

[54] **BIPLANAR VARIABLE ANGLE X-RAY EXAMINING APPARATUS**

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**Related U.S. Application Data**

[63] Continuation-in-part of Ser. No. 67,605, Aug. 20, 1979, abandoned, and a continuation-in-part of Ser. No. 148,298, May 9, 1980, abandoned.

[51] Int. Cl.<sup>3</sup> ..... **A61B 6/00**

[52] U.S. Cl. .... **378/196; 378/62**

[58] Field of Search ..... 378/196, 190, 179, 197, 378/174, 181, 41, 42, 62, 9, 6, 87, 89

[56] **References Cited**

**U.S. PATENT DOCUMENTS**

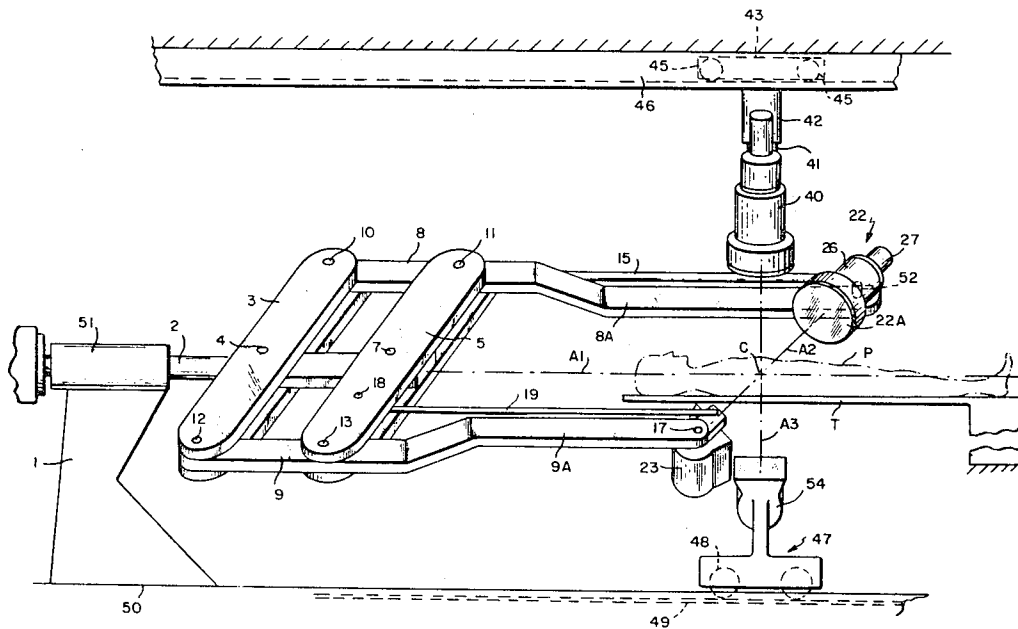
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*Attorney, Agent, or Firm*—James H. Grover

[57] **ABSTRACT**

X-ray apparatus is shown in which there are two radiological sets, each set including an X-ray tube and radiation receptor (e.g., film holder or image intensifier) and means supporting them on a common radiation axis. The two radiation axes of the respective radiological sets intersect at an isocenter at which the subject of examination, e.g., the human heart, may be located; and at least one set is rotatable on a rotation axis through the isocenter and perpendicular to the radiation axes independently of, and relative to, the radiation axis of the other set. One or both of the sets may be retracted from alignment with the isocenter without disturbing the patient to allow unobstructed access and both sets may be independently rotatable.

**23 Claims, 15 Drawing Figures**



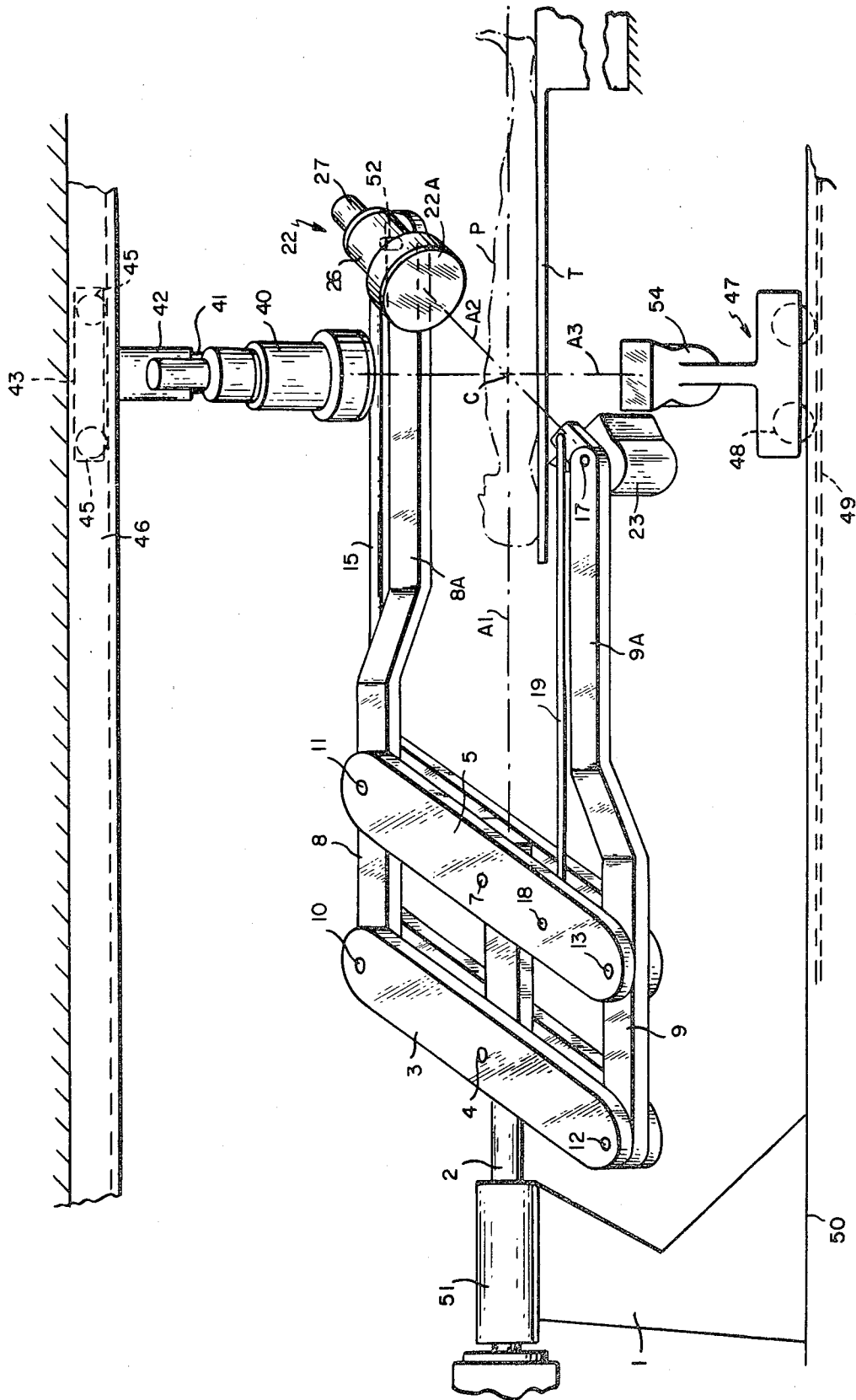


FIG. 1

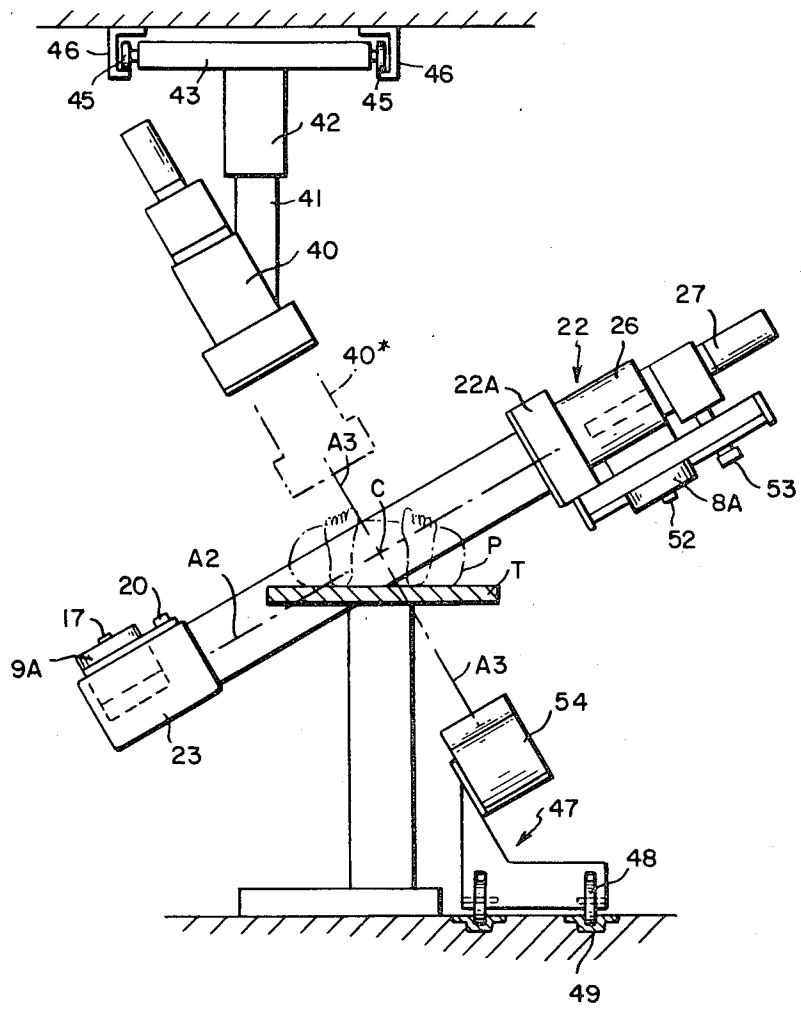
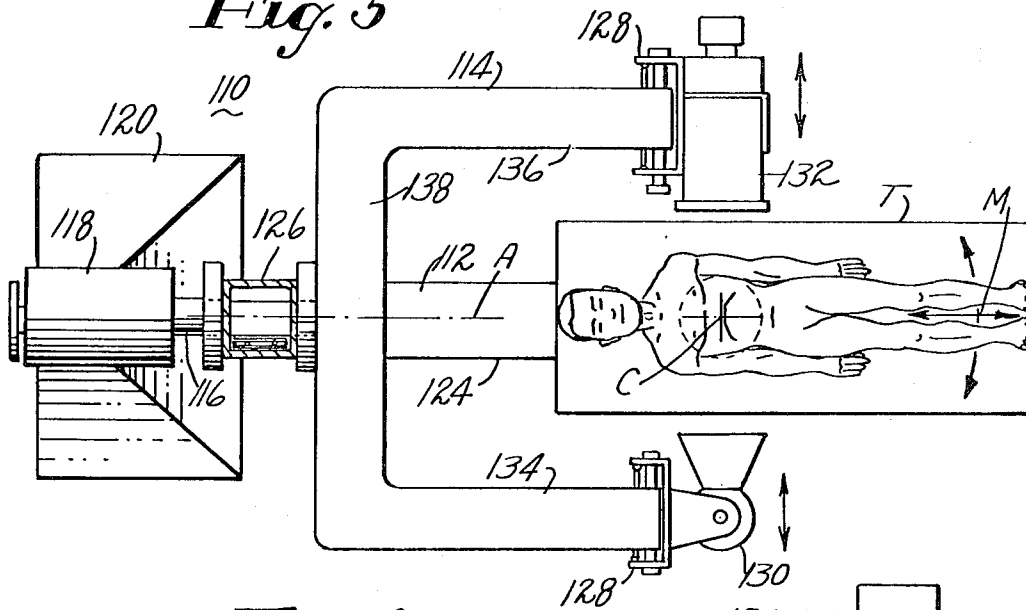


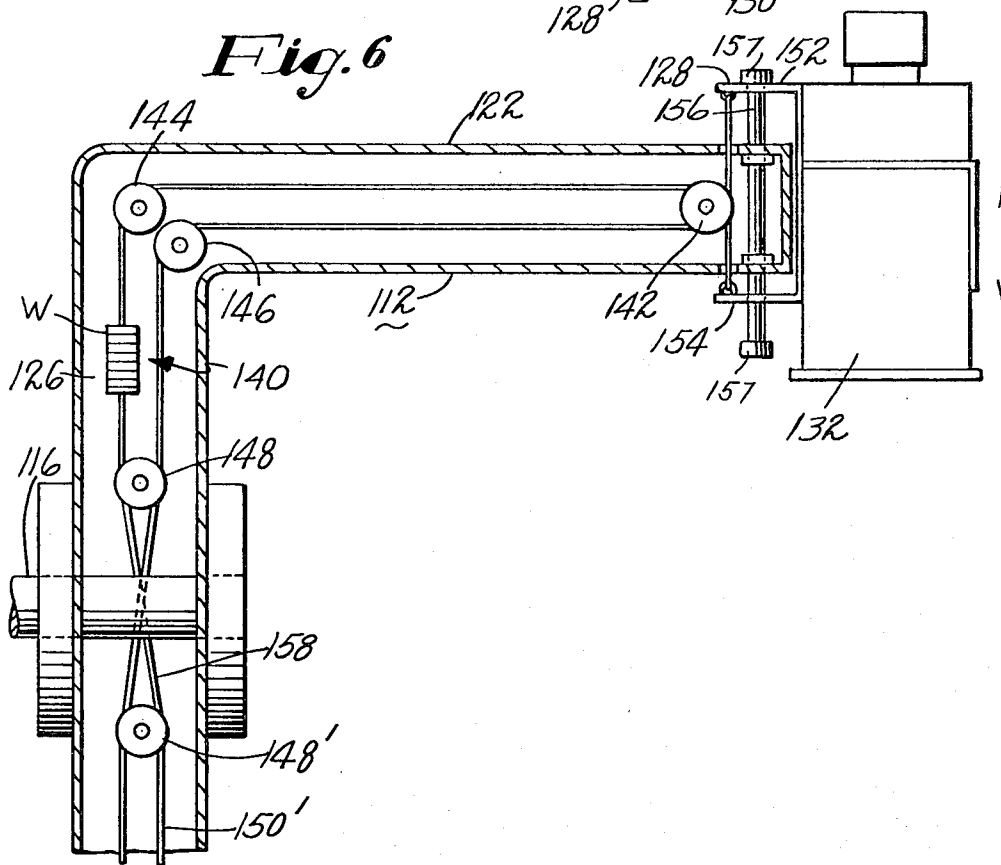
FIG. 2



*Fig. 5*



*Fig. 6*



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