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(12) **United States Design Patent**  
**Hawkins**

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(54) **MULTI-DIAMETER PIPELINE CLEANER OR "PIG"**

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(\*\*) **Term:** **14 Years**

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(51) **LOC (7) Cl.** ..... **15-05**

(52) **U.S. Cl.** ..... **D32/14**

(58) **Field of Search** ..... D32/14; 137/15.07; 4/255.01, 255.05, 255.08; 141/357; 134/168 C; 15/104.03, 104.05, 104.61

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D315,621 S	*	3/1991	Laymon et al.	.....	D32/14
5,625,917 A	*	5/1997	Hawkins	.....	15/104.061
6,510,860 B2	*	1/2003	Kihs	.....	4/255.05 X
6,618,873 B2	*	9/2003	Mulgrew et al.	.....	4/255.05 X

\* cited by examiner

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(57) **CLAIM**

The ornamental design for multi-diameter pipeline cleaner or "pig", as shown and described.

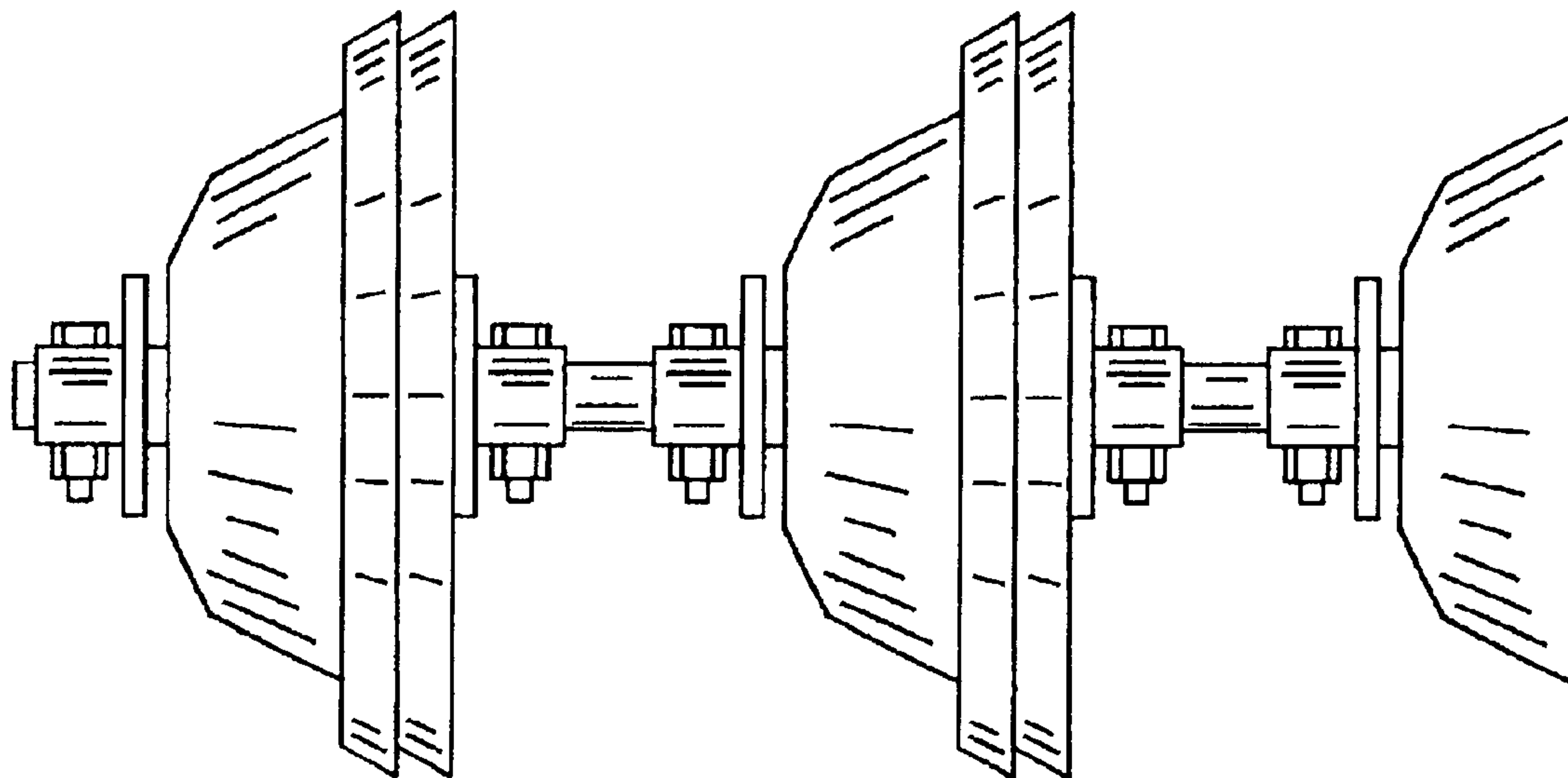
**DESCRIPTION**

FIG. 1 is a front side elevation view of a multi-diameter pipeline cleaner of "pig" showing my new design, the rear, top and bottom sides being identical; and,

FIG. 2 is a greatly enlarged isolated view showing the split discs with sloping edges folded back in condition of use thereof.

The "pig" is constructed with a shaft, scapper cups and split discs similar to "flower petal" design. The cups and discs are held in place by locking collars and washers. The split discs are designed to seal in the large diameter pipe. The scapper cups are sized to seal in the small diameter pipe. When the pig is in the small diameter pipe, the discs fold back and the cups slide over them holding them in a compressed position so that they do not touch the small diameter pipe. The cups are mounted against the leading edge of the discs and prevent the discs from being blown forward and losing seal. When the "pig" is in the small diameter pipe, the rear cup becomes the driving cup and forces the discs into the cavity of the front two cups. The outer edges of the discs are sloped from back to front. When the discs are folded back to the diameter of the large pipe, the sloped edges match and form a combination sealing surface. Square edges leave a gap when folded back and allow by pass of propelling fluid.

**1 Claim, 1 Drawing Sheet**



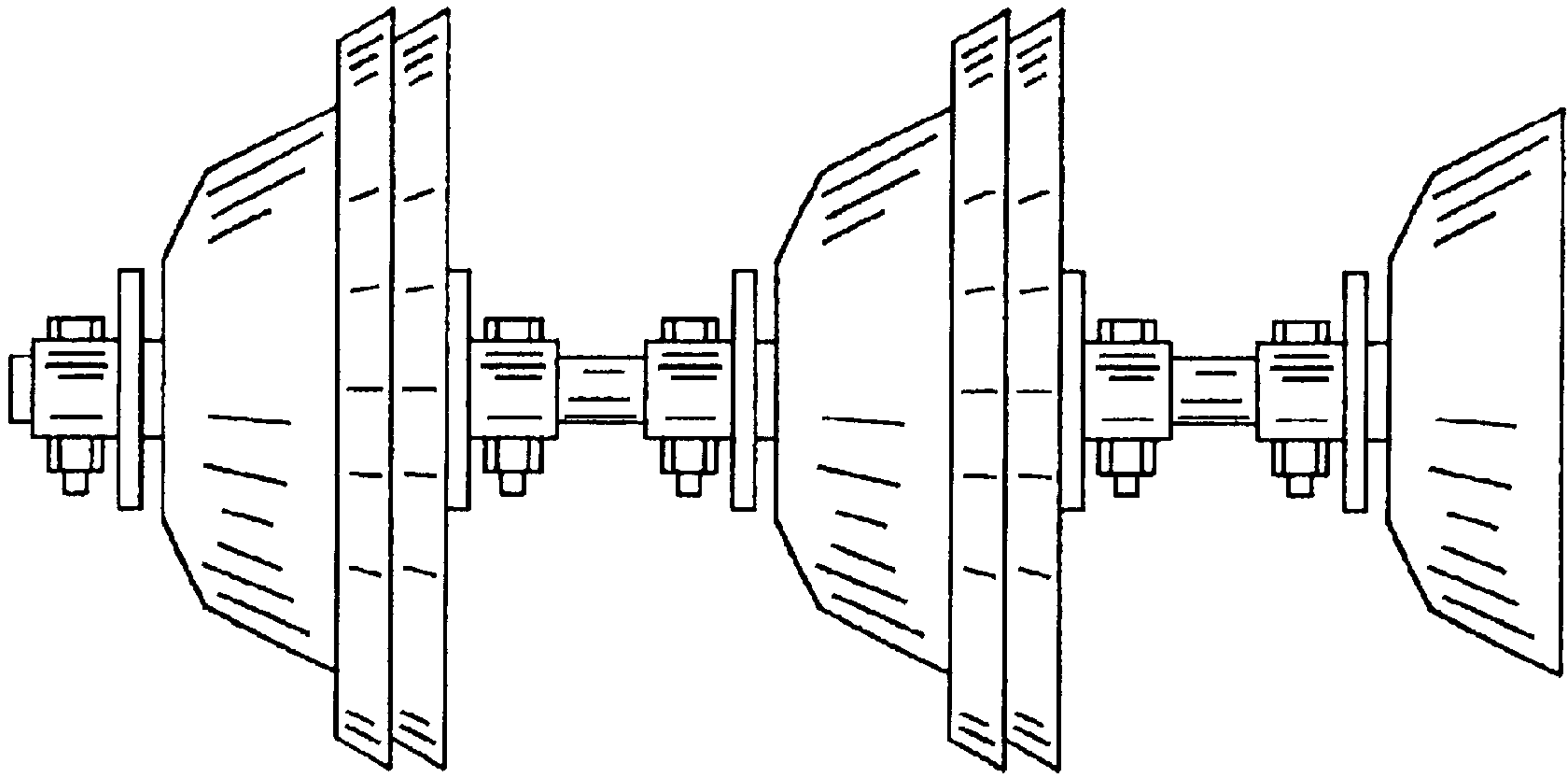


Fig. 1

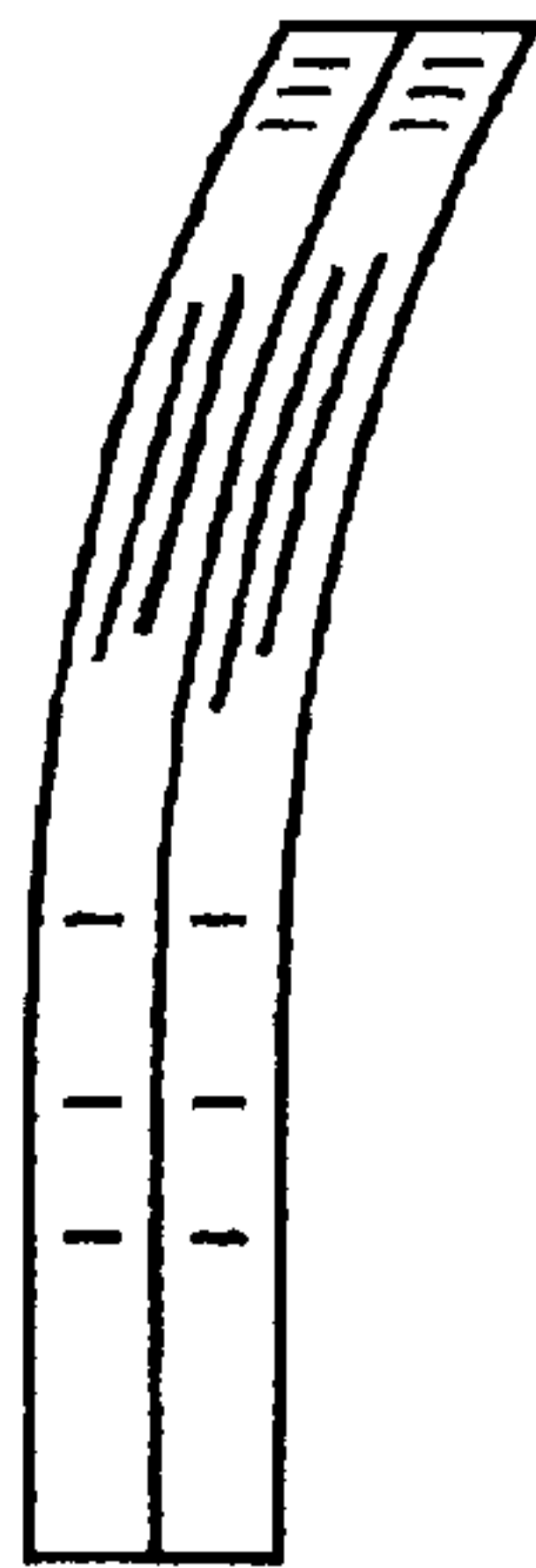


Fig. 2