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May et al.

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[54] ASSAYS

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[*] Notice: The term of this patent shall not extend beyond the expiration date of Pat. No. 5,599,721.

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Related U.S. Application Data

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[30] Foreign Application Priority Data

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[51] **Int. Cl.⁶** **G01N 33/558**

[52] **U.S. Cl.** **436/514; 436/501; 436/518; 436/523; 436/524; 436/525; 436/530; 436/541; 436/810; 436/814; 436/817; 436/818; 436/906; 435/962; 435/970; 435/975; 427/2.13; 422/60**

[58] **Field of Search** **422/56-58, 60; 436/501, 530, 514, 810, 814, 515, 518, 523, 524, 541, 817, 818, 906; 435/7.92-7.95, 970, 810, 962, 975; 427/2, 2.11, 2.13**

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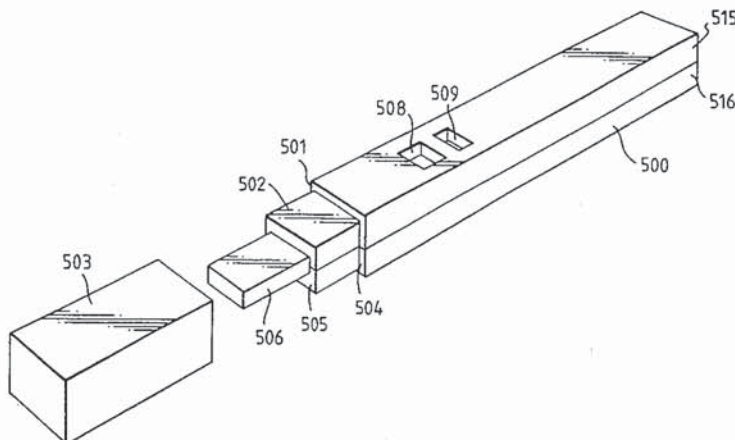
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[57] ABSTRACT

An analytical test device useful for example in pregnancy testing, includes a hollow casing (500) constructed of moisture-imperious solid material, such as plastics materials, containing a dry porous carrier (510) which communicates indirectly with the exterior of the casing via a bibulous sample receiving member (506) which protrudes from the casing such that a liquid test sample can be applied to the receiving member and permeate therefrom to the porous carrier, the carrier containing in a first zone a labelled specific binding reagent is freely mobile within the porous carrier when in the moist state, wherein the mobility is facilitated by a material comprising sugar, in a amount effective to reduce interaction between the test strip and the labelled reagent, and in a second zone spatially distinct from the first zone unlabeled specific binding reagent for the same analyte which unlabelled reagent is permanently immobilized on the carrier material and is therefore not mobile in the moist state, the two zones being arranged such that liquid sample applied to the porous carrier can permeate via the first zone into the second zone, and the device incorporating an aperture (508) in the casing, enabling the extent (if any) to which the labelled reagent becomes bound in the second zone to be observed. Preferably the device includes a removable cap for the protruding bibulous member.

34 Claims, 5 Drawing Sheets



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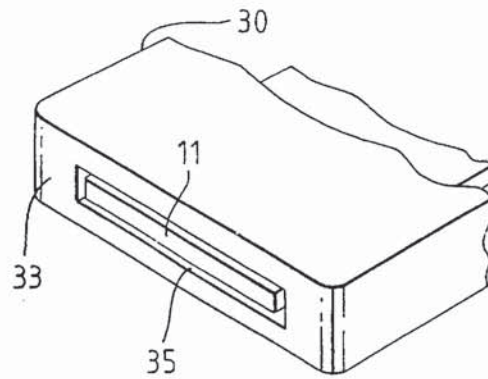
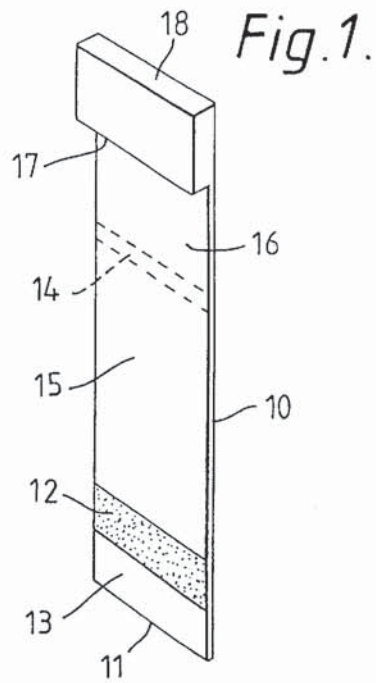


Fig. 5.

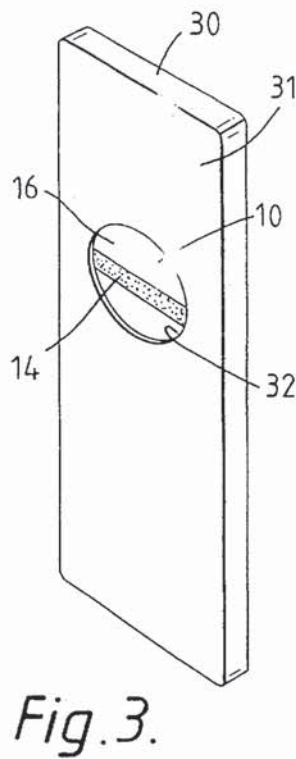
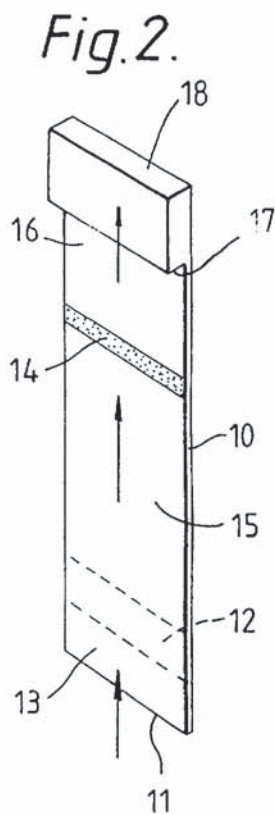


Fig. 3.

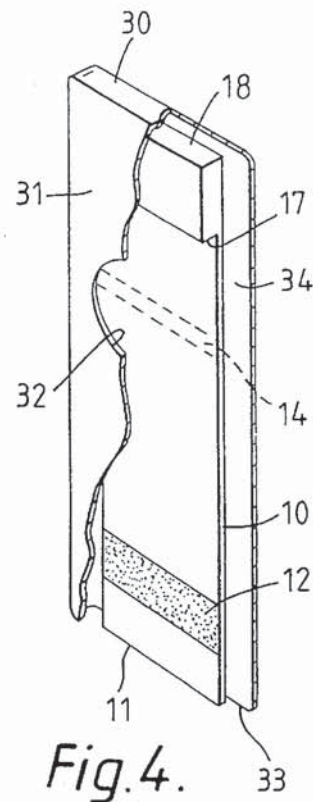
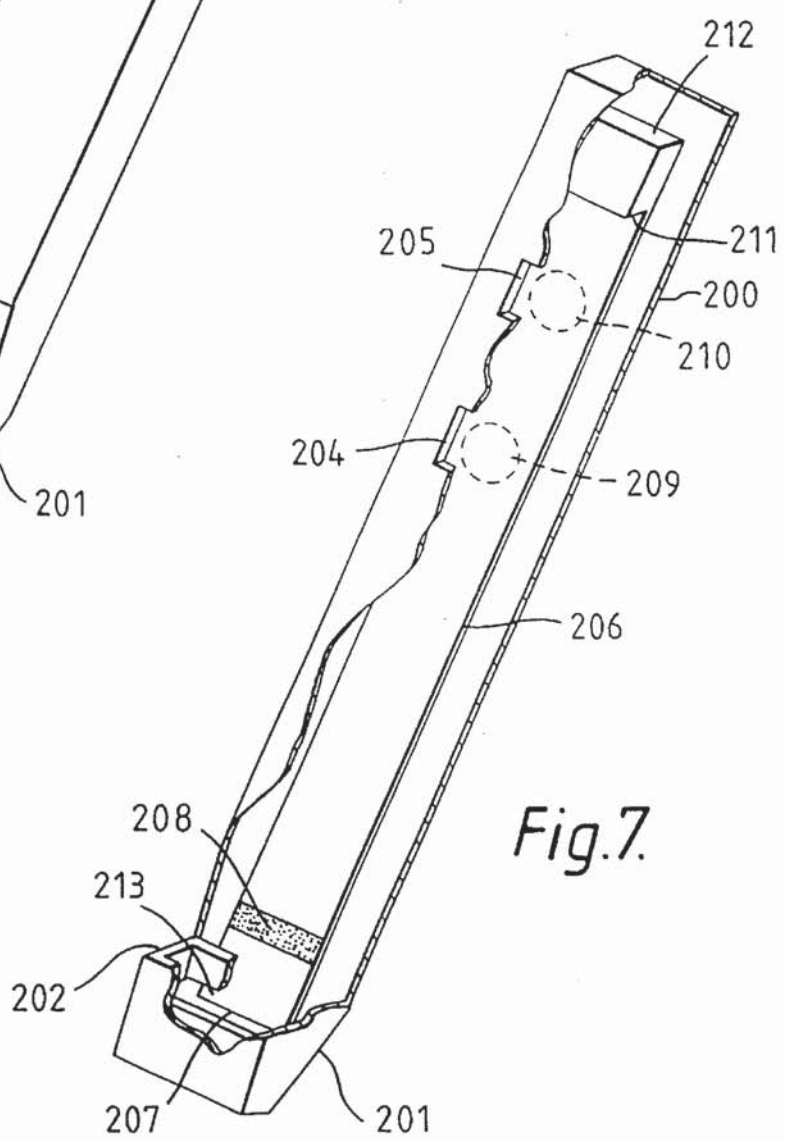
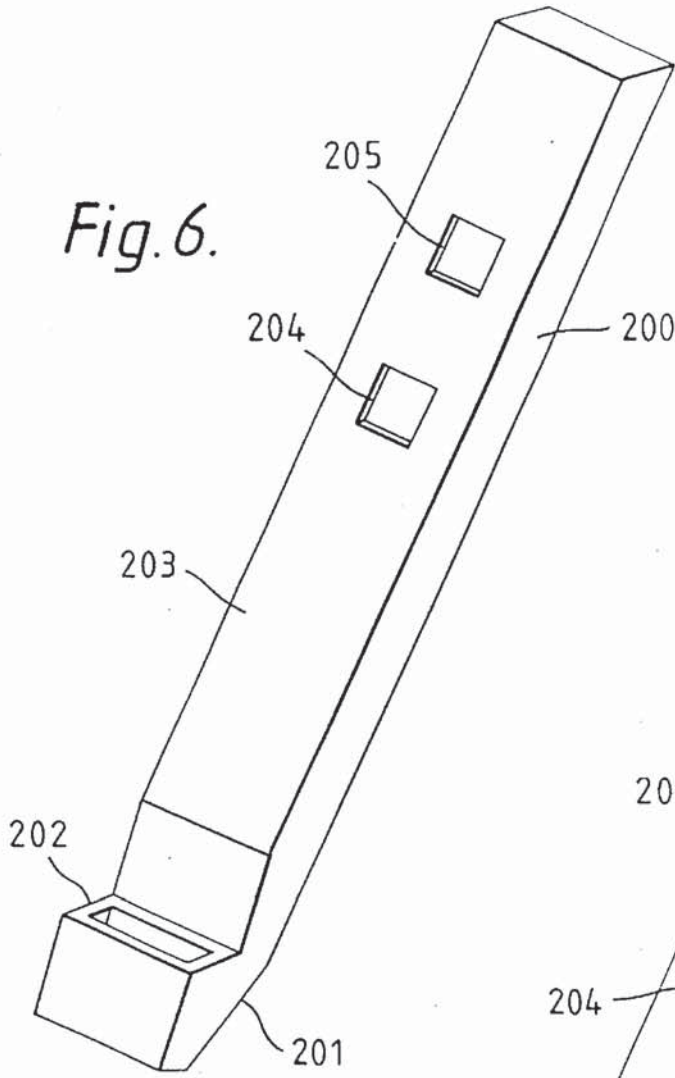


Fig. 4.



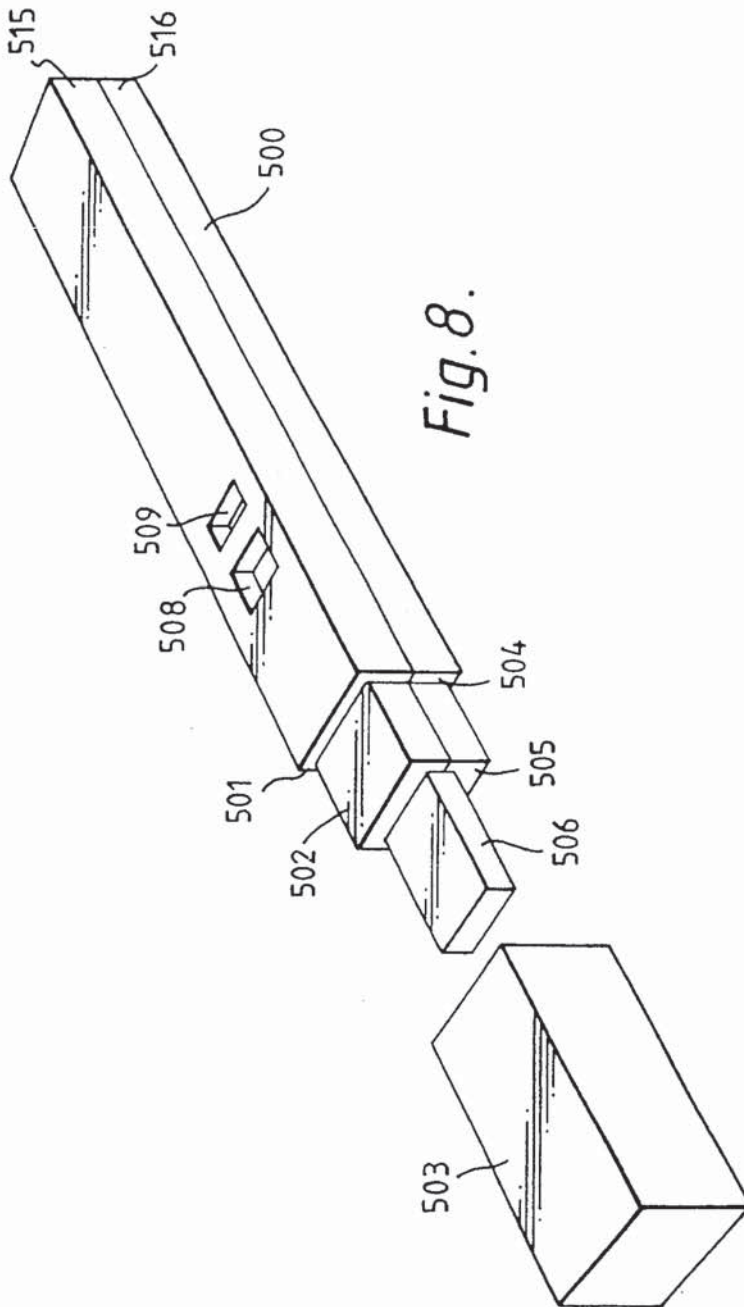


Fig. 8.

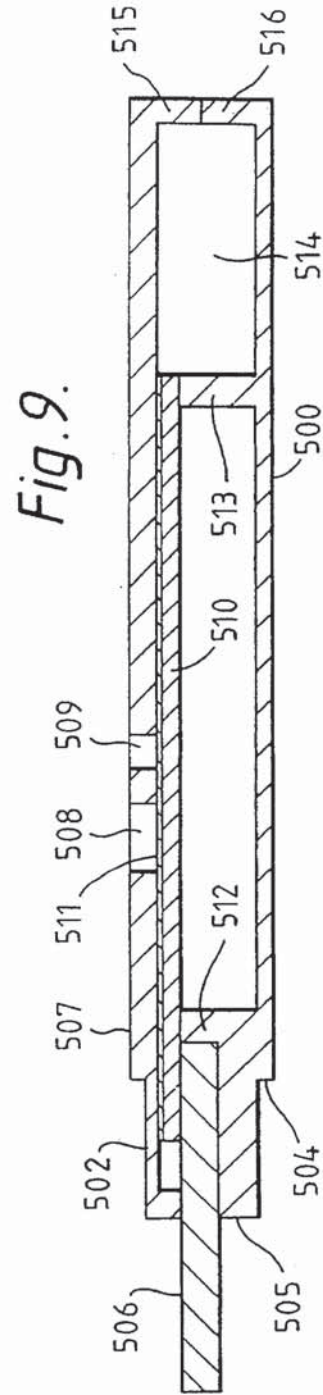


Fig. 9.

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