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United States Patent [19]

Collett et al.

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[45] **Date of Patent:** May 14, 1996

[54] **CONFORMANT COMPACT PORTABLE CELLULAR PHONE CASE SYSTEM AND CONNECTOR**

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[73] Assignee: **Cycomm Corporation**, Portland, Oreg.

[21] Appl. No.: **374,926**

[22] Filed: **Jan. 18, 1995**

[51] **Int. Cl.**⁶ **H04B 1/034**; H04B 1/38; H04Q 7/32

[52] **U.S. Cl.** **455/89**; 455/90; 455/349; 455/351; 379/58; 379/450

[58] **Field of Search** 455/33.1, 89, 90, 455/128, 344, 348-351; 379/58, 441, 446-450, 454, 455

[56] **References Cited**

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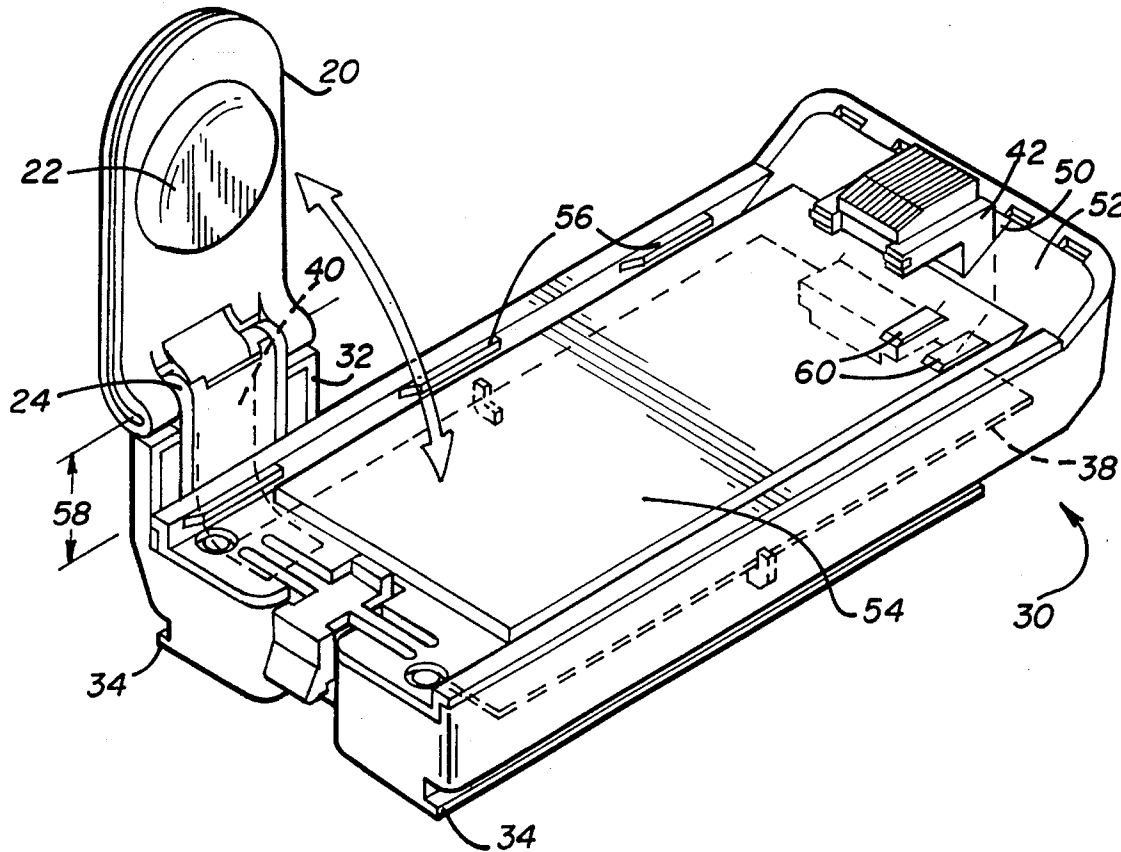
Primary Examiner—Chi H. Pham

Attorney, Agent, or Firm—Fliesler, Dubb, Meyer & Lovejoy

[57] **ABSTRACT**

A compact portable cellular telephone extension that provides additional electronic functions is implemented in a case attachable to a first external surface of the cellular phone to form a physically integral unit. A connector is supported by the case and couples the extension electronics to the cellular phone electronics. The connector connects through a second external surface of the cellular phone that lies in a plane different from the plane of the first external surface. A speaker arm extends from the case and supports a speaker unit. The speaker arm is positionable in a first position adjacent a third external surface of the cellular phone and in a second position away from the third external surface allowing the case to be readily attached and detached.

12 Claims, 10 Drawing Sheets



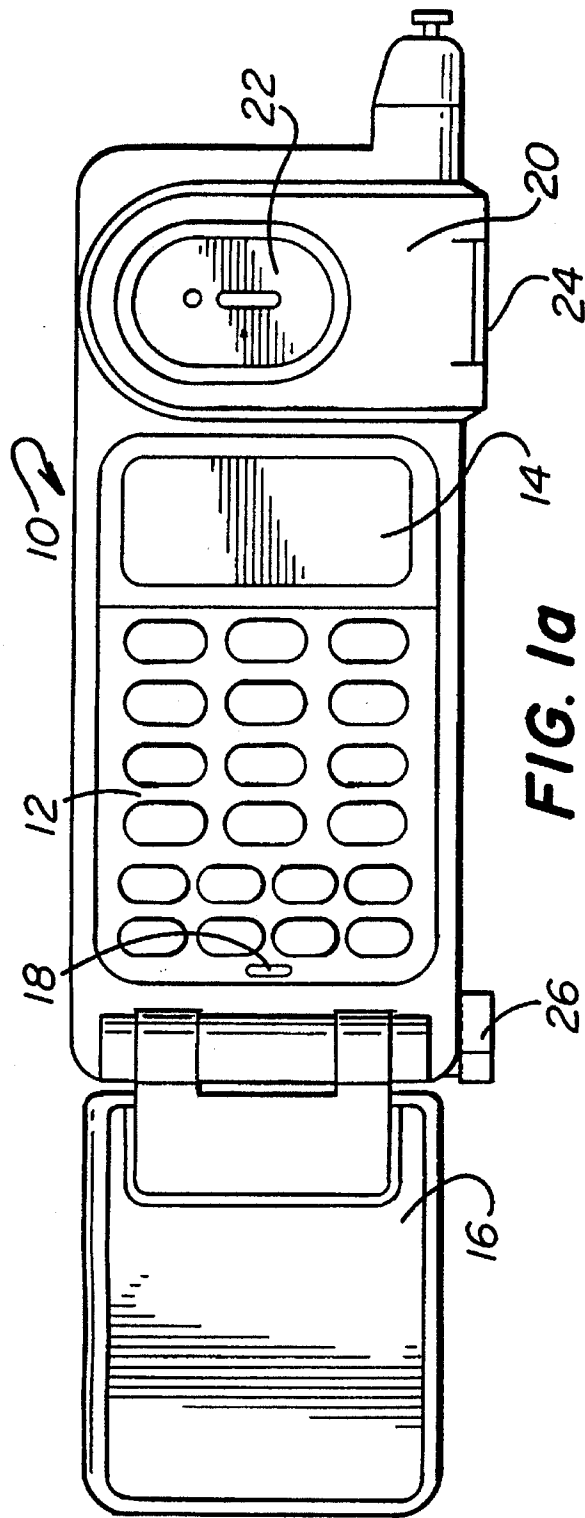


FIG. 1a

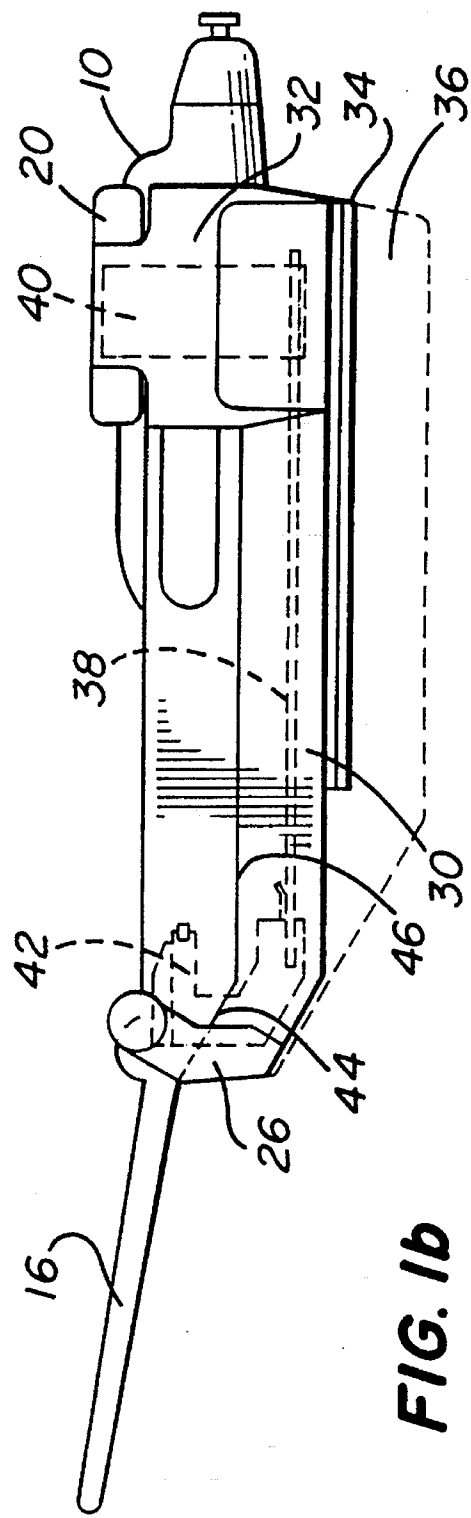


FIG. 1b

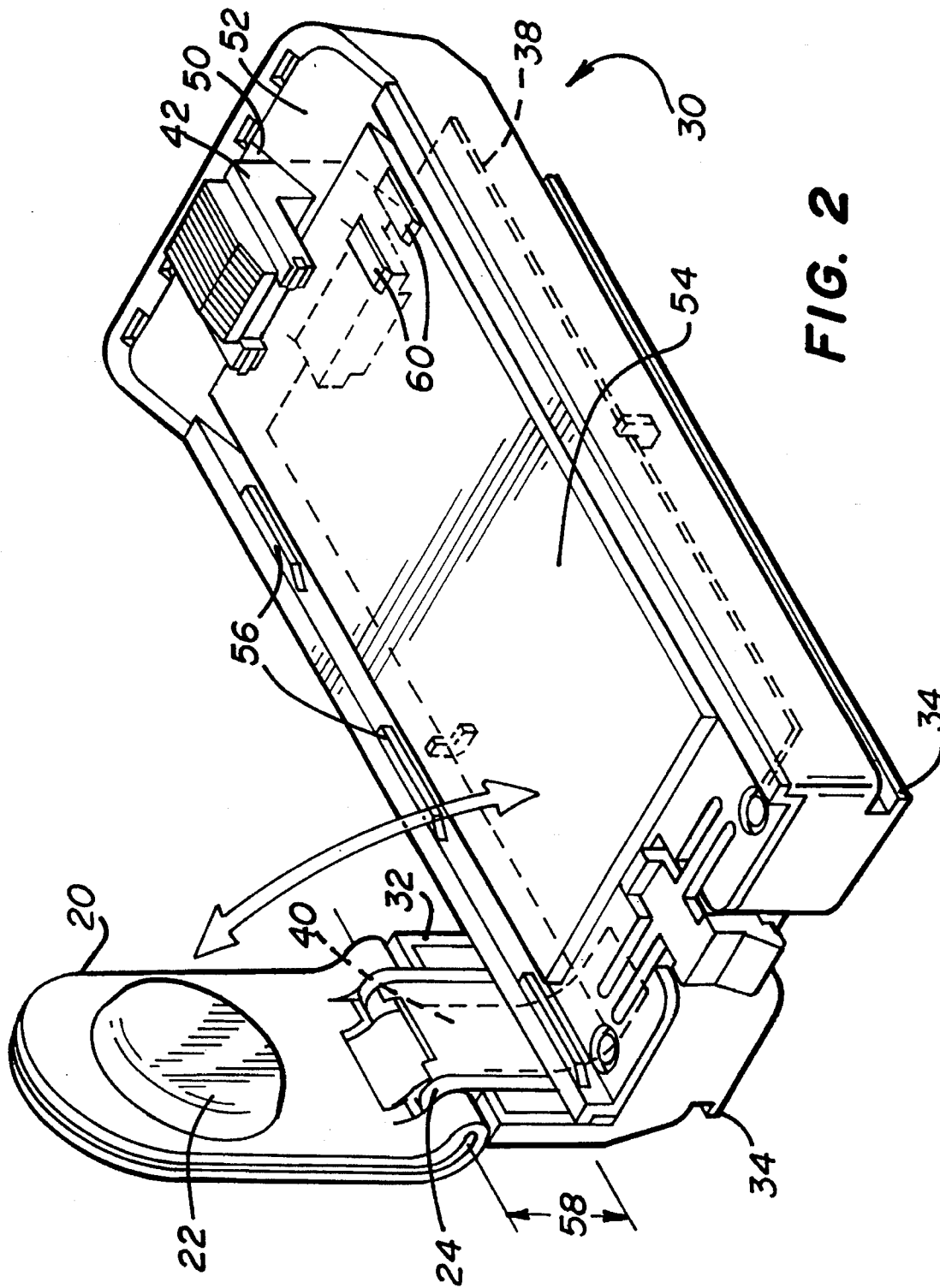


FIG. 2

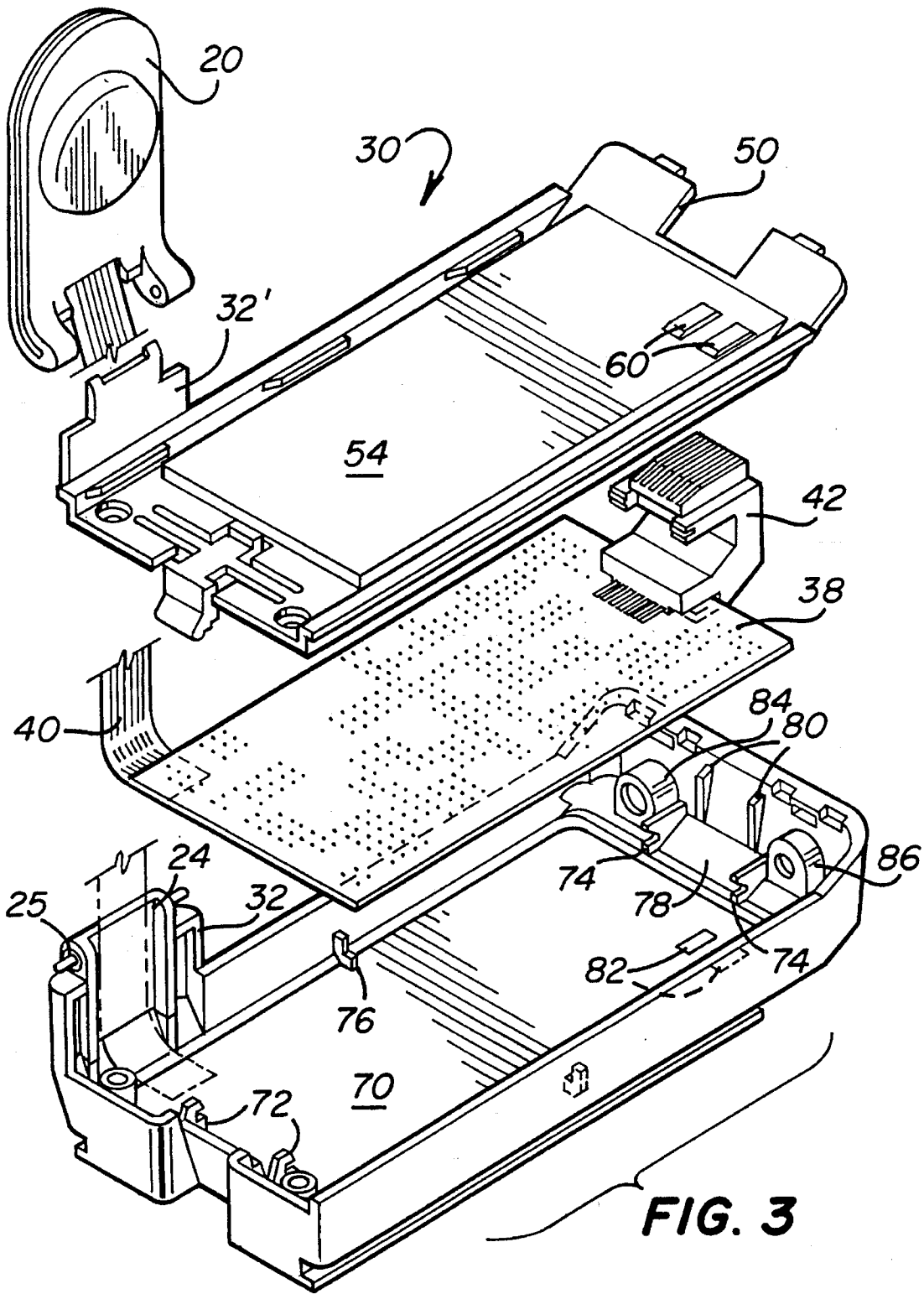
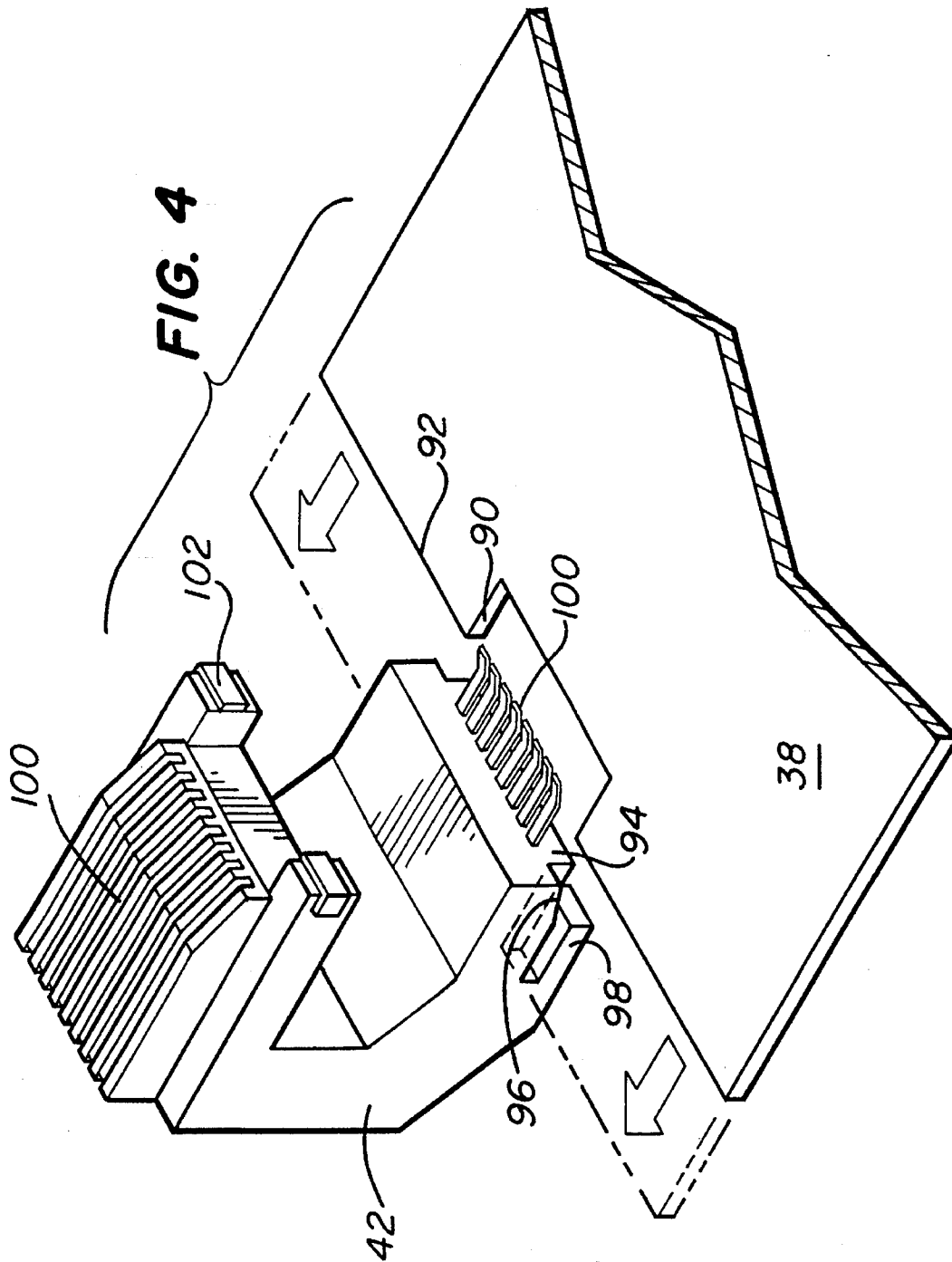


FIG. 3



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