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(12) United States Design Patent

Feng et al.

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(54) **SAFE INJECTION LOCKING NEEDLE**

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(**) Term: **15 Years**

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Related U.S. Application Data

(63) Continuation of application No. 14/562,765, filed on Dec. 7, 2014, now abandoned.

(51) **LOC (12) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/130**

(58) **Field of Classification Search**
USPC D24/127–131, 112–114, 133, 186; 606/181, 185; 604/264, 523–528, 272,
(Continued)

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(57) **CLAIM**

The ornamental design for a safe injection locking needle, as shown and described.

DESCRIPTION

FIG. **1** is a perspective view of the safe injection locking needle according to a preferred embodiment of the present invention, showing a needle received in a transparent needle cap;

FIG. **2** is a partially sectional view of the safe injection locking needle according to the above preferred embodiment of the present invention, illustrating a needle enclosure being unfolded to expose the needle inside the needle cap;

FIG. **3** is a sectional view of the safe injection locking needle according to the above preferred embodiment of the present invention, illustrating the needle enclosure being folded to enclose the needle after the needle cap is detached therefrom;

FIG. **4** is a perspective view of a lockable needle arrangement of the safe injection locking needle according to the above preferred embodiment of the present invention;

FIG. **5** is a sectional view of the needle enclosure of the lockable needle arrangement along a sectional line A-A in FIG. **3** according to the above preferred embodiment of the present invention, illustrating the needle cap received at an enlarged cap cavity;

FIG. **6** is a sectional view of the needle enclosure of the lockable needle arrangement along a sectional line A-A in FIG. **3** according to the above preferred embodiment of the present invention, illustrating the needle received at a narrowed needle cavity after the needle cap is detached from the needle;

FIG. **7** is a sectional view of a locker unit of the lockable needle arrangement along a sectional line B-B in FIG. **3** according to the above preferred embodiment of the present invention;

FIG. **8** illustrates an alternative mode of a locker unit of the lockable needle arrangement according to the above preferred embodiment of the present invention, illustrating each

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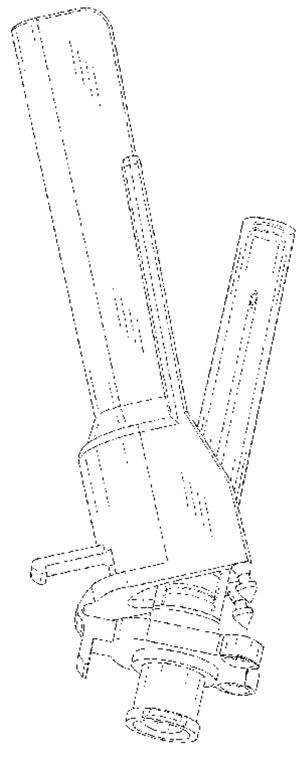

locking protrusion having a slit and comparing with FIG. **4** in which no slit is formed at the locking protrusion; and, FIG. **9** illustrates an alternative mode of a locking platform of the lockable needle arrangement according to the above preferred embodiment of the present invention, illustrating an integrated structure of a locking platform with a needle seat and comparing with FIG. **3** to show non-integrated structure of the locking platform.

1 Claim, 9 Drawing Sheets

(58) **Field of Classification Search**

USPC 604/187, 158, 164.01–164.11, 181, 184, 604/227; 600/101, 139, 143; 128/200.24, 207.14, 207.15

CPC A61M 5/178; A61M 3/00; A61M 5/20; A61M 5/31; A61M 5/3146; A61M 5/3129; A61M 5/3148; A61M 5/315

See application file for complete search history.

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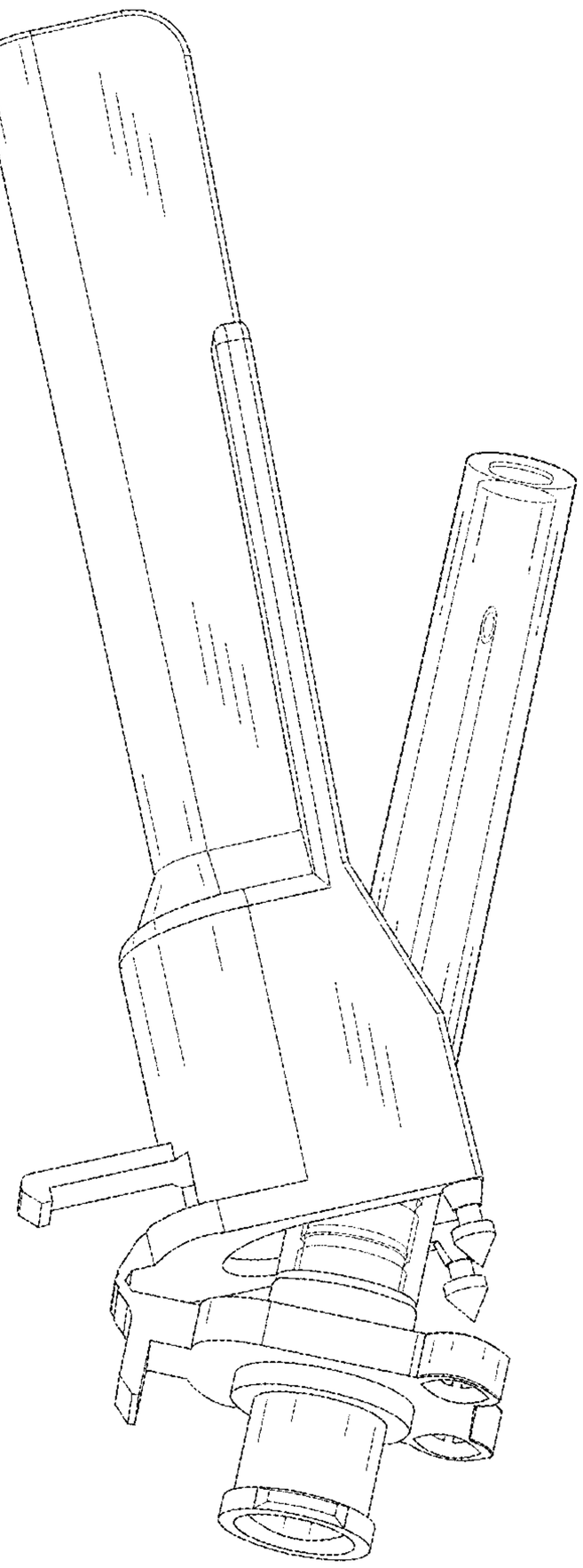

FIG.1

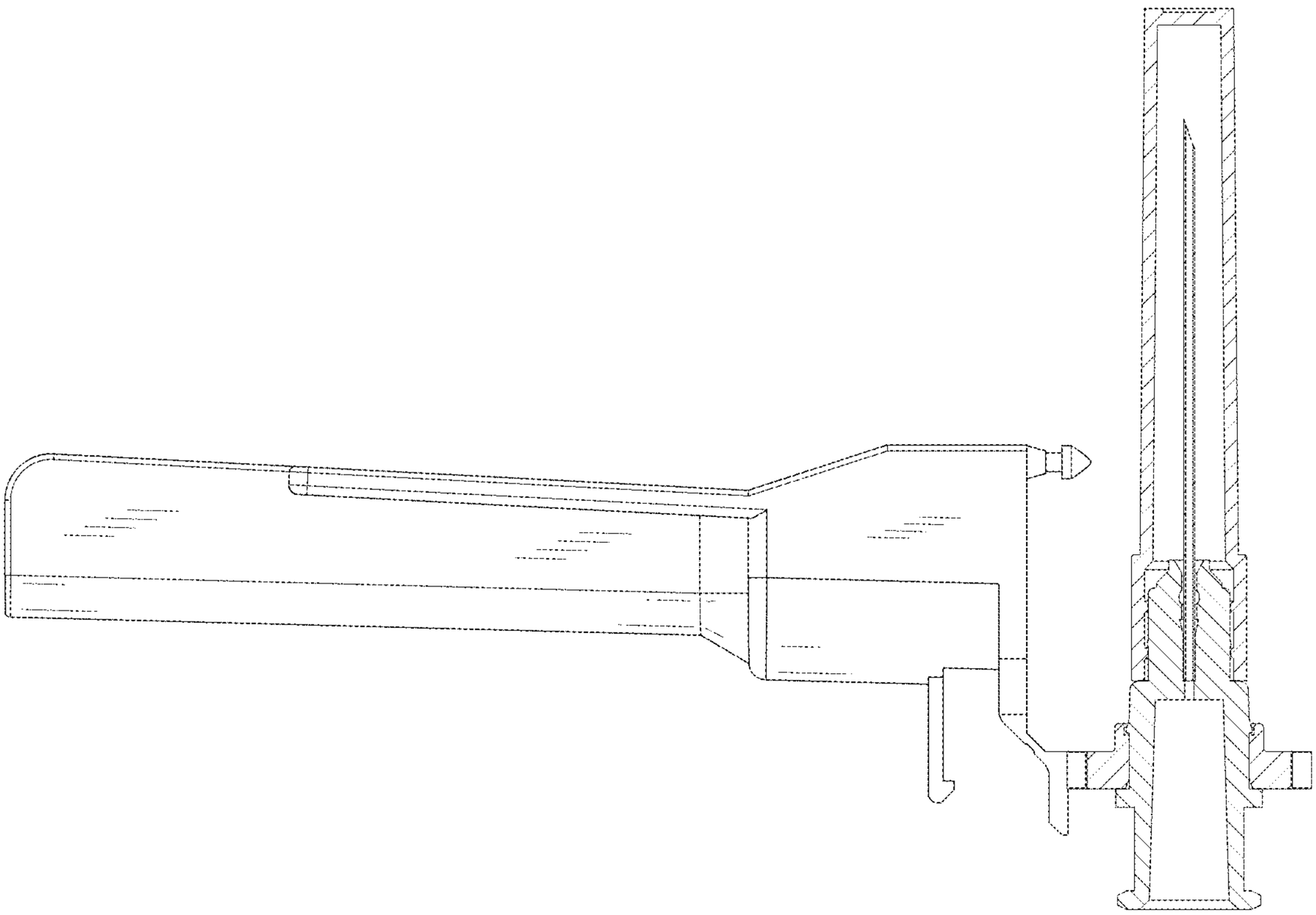

FIG.2

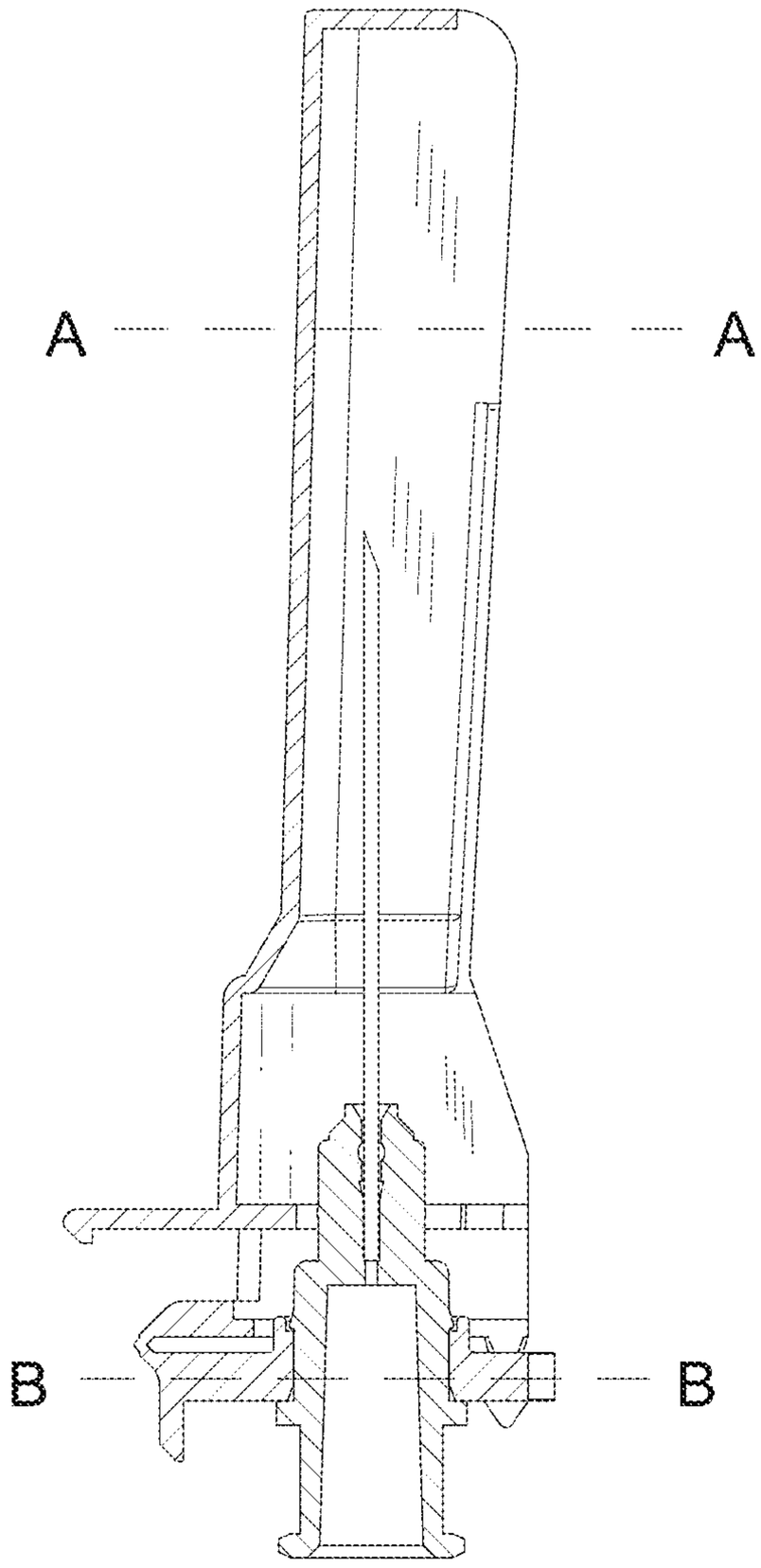

FIG.3

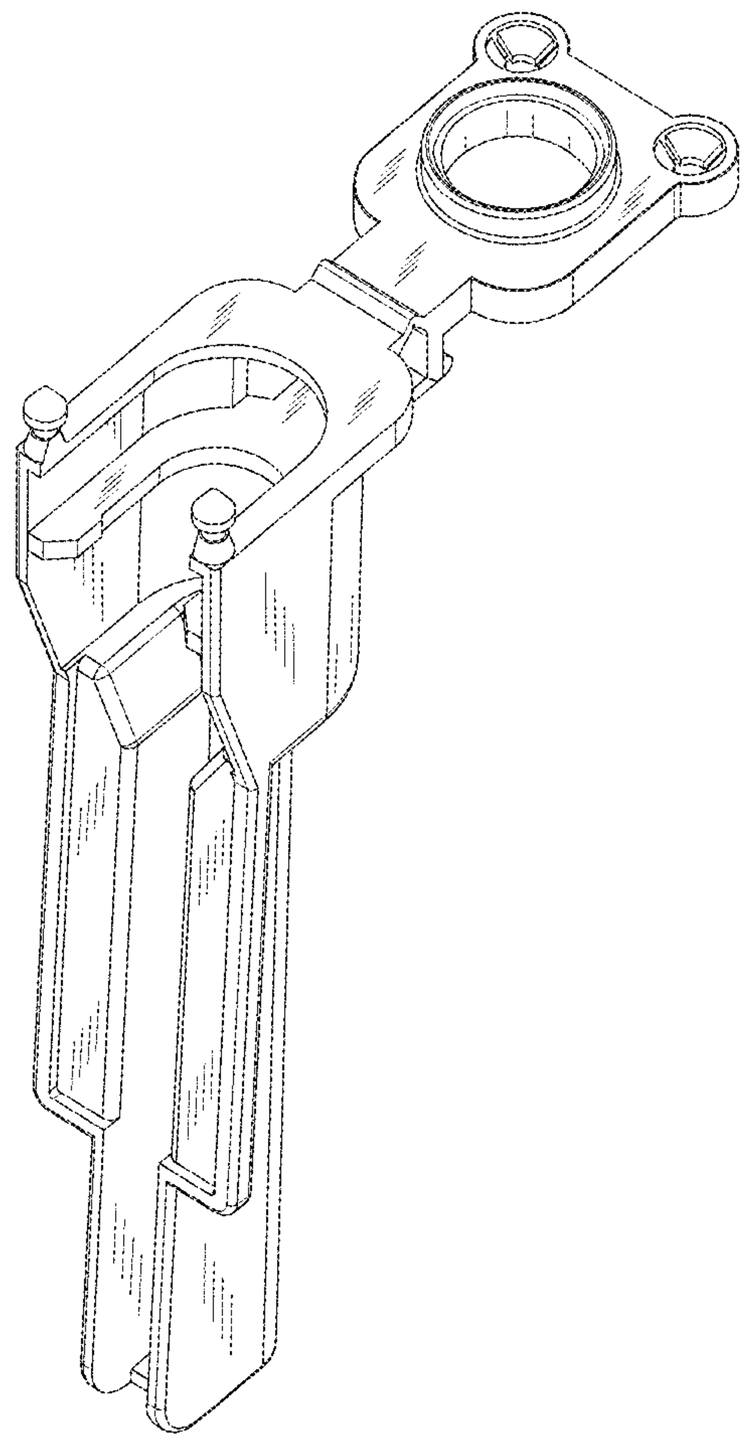

FIG.4

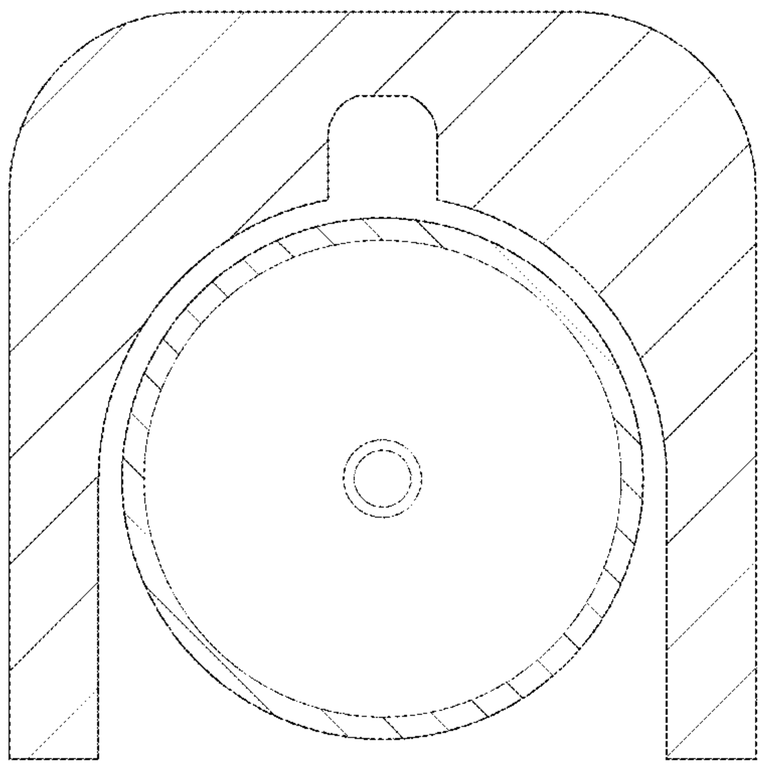

FIG.5

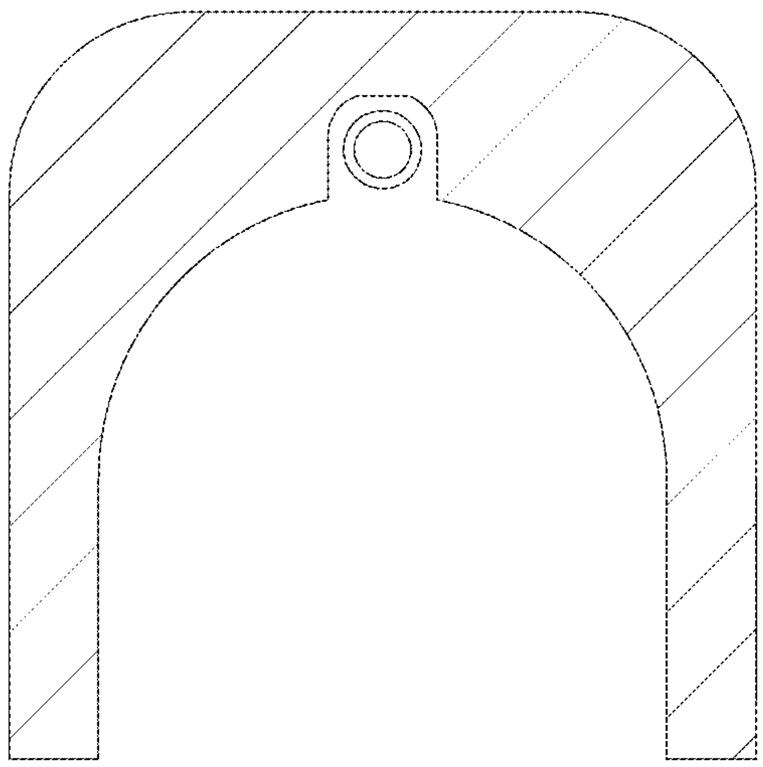

FIG.6

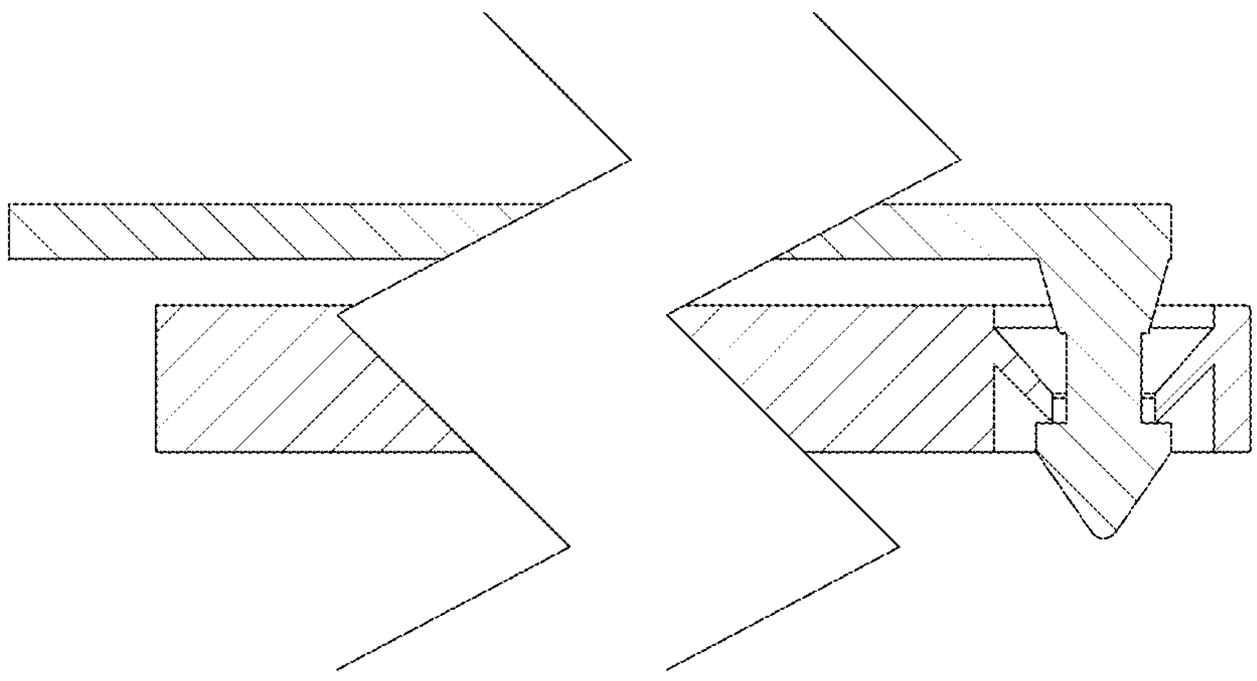

FIG.7

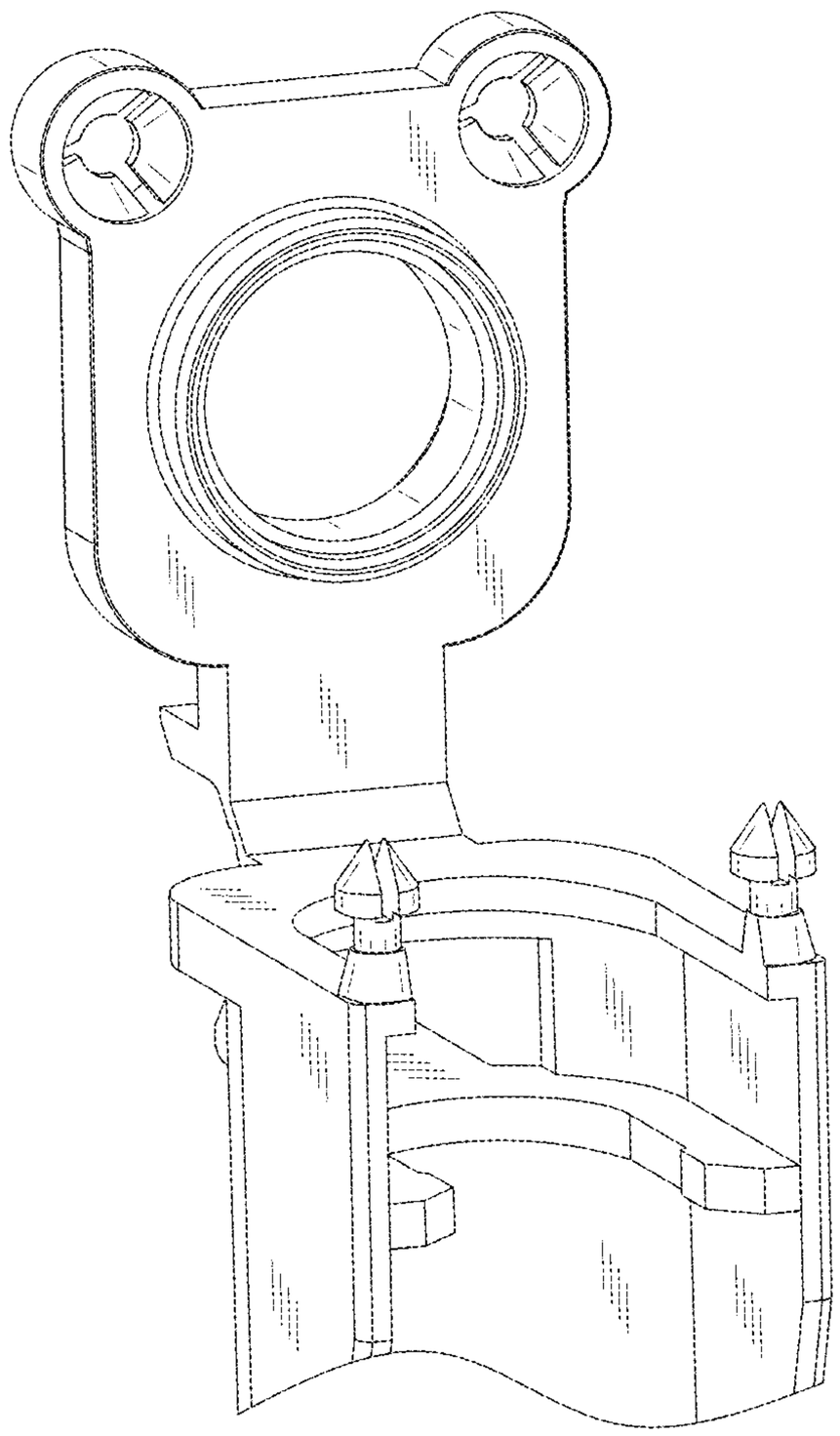

FIG.8

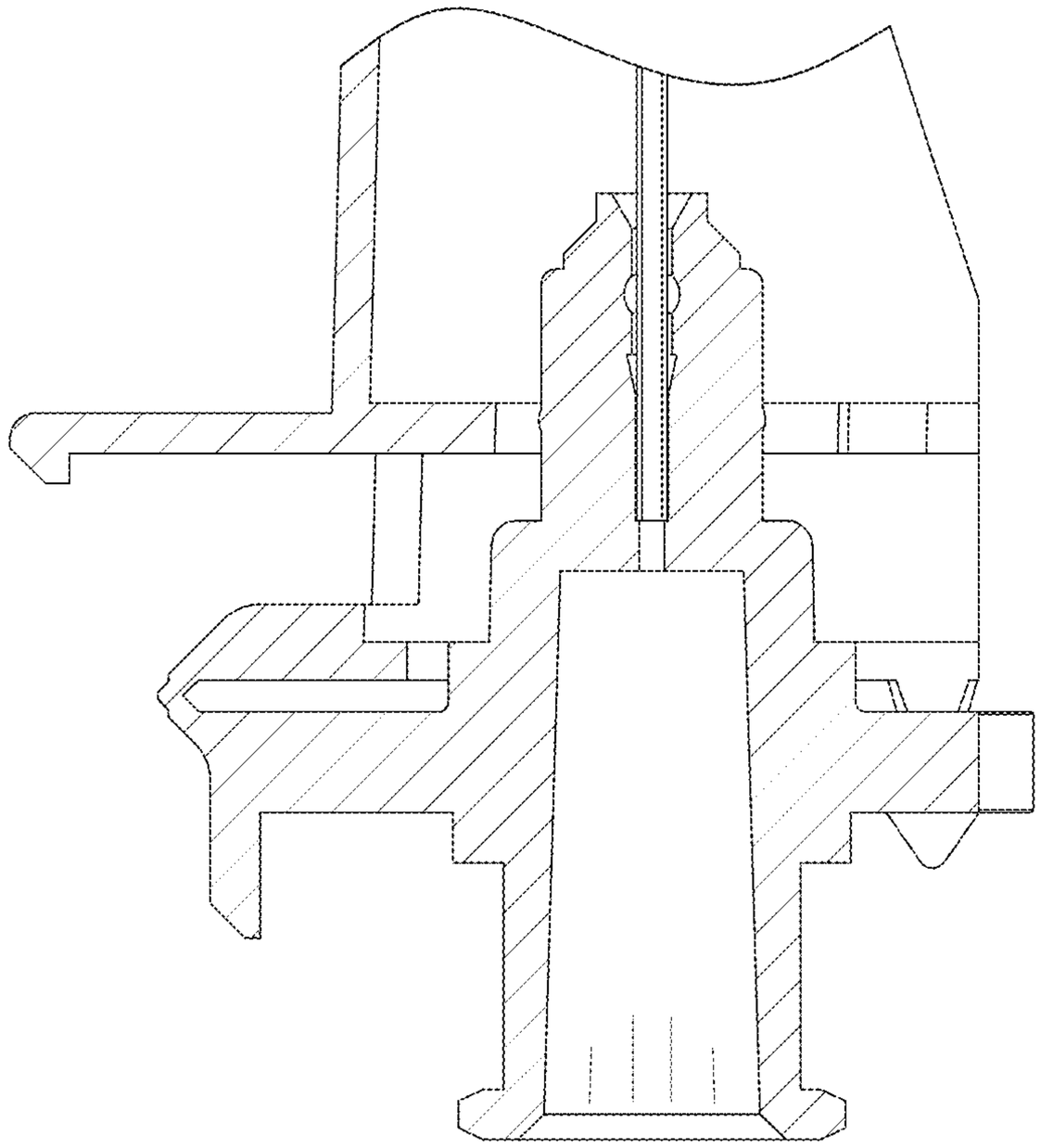

FIG.9