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SLIDE GAUGE

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Fig. 1

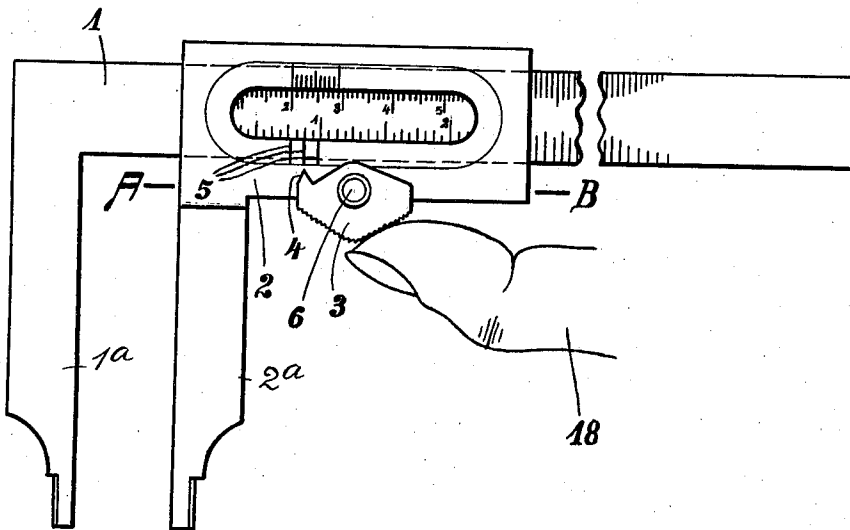
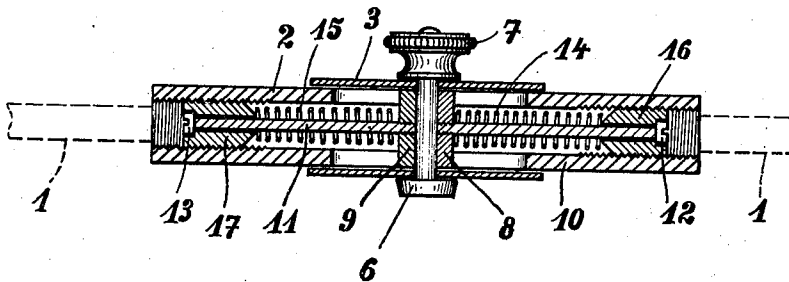


Fig. 2



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SLIDE GAUGE

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4 Claims. (Cl. 33—143)

This invention relates to a slide gauge of the kind comprising a pair of legs one of which is carried by a graduated bar and the other by a slide which is adjustable on said bar.

5 The degree of accuracy of measurements obtained by gauges of this kind depends to some extent on the pressure with which the slide is urged against the object to be measured, and it has been shown by tests that there can be a considerable variance between measurements taken of the same object by different persons and also by the same person at different times.

10 The object of the present invention is to provide means in a gauge of this kind which will eliminate the errors due to variations in the pressure applied to the slide, and the invention consists essentially in the provision on the slide of a spring-controlled thumb piece by which the adjustment of the slide is effected, the thumb piece 20 being furnished with an index which, by cooperation with graduations on the slide, indicates the amount of displacement of the thumb piece in opposition to the spring and thus the degree of pressure applied to the slide.

25 Fig. 1 of the accompanying drawing represents a side view of a slide gauge constructed according to the invention, and

Fig. 2 is a section on the line A—B of Fig. 1.

30 The gauge consists of a pair of legs 1a and 2a, one carried by a graduated bar 1 and the other by a slide 2 which is adjustable along the bar. According to the invention the lower part of the slide is provided with a longitudinal slot wherein a cross bolt 6 is guided. Connected to said bolt 35 between the head and a nut 7, is a U-shaped thumb piece 3 which embraces the lower part of the slide and is provided, as shown in Fig. 1, with a milled, V-shaped lower surface arranged so that it can be conveniently engaged by the thumb 40 18 for shifting the slide on the bar 1. The thumb piece acts on the slide by means of springs 14 and 15 which bear at one end against the bolt 6 through the medium of thrust pieces 8 and 9 and at the other end against abutments 16 and 45 17 which are screwed into bores at the ends of the slide. The springs are guided on rods 10 and 11 which pass through the abutments 16 and 17 and are screwed into the thrust pieces 8 and 9. Recesses are made in the abutments 16 and 17 for the accommodation of the screw heads 12 50 and 13 of the rods. The abutments 16 and 17 are adjusted so that an index 4 on the thumb piece 3 will normally be in register with the central one of three graduations 5 on the slide 2.

55 From this arrangement it follows that the pres-

sure on the thumb piece 3 in one direction or the other will be transmitted to the slide 2 by means of the springs, the respective thrust piece and guide rod being made to follow the thumb piece in case of relative displacement between 5 it and the slide. If the outer graduations 5 are chosen as the limit of displacement, and if the thumb piece is always moved into register with these graduations, it is evident that the force exerted on the legs 1a and 2a will in each case 10 be constant, so that errors due to irregularity in muscular exertion, will be obviated.

In the case of a gauge which is used exclusively either for outside or inside measurements, one of the springs may be omitted, and the retained 15 spring may be fastened to the bolt 6.

The device may be modified by arranging the spring and guide elements on the outside of the slide instead of within it.

I claim:

20 1. A slide gauge of the character described having a slide, a thumb piece for the adjustment of the slide, said thumb piece being mounted on said slide and movable relatively thereto, resilient means tending to prevent said thumb piece moving 25 relatively to said slide, and means for indicating the displacement of the thumb piece relative to the slide.

30 2. A slide gauge of the character described having a slide provided with graduations and with a longitudinal slot, a cross bolt guided in said slot, a thumb-piece for the adjustment of said slide and connected to said bolt and movable relatively to said slide, an index on the thumb-piece cooperating with said graduations on the slide for 35 indicating the displacement of the thumb-piece relative to said slide, and resilient means tending to prevent said thumb-piece moving relatively to said slide.

40 3. A slide gauge of the character described having a slide provided with graduations and with a longitudinal slot, a cross bolt guided in said slot, a thumb-piece for the adjustment of said slide connected to said bolt and movable relatively to said slide, an index on the thumb-piece cooperating with said graduations on the slide for 45 indicating the displacement of the thumb-piece relative to said slide, a closure member at each end of the longitudinal slot and a spring between each of said closure members and said cross bolt, 50 said springs tending to prevent said thumb-piece moving relatively to said slide.

55 4. A slide gauge of the character described having a slide provided with graduations and with a longitudinal slot, a cross bolt guided in said slot, 55

thrust members bearing against said bolt, adjustable screw abutments mounted in the slide at opposite ends of the slot, rods secured to the thrust members and guided in said abutments, a spring on each rod bearing at one end against the adjacent thrust member and at the other end against the abutment, a U-shaped thumb piece movable relatively to and embracing part of the slide and connected to said bolt for the adjustment of the slide, and an index on the thumb piece co-operating with said graduations on the slide for indicating the displacement of the thumb piece relative to the slide in opposition to the springs.

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