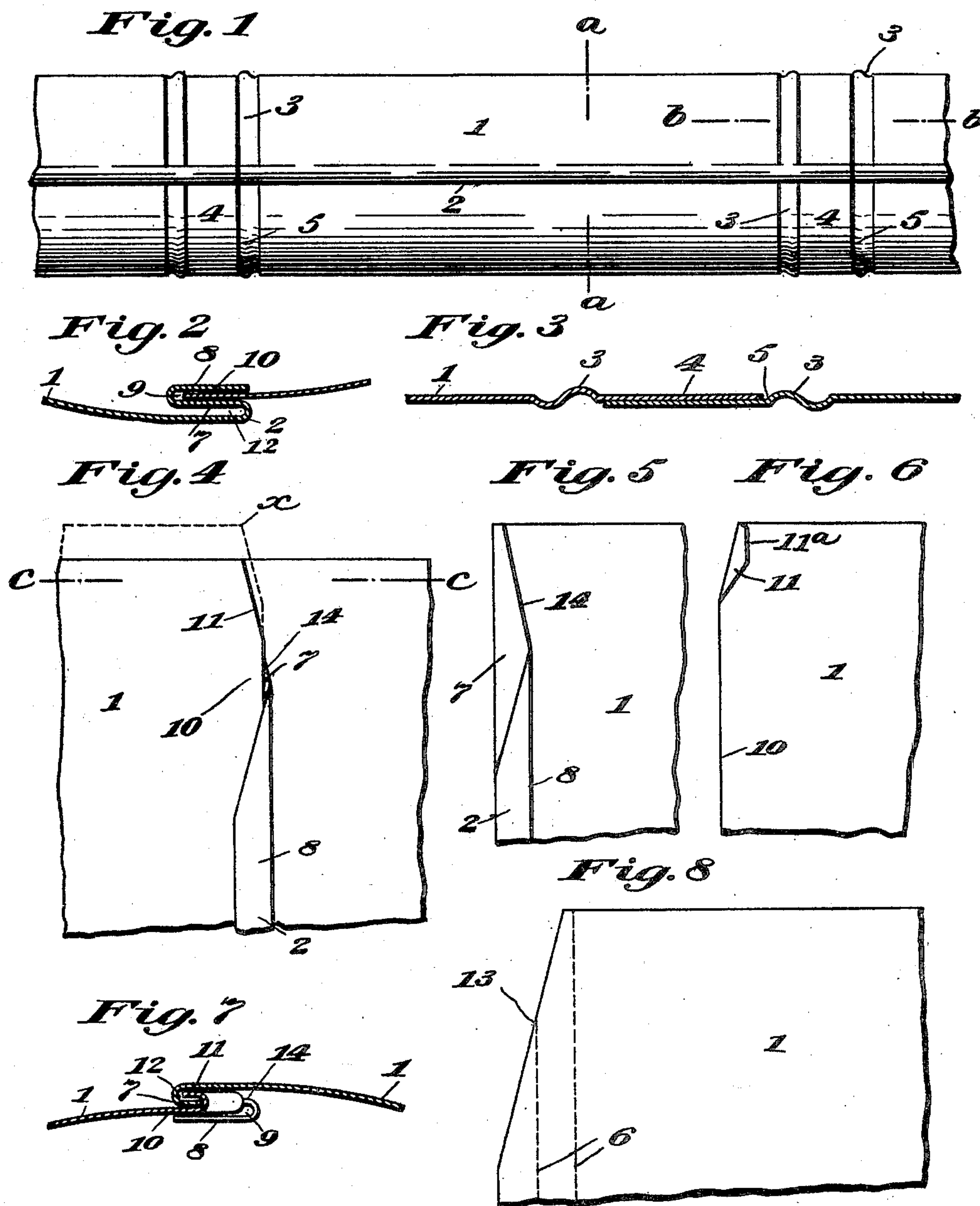


No. 679,272.

Patented July 23, 1901.

E. D. BEVITT.
SHEET METAL WARE.
(Application filed Sept. 4, 1900.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

EDWIN D. BEVITT, OF CINCINNATI, OHIO.

SHEET-METAL WARE.

SPECIFICATION forming part of Letters Patent No. 679,272, dated July 23, 1901.

Application filed September 4, 1900. Serial No. 28,943. (No model.)

To all whom it may concern:

Be it known that I, EDWIN D. BEVITT, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Sheet-Metal Ware, of which the following is a specification.

This invention relates to certain improvements in sheet-metal ware, and particularly to that class of sheet-metal ware wherein the articles are seamed or joined together along the edges of the metal sheet—as in stovepipe, for example; and the object of the invention is to provide an improved and simplified means for joining the edges of the metal sheet detachably together, so as to lessen the expense of manufacture and to permit the articles to be packed and shipped in nested form.

The invention consists in certain novel features of the construction, combination, and arrangement of the several parts of the improved seam or joint, whereby the ware is made cheaper and otherwise better adapted for use and is permitted to be packed and shipped in nested form, so as to take up less space, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

In the accompanying drawings, which serve to illustrate my invention, Figure 1 is an elevation drawn to a small scale and showing part of a stovepipe made according to my invention. Fig. 2 is an enlarged partial section taken through the seam between the edges of the metal sheet, the plane of the section being indicated by the line *a a* in Fig. 1. Fig. 3 is an enlarged partial section taken through the pipe at a joint between two sections thereof, the plane of the section being indicated by the line *b b* in Fig. 1. Fig. 4 is a partial inside view of a joint or section of stovepipe, showing the locking devices carried by the edges of the metal sheet engaged with each other. Fig. 5 is a view similar to Fig. 4, but showing only one of said locking devices; and Fig. 6 is a partial view showing the outer face of the metal sheet with the other locking device carried thereon. Fig. 7 is an enlarged partial section taken transversely through the seam at the locking devices, the plane of the section being indicated by the line *c c* in Fig.

4. Fig. 8 is a partial view illustrating the manner of producing one of the locking devices upon the metal sheet or blank.

In the views, 1 indicates the stovepipe, formed of a number of joints or sections in the usual way, each section or joint being produced from a rectangular metal sheet or blank bent in cylindrical form and having its opposite edges seamed together, as shown at 2, the seam extending lengthwise along the metal pipe. Near each end each joint or section of the pipe has produced upon it a swaged encircling band or collar 3, projecting slightly from the outer face of the pipe and imparting an ornamental appearance thereto. The portions of the respective sections or joints beyond said bands or collars 3 are adapted to fit one over the other, as shown at 4 in the drawings, to permit of connecting the several joints or sections of the pipe together, and when so connected the bands or collars 3 form stops against which the ends of the outer joints or sections are adapted to engage, as shown at 5, to limit the lap of each section over the next adjacent section. To permit the end of each section to be entered into the end of an adjacent section of the pipe, I provide a loose connection between the edges of the metal sheet at the seam 2, said seam being preferably formed, as shown in Fig. 4, by bending one edge of the metal sheet or blank along two parallel lines, as shown at 6 6 in dotted lines in Fig. 8, so as to produce a part 7, bent over inside of and parallel with the edge of the pipe at the seam, and a part 8, bent over inside of and parallel with said part 7, the parts 8 and 7 being separated from each other and from the edge portion of the pipe at the seam to produce spaces or chambers 9 and 12, extended along the seam and open at opposite sides or edges, respectively, the inner space or chamber 9 being open along the edge of the pipe. The opposite edge 10 of the metal sheet or blank is left plain and is adapted to be received within the chamber or space 9 loosely, through the open side or edge thereof, as clearly shown in Fig. 2. By this construction it will be seen that the edge 10 is capable of being either disengaged completely from the space or chamber 9, so as to permit the joints or sections of the pipe to be nested

compactly together, or said edge 10, while engaged in said space or chamber 9, may be moved or adjusted to reduce the diameter of the pipe section or joint to permit one of its ends to be received within an adjacent section or joint. When the edges are engaged, however, the pipe-section presents substantially the same appearance as any ordinary seamed section, and the joint between its edges at the seam is sufficiently close for all practical purposes.

At one end of each pipe joint or section the edges thereof are provided with locking devices adapted for reciprocal engagement to hold the seam against being opened, these devices being at that end of the joint or section which receives within it the end of an adjacent section or joint. The locking device at the folded edge is produced by clipping off one corner of the blank or metal sheet diagonally, as shown at 13 in Fig. 8, so as to produce, when the blank or sheet is folded or bent along the lines 6 6, a beveled and hook-shaped locking member or edge 14 at one end of the part 7 and inclined with relation to the fold by which said part 7 is produced. The opposite locking device 11 is produced by bending over outwardly and upon itself the corresponding corner at the other edge 10 of the blank or metal sheet, so as to produce a hook-shaped member inclined similarly to, but directed oppositely to, the locking member or edge 14 and adapted to be engaged over the same, its projecting bent part taking into the space or chamber 13 at the open side or edge of the same.

In order to engage the reciprocal locking devices, the edge 10 is first entered into the space or chamber 9 after moving the edges of the blank or metal sheet over one another lengthwise of the pipe-section, as indicated in dotted lines at x in Fig. 4, far enough to permit the locking-hook 11 to clear the inclined locking edge 14. After the edges have been engaged to produce the seam 2 they are again moved lengthwise over one another, but in an opposite direction, so as to bring the locking devices carried upon them into engagement, the inclined or beveled locking members riding or sliding over each other, so as to bring the two edges of the sheet metal into close relation and hold the seam against opening at one end of the pipe joint or section, while permitting free adjustment of the plain edge 10 in the space or chamber 9 at the opposite end of the pipe joint or section.

From the above description it will be seen that the improved locking means is of an extremely simple and inexpensive nature, requiring no preliminary forming or shaping of the metal sheet or blank excepting the shearing off of the diagonal edge 13 and of the opposite corner, as shown at 11^a in Fig. 6, and the bending of said corner over outwardly to produce the locking-hook 11. The manufacture of the stovepipe provided with the improved locking means requires no special dies, presses, or other tools, and the pipe requires no special skill in its manufacture.

It will also be seen from the above description that the improved seam-locking means is not confined in its use to stovepipe, but may be used upon other sheet-metal ware to permit it to be packed and shipped in nested form, and for this reason I do not wish to be understood as limiting myself to the use of my improvements in connection with stovepipe only, nor to the exact form and arrangement of the several parts of the device herein set forth, since it is evident that the locking means is capable of some modification in its details without material departure from the principles and spirit of the invention.

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

1. A pipe-section formed of a metal sheet having one edge clipped off diagonally at a corner of the sheet and bent along parallel lines to produce two spaces or chambers open at opposite sides, the other edge of the sheet having a similar corner bent over to produce a locking member adapted for engagement in one of said spaces or chambers, substantially as set forth.

2. A stovepipe formed of a metal sheet having one edge clipped off diagonally at a corner of the sheet and bent along parallel lines to produce two spaces or chambers open at opposite sides, the other edge of the sheet having a similar corner sheared diagonally and bent over to produce a locking member adapted for engagement in one of said spaces or chambers, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWIN D. BEVITT.

Witnesses:

J. F. LUDDON,
JOHN ELIAS JONES.