

(No Model.)

R. E. GOODRICH.  
SHEET METAL JOINT.

No. 382,151.

Patented May 1, 1888.

Fig. 1.

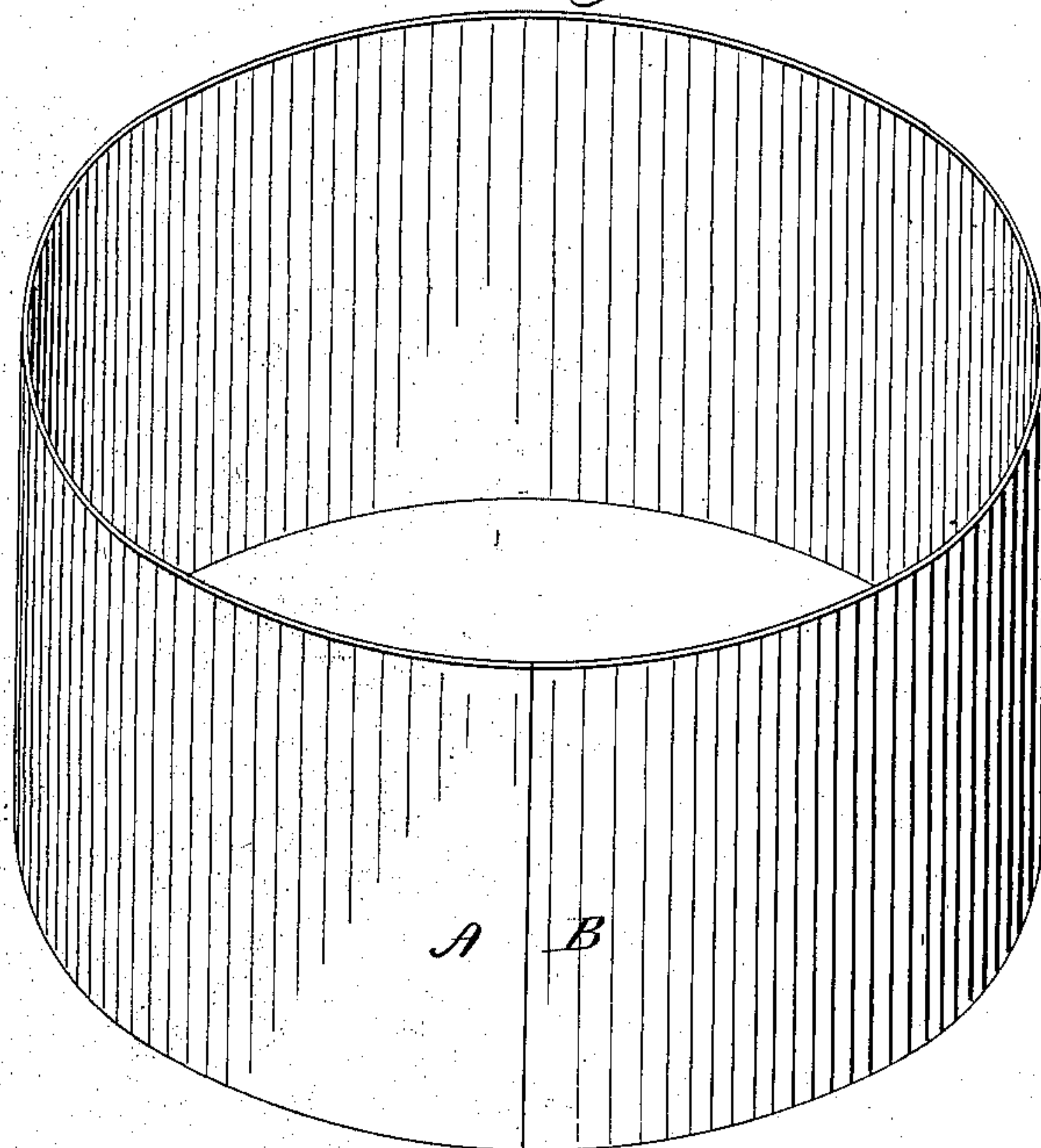


Fig. 2.

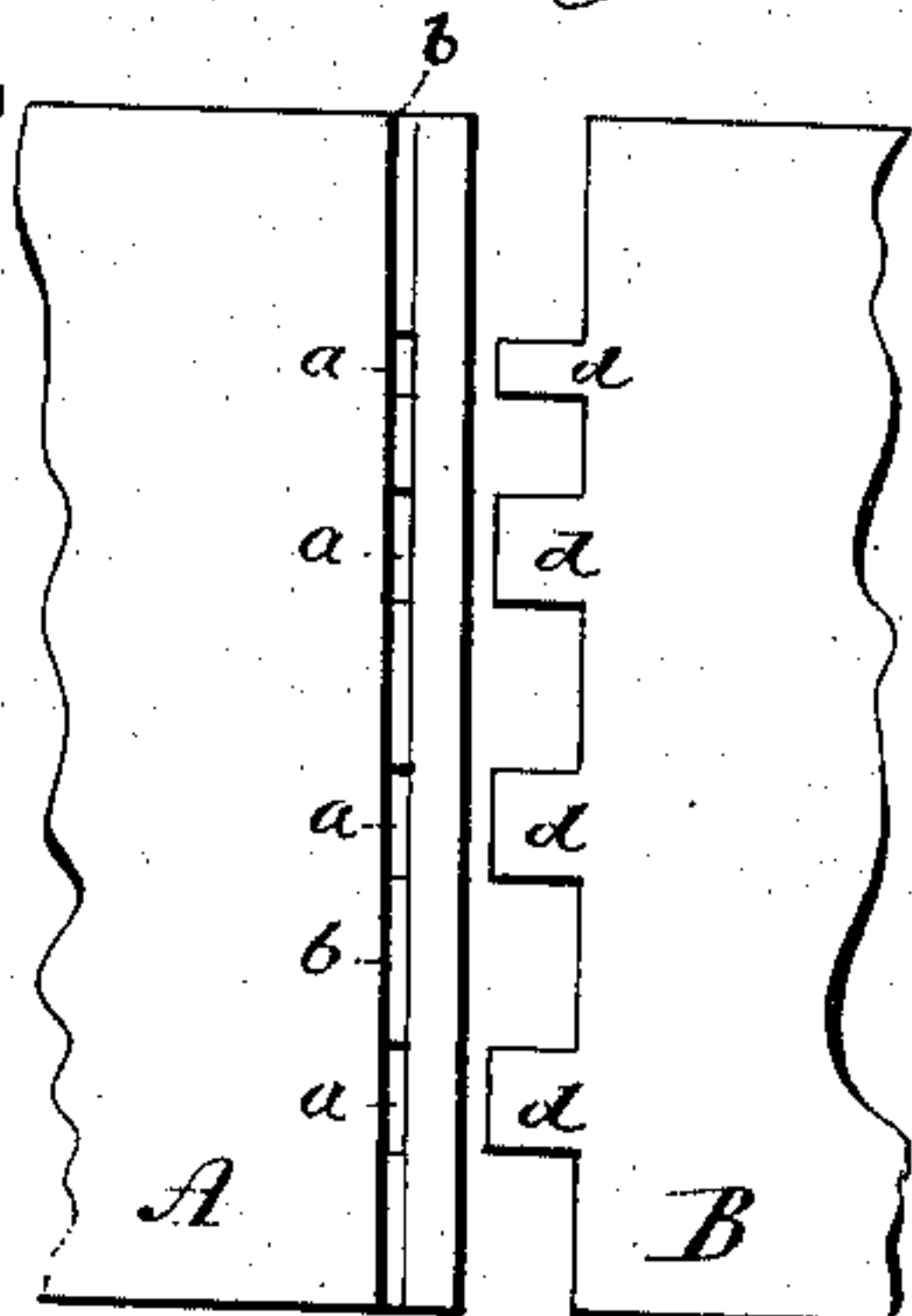


Fig. 3.

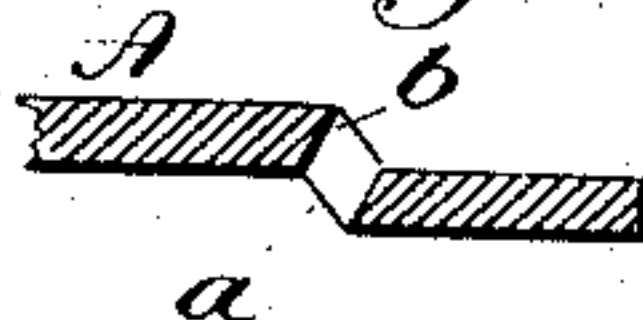


Fig. 4.

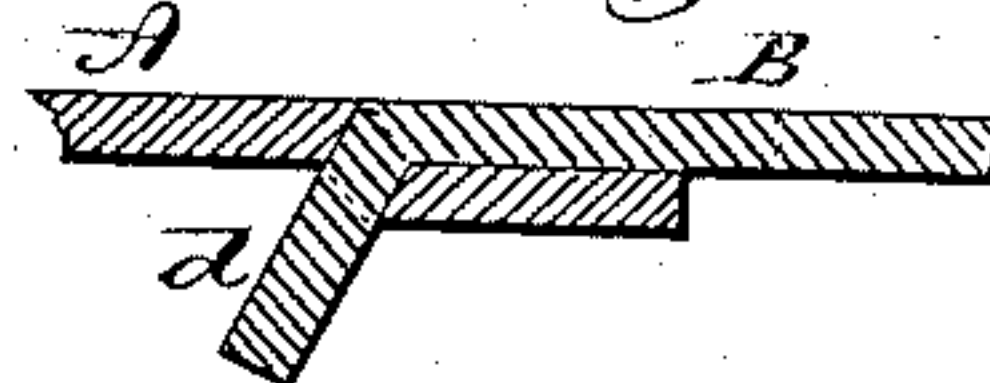
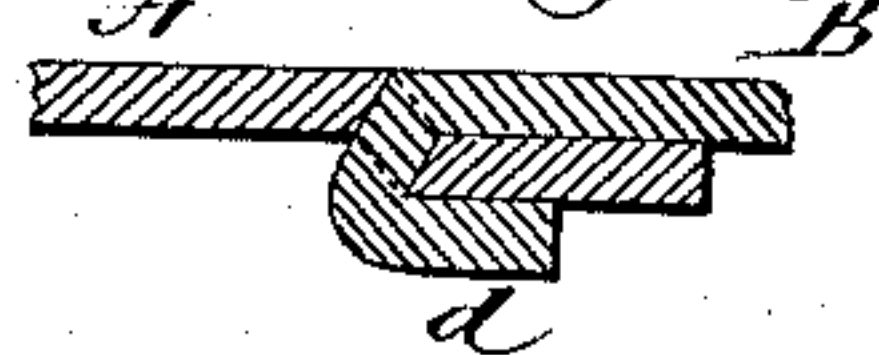


Fig. 5.



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# UNITED STATES PATENT OFFICE.

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## SHEET-METAL JOINT.

SPECIFICATION forming part of Letters Patent No. 382,151, dated May 1, 1888.

Application filed March 8, 1888. Serial No. 266,551. (No model.)

*To all whom it may concern:*

Be it known that I, R. ELMER GOODRICH, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Sheet-Metal Joints; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a perspective view of a sheet-metal blank for a clock-case, the ends or edges united by my improved joint; Fig. 2, the end or edge portions of the two parts, the one as constructed with the slots and the other with the corresponding tongues; Fig. 3, a longitudinal section of part A through one of the slots, showing the shoulder as formed in line with the slots; Fig. 4, the two parts as set together, the tongues extending through the slots; Fig. 5, the same as Fig. 4, showing the tongues of one part as closed down upon the inner surface of the other part, Figs. 3, 4, and 5 being enlarged.

This invention relates to an improvement in joints for sheet-metal articles, specially adapted for uniting the meeting edges of metal bent into cylindrical shape, as for clock-cases and other articles which are made from sheet-metal.

In illustrating the invention I show it as applied to the manufacture of clock-cases.

Cylindrical clock-cases are made from a strip of metal of the required width for the depth of the case, the two ends of the metal brought together and united. The more common method of uniting the two ends has been to abut the two meeting ends together, lay a strip of metal upon the inside, covering the joint and lapping onto each side, then soldering this strip to the metal. This method, while securing the two ends of the strip together, is an expensive joint to make.

A double-seam joint is a common method of uniting the two ends of metal for like purposes; but a lap-joint necessarily produces four thicknesses of metal at the joint, and as the outside must be flush, the additional thicknesses produce a rib upon the inside too large

for practical purposes in the manufacture of clock-cases; hence the employment of the single-thickness strip upon the inside, as I have just described.

The object of my invention is to produce a joint which will leave the metal flush upon the outside, firmly secure the edges together, and without the double folding which is necessary in the production of a lap-joint; and it consists in the joint, as hereinafter described, and more particularly recited in the claim.

Near the end of the part A, which is to be joined to B, a series of slots, *a a*, is made transversely across the strip, the width of the slots corresponding substantially to the thickness of the metal which is to be joined to A. In the line of the slots transversely across the strips the metal is offset to form a shoulder, *b*, so that when so offset the slots open through the shoulder, as represented in Fig. 3.

On the corresponding end of the part B projecting tongues *d* are formed, which in width and position correspond to the length and position of the slots *a* in the part A. The length of these tongues is considerably greater than the thickness of the metal. The line at the roots of the tongues is transversely across the plate and corresponds to the shoulder *b* on the part A. Thus prepared, the tongues of the part A are passed through the slots in the shoulder *b*, as seen in Fig. 4, so as to extend onto the inner surface of the part A. Then the tongues are turned backward and closed firmly down upon the part A, as represented in Fig. 5. The edge of the part B at the roots of the tongue thereby close abuts against the shoulder *b* of the part A, and in nice work will simply appear as a line across the surface. The depth of the shoulder *b* corresponding to the thickness of the metal B, the outer surface of the two parts will be flush and smooth.

The interlocking of the tongues through the slots brings them into the form of hooks, which engage the two parts to withstand the tendency of the two parts to separate, and the shoulder *b* prevents any tendency of the two parts to slide onto each other. Thus the joint is made in a firm and finished manner without the employment of solder, and a much



more finished or less apparent joint will be produced by the abutting of the part B against the shoulder a than can be produced with a double-seam joint.

5 The illustration of this invention as applied to the making of sheet-metal clock-cases will be sufficient to enable others skilled in the art to apply the joint to the uniting of sheet metal for other purposes.

10 I claim—

The herein-described joint for sheet metal, consisting in a series of slots formed near the edge of the one part and the metal offset in the line of the slots to form a shoulder parallel with the slots, so that the slots will be

substantially through the shoulder, the other part constructed with a series of projecting tongues corresponding to the said series of slots, the said tongues introduced through said slots, so as to bring the edge from which the tongues project to abut against the said shoulder, and the tongues closed upon the reverse side of the slotted part, substantially as described. 20

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