

No. 682,430.

E. A. SANDERS.  
CHIMNEY COWL.

Patented Sept. 10, 1901.

(No Model.)

(Application filed Mar. 5, 1901.)

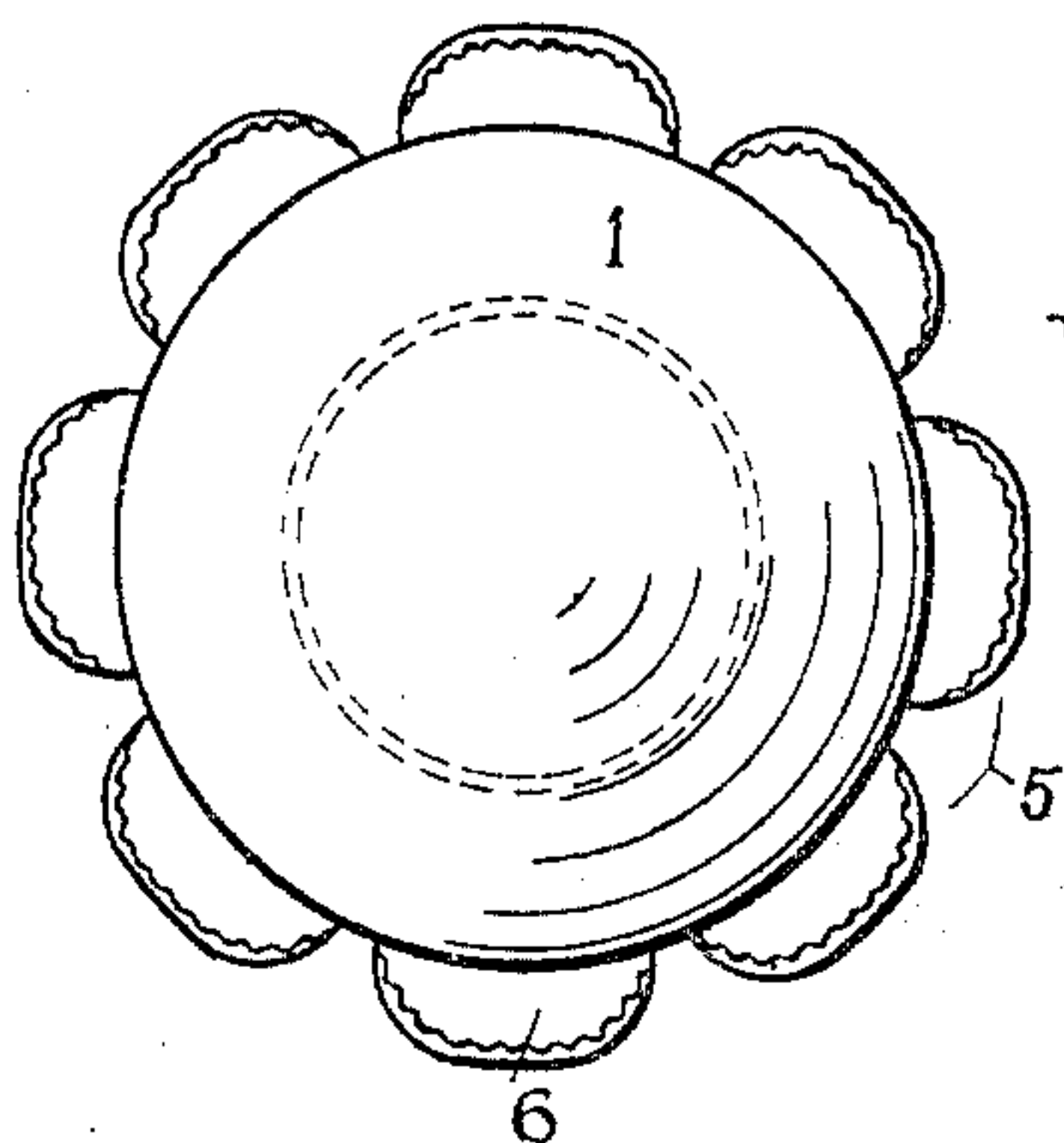


FIG. 1.

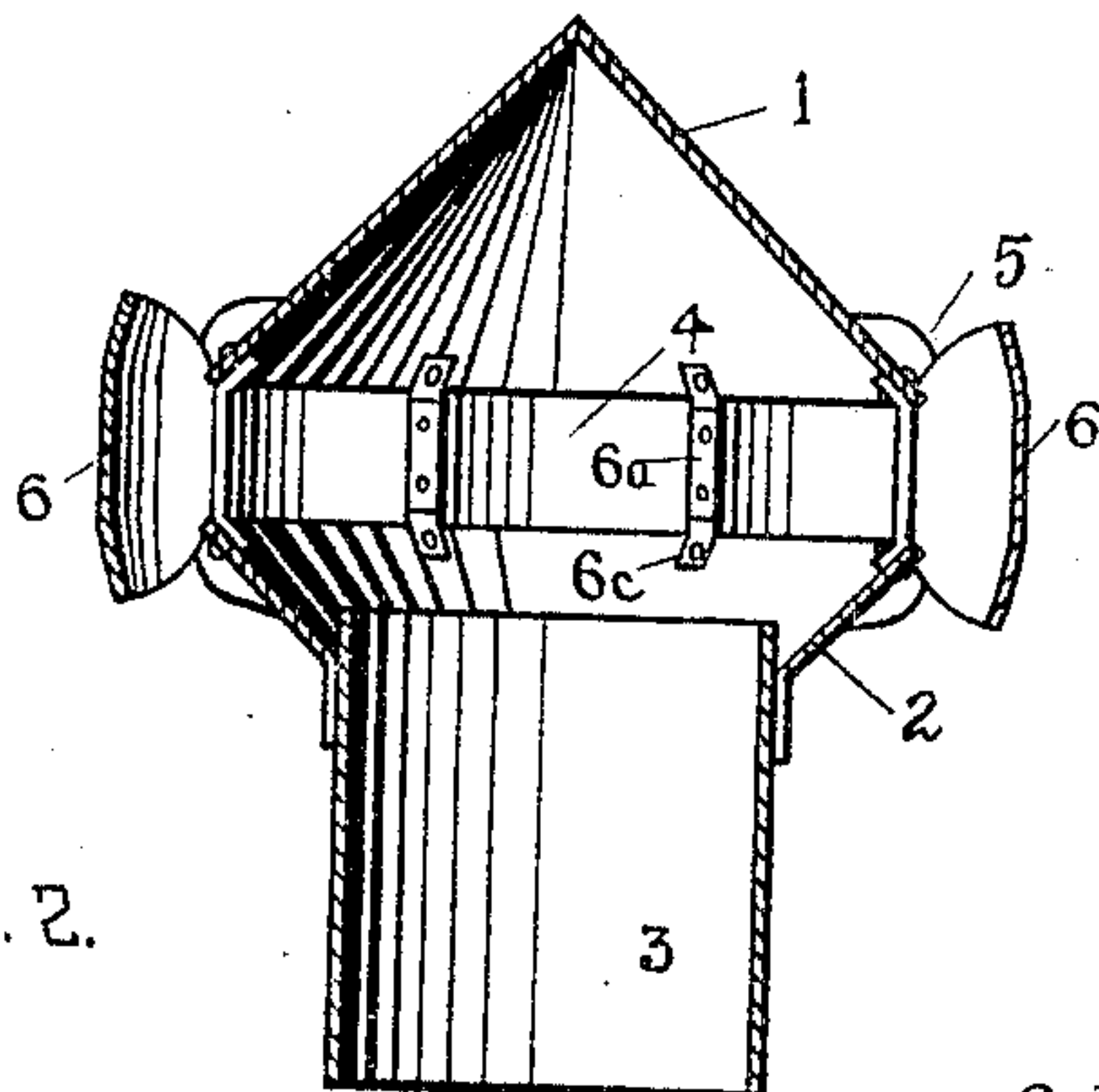


FIG. 2.

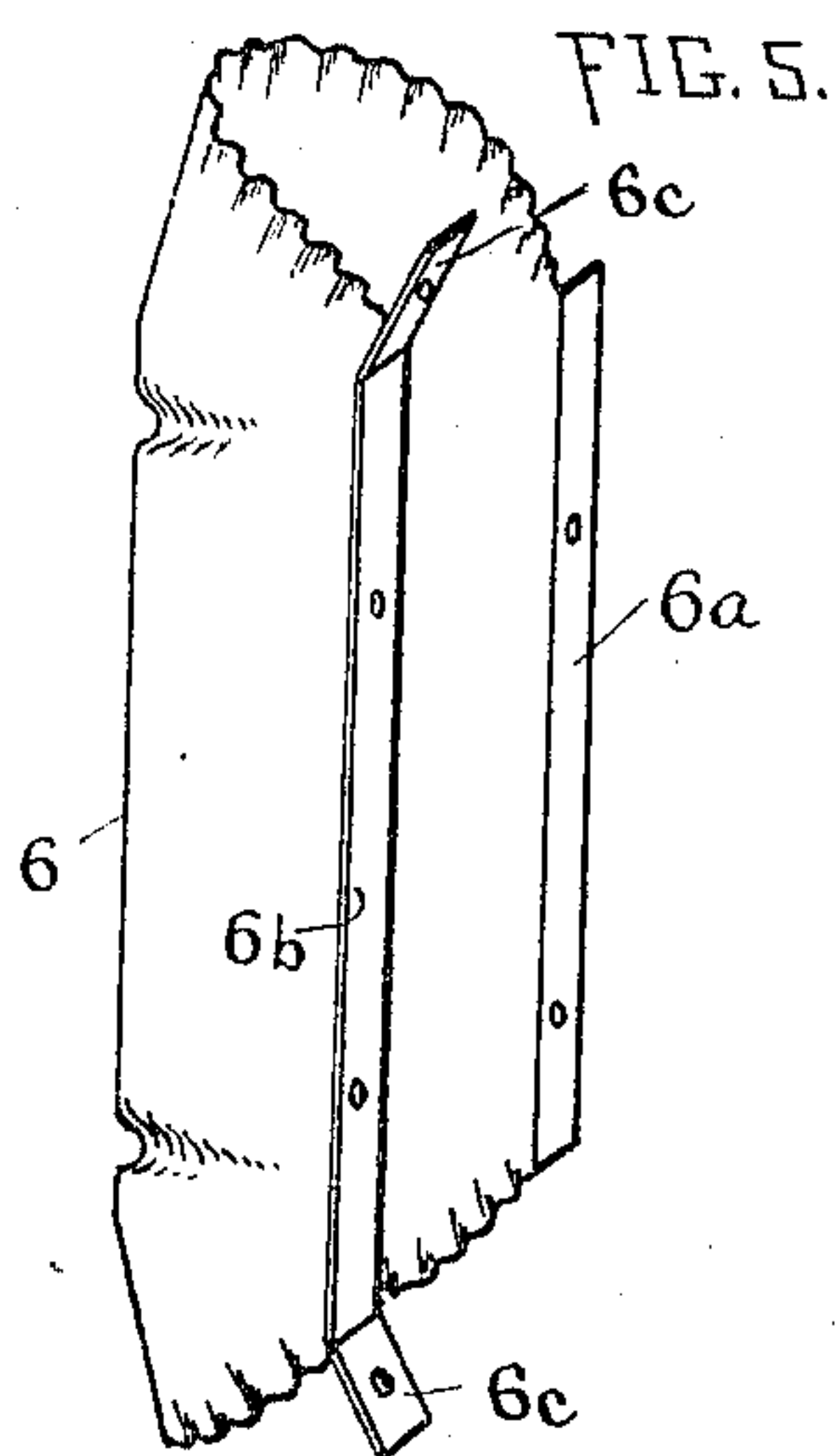


FIG. 5.

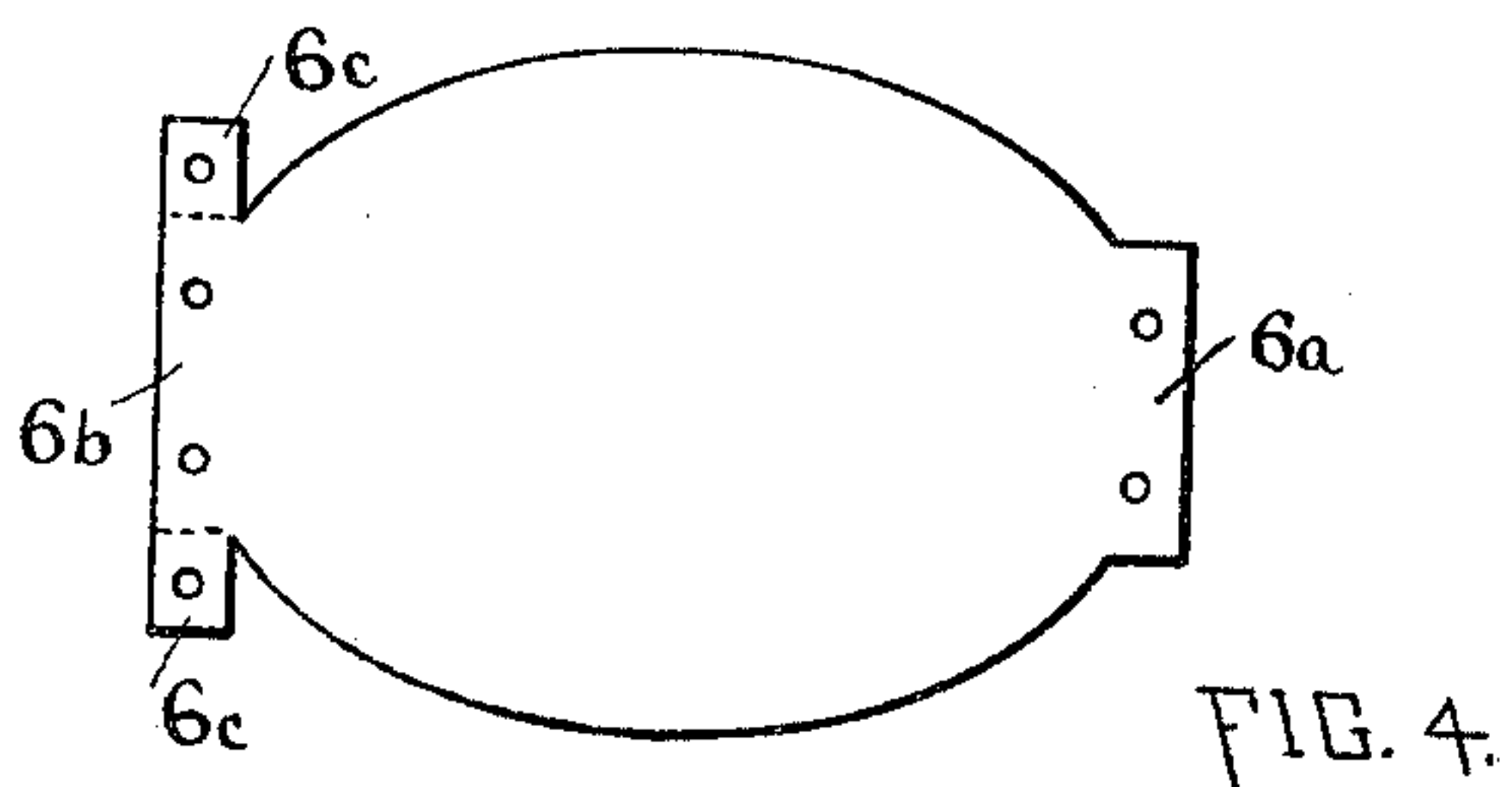


FIG. 4.

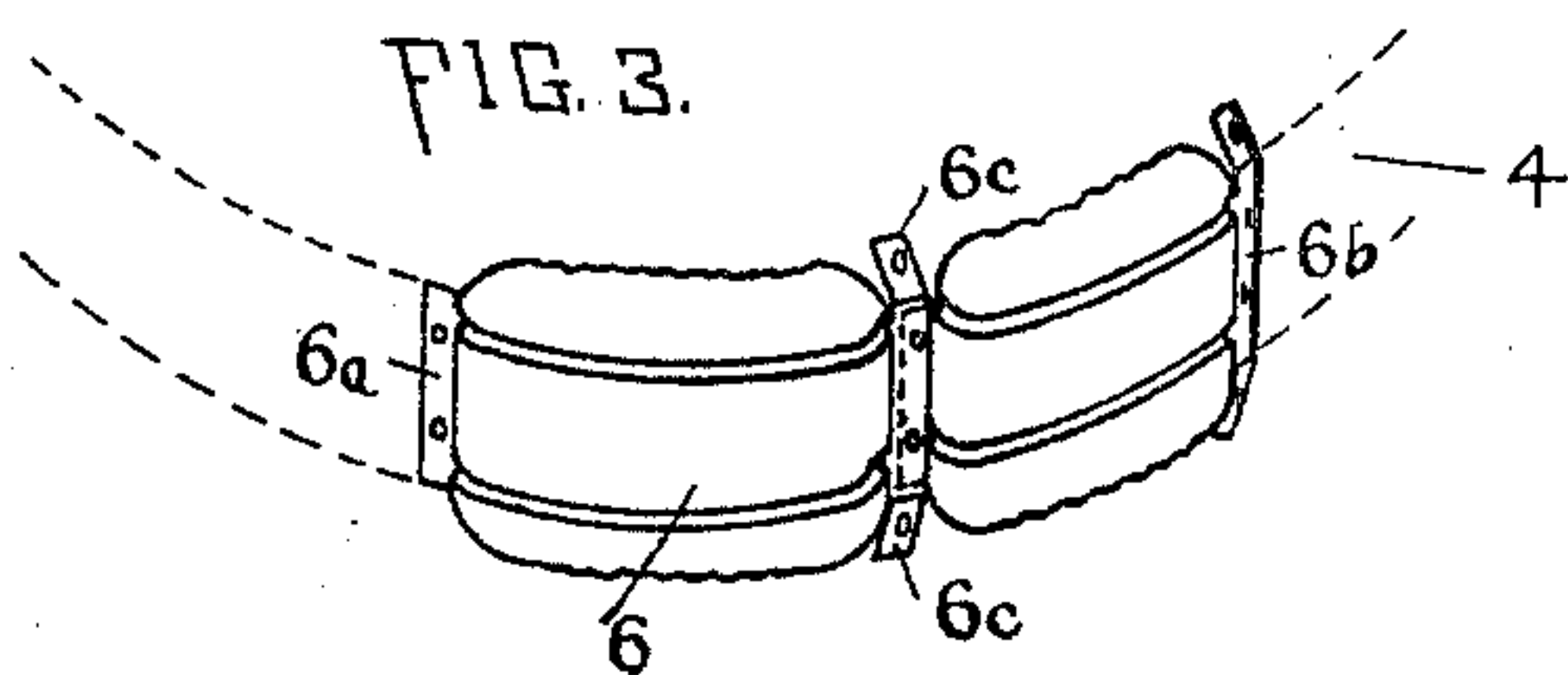


FIG. 3.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

EDWARD A. SANDERS, OF SAGINAW, MICHIGAN.

## CHIMNEY-COWL.

SPECIFICATION forming part of Letters Patent No. 682,430, dated September 10, 1901.

Application filed March 5, 1901. Serial No. 49,868. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD A. SANDERS, a citizen of the United States, residing at Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Chimney-Cowls; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention is a chimney-cowl; and the improvements consist in certain novel construction and arrangement of the parts whereby the objects of my invention are accomplished. These objects are, first, to produce a chimney-cowl the upper and lower hoods of which are connected by a series of independent outwardly-curved cells or pockets which act not only as passage-ways for air and gas, but also serve to so connect the upper and lower hoods of the cowl that no further bracing is required; second, to cheapen the cost of manufacture by forming the cowl-rim of a series of independent interchangeable units or cells arranged to interlock with each other and with the upper and lower cowlhods, whereby a strong, neat, and easily-assembled cowl is produced.

My improved cowl construction is illustrated in the accompanying drawings, throughout the several views of which similar numerals of reference designate corresponding parts.

Figure 1 is a top view of a complete cowl. Fig. 2 is a vertical section. Fig. 3 is a diagrammatic view showing the manner of assembling the hoods and cells. Fig. 4 is a blank from which a cell is formed. Fig. 5 is a perspective view of a single cell.

As is clearly shown in the drawings, the cowl consists in the upper cone-shaped hood 1, which surmounts the lower flaring hood 2, into which the funnel 3 discharges. The upper hood is separated from the lower by a space 4, around which extends a belt 5, built up of independent cells 6. Each of the cells 6 consists in a scallop of semi-elliptical cross-section and somewhat longer than the height of the space 4 between the hoods. The upper and lower corners of each cell are rounded, as shown in Figs. 3 and 4. A flange 6<sup>a</sup>, substantially equal in height or of less height

than the space 4, is formed on one edge of the cell, and a flange 6<sup>b</sup> is formed on the other edge. The flange 6<sup>b</sup> has upper and lower wings 6<sup>c</sup>, which interlock the cell with the edges of the upper and lower hoods. The wings 6<sup>c</sup> are secured inside the hoods by rivets, bolts, or other suitable means. The flange 6<sup>a</sup> of one cell laps under and is secured to the flange 6<sup>b</sup> of the next cell by bolts or rivets when the cowl is assembled. The pair of overlapping flanges between each pair of cells forms a strong support for the upper cowl, doing away with the necessity of extra strips or braces and greatly simplifying the structure and reducing the cost of manufacture.

In practice I prefer to assemble the cowl in the following manner: The lower funnel and hood being constructed, I place the first cell upon the rim of the hood 2 and rivet the lower wing 6<sup>c</sup> of the flange 6<sup>b</sup> to the inside of the hood. The lower edge of the flange 6<sup>a</sup> supports the cell in a horizontal position. I then insert the flange 6<sup>a</sup> of the next cell underneath the flange 6<sup>b</sup> of the first cell and rivet the two flanges together. The lower wing 6<sup>c</sup> of the next cell is then riveted to the inside of the lower hood 2. The entire series of cells is thus riveted to the lower hood, and adjacent cells are riveted to each other, forming a complete rim. The upper hood can then be put in place, resting upon the inwardly-bent upper wings of the flanges 6<sup>b</sup> and the upper edge of the cell. It is then riveted to the wings, completing the cowl.

In assembling cowls that are too small to admit a man for riveting up it is better to put a few cells in place and rivet the upper hood to them, completing the cowl by adding successive cells and riveting them to both top and bottom hood.

In practice I prefer to bend the upper and lower edges of each cell inwardly, as shown in Fig. 2. This may be accomplished by stamping the cell from sheet metal, in which case the curve is produced at a single operation or by crimping the upper and lower edges in a crimping or corrugating machine.

It is thus seen that I have produced a cell for chimney-cowls that is simple and economical and can be cut from small pieces of sheet metal, which would otherwise be wasted.

Having described my invention, what I



claim, and desire to secure by Letters Patent, is as follows:

1. In a chimney-cowl the combination with the upper and lower hoods, of a series of interlocking cells; each cell consisting in a scallop of substantially semi-elliptical cross-section having a lateral flange formed on one vertical edge and integral therewith; a lateral flange formed on the other edge of the cell, said second flange having an upwardly and downwardly projecting end for engaging the inner surfaces of the upper and lower hoods, the long flange of one cell overlapping the short flange of the adjacent cell.
2. As an article of manufacture, a cell or unit for building up the ring of a chimney-cowl consisting in a sheet of metal bent into the form of a vertical scallop of substantially semi-elliptical cross-section, having two lateral wings or flanges, one of said flanges being shorter than the height of the space be-

tween the cowl-hoods and the second flange having upwardly and downwardly projecting ends whereby the cell is fastened to the hoods, for the purposes described.

3. A cell or unit for building up the rim of a chimney-cowl consisting in a sheet of metal bent into the form of a vertical scallop with top and bottom edges crimped, and having two lateral wings or flanges, one of said flanges being shorter than the height between the cowl-hoods and the second flange having upwardly and downwardly projecting ends whereby the cell is fastened to the hoods, for the purposes described.

In testimony whereof I affix my signature in presence of two witnesses:

EDWARD A. SANDERS.

Witnesses:

I. GOULD,  
JAS. C. HANSON.