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(54) **MULTI-DIMENSIONAL NAVIGATION OF
ENDOSCOPIC VIDEO**

(76) Inventors: **Abhishek Gattani**, San Jose, CA
(US); **Salmaan Hameed**, San Jose,
CA (US)

Correspondence Address:
BLAKELY SOKOLOFF TAYLOR & ZAFMAN
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

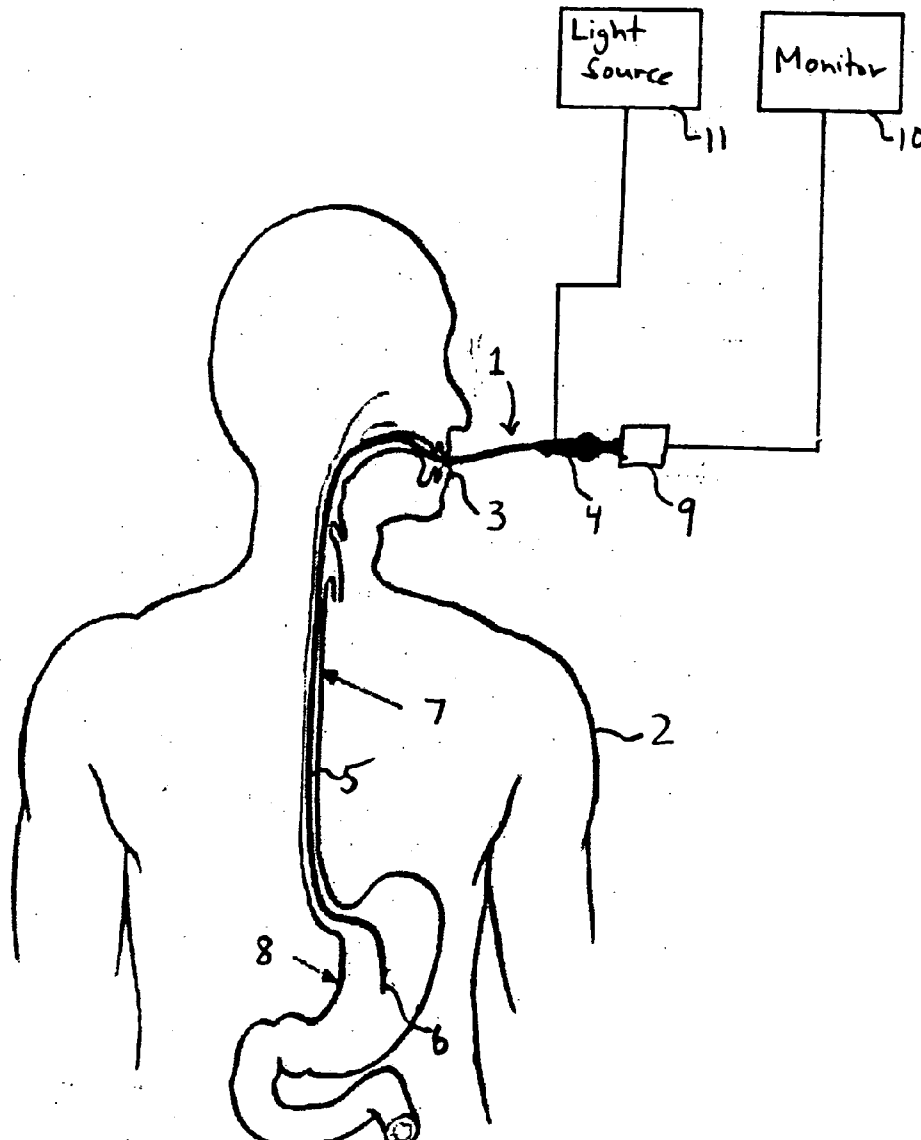
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(57) **ABSTRACT**

An endoscopic surgical navigation system comprises a multi-dimensional video generation module that enables a user to visually navigate captured endoscopic video with six degrees of freedom. This capability provides the user with control of a virtual camera (point of view) that can be translated in three orthogonal axes in 3-D space as well as allowing control of vertical panning (pitch), horizontal panning (yaw) and tilt (roll) of the virtual camera, as well as zoom.



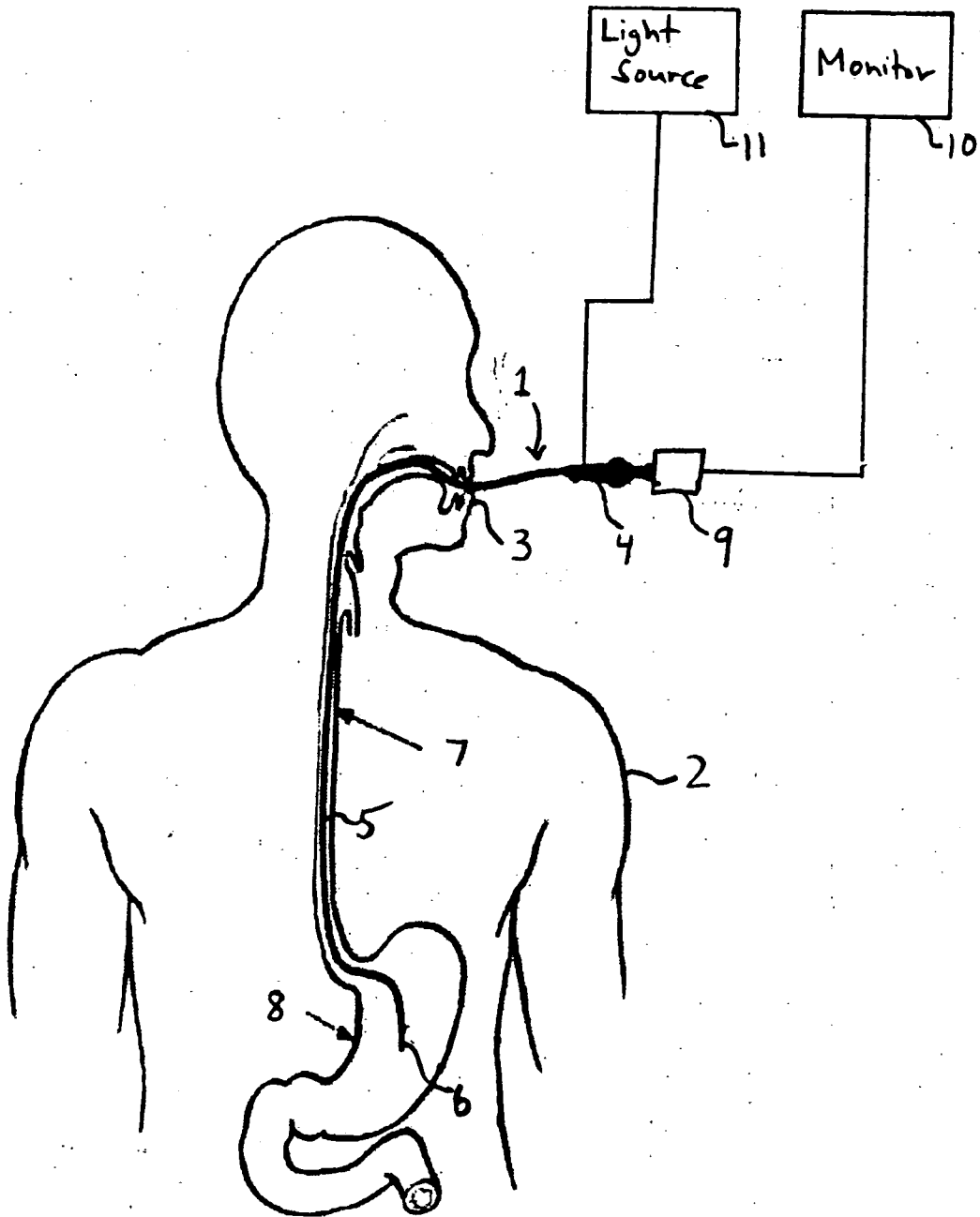


FIG. 1

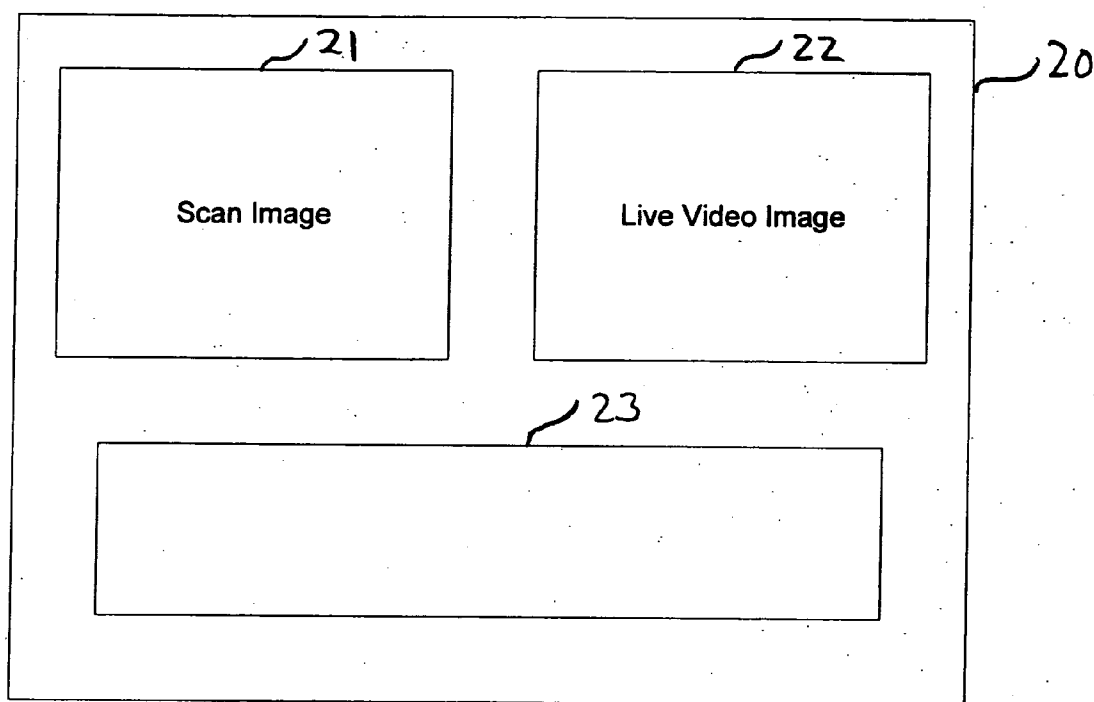


Fig. 2

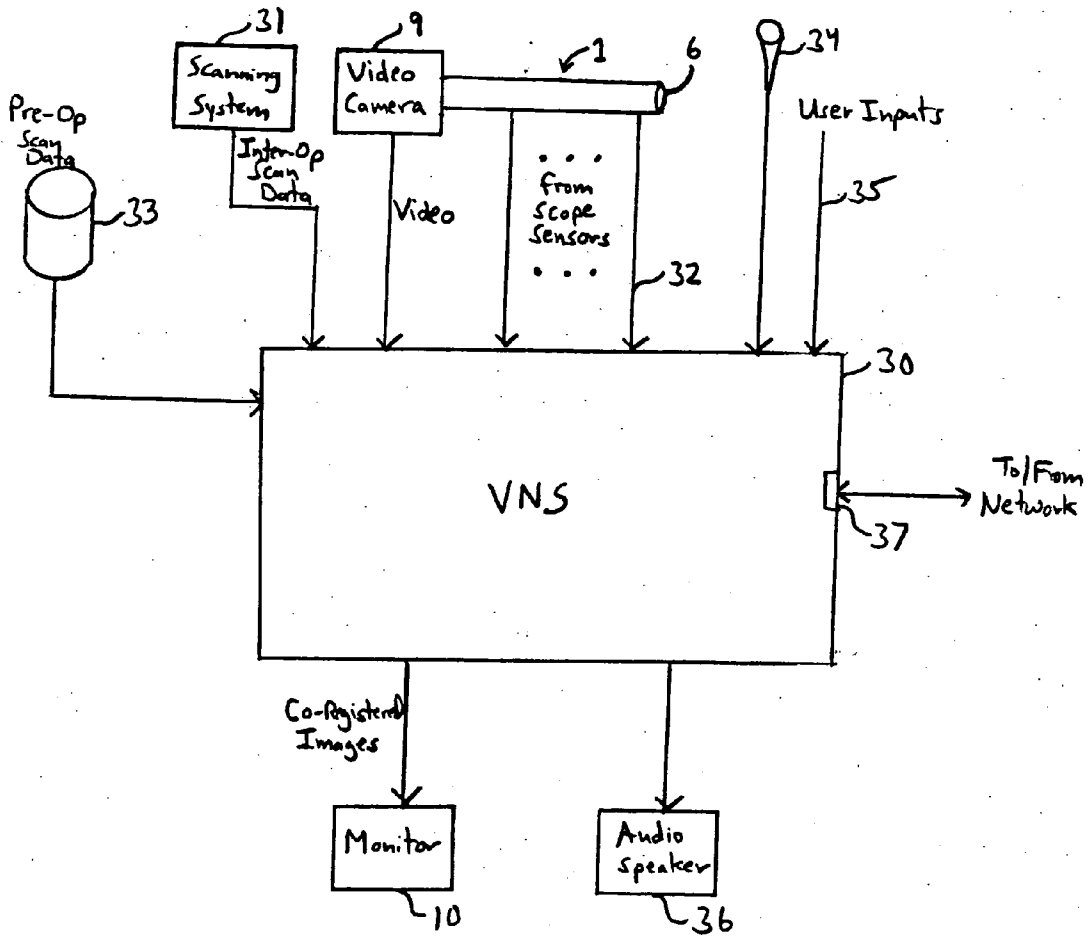


FIG. 3

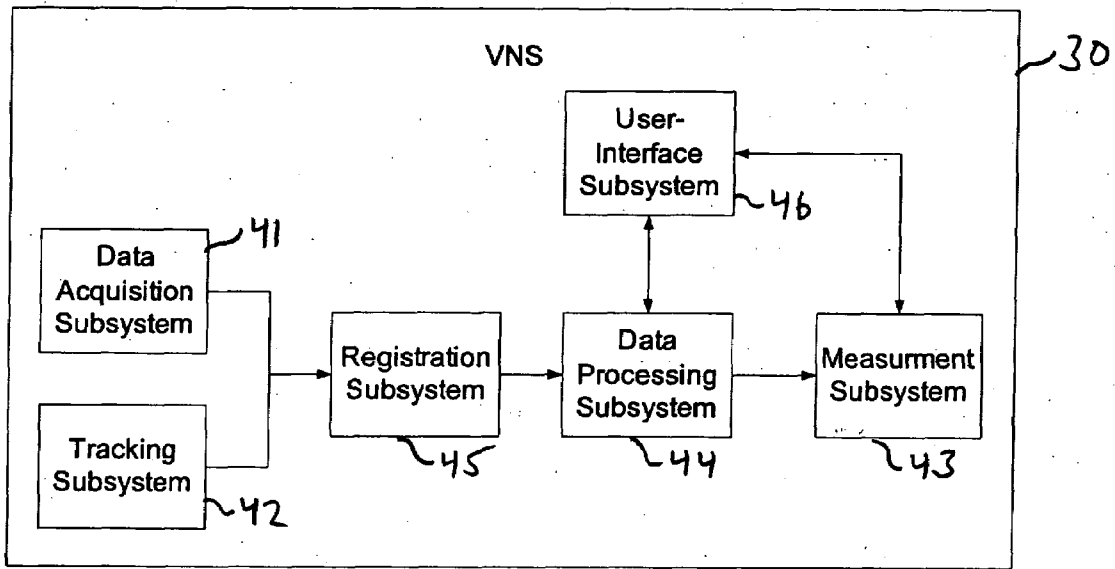


Fig. 4

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