J. B. HARRINGTON.

SHEET METAL JOINT.

APPLICATION FILED MAY 17, 1915.

1,190,759. Patented July 11, 1916.

Fig. 1.

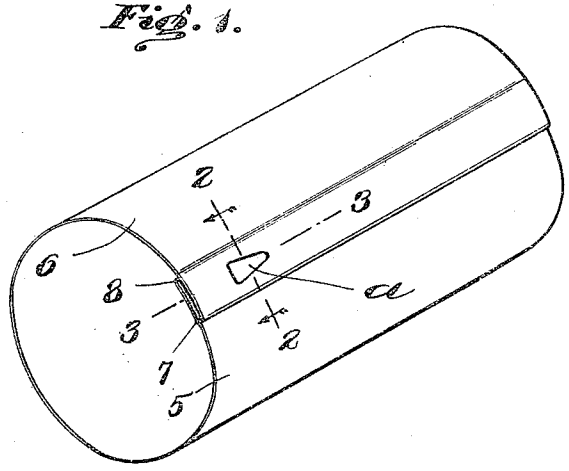


Fig. 2.

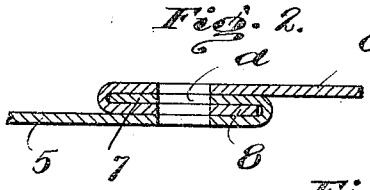


Fig. 3

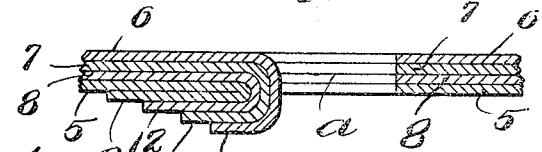
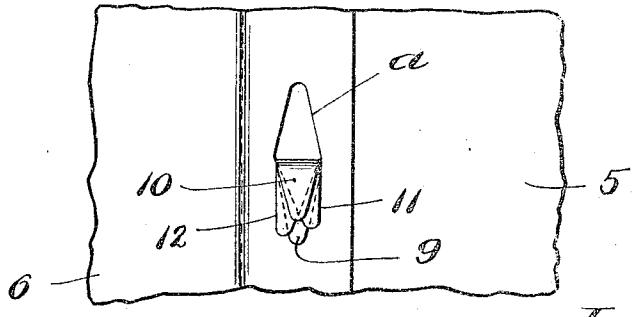


Fig. 4.



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UNITED STATES PATENT OFFICE.

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SHEET-METAL JOINT.

1,190,759. Specification of Letters Patent. Patented July 11, 1916.

Application filed May 17, 1915. Serial No. 28,732.

To all whom it may concern:

Be it known that I, JAMES B. HARRINGTON, a citizen of the United States, residing at Dorchester, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Sheet-Metal Joints, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

This invention has reference to improvements in lap folded joints for stove pipes and other sheet metal articles.

The main object of this invention is to provide a new and economical joint for sheet metal articles and particularly for the joint or joints of stove pipes to prevent the relative detaching movement of the parts.

Other objects of the invention will appear from the following description.

The invention consists in such novel features of construction and combination of parts as shall hereinafter be more fully described and pointed out in the claims.

Figure 1, represents a piece of sheet metal pipe having the improved joint. Fig. 2, represents an enlarged sectional view of the joint taken on line 2—2 Fig. 1. Fig. 3, represents a similar view taken on line 3—3 Fig. 1. Fig. 4, represents a reverse view of pieces of sheet metal having the improved joint.

Similar characters of reference designate corresponding parts throughout.

It has heretofore been customary to fold over the edge portions of two sheets of metal or the two edges of a single sheet of metal and to engage or hook together said folded-over edges at some point in the operation, and it has been the custom to punch a hole through said folded-over and engaged portions and to insert a rivet in said hole which rivet it has been necessary to secure by upsetting the end thereof. Such method has been found to be objectionable and expensive because of the necessity of maintaining a supply of the rivets, the handling of the rivets, and the number of steps required to complete the operation.

In carrying this invention into practice to secure the folded and lapped edges of a stove pipe I take the pipe having the main portions of members 5 and 6 having the folded edge members 7 and 8 which edge members, at some step in the operation, are engaged as shown in Fig. 2 and punch through all of said members 5, 6, 7 and 8 to form the tongues 9, 10, 11 and 12 integral with their respective members and having side edges converging or tapering from their bases toward their ends. In such punching operation said tongues are bent downward at angles with the general extension of their respective members 5, 6, 7 and 8. At the next operation, after the removal of the punch, said tongues are bent over on each other as shown in Fig. 3, and in such operation the tongues 11 and 12 are spread or crowded laterally from the converging edges of the tongues 9 and 10 as shown in Fig. 4 whereby the outer edges of said tongues 11 and 12 are out of alinement with the slot *a* from which they were bent. By such operation the members 5, 6, 7 and 8 are all secured together by the tongue 9 and the members 7 and 8 are secured to the member 5 by means of their respective tongues 11 and 12 while the tapering edges of tongue 9 may constitute a spreading means to spread outward the tongues 11 and 12 under pressure.

While I have herein described a specific construction of this invention it is not my intention thereby to limit said invention except as herein claimed.

Having thus described my invention I claim as new and desire to secure by Letters Patent.

1. The sheet metal joint comprising a series of folded and interengaged sheet metal members having a slot cut therethrough, said slot having at one end a series of superposed tongues integral with said sheet metal members, the tongues of certain of said members extending through said slot and bent away from said slot.

2. The sheet metal joint comprising a series of folded and interengaged sheet metal members having a slot cut therethrough, said slot having at one end a series of superposed tongues integral with said sheet metal members, the tongues of certain of said members extending through said slot and bent away from said slot, the tongues of the intermediate members spread laterally from the tongues of the upper and lower members.

JAMES B. HARRINGTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."