Feb. 15, 1944. M. C. ANDERSEN 2,341,681

SLIDE RULE

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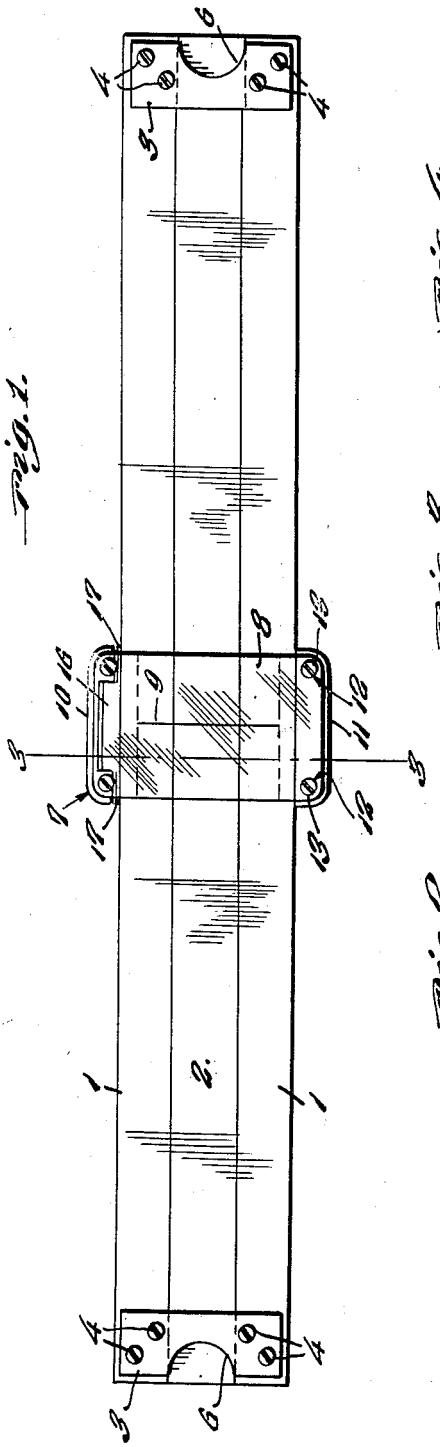

Fig. 1.

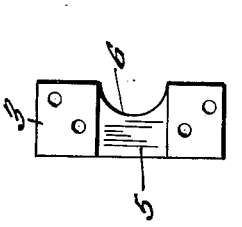

Fig. 4.

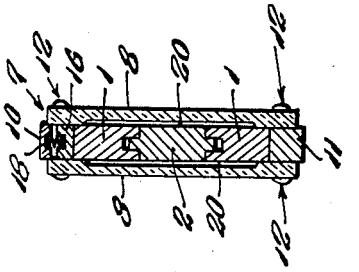

Fig. 3.

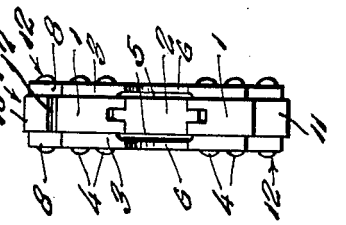

Fig. 2.

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SLIDE RULE

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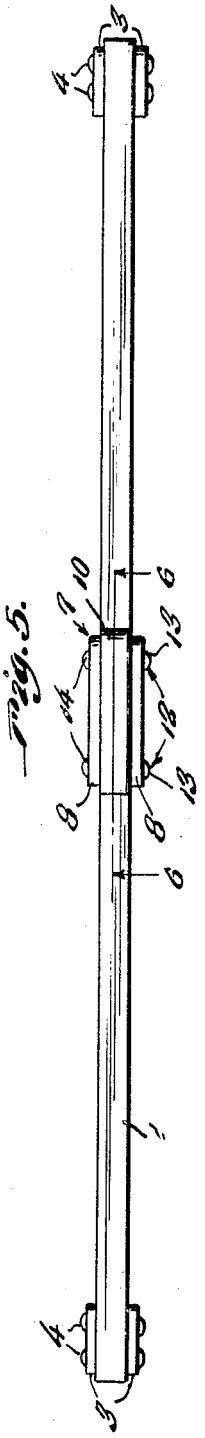

Fig. 5.

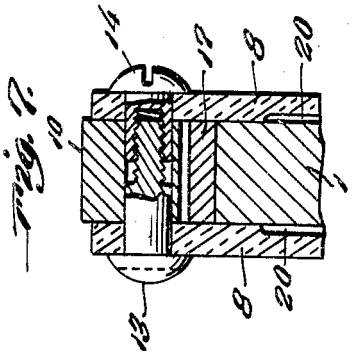

Fig. 7.

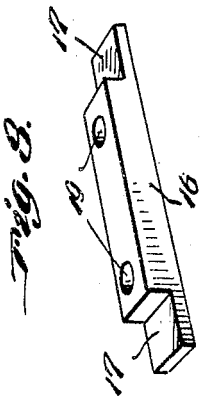

Fig. 8.

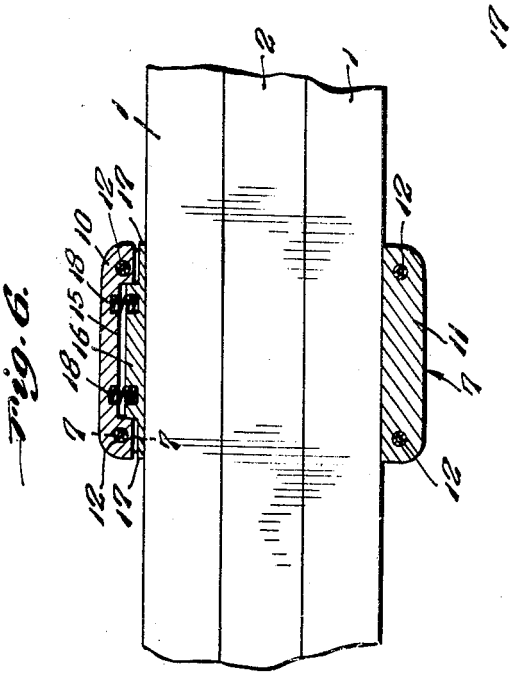

Fig. 6.

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UNITED STATES PATENT OFFICE

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SLIDE RULE

Mads C. Andersen, San Benito, Tex.

Application December 2, 1941, Serial No. 421,337

1 Claim. (Cl. 235—70)

The present invention relates to new and useful improvements in slide rules of the type comprising a runner, and has for one of its important objects to provide an instrument of this character comprising novel means for frictionally securing said runner in adjusted position.

Another very important object of the invention is to provide, in a slide rule comprising a pair of spaced, parallel outer bars and an intermediate bar slidable therebetween, unique means for securing said outer bars together.

Other objects of the invention are to provide a slide rule of the character described which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact, light in weight and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in side elevation of a slide rule constructed in accordance with the present invention.

Figure 2 is a view in end elevation of the instrument.

Figure 3 is a cross-sectional view, taken substantially on the line 3—3 of Figure 1.

Figure 4 is a detail view in elevation of one of the end plates, looking at the inner side thereof.

Figure 5 is a plan view of the device.

Figure 6 is a fragmentary view in vertical longitudinal section, taken substantially on the line 6—6 of Figure 5.

Figure 7 is an enlarged detail view in cross section, taken substantially on the line 7—7 of Figure 6.

Figure 8 is a detail view in perspective of the spring pressed shoe which frictionally secures the runner in adjusted position.

Referring now to the drawings in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a pair of spaced, parallel outer bars 1. Slidably mounted between the outer bars 1 is a double tongue intermediate bar 2. The bars 1 and 2 may be of any suitable material. Further, the faces of the bars 1 and 2 may be provided with any desired scales or combinations of scales.

The end portions of the outer bars 1 are rigidly secured together through the medium of pairs of plates 3 which are secured by fasteners 4 on the sides of said bars. All of the plates 3 are identical and said plates may also be of any suitable material. The intermediate portions of the inner faces of the plates 3 are recessed, as at 5, to clear the slide bar 2 and the scales thereon. These portions of the plates 3 are further provided with finger receiving notches or recesses 6 to facilitate gripping the end portions of the bar 2.

Slidably mounted on the bars 1 is a runner which is designated generally by reference numeral 7. The runner 7 includes identical plates 8 of Celluloid or other suitable transparent material. The transparent plates 8 include hair lines 9 to be read against the scales on the bars 1 and 2.

Mounted between the end portions of the plates 8 are spacing blocks 10 and 11. Fasteners 12 secure the plates 8 to the spacing blocks 10 and 11. As illustrated to advantage in Figure 7 of the drawings, the fasteners 12 comprise complemental male and female screws 13 and 14, respectively. The end plate fasteners 4 are similar to the fasteners 12.

The spacing block 10 has formed therein and extending from side to side thereof a recess 15 for the reception of a shoe 16. The shoe 16 is of any suitable material and comprises end portions 17 of reduced thickness which extend adjacent the end portions of the block 10. Coil springs 18 yieldingly urge the shoe 16 against the outer edge of the adjacent bar 1. Sockets 19 are provided in the shoe 16 and in the block 10 for the reception of the end portions of the coil springs 18.

It is thought that the manner in which the instrument is used will be readily apparent from a consideration of the foregoing. Of course, the slide 2 is adjusted longitudinally relative to the bars 1. As hereinbefore mentioned, the recesses 6 in the plates 3 facilitate gripping the end portions of the slidable bar 2. To adjust the runner 7, it is only necessary to apply sufficient force to said runner to overcome the frictional contact of the shoe 16, under the influence of the coil springs 18, with the adjacent bar 1. The intermediate portions of the inner faces of the transparent runner plates 8 are recessed, as at 20, to clear the sides of the bar 2 with the scales thereon. Certain of the holes in the plates 3 and 8 are slightly larger than the respective fasteners 4 and 12 to facilitate adjustment of said plates. In general, the construction and arrangement are such as to facilitate assembling and disassembling of the instrument.

It is believed that the many advantages of a

slide rule constructed in accordance with the present invention will be readily understood, and although a preferred embodiment of the instrument is as illustrated and described, it is to be understood that changes in the details of construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

A slide rule runner comprising a pair of transparent plates for the reception of a rule therebetween, elongated spacing blocks between the end portions of said plates, one of said blocks having an elongated, longitudinal recess therein, a shoe slidable in the recess and including reduced end portions extending between the end portions of said one block and the rule, the end walls of the recess being engaged with the shoe for securing said shoe against longitudinal movement, and coil springs mounted in said one block and engaged with the shoe for pressing said shoe against the rule for frictionally securing the runner in adjusted position thereon.

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