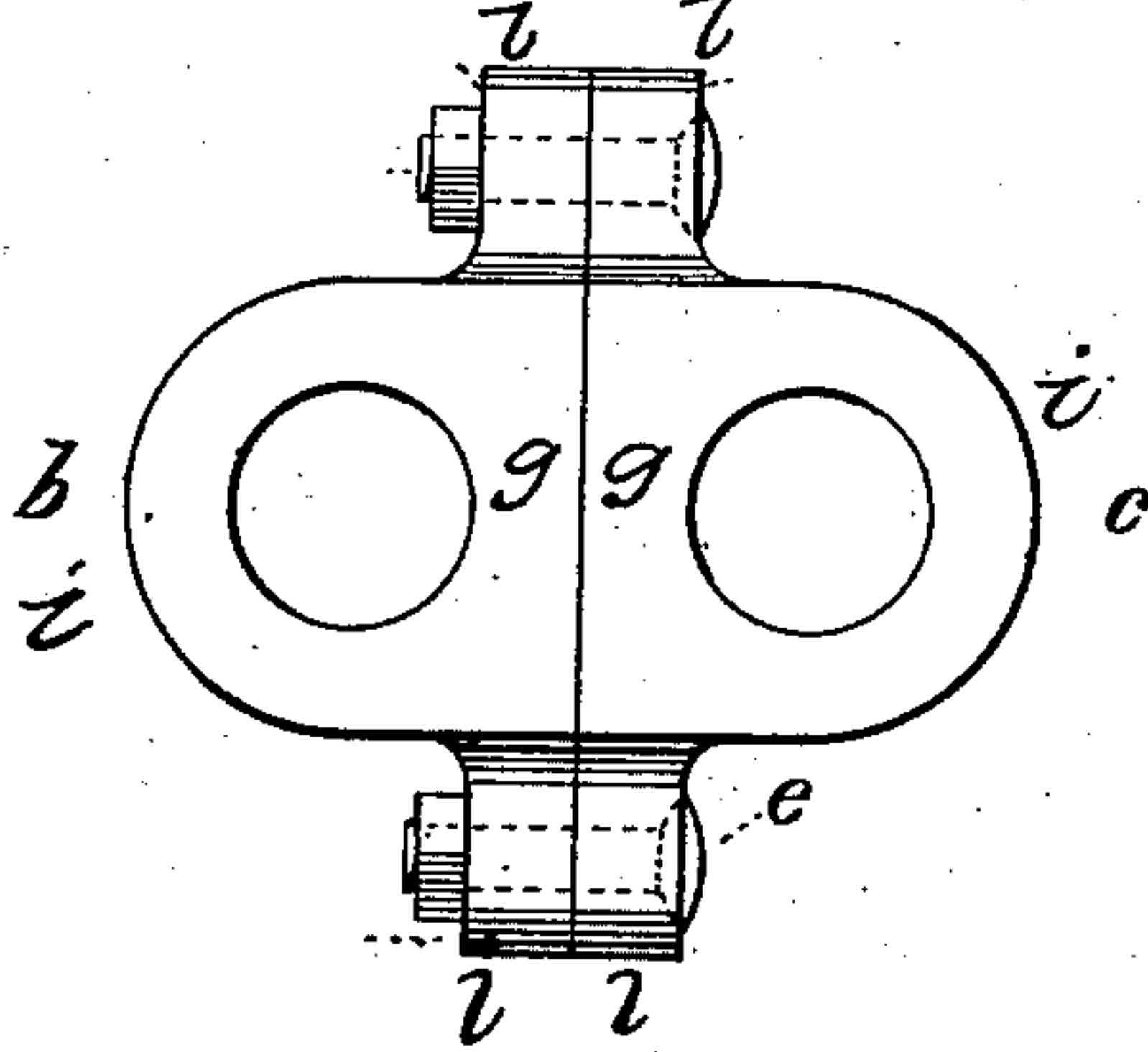


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

ROBERT H. D. MORRISON, OF WINONA, MINNESOTA, ASSIGNOR OF ONE-HALF
TO M. TOYE, OF SAME PLACE.

PIPE-RETURN.

SPECIFICATION forming part of Letters Patent No. 293,976, dated February 19, 1884.

Application filed May 19, 1883. (No model.)

To all whom it may concern:

• Be it known that I, ROBERT H. D. MORRISON, a citizen of the United States, residing at Winona, in the county of Winona and State of Minnesota, have invented certain new and useful Improvements in Pipe>Returns; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of this invention, and shows a side view of the two parts joined. Fig. 2 is a view of the inner face of one piece. Fig. 3 is a view of the under side, showing the two parts together.

This invention has relation to improvements in the manufacture of steam-pipe elbows; and it consists in the construction and novel arrangement of parts, as will be hereinafter more fully set forth, and particularly pointed out in the claim appended.

Heretofore elbows have been constructed in sections, with each section provided at adjacent ends with perforated flanges for the reception of connecting-bolts, but such elbows have not been provided with the flanges hereinafter specified.

The object of my invention is to provide a strong and durable elbow which may be manufactured at a very small expense. This object I accomplish by the means shown and illustrated in the accompanying drawings, in which the respective sections are indicated by the

letters *b* and *c*, which are provided with flanges *d d*. These flanges extend transversely around the outer sides of the adjacent ends of each section, and communicate at the under side of the sections with web-flanges *g*, which, when the sections are placed together, extend solidly from one branch to the other.

i indicates flanges around the mouth of each section, which also communicate with the web-flanges. These flanges are all cast or made integral with relation to each section, and when the sections are connected by passing bolts through the perforated lugs *l* of the flanges *d d* an elbow is formed, of the construction shown in Fig. 1 of the drawings, with all the flanges meeting solidly at the adjacent faces of the sections.

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

The pipe-elbow consisting of the sections *b* and *c*, cast with arched perforations, and flanges *d d* around the mouths of said sections, forming the adjacent faces of the sections, and perforated lugs for the fastening-bolts, and with base-flanges *i*, extending to the adjacent face-flanges and joining the same in angular form, the angles being solidly filled by the metal of the sections, all substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT H. D. MORRISON.

Witnesses:

J. N. MAYBURY,
W. P. LAIRD.