

No. 874,125.

PATENTED DEC. 17, 1907.

F. E. SLOAN.  
SHEET METAL PULLEY CASING.  
APPLICATION FILED AUG. 9, 1907.

Fig. 1.

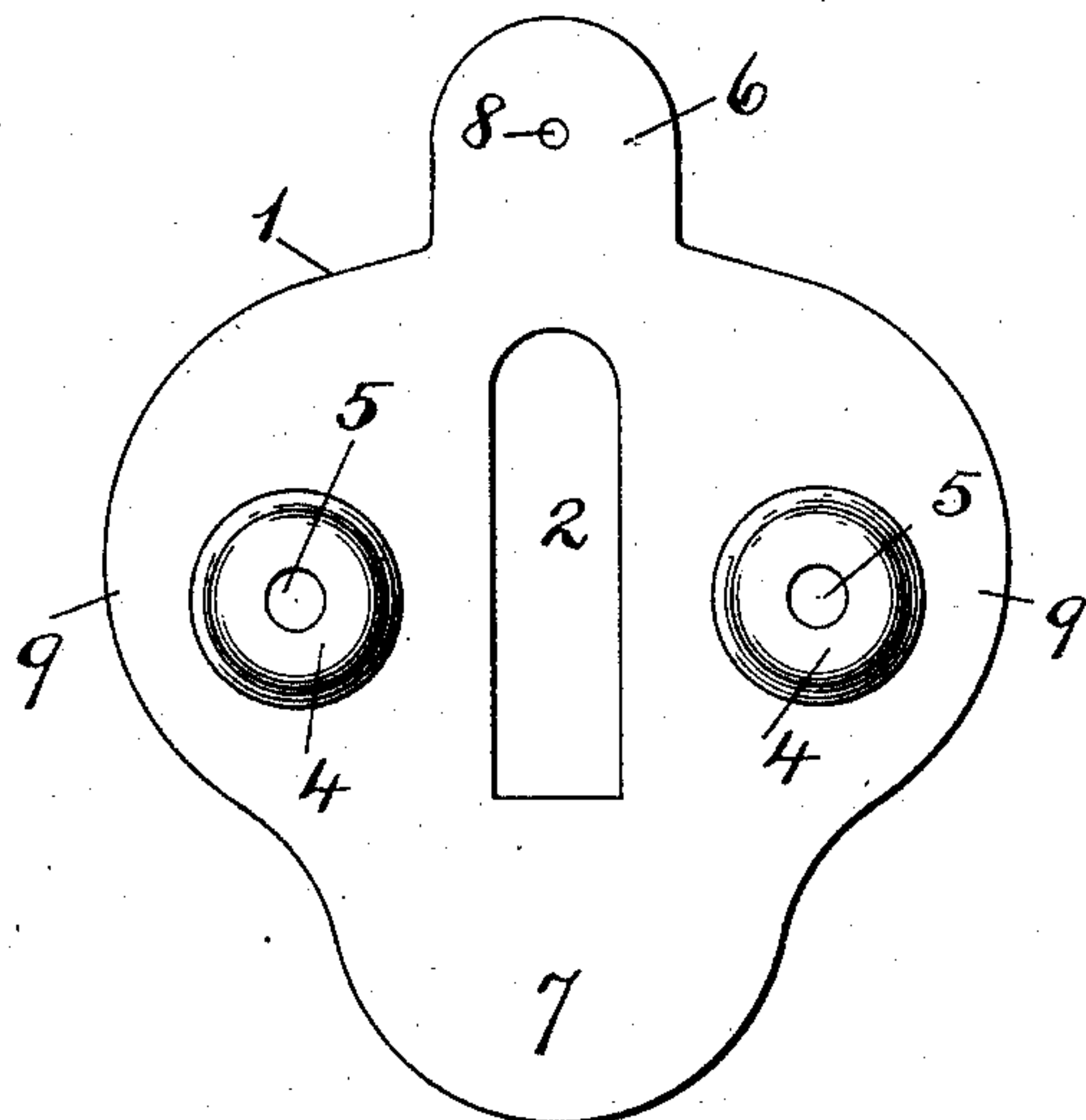


Fig. 2.

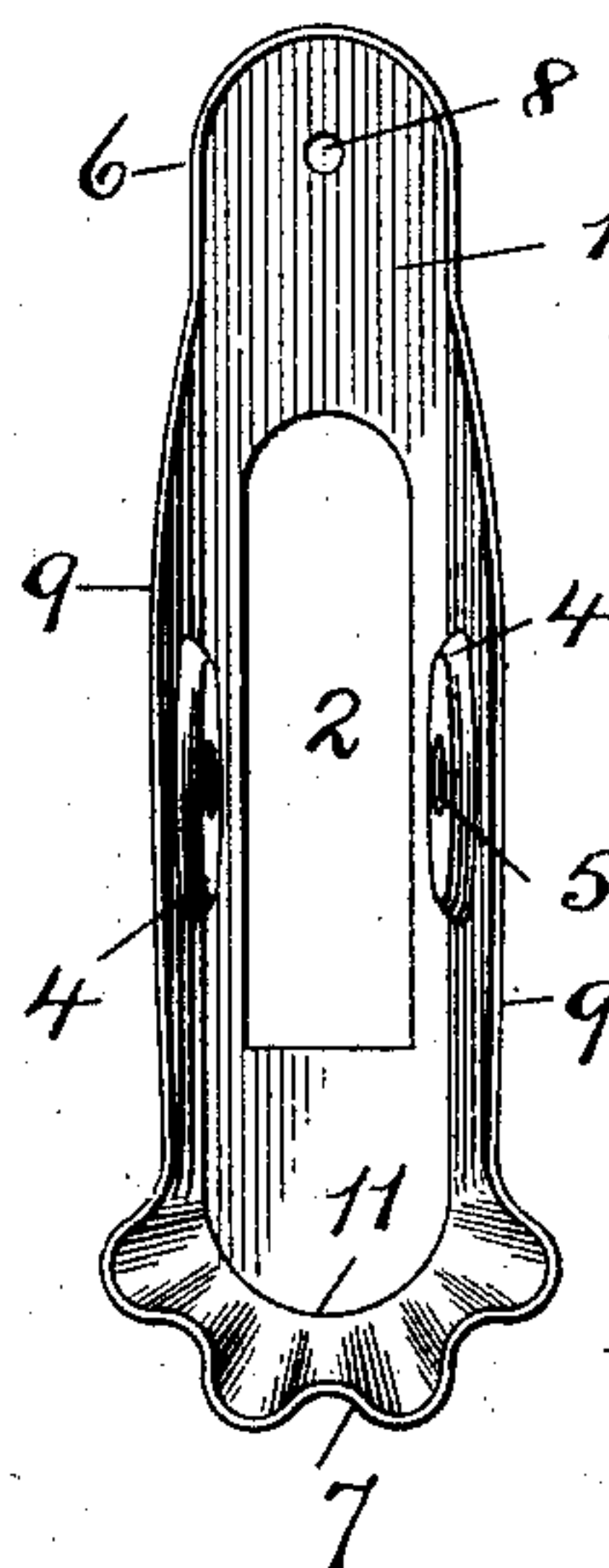


Fig. 3.

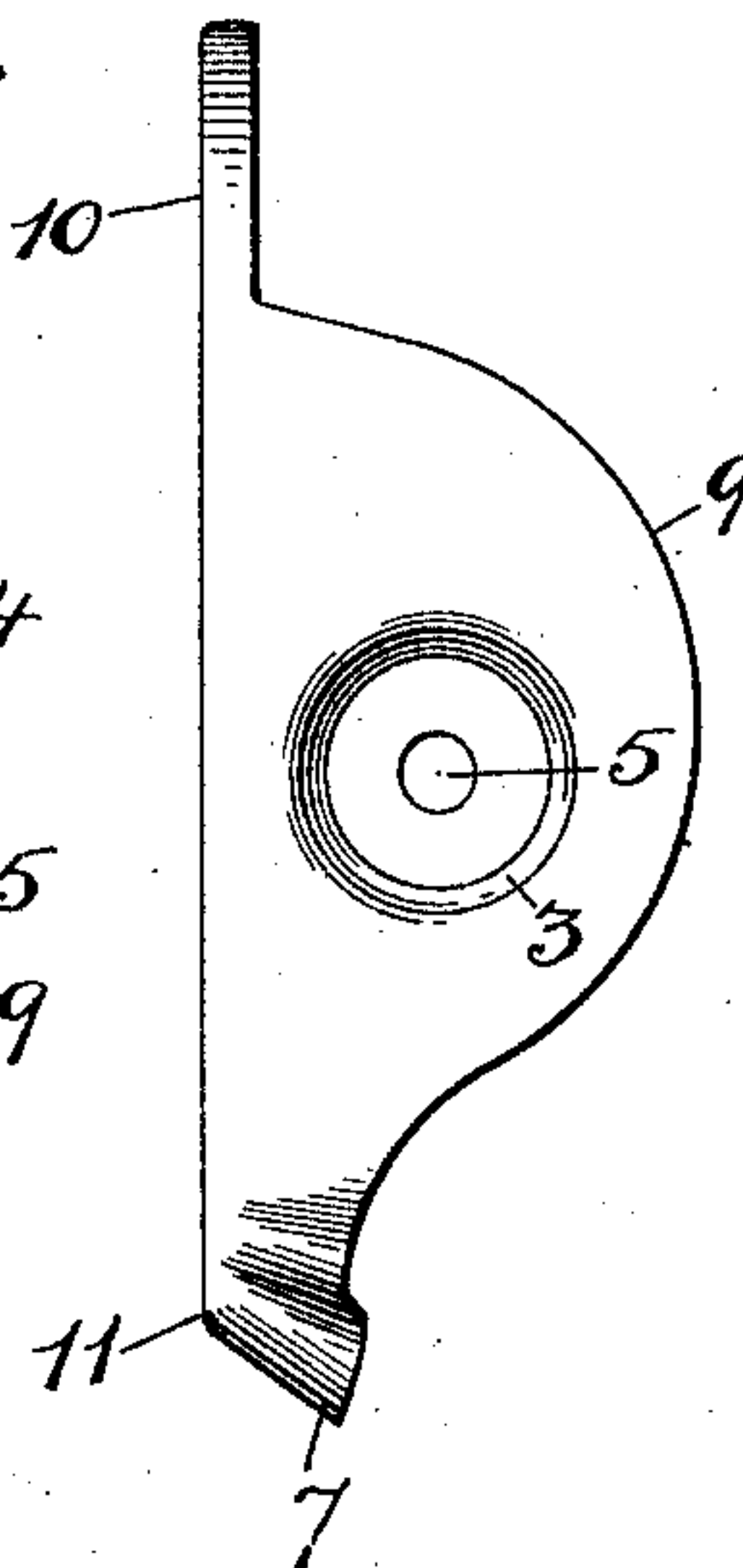


Fig. 4.

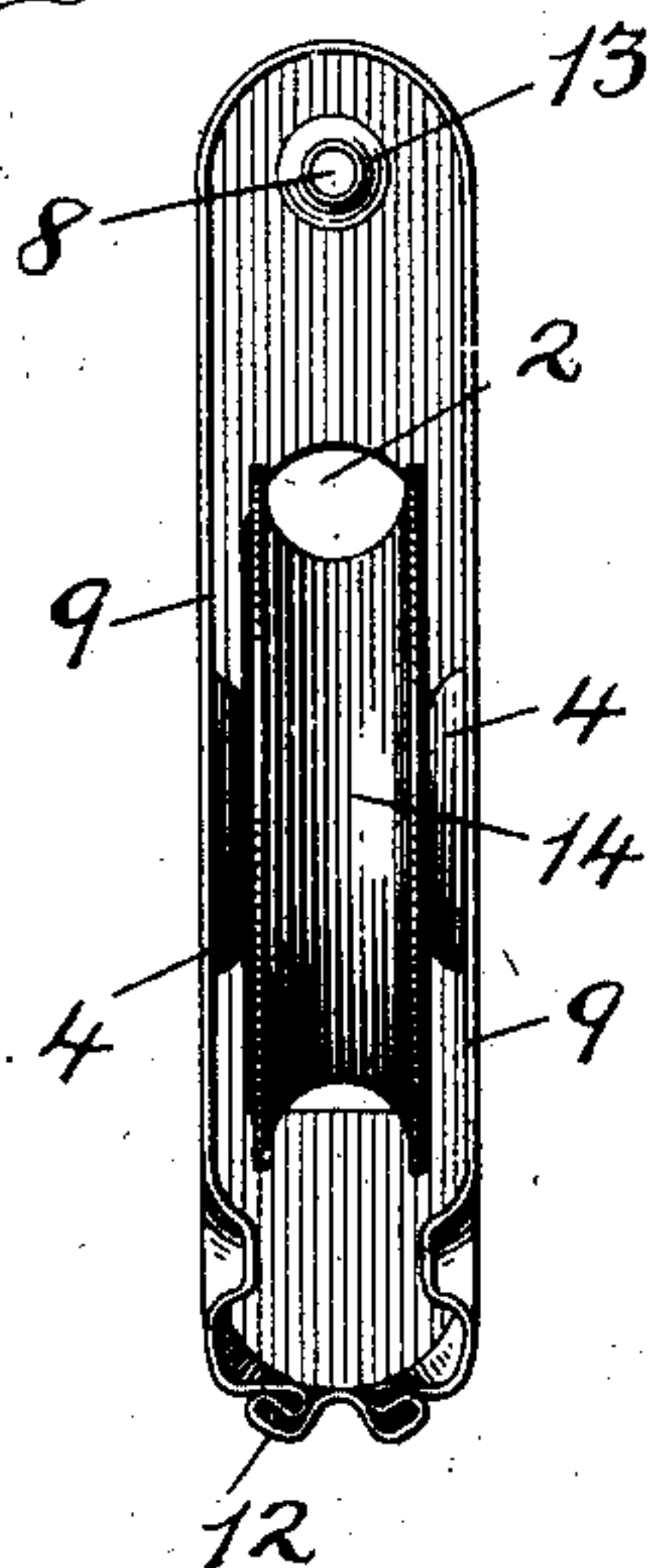
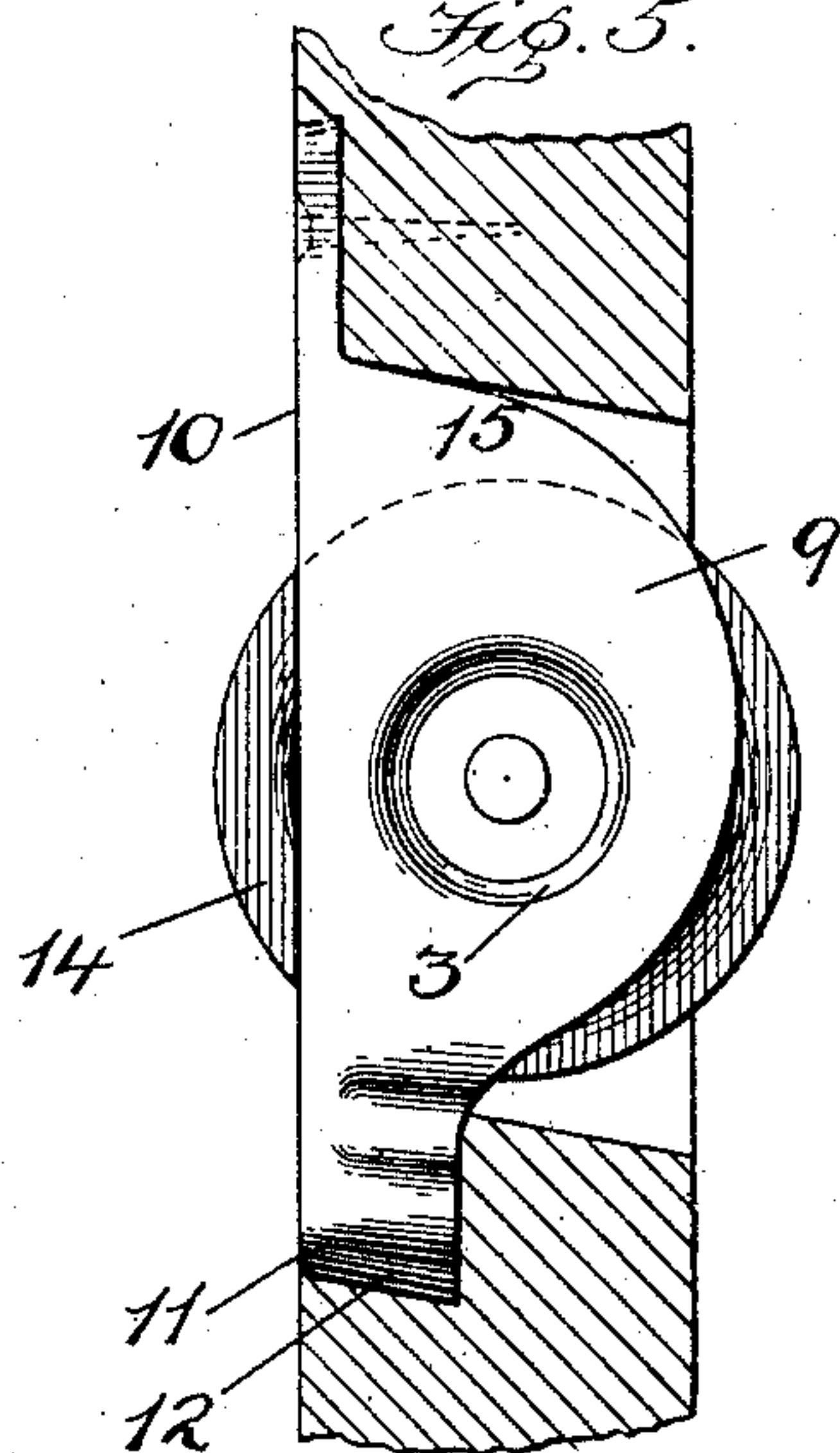


Fig. 5.



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# UNITED STATES PATENT OFFICE.

FRANCIS EUGENE SLOAN, OF BALTIMORE, MARYLAND.

## SHEET-METAL PULLEY-CASING.

No. 874,125.

Specification of Letters Patent.

Patented Dec. 17, 1907.

Application filed August 9, 1907. Serial No. 387,803.

*To all whom it may concern:*

Be it known that I, FRANCIS EUGENE SLOAN, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Sheet-Metal Pulley-Casings, of which the following is a specification.

This invention relates to stamped up sheet-metal pulley casings for sash pulleys.

Considerable trouble is experienced in stamping up from a single blank a sash pulley casing that is strong and durable and at the same time economically manufactured.

The object therefore of the present invention is to provide an improved construction of casing formed from a single blank, and possessing strength and durability to a degree that renders it commercially practicable and which may be produced by simple die operations.

The invention consists in the improved construction hereinafter described and claimed reference being made to the accompanying drawing in which

Figure 1, shows the blank in the flat form as produced by the first die operation. Fig. 2, illustrates a rear elevation of the partly formed casing as produced by the second die operation. Fig. 3, shows a side elevation of the same. Fig. 4, illustrates a rear view of the complete casing as produced by the third die operation, and also shows a pulley mounted therein, and Fig. 5, shows a side elevation of the complete casing with the pulley therein.

The first operation of the die cuts a blank 1, from a sheet and forms in the said blank a central slot 2, and a depression 3, at each side of said slot. These depressions are made from the outer side of the blank so as to produce projections 4, at the inner side of said blank and a perforation 5, is provided in each of said depressions. At the upper and lower edges, the blank is provided with projecting portions 6, and 7, the former being smaller than the latter and having a single perforation 8. The opposite side portions 9, in which the projections are formed constitute the side cheek pieces of the casing and the blank is broadest at a point through the upper portion of the projections which latter are slightly eccentrically located in said side portions for a purpose presently to be described.

The second die operation forms a central flat face plate portion 10, and bends the metal laterally from the central face plate so

that the opposite side portions 9, will have position at an angle with respect to the face plate. In making this bend the lower projecting portion 7, is turned to an inclined position so as to extend downwardly and laterally from the lower edge 11, of the face plate, and the surplus metal is uniformly folded as it is gathered in. The folding of the metal in this manner at this point serves to reinforce and greatly stiffen the casing at the lower end which is subjected to the greatest strain. In bending the metal of the casing into this form a continuous flange around the face plate of unequal widths is produced,—the narrowest portion of the flange being at the upper end of the casing; the intermediate width of flange being at the lower end of said casing, and the widest flange portion being between the intermediate and the narrowest flange portions. I prefer to provide the narrowest flange portion at the upper end of the casing because of the rigidity it produces, but I may in some instances omit this narrowest flange portion as the casing is supported mainly by the lower inclined flange portion as will presently be described.

The third die operation completes the casing and bends the side and bottom inclined portions from their positions shown in Fig. 2 to the positions illustrated in Fig. 4. In making this third and last bend the die folds the surplus metal at the lower end into uniform close folds 12, which are rigid, and at the same time the die leaves said lower end in an inclined position with respect to the face plate 10. Simultaneously with the final folding of the metal at the lower end of the casing the die also produces a depression 13, in the metal around the perforation 8, at the upper end of the casing. This casing is especially designed for attachment in the mortise of a window frame by a single screw or equivalent fastening,—the fastening however merely serving to keep the upper end of the casing from swinging or tilting outwardly while the lower inclined end of the casing will fit the correspondingly shaped portion of the mortise and said casing is mainly supported by said lower end. The folds 12, in said lower end serve to reinforce said end.

By locating the projections 4, eccentrically in the opposite side portions 9, said portions, when the pulley 14, is in position, will project upwardly at opposite sides of the pulley as at 15, and serve as a guide for the sash cord to prevent the latter from being displaced dur-



ing the operations of traveling over the pulley. It is obvious that the projections 4, at the inner side of the said portions will lie adjacent the opposite sides of the pulley and prevent the latter from wobbling in the casing.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is,—

1. A sash pulley casing stamped from a single sheet metal blank and having a face and parallel side portions extending laterally from the edge of the face and provided with perforations therein and a lower end portion formed integrally with and extending continuously from one side portion around and merging into the other side portion.

2. A sash pulley casing stamped from a single sheet metal blank and having a face, the upper end portion of which is provided with a perforation, parallel perforated side portions formed integrally with and extending laterally from said face and a lower end portion formed integrally with the face and side portions, and extending continuously from one side portion around to and merging into the other side portion and said end portion being joined to and bent laterally from the face and inclining downwardly therefrom.

3. A sash pulley casing stamped from a single sheet metal blank and having a face, parallel side portions formed integrally with and extending laterally from said face and a

lower end portion extending continuously from one side portion around to and merging into the other side portion and the metal of said continuous end portion being provided with folds.

4. A sash pulley casing stamped from a single sheet metal blank and having a face, a flange formed integrally with and extending laterally from the edges of said face and forming broad parallel side portions and a narrower rounded lower end portion which is joined to and inclines downwardly from the face, and also having an upper perforated portion above the broad side portions.

5. A sash pulley casing stamped from a single sheet metal blank and having a face with a slot therein and a perforation in the face above the slot, a lateral flange extending continuously from the edge of said face and having an irregular width,—said flange being narrowest at the upper end of the casing, widest between its ends and of an intermediate width at the lower end of the casing and the lowermost end of the flange being joined to and inclining downwardly from the face.

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

FRANCIS EUGENE SLOAN.

Witnesses:

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CHARLES B. MANN, Jr.