

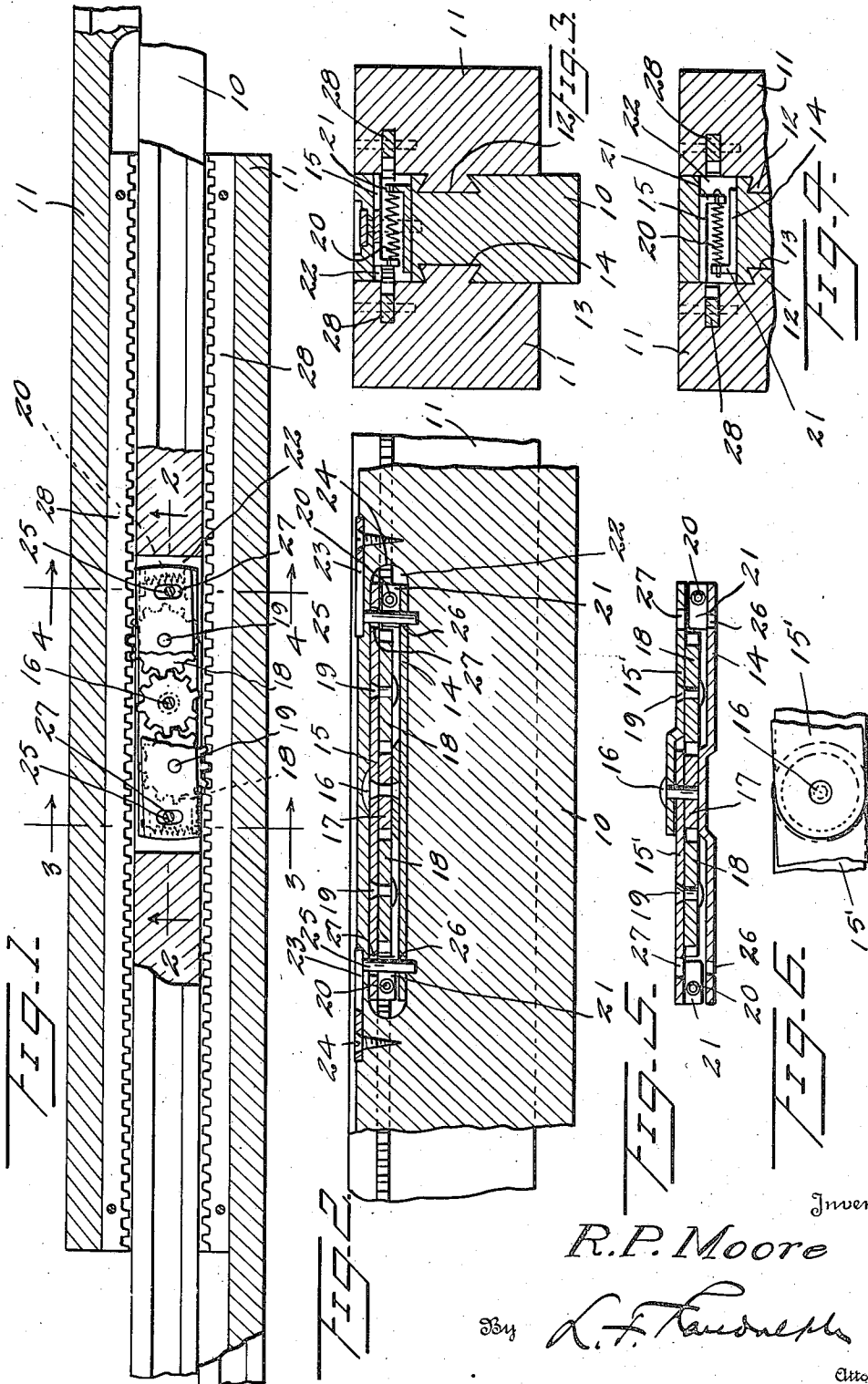
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EXTENSION TABLE SLIDE

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EXTENSION TABLE SLIDE

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3 Claims. (Cl. 311-73)

This invention relates to an extension slide and particularly to one of the type used on extension tables and one which is equalizing.

In table slides there is the difficulty that after they have been in use, due to the construction employing wooden slides, they become loosened by wear, or the wooden members warp and prevent satisfactory operation. Heretofore, it has been attempted to overcome these disadvantages by equalizing devices involving racks and gears but they have not been satisfactory because of binding between said equalizers and the wooden slides, and the object of my invention is to provide a new construction of equalizing slide employing a triple gear assembly that swivels to take up lost motion in the wooden parts and will stay in mesh with the racks at all times, whether the wooden parts become either tight or loose, the flexibility of the gear assembly taking care of either situation.

The more specific objects and advantages will, in part, be pointed out and become otherwise apparent from a consideration of the description following taken in connection with accompanying drawing illustrating an operative embodiment.

In said drawing:

Figure 1 is a horizontal sectional view through a slide construction embodying my invention;

Figure 2 is a vertical sectional view taken on the plane of line 2-2 of Figure 1;

Figure 3 is a vertical section taken on the line 3-3 of Figure 1;

Figure 4 is a vertical section taken on the line 4-4 of Figure 1;

Figure 5 is a longitudinal sectional view taken through a modified form of the equalizing slide device, and

Figure 6 is a fragmentary plan view of the form of device shown in Figure 5.

Referring specifically to the drawing wherein like reference characters designate like or similar parts, the structure comprises a rail 10 adapted to be mounted on the cap (not shown) of a table and between beams 11 adapted to be secured to the end sections of an extension table to slide therewith and on and relatively to the beam 10, dove-tailed ribs 12 being provided on the beams or rails 11 which occupy undercut grooves 13 on opposite sides of the beam or rail 10.

In carrying out the invention, I provide a base or plate 14, usually of metal, to which an upper plate 15, usually of metal, is pivotally connected by means of a stud 16, whose ends are suitably upset as shown to hold the plate in operative relation. A pinion 17 is disposed between the plates

14 and 15 and is journaled on the stud 16. On opposite sides of the pinion 17 similar equalizing pinions 18 are disposed between the plates enmeshed with the pinion 17 and journaled on studs 19 carried by the upper or movable plate 15.

The plates 14 and 15 are normally in registry and so held by coil springs 20 located between them at opposite ends and anchored to lugs 21 on such plates.

The slide described occupies a suitable recess 22 in the beam 10 and fastening plates 23 are screwed or otherwise fastened at 24 to such beam, the plates having depending pins at 25 which pass through openings 26 and 27, respectively, in the plates 14 and 15. Pins 25 fill the opening 26 and thus hold plate 14 immovable or fixed relative to the beam 10. However, the holes or openings 27 are arcuate or enlarged with respect to the pins 25 and hence the upper plate 15 may move on the pivot 16 to a limited extent relative to the plate 14 and against tension of the springs 20.

Said pinions 18 have their teeth enmeshed with the teeth of rack bars 28, suitably carried by the beams 11.

As a result of the construction described, when one beam 11 is moved, it will slide on the beam 10 and due to the equalizing action effected by the pinions and racks, motion in the opposite direction will be imparted to the other beam 11. Should the slide or part thereof attempt to bind, it will be realized, that the plate 15 will yield against the tension of the springs 20 and overcome such tendency insuring free and easy sliding of the beams at all times.

Various changes may be resorted to provided they fall within the spirit and scope of the invention. For instance, a modified form is shown in Figures 5 and 6 and it conforms to the first described embodiment of my invention except for the upper or movable plate 15 which in this instance is made of two plates 15', which overlap at their inner ends and are both journaled on the stud 16. Each of the plates or levers 15' carries a pinion 18 and, in fact, the remainder of the structure is identical with that of the form of Figures 1 to 4 and functions in the same manner.

I claim as my invention:

1. A slide device for use with slidable beams having racks, a pinion, means to mount said pinion on a fixed axis between the beams, and pinions enmeshed with the first mentioned pinion on opposite sides thereof and respectively adapted to mesh with said racks, means movable on the axis of the first mentioned pinion carrying the

second mentioned pinions, and a resilient connecting means between the first mentioned means and the last mentioned means biasing said second-mentioned pinions toward their respective racks.

2. In a slide device for use with slidable beams having racks, a plate disposed between the same, a stud on said plate, a movable plate pivoted on said stud, a pinion journaled on said stud, equalizing pinions carried by the movable plate enmeshed with the respective racks and with the first mentioned pinion, said movable plate having openings therethrough, fastenings extending through said openings and connected to the first mentioned plate, said openings being enlarged with respect to said fastenings, and resilient

spring means between and connected to each plate.

5 3. In a slide device for use with slidable beams having racks, a plate disposed between the same, a stud on said plate, a movable plate pivoted on said stud, a pinion journaled on said stud, equalizing pinions carried by the movable plate enmeshed with the respective racks and with the first mentioned pinion, said movable plate having
10 openings therethrough, fastenings extending through said openings and connected to the first mentioned plate, said openings being enlarged with respect to said fastenings, said plates having
15 lugs thereon, and coil spring means connected to said lugs.

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