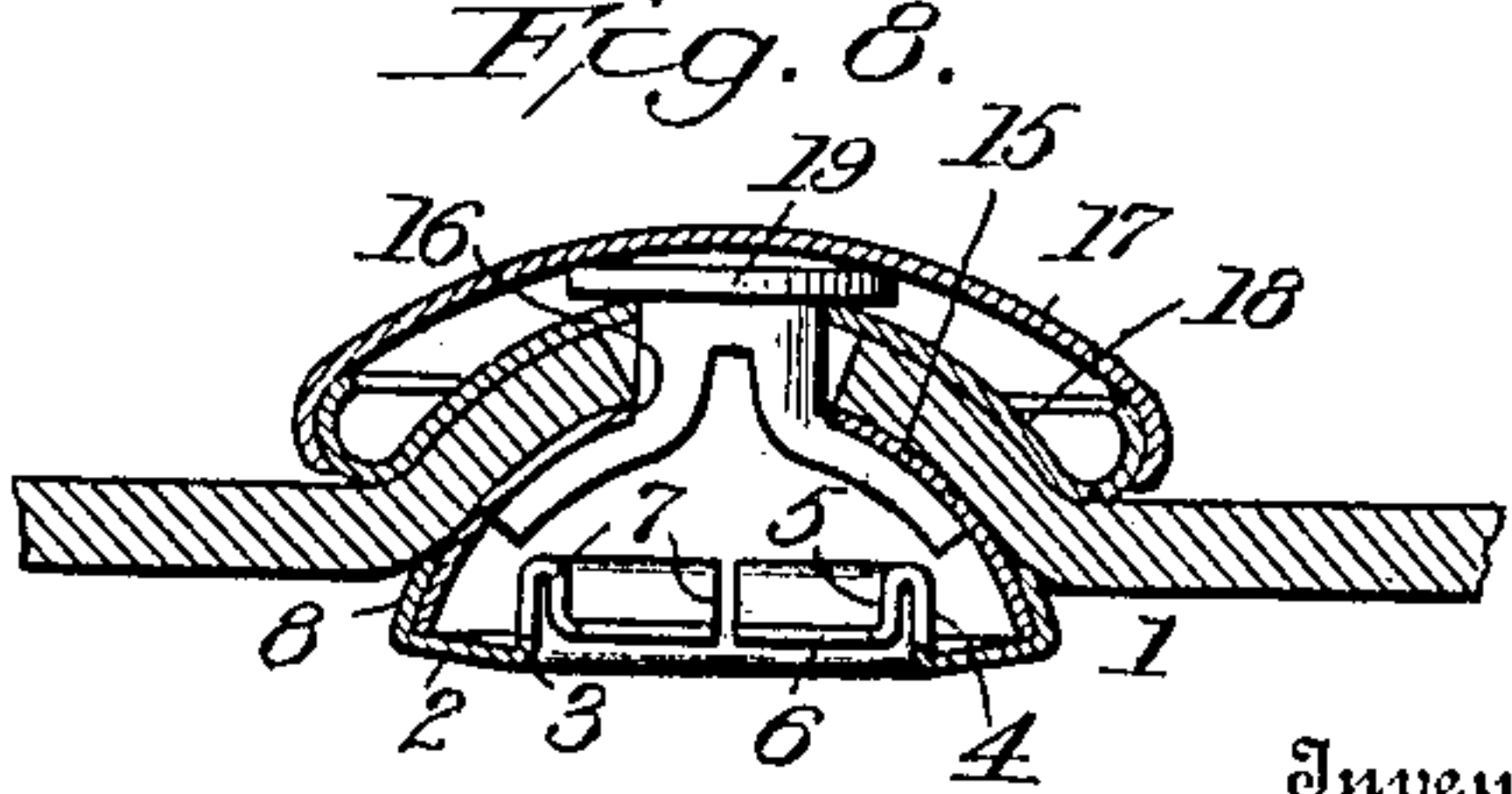
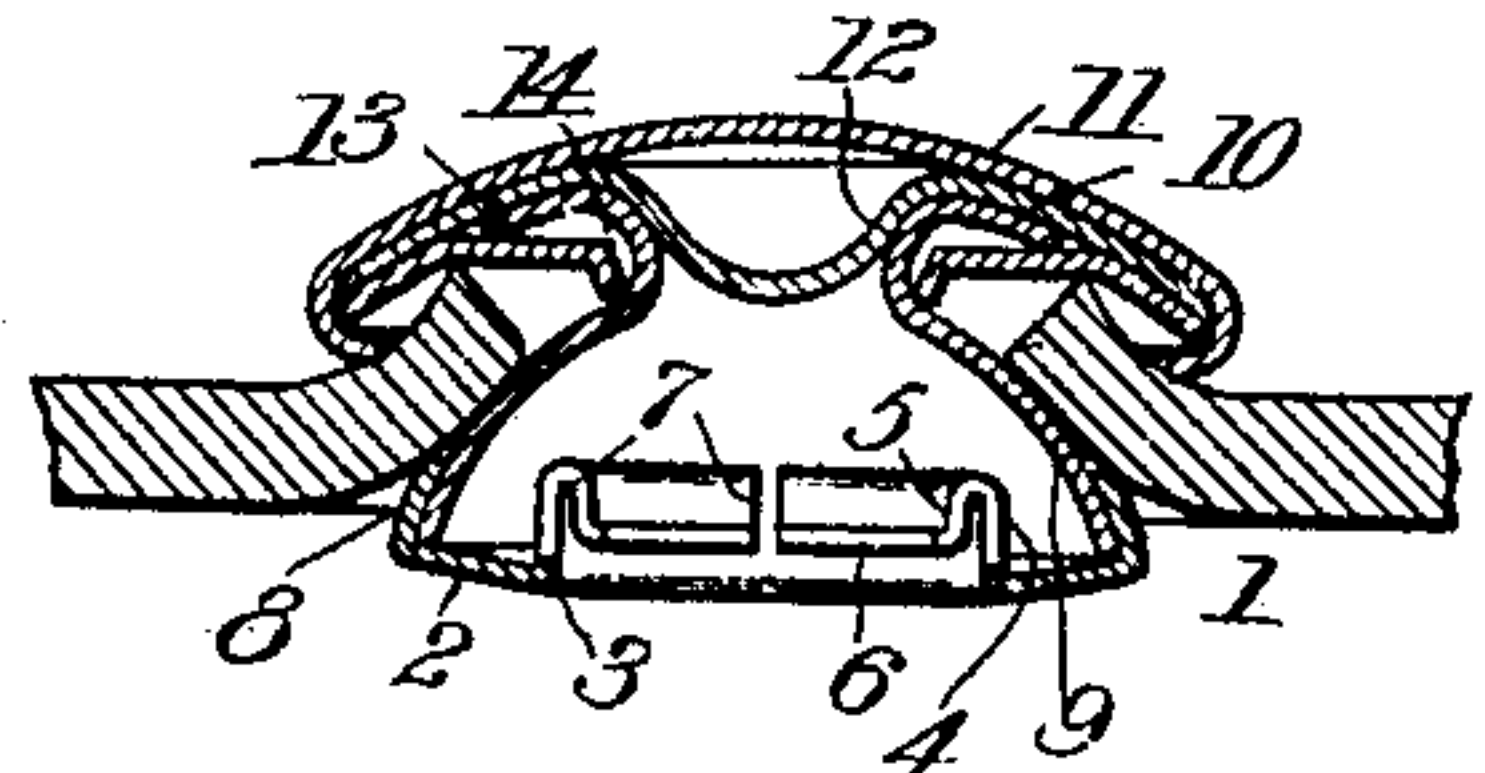
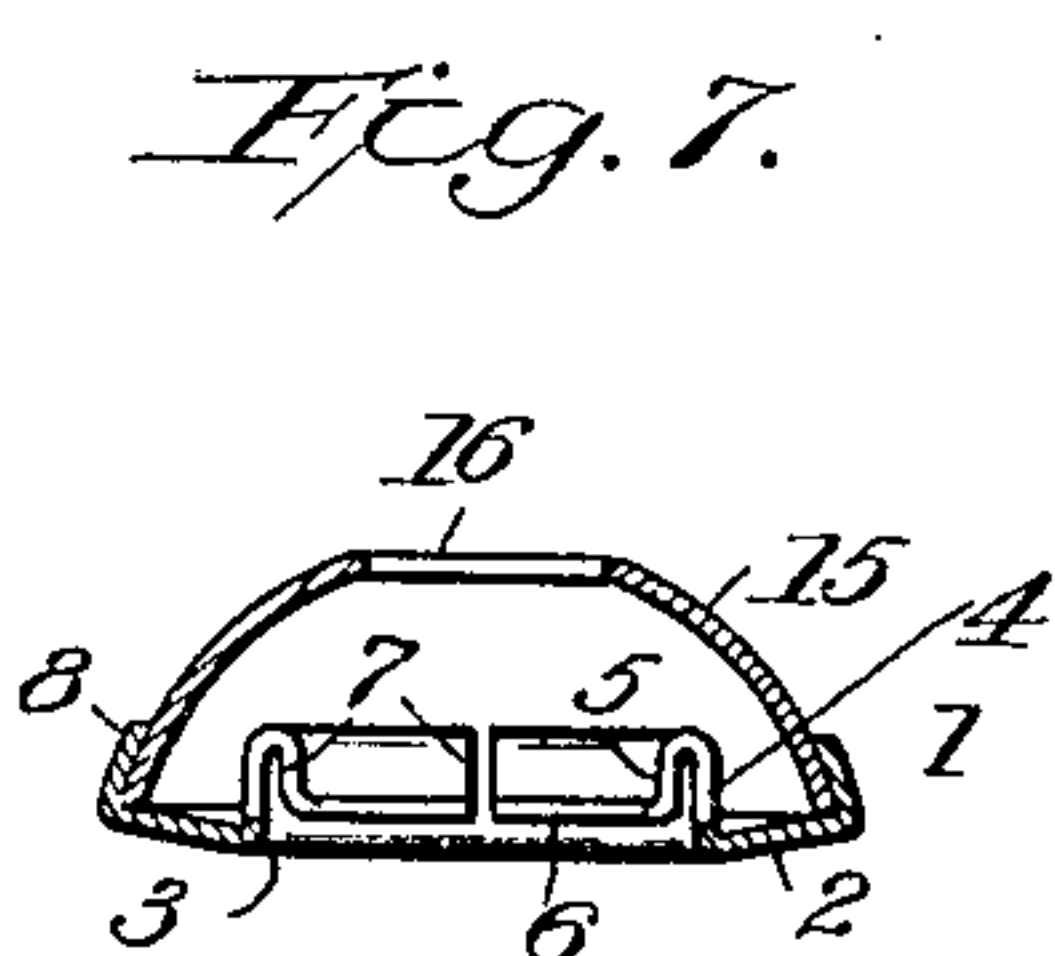
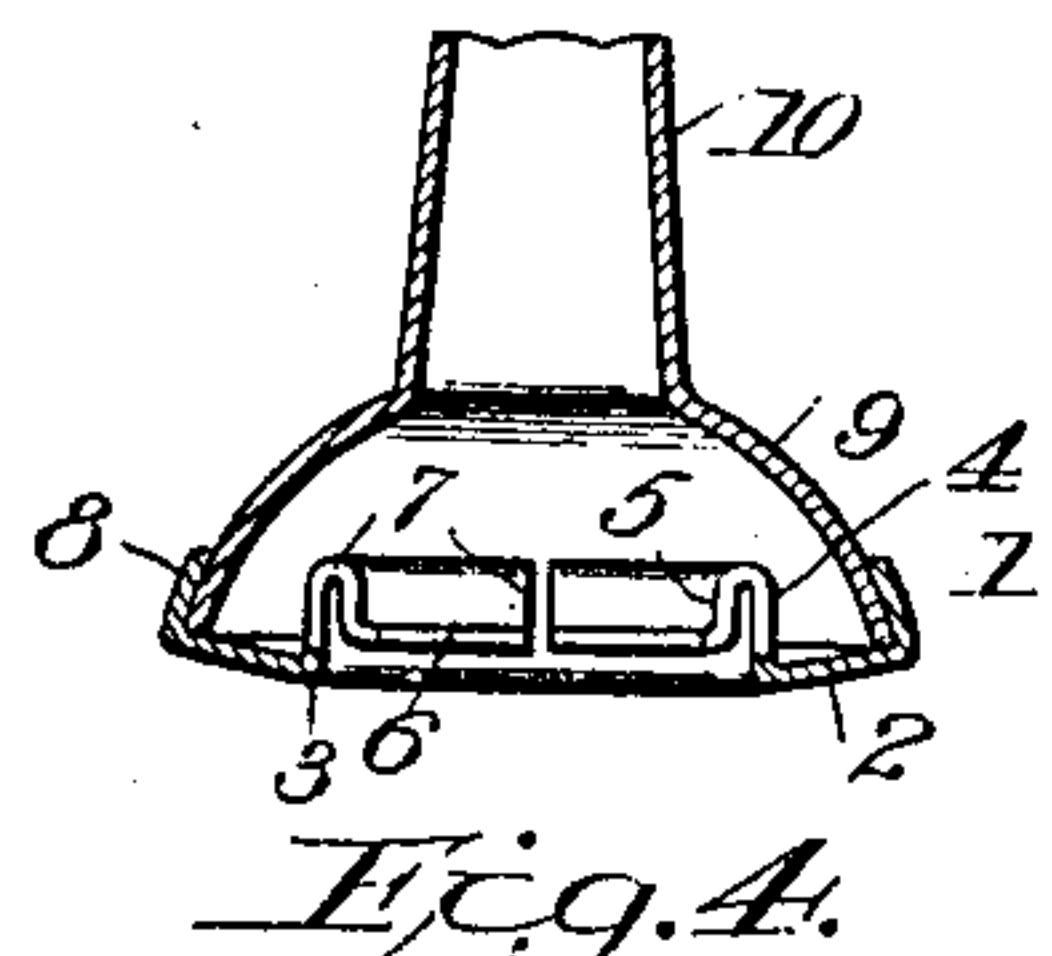
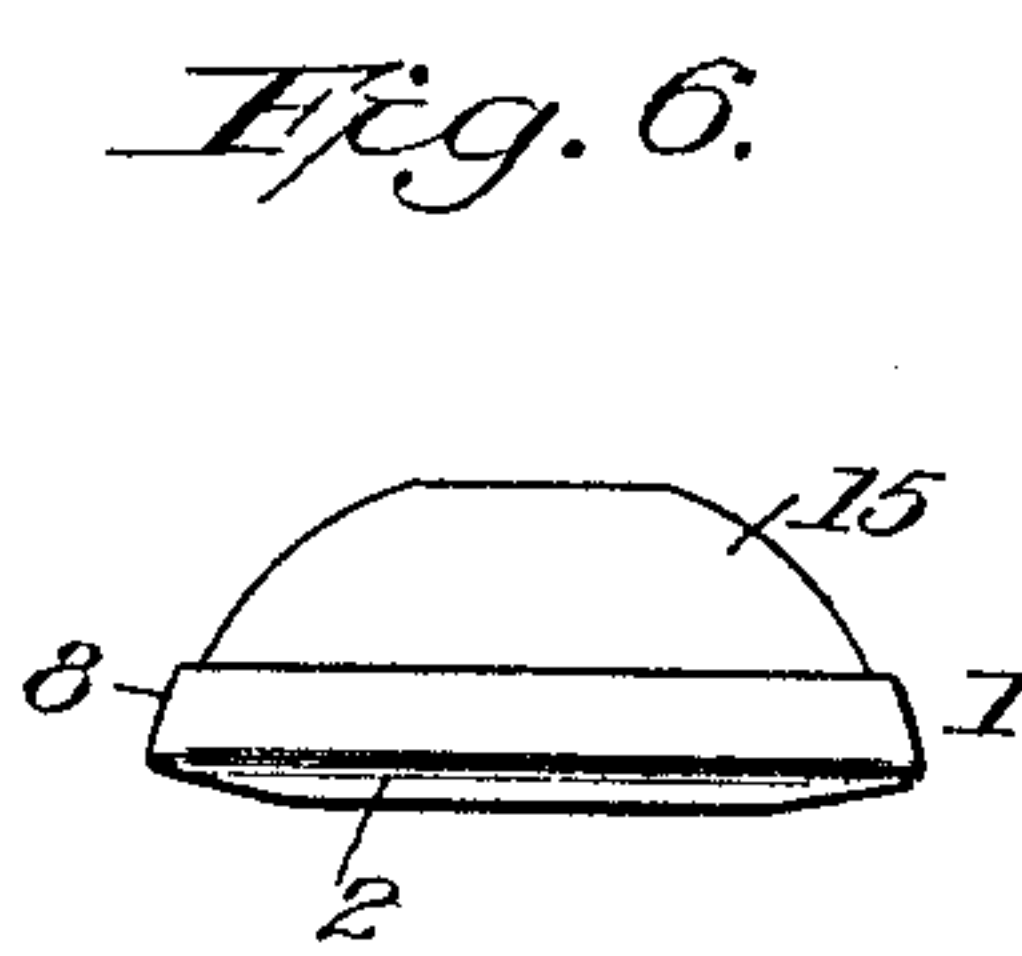
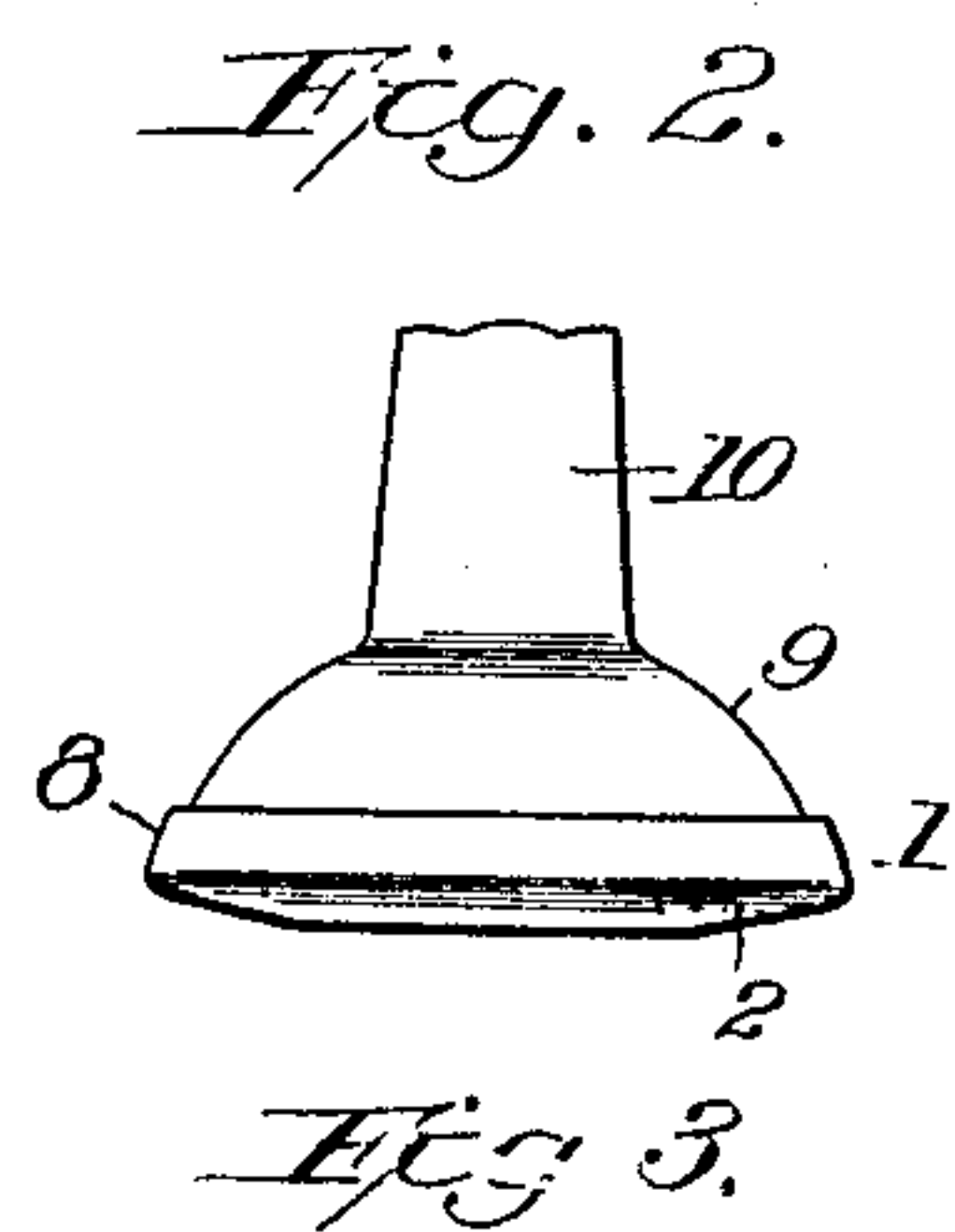
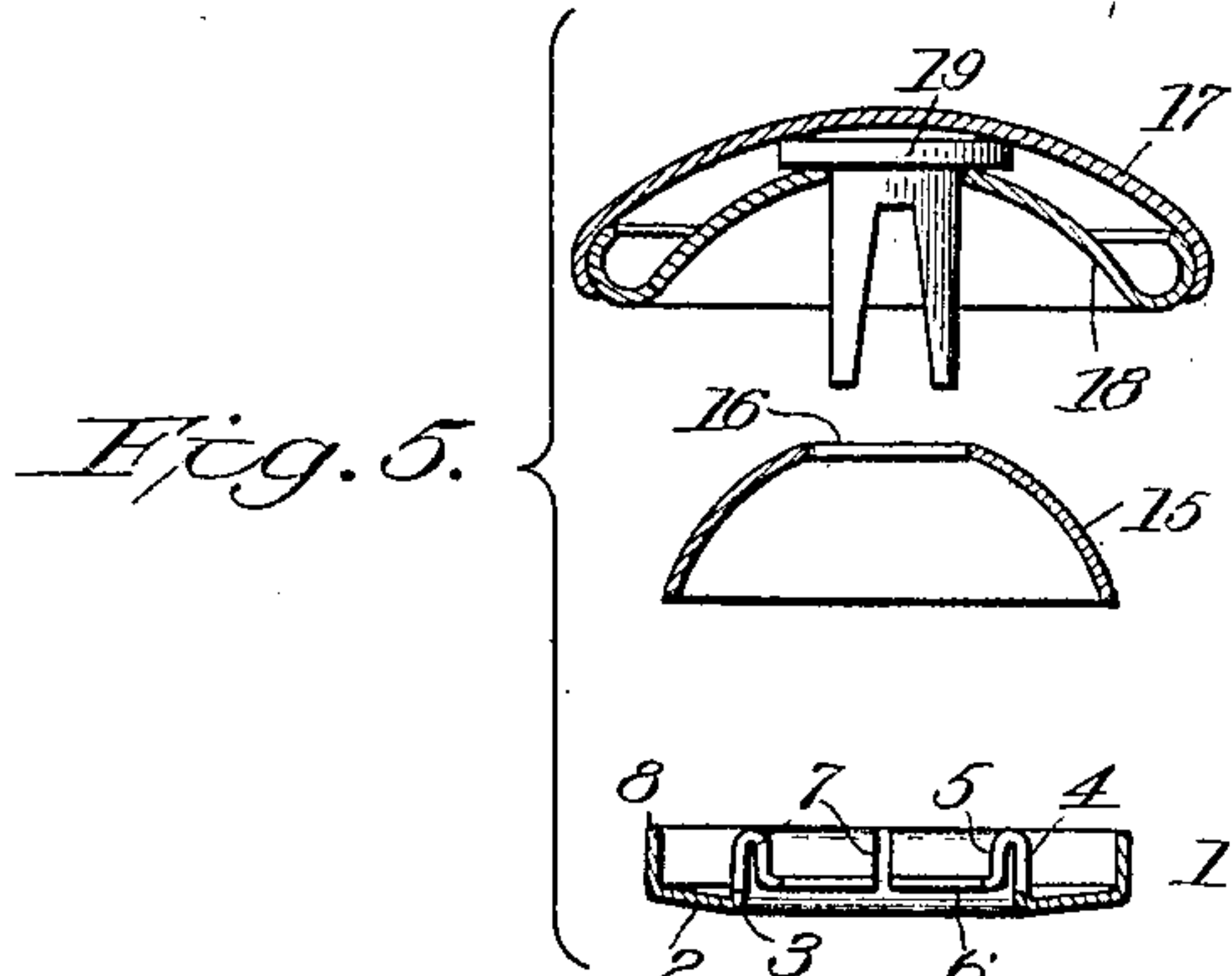
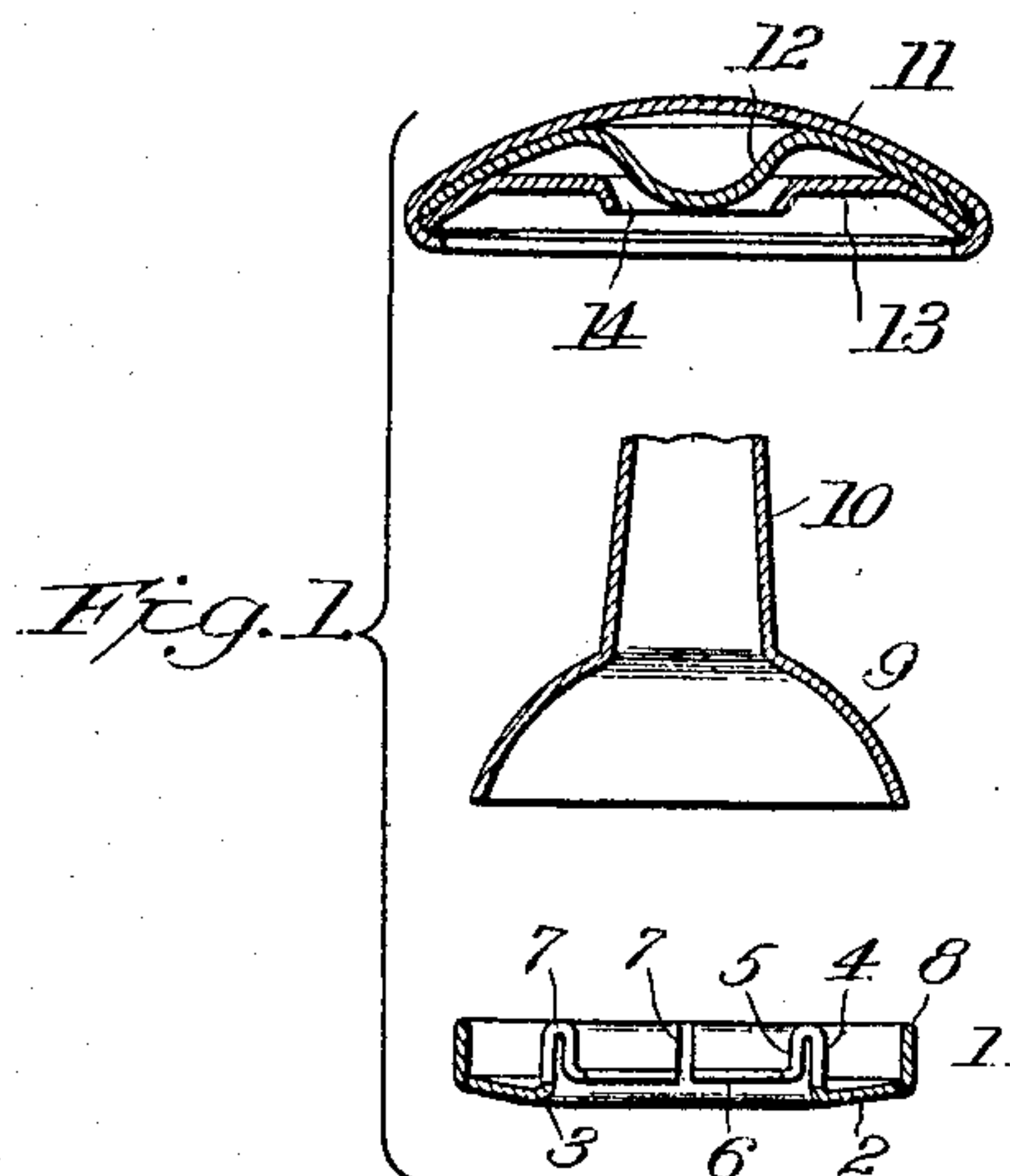


T. R. HYDE, JR.  
SNAP FASTENER.  
APPLICATION FILED APR. 3, 1906.

920,063.

Patented Apr. 27, 1909.



Witnesses  
C. H. Walker.  
Ina Staler.

Inventor  
Theophilus A. Hyde Jr.  
by W. H. Finckel  
Attorney.



# UNITED STATES PATENT OFFICE.

THEOPHILUS R. HYDE, JR., OF WATERBURY, CONNECTICUT, ASSIGNOR TO SCOVILL MANUFACTURING COMPANY, OF WATERBURY, CONNECTICUT, A CORPORATION OF CONNECTICUT.

## SNAP-FASTENER.

No. 920,063.

Specification of Letters Patent.

Patented April 27, 1909.

Application filed April 3, 1906. Serial No. 309,694.

*To all whom it may concern:*

Be it known that I, THEOPHILUS R. HYDE, Jr., a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented a certain new and useful Improvement in Snap-Fasteners, of which the following is a full, clear, and exact description.

This invention relates to that class of separable garment fasteners or buttons in which a resilient socket member is employed, and the invention herein is in the nature of a modification of the invention forming the subject of the patent of Frank E. Warner, granted May 15, 1906, No. 820,612. In this invention, as in the Warner invention, the stud-engaging element is formed of a fold having a standing member and a free member, both of which are slitted radially to obtain the resilience necessary to permit the engagement and disengagement of the stud with the socket member, and to insure a practical permanence of this resilience, or, in other words, to avoid the setting of the spring that seems to be due to the taxing of the metal of the spring beyond its elastic limit by the repeated engagement and disengagement of the two parts and the strains to which they are subjected thereby and by use.

The invention consists of a socket-piece of a snap-fastener having a stud-opening surrounded by an upright or perpendicular stud-engaging device constructed by folding the metal upon itself to form a standing fold and a free fold, both of which folds are slitted radially and are parallel with the vertical axis or axial line passing centrally through the stud opening in the direction of the entrance and exit of the stud, all as I will proceed now more particularly to set forth and finally claim.

In the accompanying drawings, illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 shows in cross-section, reading down, the top, the tubular dome, and the socket-piece, respectively. Fig. 2 is a side elevation of the tubular dome and socket-piece assembled. Fig. 3 is a longitudinal section of the device of Fig. 2. Fig. 4 is a longitudinal section showing the parts of Fig. 1 assembled and united about a piece of cloth. Fig. 5 is a cross-section, reading

down, and showing the top, dome, and socket-piece, respectively, of another form of the invention. Fig. 6 is an elevation showing the dome and socket-piece of Fig. 5 united. Fig. 7 is a cross-section of the device of Fig. 6. Fig. 8 is a cross-section and partial elevation showing the parts of Fig. 5 assembled and united about a piece of cloth. I have not herein shown the stud since it may be of any approved construction, and preferably of the rigid or non-resilient type.

The socket-piece 1 comprises a base 2, having a central stud passage or opening 3, the margin of which is surrounded by a fold of the metal of the base, the standing member 4 of which fold rises upright or perpendicular to a horizontal plane drawn through the base, and is continued reversely as a free fold-member 5 which terminates in a stud-engaging lip 6, this lip being the active element of the socket-piece which coöperates with the neck of the stud to grip the stud more or less securely in accordance with the stiffness of the spring formed by the fold. The two parts 4 and 5 of the fold are slitted radially as at 7 to form spring finger-like portions. This socket-piece is provided with a flange 8 by which it is secured to its attaching member, herein shown in two forms. The attaching member of Figs. 1 to 4 comprises a dome-shaped piece 9 terminating in a tubular portion 10 which is in effect an eyelet, and which is adapted to coöperate with the top shown detached in the upper view of Fig. 1 and applied in Fig. 4, and comprising a cap 11 containing an anvil piece 12 and a collet 13, these parts being connected by flanging in any usual way, and a space 14 being left between the collet and the anvil for the reception and clenching of the eyelet-like tube 10 of the attaching member. In Figs. 5 to 8 the attaching member is a dome-shaped piece 15 having a hole 16 in its center instead of the eyelet-like tube of the preceding figures, but otherwise this dome 15 is applied to the socket-piece as in the first described form. Instead, however, of using the top shown in the other figures, I use a top shown detached in the upper view of Fig. 5 and applied in Fig. 8, comprising a cap 17, a collet 18, and a pronged rivet 19 secured by its head between the cap and collet, and adapted to enter the hole 16 of the dome 15 and be clenched therein, as shown in Fig. 8.



The socket-piece and dome, together with the attaching part constitute as a whole the socket of a snap-fastener.

5 The mode of operation and the advantages pertaining to the Warner construction first above mentioned apply also to this present invention to the extent of obtaining the necessary resilience to effect engagement with and disengagement of the stud, and in in-  
10 suring the practical permanence of this resilience or avoidance of the setting of the spring due to taxing the metal beyond its elastic limit by repeated use; and in addition the present invention provides a struc-  
15 ture wherein the spring as a spring is of comparatively greater strength and hence of greater efficiency in retaining engagement with the stud in those situations where the strain is very great; and still further, the  
20 present invention can be manufactured more economically than the Warner construction, because the straight folds permit the production of the socket by a single machine, direct from the raw material, without suc-  
25 cessive handlings such as are necessary to flare the fold in the Warner socket. Thus the present invention is, first, more efficient in resilience than the Warner, and, second, it can be produced at less first cost.

30 Obviously the device is for use as a glove fastener or a fastener for other articles, and it is to be noted that the fold is in no manner used in attaching the device to the glove or other article, but on the contrary, is at all

times independent of such attaching means. 35  
By this construction the fold is free at all times to perform its function as a resilient clasp for the complementary stud member of the snap-fastener, and whether the device be  
40 attached properly or improperly to a glove or other article the functions of the fold are in no wise affected.

What I claim is:—

The herein - described improvement in snap-fasteners, consisting of a socket-piece 45 provided with a base made with a central opening for the reception of the head of a complementary stud, said opening surrounded by a stud-engaging portion integral with the base and consisting of a standing fold-mem- 50 ber and a free fold-member, both of which fold-members are slitted radially, said free fold-member having an inwardly projecting lip for actively engaging the stud, and both of said fold-members standing up parallel 55 with the vertical axis of the socket-piece, whereby the resilient strength of the stud-engaging device is increased and the manufacture of the socket-piece simplified, and means to attach the device to a glove or other 60 article.

In testimony whereof I have hereunto set my hand this 2nd day of April A. D. 1906.

THEOPHILUS R. HYDE, JR.

Witnesses:

CHARLES FEHL,  
HENRY FEHL.