

Sept. 13, 1927.

1,642,166

E. R. McCAFFREY
METHOD OF MAKING FLASHINGS

Filed Nov. 3, 1924

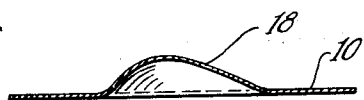


Fig. 1



Fig. 2

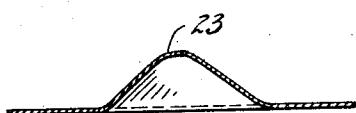


Fig. 3

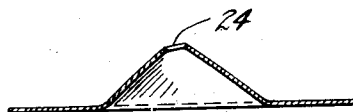


Fig. 4

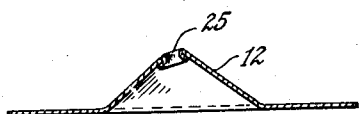


Fig. 5

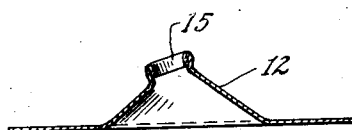


Fig. 6

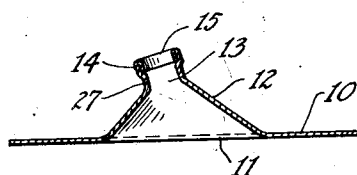


Fig. 7

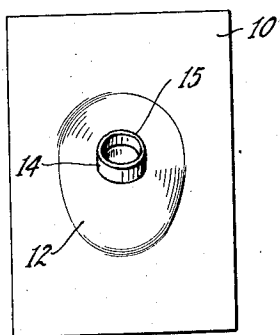


Fig. 9

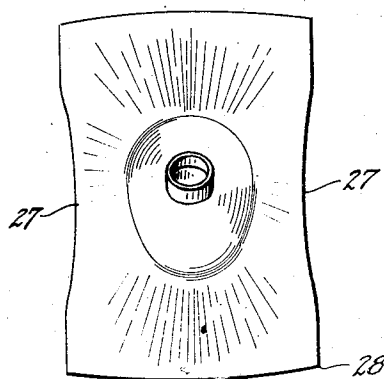


Fig. 8

INVENTOR:
Edward R. McCaffrey
By *E. J. Andrews*
A.H.Y.

UNITED STATES PATENT OFFICE.

EDWARD R. McCAFFREY, OF CHICAGO, ILLINOIS.

METHOD OF MAKING FLASHINGS.

Application filed November 3, 1924. Serial No. 747,580.

This invention relates to methods of making flashings to be used with vent pipes, and for other purposes; and it has for one of its objects the production of a flashing which can be conveniently and effectively sealed around the pipe, and which is not only dependable, but will not deteriorate by the action of time or the elements. A further object of the invention is to provide a suitable method for making the flashings.

Of the accompanying drawings, Figs. 1 to 6 show central sectional views of a flashing during the process of manufacturing, the different steps taken in the process being indicated by the different figures; Fig. 7 indicates a sectional view of the completed flashing; Fig. 8 is a plan view of the completed flashing with its edges untrimmed; and Fig. 9 is a plan view of the flashing trimmed and ready for use.

The completed flashing comprises a base 10 of any suitable size, and preferably rectangular, having a central opening 11 through which the pipe projects when the flashing is in use. Surrounding this opening is a riser 12 through which the pipe also projects. This riser is preferably conical in shape and has a pipe opening 13 at its upper end. Fixed to the upper end of the riser is a collar 14 which preferably comprises two thicknesses of the metal of which the flashing is composed, the inner thickness being formed by a ring 15 turned inwardly as the flashing is making. The collar 14 is preferably annular in shape, and is adapted to fit snugly around the pipe when in use. The material of which the flashing is made is preferably malleable, at least flexible; and when the flashing is in place the outer end of the collar 14 may be bent or pressed snugly around the pipe so as to avoid any material leakage if desired.

The flashing is formed from sheet metal by drawing the riser 12 from the central portion of the base so that the flashing is entirely seamless, the riser being integral with the base. The collar also is formed by drawing and pressing the material from the upper end of the riser so that the entire collar is also seamless and is integral with the riser. In forming the flashing by drawing it and pressing it from sheet metal I have found it desirable to take certain definite steps in the process as otherwise much

difficulty is found in forming the flashings. The process which I prefer is as follows:

A sheet of suitable material, such as sheet lead, is cut into pieces somewhat larger than the base desired for the flashings, and of substantially the same shape, and it is placed between suitable formers and arranged to be pressed by some suitable plunger and die. The shapes of the dies and plungers are such as to draw the riser 18 up, substantially as indicated in Fig. 1, while the sheet is pressed between flat formers, for the purpose of maintaining flat the base portion 10. In this process there is more or less drawing of the metal from this base portion upwardly into the riser. The sheet is then placed between the other formers and the height of the riser is increased by suitable shaped dies and plungers, and a flat portion 22 is formed. The base 10 is still held substantially flat but more material in this manner is drawn from the base up into the riser. The next step is to complete the riser as far as its sides are concerned, and to provide a definite flat portion 23, as indicated in Fig. 3. An opening 24 is then formed in the riser in any suitable manner, the opening being about the same size as the flat portion on the upper end of the riser. The next step is to turn inwardly a ring 25 so as to form an inner ring surrounding the opening, thus providing a ring with double thickness projecting conically from the upper end of the riser 12, and then to form a tubular ring (Fig. 6). Any suitable means may be used for taking the steps indicated by figures 5 and 6. My process consists simply in carrying out these steps irrespective of the particular means applied for doing so. These steps may be taken manually if desired. The next step, as indicated by Fig. 7, is to form the throat 27 below the ring 14, so that the ring and throat will fit snugly around the pipe. This step includes bending outwardly the sides of the throat with reference to the sides of the riser 12, so that the ring and throat take substantially the shape indicated.

As will be seen by Fig. 8, as these steps are being taken, particularly the first and second steps, the material will be drawn in from the portions 27 and also from the corners 28 of the base, this metal being so drawn as to form a portion of the metal of the riser. So that this process is not a pressing process, but a drawing process. A press-

ing process would disrupt the metal without producing the desired results. In view of this it is desirable to avoid overpressing of the base 10 during the preliminary steps, 5 as this would prevent the drawing tendency of the process, and would at least weaken the flashing along the portions where the riser is connected to the base. As a final step the edges of the base are trimmed substantially as indicated in Fig. 9. 10

In this manner it will be seen that a very effective and dependable flashing is provided, and the steps are such that the flashing is properly formed and entirely integrally from the same piece of sheet metal, 15 and it has no weak joints, and no seams which interfere with the calking of the flashing or otherwise sealing it to the pipe and which would tend to disintegrate by 20 the collection of dirt or moisture. And ample metal is provided at the pipe opening to permit of effective sealing to the pipe.

Although I have described a flashing to be used with vent pipes, it is to be under-

stood that the process may be applied to 25 flashings to be used with stove pipes and for various other purposes.

I claim as my invention:

A method of forming flashings consisting in forming a protuberance in the central 30 portion of a piece of sheet metal by drawing more or less of the metal from the surrounding portions of the sheet, then in increasing the height of said protuberance by a corresponding drawing process and flattening a 35 portion of the outer end of said protuberance, in then removing a portion of the metal from said flattened portion, then in turning inwardly the metal surrounding the opening in said sheet, and then in forming 40 the metal around said opening into a tubular two ply collar with its sides angular with reference to the sides of said protuberance.

In testimony whereof, I hereunto set my 45 hand.

EDWARD R. McCAFFREY.