

(12) **United States Patent**
Sparks et al.

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(54) **OPTICAL SWITCH ATTENUATOR**

(56) **References Cited**

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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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(57) **ABSTRACT**

(21) Appl. No.: **09/474,544**

An optical switch comprising switching means arranged to switch an optical signal by redirection of the optical beam path of said signal, wherein said optical switch is arranged to misalign the optical beam path so as to provide a predetermined optical output power. Thus a switch can be directly used to attenuate a signal, instead of utilising separate attenuators.

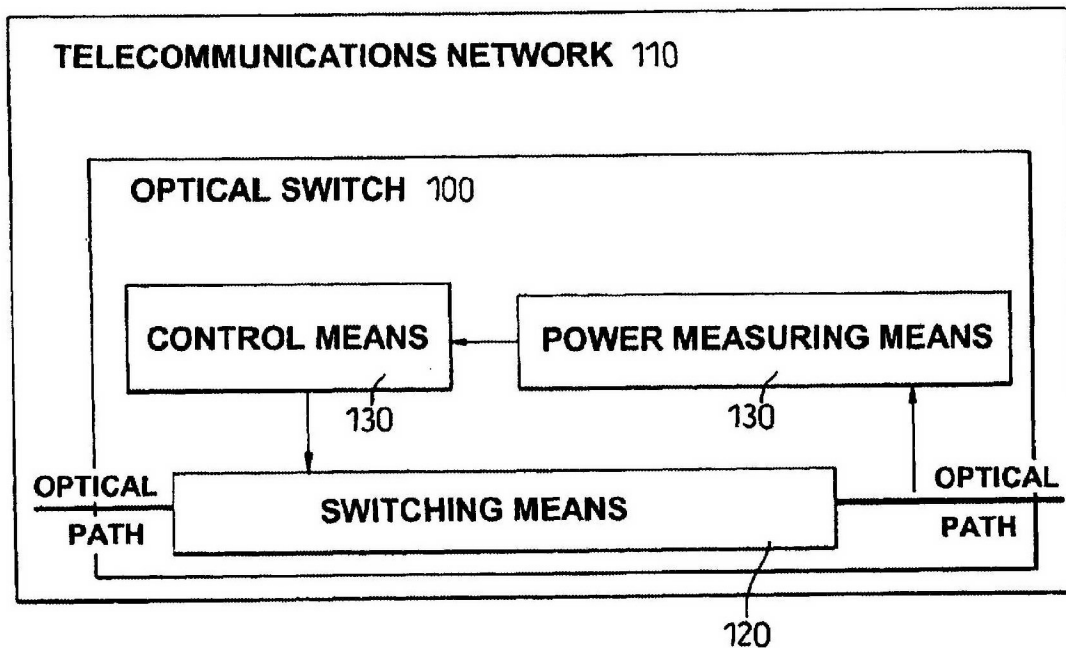
(22) Filed: **Dec. 29, 1999**

(51) Int. Cl.⁷ **G02B 6/26; G02B 6/42**

(52) U.S. Cl. **385/18; 398/45**

(58) Field of Search 359/117, 128;
385/16-18

12 Claims, 4 Drawing Sheets



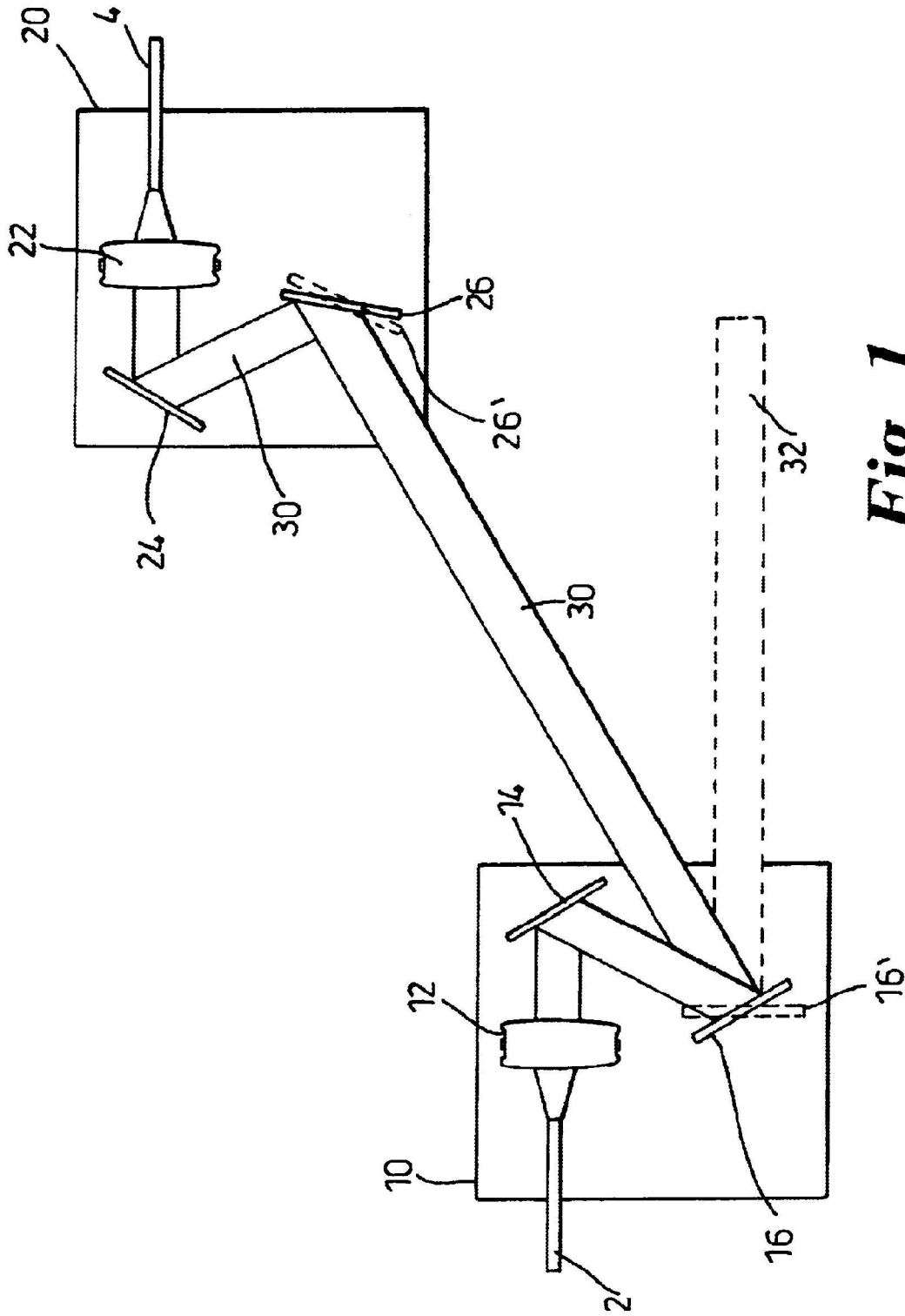


Fig. 1

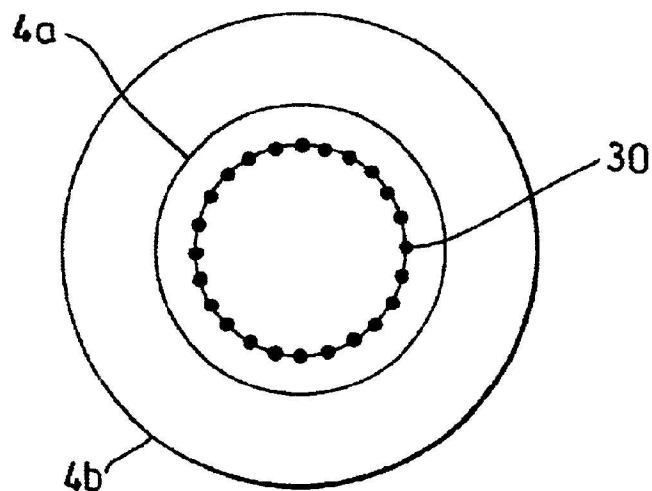


Fig. 2a

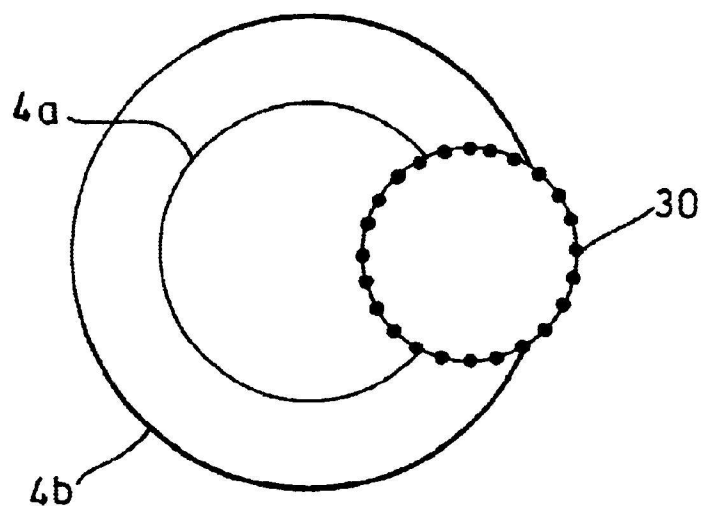


Fig 2b

Full Beam Profile reflected

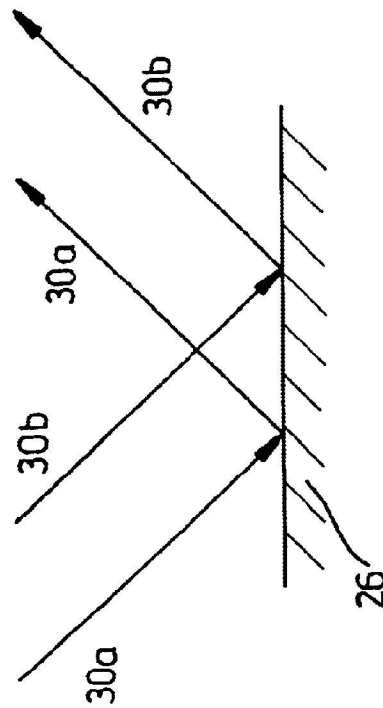


Fig. 3a

Only part of Beam Profile reflected

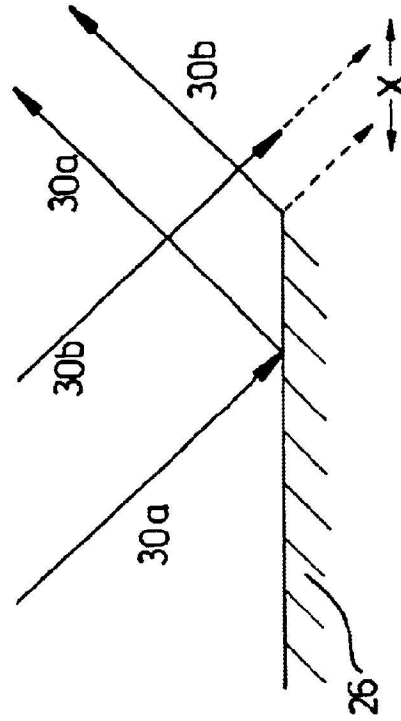


Fig. 3b

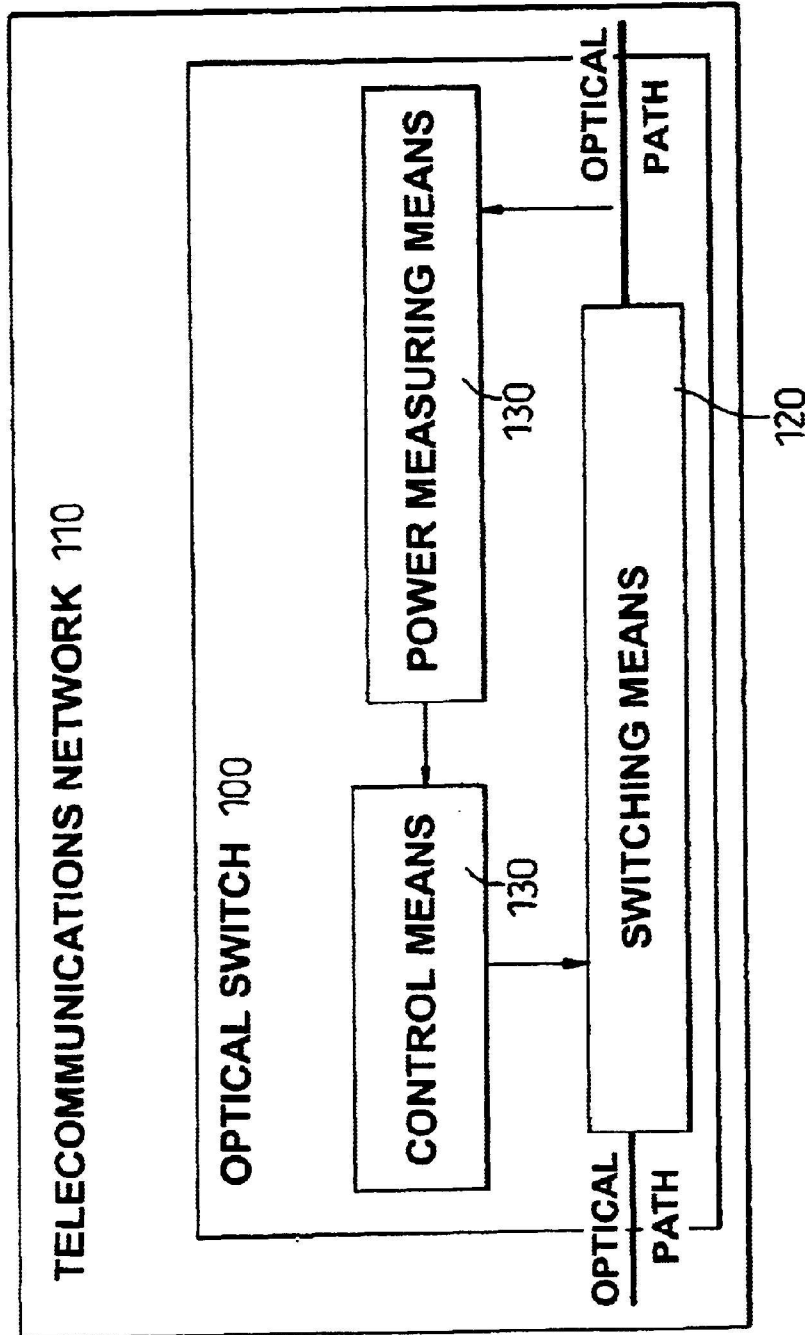


Fig. 4

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