

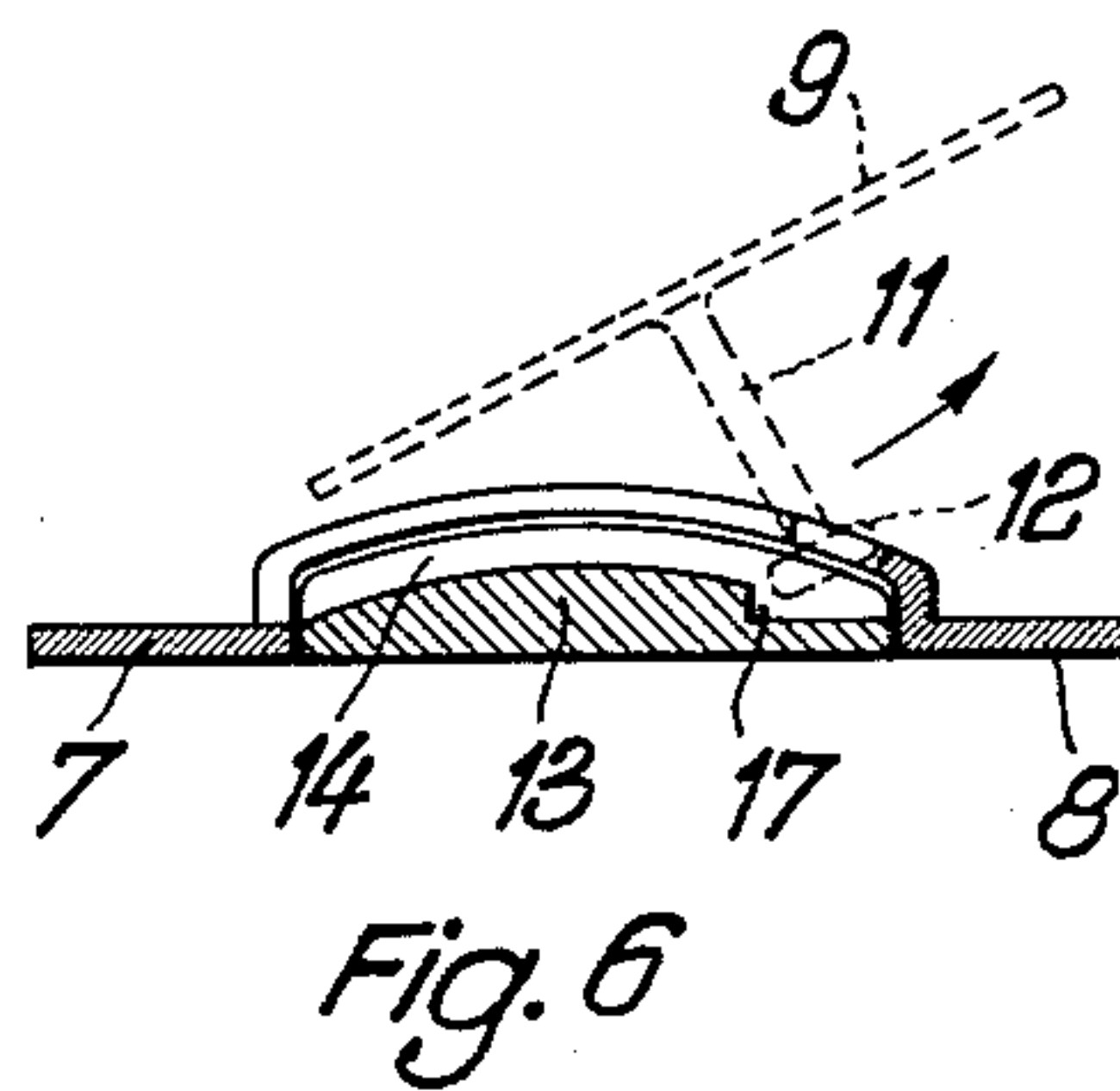
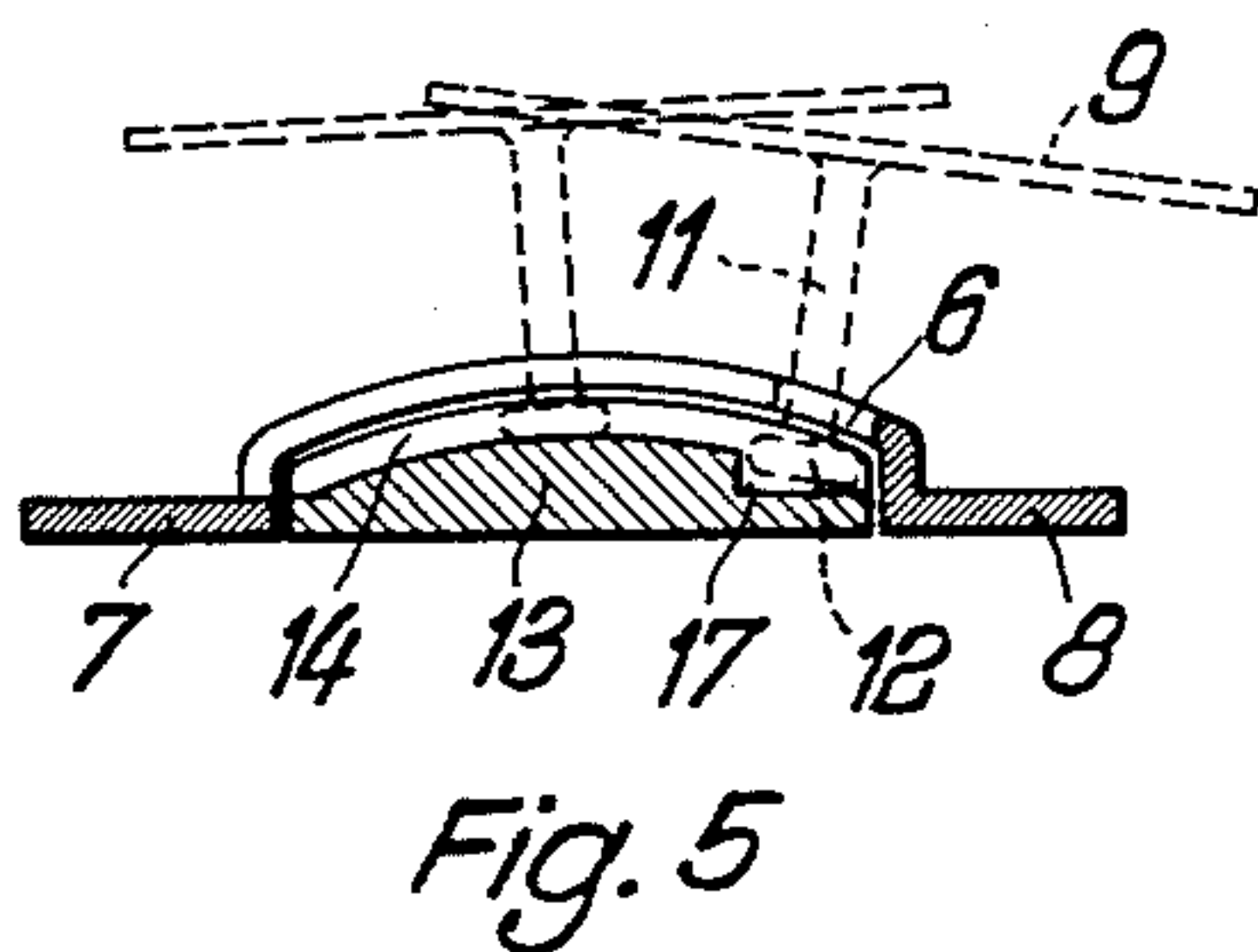
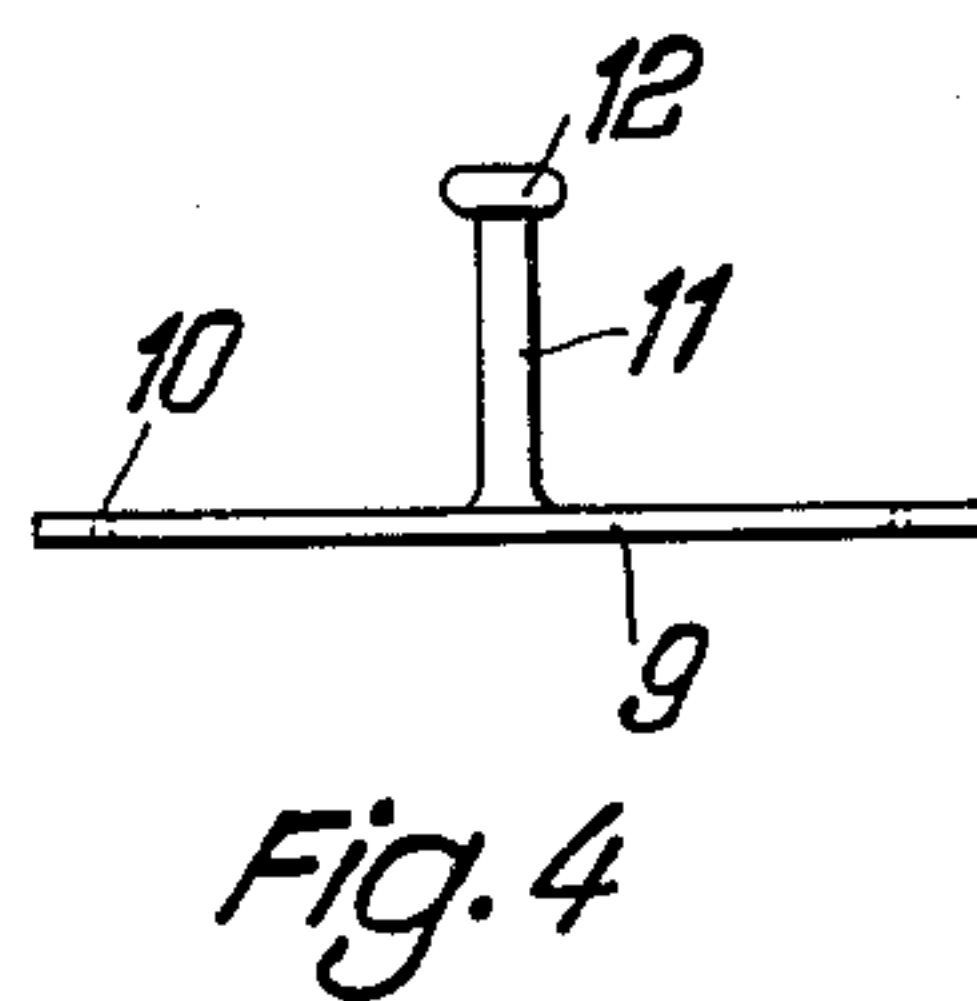
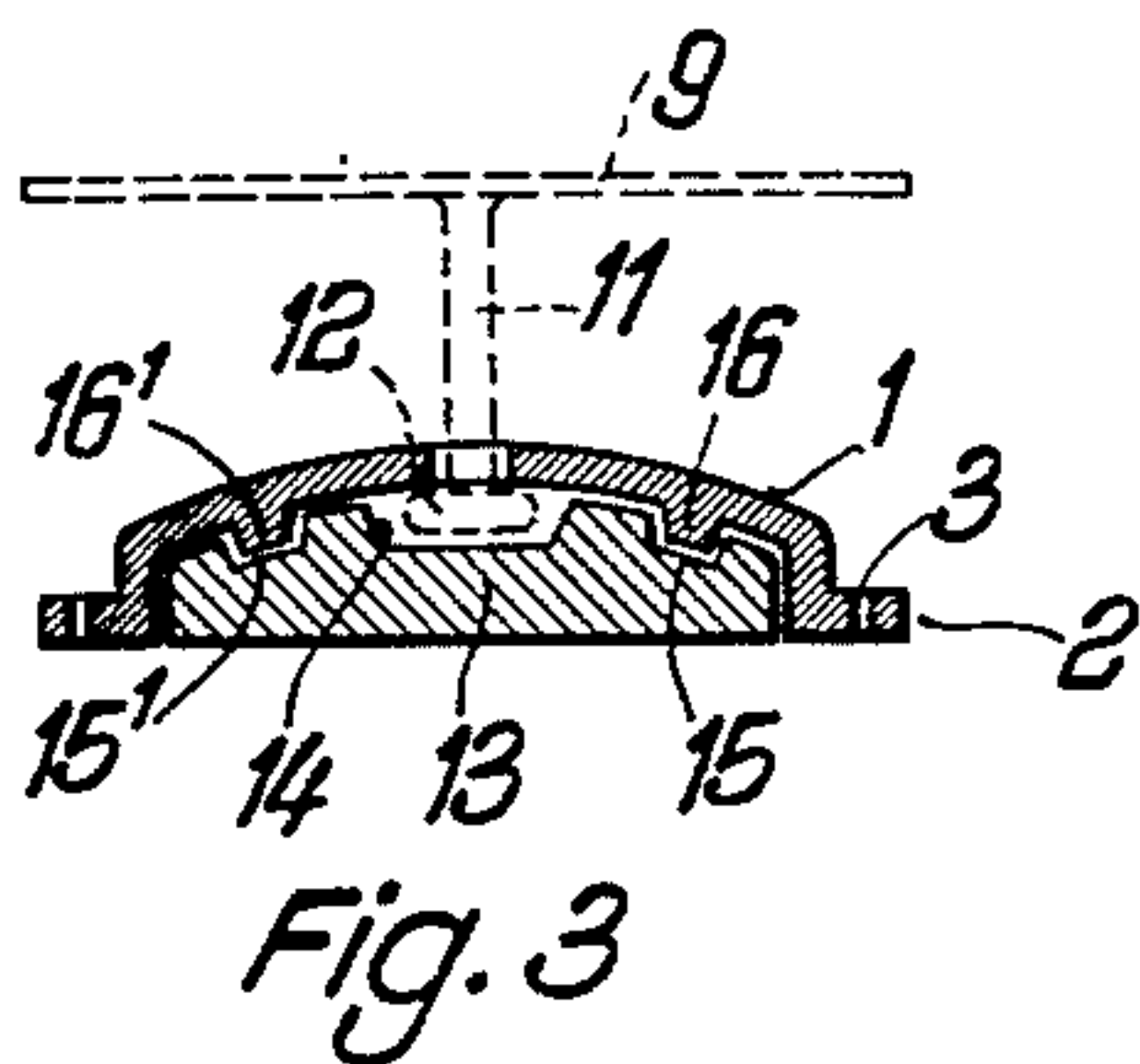
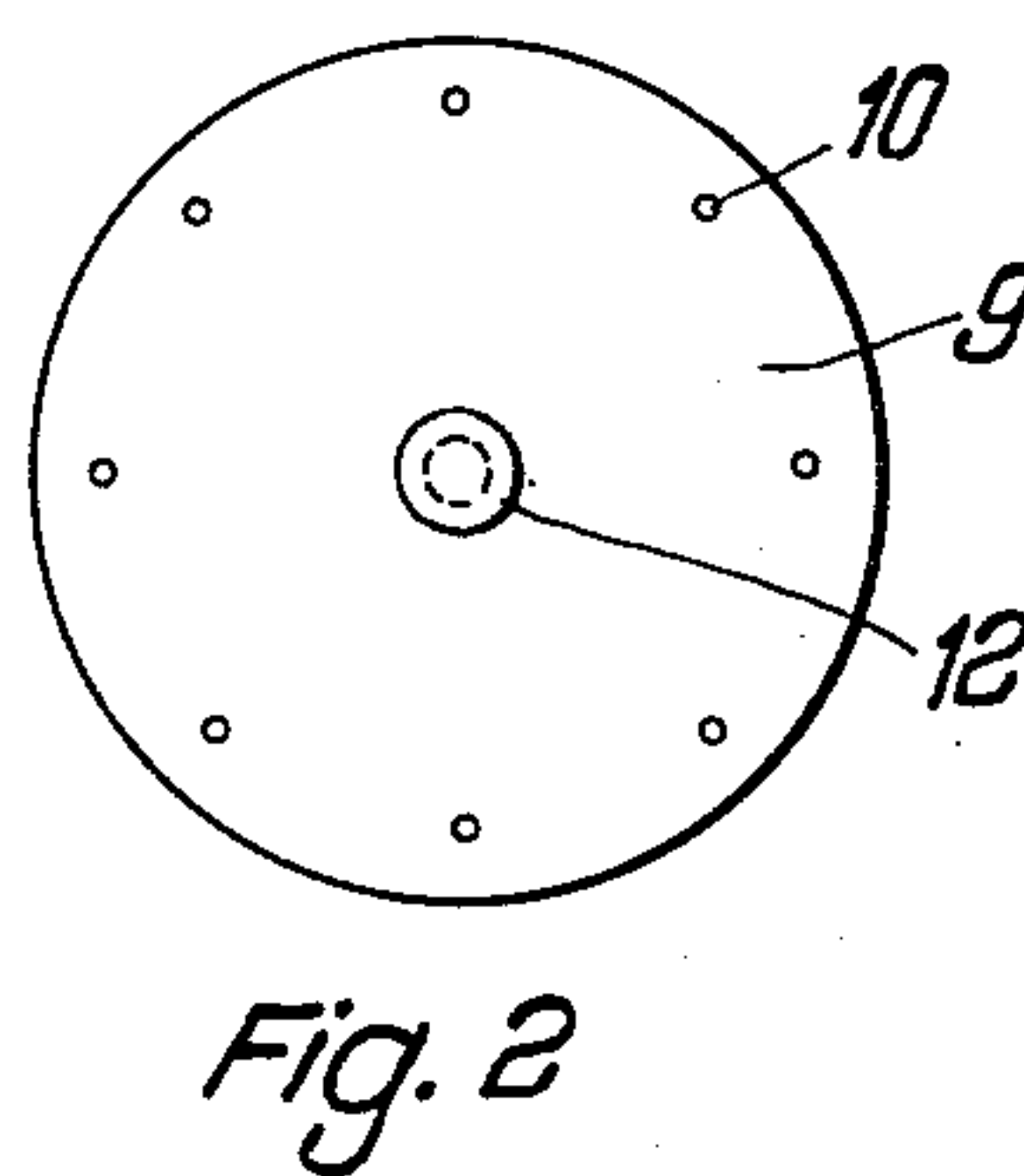
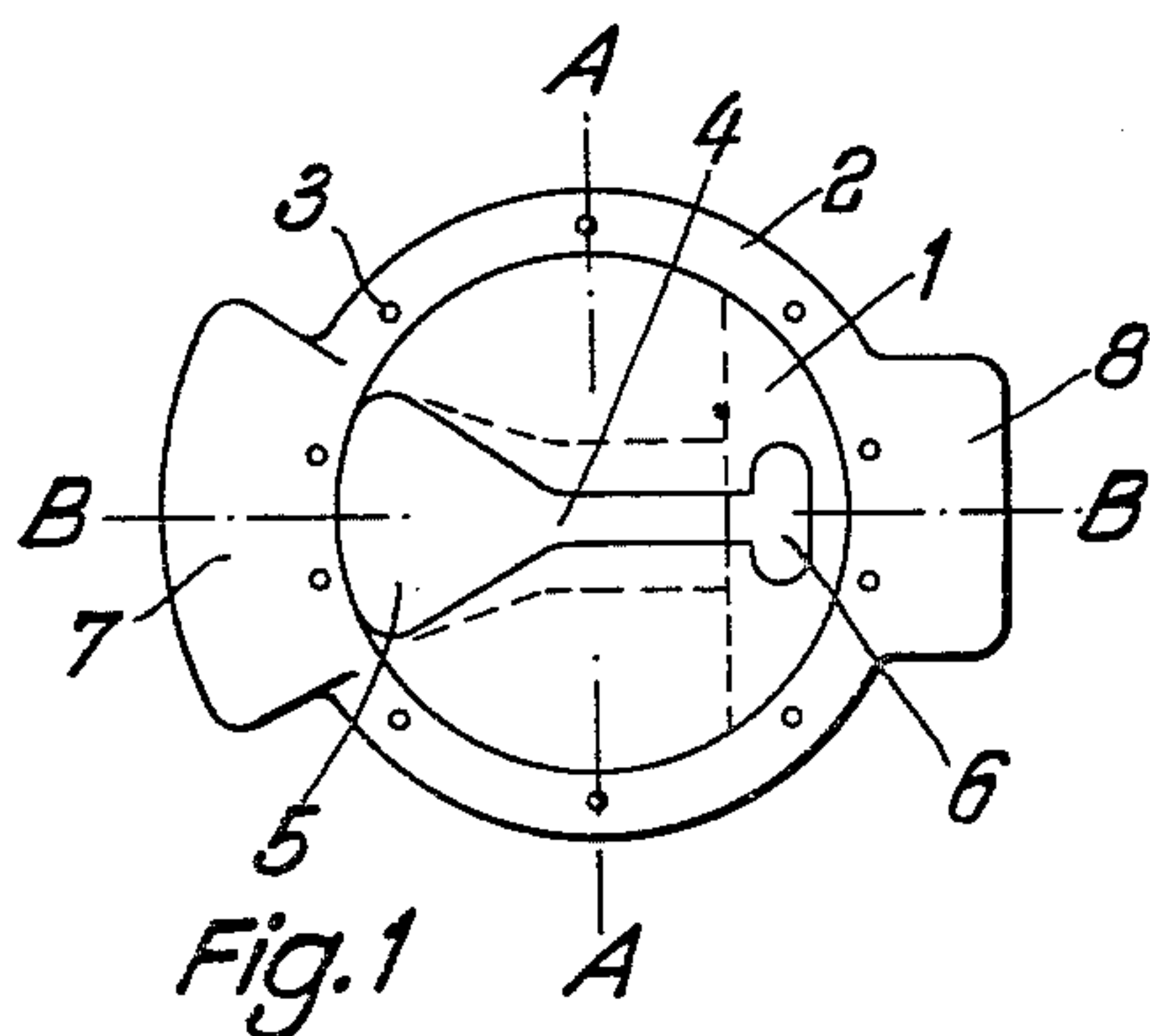
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BUTTON FASTENINGS

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1

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BUTTON FASTENINGS

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5 Claims. (Cl. 24—104)

This invention relates to button fastenings of the type in which one of two members, respectively adapted for attachment to the parts to be connected, is formed with a convex surface having a slot widened at both ends for optional engagement with a headed stem on the other member.

In some known fastenings of the type aforesaid the accidental disengagement of the headed stem from the slot is resisted by spring means, but such an arrangement is liable to jamming and it is often hard to separate the two members without damaging the same.

Another known form of fastening is made without the spring means above-mentioned, the slot in this case being of keyhole shape so that the two members can only be separated by returning the headed stem to its point of insertion into such slot, and the securing or release of this form of fastening consequently requires a backward movement of the left hand which most people find difficult.

The object of the present invention is to provide an improved button fastening of the type referred to which, whilst simple to engage and disengage, will nevertheless provide a secure connection of the associated garment parts without the use of spring means for locating the headed stem in the slotted member.

According to this invention the improved button fastening is characterised in that the enlargements at the end of the slot are of different widths, the wider permitting introduction and the narrower permitting withdrawal of the stem head, which latter is guided in a grooved filling piece within the convex slotted member and requires to be tilted in a relatively deep end portion of such groove before it can be withdrawn through the narrower end of the slot above such recess.

The male and female members are disposed in relatively offset positions when mutually engaged and under strain in a direction longitudinal to the slot.

In a convenient arrangement, the filling piece is adhesively secured to the underside of the convex member, which latter is formed at opposite sides of its slot with locating projections engaging recesses in the filling piece. Alternatively the latter may be formed integrally with the slotted member, the groove in either case preferably being curved in conformity with the slot as seen in side elevation.

In the accompanying drawings:

Fig. 1 is a plan view of the slotted or female member of the improved button fastening,

Fig. 2 is a plan view of the headed or male member coacting therewith,

Fig. 3 is a section on the line A—A of Fig. 1, indicating the engaged position of the male member,

Fig. 4 is a side elevation of such male member,

Fig. 5 is a section on the line B—B of Fig. 1, showing different engaged positions of the male member,

Fig. 6 is a similar view showing the male member in the act of separation from the slot.

In the example illustrated, the female member has a

2

central domed portion 1 surrounded by a flat circular flange 2 in which holes 3 are provided to permit such member to be sewn to a garment. A diametral slot 4 in the domed part has an enlargement 5 at one end to admit the male member of the fastening and an enlargement 6 at the other end through which such member can be withdrawn. Adjacent these two enlargements the flange 2 is widened to form lugs 7, 8 which respectively facilitate the engagement and disengagement of the male member with the slot 4 inasmuch as they provide a convenient finger grip during such operations.

The male member of the fastening has a base portion 9, provided with holes 10 for sewing it into position, a central stem 11, and a flat circular head 12 on the latter.

Within the domed part 1 of the female member is arranged a filling piece 13 with a transverse groove 14 which is deep enough to accommodate the head 12 of the male member when the stem 11 of the latter is entered into the slot 4 by way of the enlargement 5 thereof. The filling piece 13, which may be adhesively secured within the domed part 1, is formed at opposite sides of its groove 14, with recesses 15, 15¹ engaged by locating projections 16, 16¹ on the dome's underside.

It will be seen from Fig. 5 that, as viewed in side elevation, the groove 14 has a convex formation corresponding to that of the dome 1, one end of such groove, however, being stepped down to provide a relatively deep recess 17 directly beneath the withdrawal enlargement 6 of the slot 4. The relative positions and dimensions of the recess 17 and enlargement 6 are such that the head 12 cannot pass through the enlargement 6 when its associated stem 11 is substantially perpendicular to the base of the female member, separation of the two members in this manner being only possible when the general plane of the flat head 12 is considerably inclined to such base as shown in Fig. 6.

The headed stem 11 is thus arranged to enter and leave the slot 4 at opposite ends of the latter, so that the securing and release of the fastening is effected by a natural uni-directional movement of the user's hand.

The form of the slot 4 tends to result in the inter-engaged male and female members assuming a staggered relation when under strain (as from the natural pull of the associated garment parts) in a direction longitudinal to the slot.

The pull applied to the fastening as aforesaid tends to tilt the male member relatively to the base of the female member; i.e. in a direction opposite to that in which the stem 11 requires to be tilted to permit passage of its head 12 through the slot enlargement 6, so that accidental release of the fastening is effectively prevented.

Furthermore the pull applied to the fastening members as aforesaid tends to bring the base portion 9 of the male member adjacent the lug 8, thereby ensuring close contact between the connected edges of the garment and resulting in the fastening being completely concealed.

I claim:

1. A button fastening of the type referred to, comprising a domed shell constituting a female member having a flange, there being means in said flange for fastening said shell to a garment, said shell having a diametric slot therein, the ends of said slot being enlarged, a filling piece united to said shell, said filling piece having a convex groove adjacent and parallel to said slot, said groove having a deep recess in one end thereof adjacent to one of said enlarged ends of said slot, a male member having a base, there being means in said base for fastening said male member to a garment, a stem extending from said base, a head on the end of said stem, said head being adapted to engage in

3

said slot, whereby said head is guided in said grooved filling piece within the domed shell and requires to be tilted in the relatively deep end recess of such groove before it can be withdrawn through one of said ends of the slot above such recess.

2. A button fastening according to claim 1, further characterised in that the male and female members are disposed in relatively offset positions when mutually engaged and under strain in a direction longitudinal to the slot.

3. A button fastening according to claim 1, further characterised in that the filling piece is adhesively secured to the underside of the domed shell which latter is formed at opposite sides of its slot with locating projections engaging recesses in the filling piece.

4

4. A button fastening according to claim 1, further characterised in that in side elevation the said groove in the filling piece is curved in conformity with the slot of the female member.

5. A button fastening according to claim 1, further characterised in that the domed shell has relatively wide lugs adjacent opposite ends of the slot.

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