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Bates et al.

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(54) **ASSAYING DEVICE CONSISTING OF THE TEST CARTRIDGE OR CASSETTE WITH A CAP OR COVER WHICH ATTACHES ONTO THE CARTRIDGE OR CASSETTE TO COVER AND SEAL THE WELL OR OPENING INTO WHICH THE SAMPLE HAS BEEN DEPOSITED**

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(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(52) **U.S. Cl.** 422/58; 422/61; 436/165;
436/169; 435/305.3; 435/305.4

(58) **Field of Search** 422/56, 58, 61,
422/102, 99-100, 103-104; 436/164, 165,
166, 169, 174, 808; 206/528, 538, 539;
435/287.1, 304.1, 304.2, 305.3, 305.4

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,785,057	A	*	3/1957	Schwab et al.	422/58
3,884,641	A	*	5/1975	Krafczyk et al.	422/56
4,624,929	A	*	11/1986	Ullman	436/179
4,981,786	A	*	1/1991	Dafforn et al.	422/102
5,380,492	A	*	1/1995	Seymour	422/56
5,504,013	A	*	4/1996	Senior	422/56
5,683,659	A	*	11/1997	Hovatter	422/56
5,897,840	A	*	4/1999	Owens et al.	422/102
5,962,336	A	*	10/1999	Sun	422/61
5,976,895	A	*	11/1999	Cipkowski	422/102

FOREIGN PATENT DOCUMENTS

WO 97/33519 * 9/1997

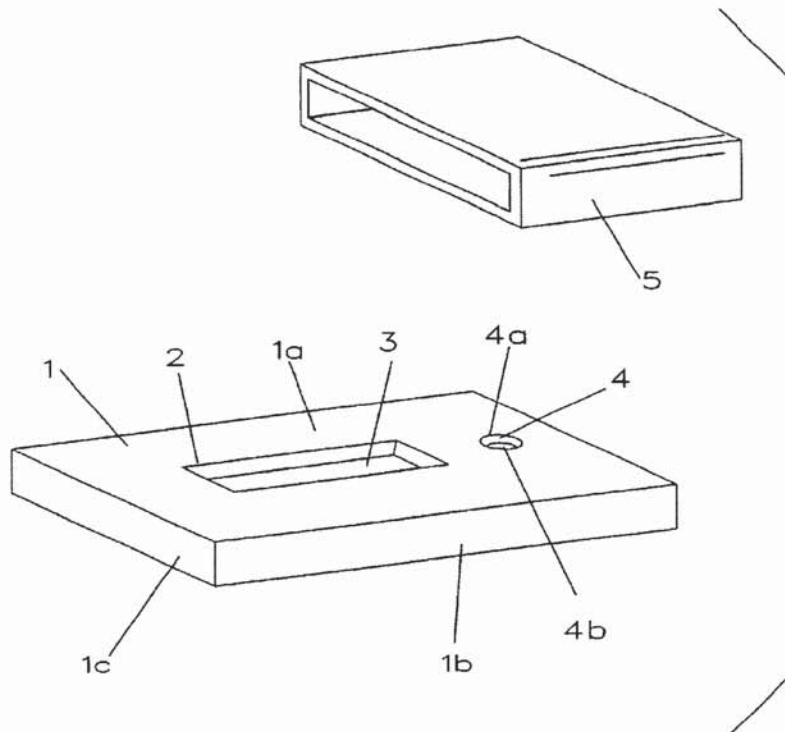
* cited by examiner

Primary Examiner—Lyle A. Alexander

(57) **ABSTRACT**

An assaying device composed of a test cartridge/cassette and cap/cover. When attached, the cap/cover seals the top of a sample well/opening on the cartridge/cassette in a fluid tight manner, to protect from contact with and contamination of the tested sample (for example, urine for drug testing), provide easier, cleaner handling of the test cartridge/cassette and prevent intermixing of another sample.

20 Claims, 4 Drawing Sheets



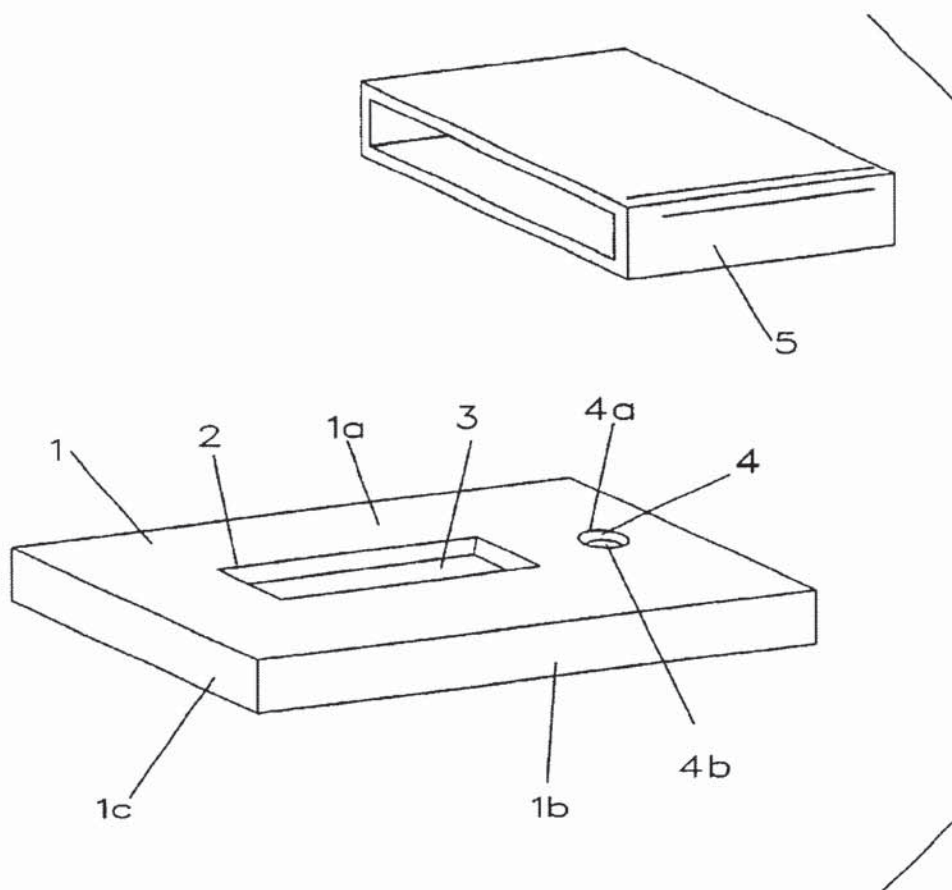


FIG. 1

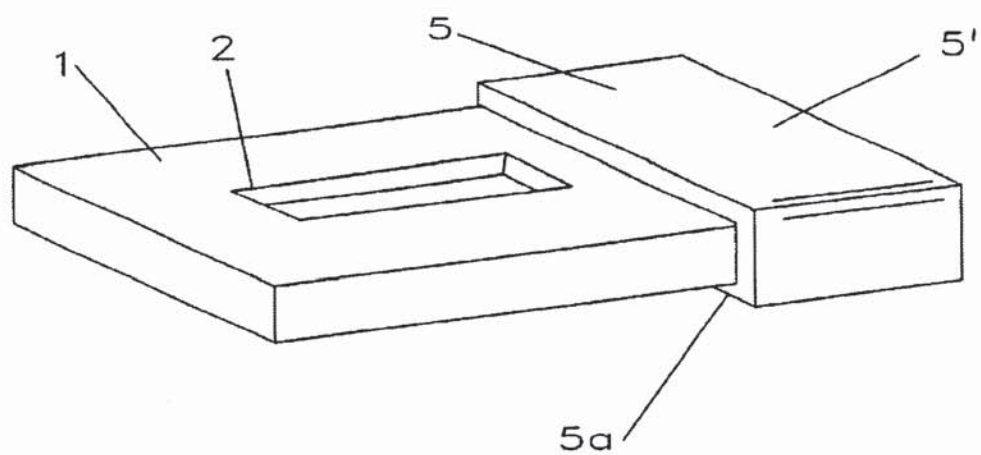


FIG. 2

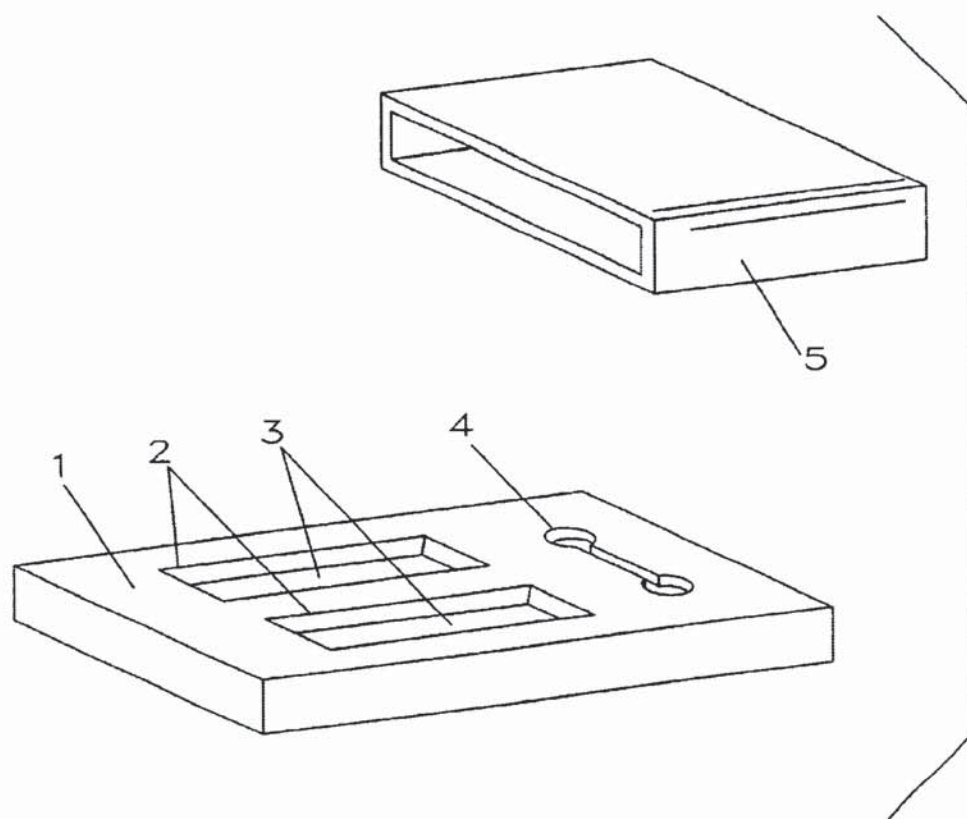


FIG. 3

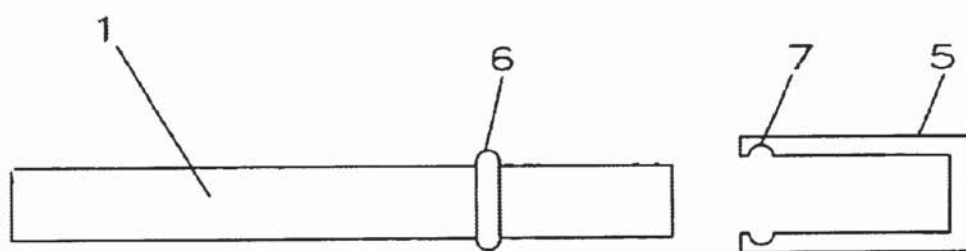


FIG. 4

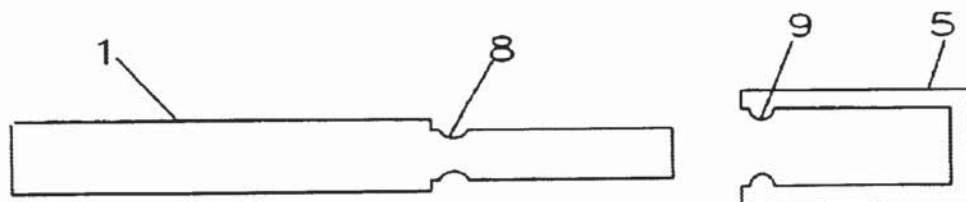


FIG. 5

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