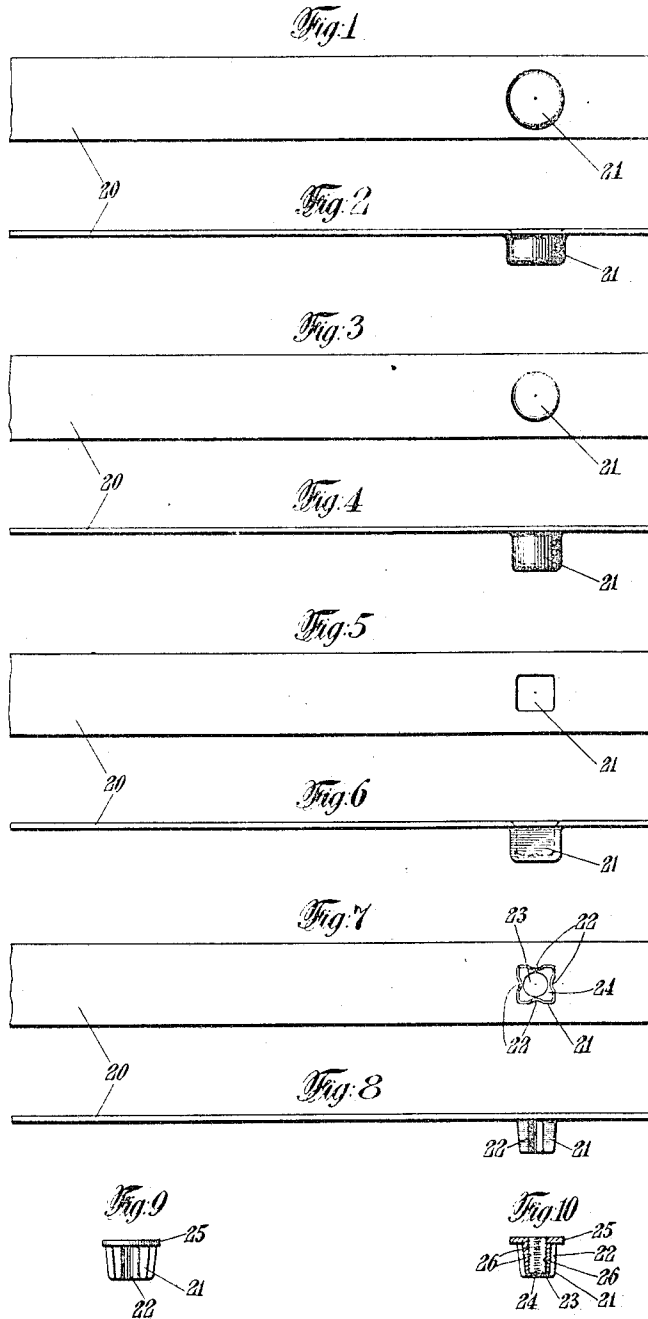


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SHEET METAL NUT.
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1,121,369.

Patented Dec. 15, 1914.



Witnesses:
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UNITED STATES PATENT OFFICE

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SHEET-METAL NUT.

1,121,369.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, NORTON W. JOHNSTON, a citizen of the United States, and a resident of Astoria, Long Island, in the county of Queens and State of New York, have invented certain new and useful Improvements in Sheet-Metal Nuts, of which the following is a specification.

The invention relates to a method of producing a screw-nut from suitable sheet material by a series of press operations with the exception, of course, of the tapping of the nut, which operation is accomplished in the usual manner.

The invention has for its object to so construct the nut that ample material will be provided for an internal thread without employing heavy stock while maintaining, however, a large enough diameter to afford a substantial grip for a wrench or the like; and, also, to provide a nut which will afford a base of the requisite contact surface and of a character such that the use of a washer therewith will be quite unnecessary.

The nature of the invention will be best understood when described in connection with the accompanying drawings, in which—

Figure 1 is a plan and Fig. 2 an elevation of the strip of material from which the nut is stamped and shows the same after the first operation. Figs. 3 and 4 are respectively a plan and elevation of the strip after the reducing operation. Figs. 5 and 6 are respectively a plan and elevation of the strip after the shaping operation; and Figs. 7 and 8 similar views after the operations of fluting, bumping and piercing. Fig. 9 is an elevation of the finished nut, and Fig. 10 a vertical section therethrough.

Similar characters of reference designate corresponding parts throughout the several views.

Referring to the drawings, 20 designates a strip of suitable material, such as strip brass or strip steel from which the nut is drawn and blanked out, although it is to be understood that the nut may be produced from a proper blank instead of strip material fed to dies. In either event, the material is cupped in well-known manner to provide a cup-shaped member 21, which may be then reduced if necessary, as shown in Figs. 3 and 4. If it be desired to provide a square nut, or nut of any desired shape, the cup 21 is then squared or otherwise

shaped by suitable dies (not shown) and assumes, for example, a square shape as shown in Figs. 5 and 6. To afford sufficient material for tapping without, however, employing a too heavy stock, the squared or otherwise shaped member is then fluted vertically to provide inwardly, projecting portions 22 along its walls, as shown in Figs. 7 to 10, as well as to afford a good gripping surface. The bottom of the cupped member is then pierced, leaving a circular opening 23 and inwardly overhanging material 24, which latter provides a finished top for the nut and material for the thread. Prior to or simultaneously with the piercing, the top and bottom of the cup may be suitably bumped to attain the proper finish. The nut is then blanked out with a flange 25 at the bottom and of any desired size and contour, for example round as shown in Figs. 9 and 10. This flange affords not only the requisite contact surface, but a perfectly smooth base, thereby making the use of a washer quite unnecessary. Suitable threads are cut upon the inwardly projecting or fluted portions of the walls and the overhanging portion 24 by tapping the same in well-known manner, thus completing the nut.

I claim:—

1. A screw nut of sheet metal of substantially uniform thickness and having a portion of its faces projecting inwardly to receive an internal thread.

2. A screw nut of sheet metal of substantially uniform thickness and having its faces fluted vertically upon the outside to project inwardly and receive an internal thread.

3. A screw nut of sheet metal of substantially uniform thickness having a flanged base and squared faces fluted vertically upon the outside to project inwardly and receive an internal thread.

4. A screw nut of sheet metal of substantially uniform thickness, having its top overhanging inwardly and a portion of its faces projecting inwardly to receive a thread.

5. A screw nut comprising a sheet metal polygonal body, a portion of each face thereof projecting inwardly and the said projecting portions being threaded upon the inner surface.

6. A screw nut comprising a sheet metal polygonal body, a portion of each face thereof projecting inwardly longitudinally of the

respective faces and the said projecting portions being threaded upon the inner surface.

7. A screw nut comprising a sheet metal polygonal body, a portion of each face thereof projecting inwardly and the said projecting portions being threaded upon the inner surface, and an outturned flange integral with said body at one end.

Signed at Long Island City in the county of Queens and State of New York this 5th day of March, A. D. 1913.

NORTON W. JOHNSTON.

Witnesses:

FELIX FRITSCHÉ,
HENRY G. FRITSCHÉ.