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- Declarations under Rule 4.17:**
- as to the identity of the inventor (Rule 4.17(i))
 - as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
 - as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))
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(54) **Title:** A HYBRID TOF-PET/CT TOMOGRAPH COMPRISING POLYMER STRIPS MADE OF SCINTILLATOR MATERIAL

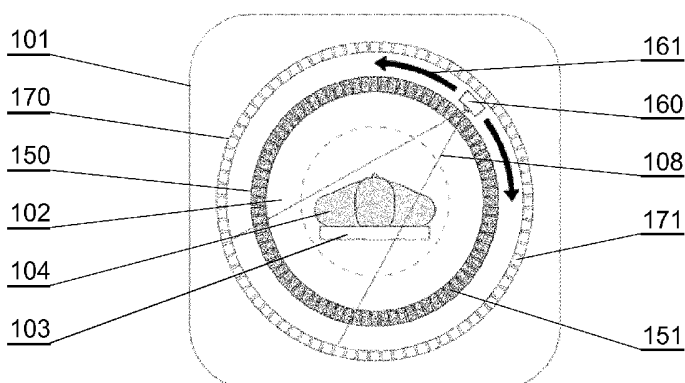


Fig. 1

(57) **Abstract:** A hybrid TOF-PET/CT tomograph comprising a detection chamber, gamma radiation detectors, X-ray detectors and a movable X-ray source, wherein the gamma radiation detectors (150, 250, 350, 450, 550) and the X-ray detectors (170, 270, 370, 470, 570) surround the detection chamber (102, 202, 302, 402, 502) around the whole perimeter of the detection chamber (102, 202, 302, 402, 502), and wherein the gamma radiation detectors (150, 250, 350, 450, 550) are located closer to the longitudinal axis (115, 215, 315, 415, 515) of the detection chamber (102, 202, 302, 402, 502) than the X-ray detectors (170, 270, 370, 470, 570), and wherein the gamma radiation detectors (150, 250, 350, 450, 550) comprise polymer strips (151, 251, 351, 451, 551) made of a scintillation material having a density lower than the density of the X-ray radiation detectors (171, 271, 371, 471, 571).

