E. W. SCHULTZ.

EXTENSION TABLE SLIDE.

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1,165,718.

Patented Dec. 28, 1915.

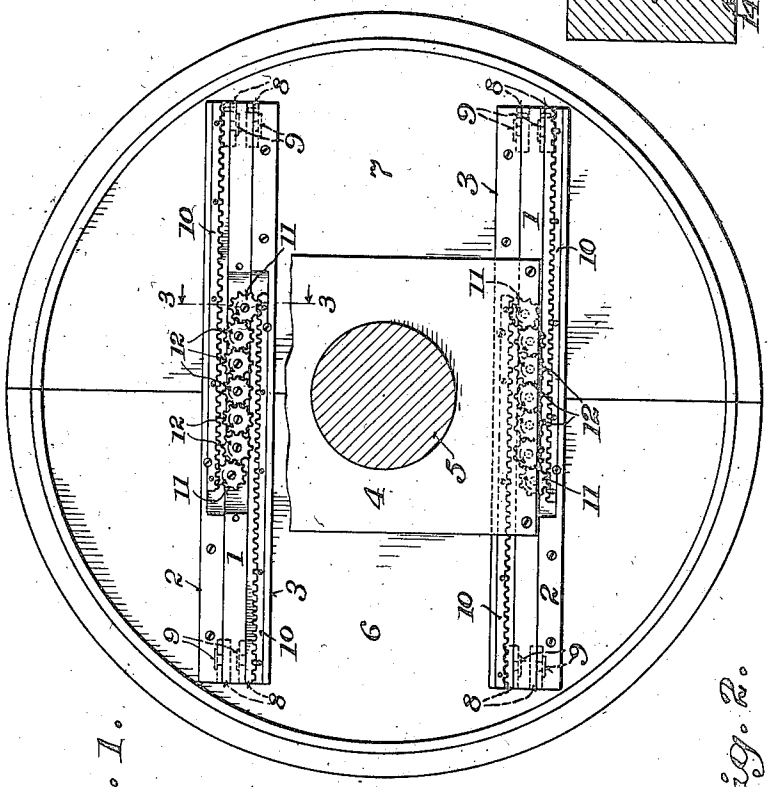


Fig. 1.

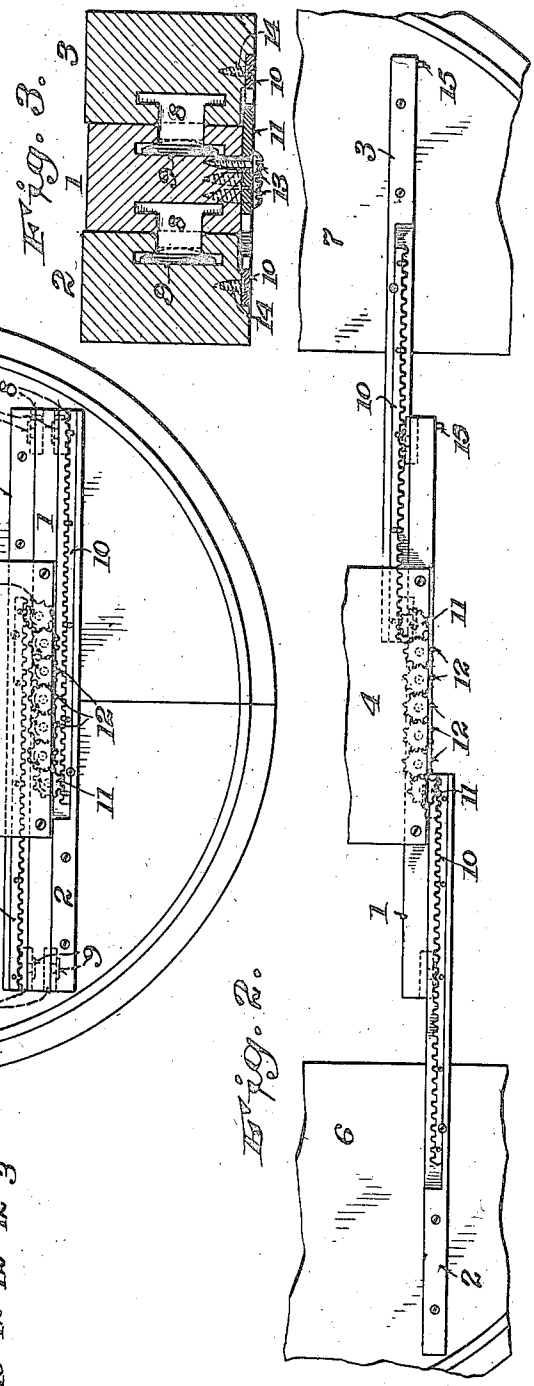


Fig. 2.

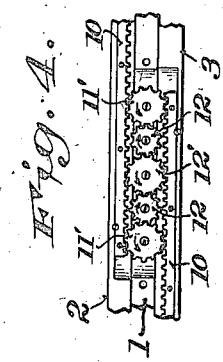


Fig. 4.

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UNITED STATES PATENT OFFICE.

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EXTENSION-TABLE SLIDE.

1,165,718. Specification of Letters Patent. Patented Dec. 28, 1915.

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To all whom it may concern:

Be it known that I, EMIL W. SCHULTZ, a citizen of the United States, residing at Watertown, in the county of Jefferson and State of Wisconsin, have invented certain new and useful Improvements in Extension-Table Slides, of which the following is a specification, reference being had to the accompanying drawing, forming a part thereof.

This invention relates more particularly to slides for extension tables having central pedestals or supports and equalizing devices whereby the end sections are caused to move equally and simultaneously in both directions, thus enabling a person at either end of a table to readily open and close the same without aid.

The main objects of the invention are to increase the extent of opening or the length of such a table when extended, without increasing the length of the slide bars, and at the same time, to afford a firm, stable support for the extended sections, and generally to improve the construction and operation and to increase the convenience of tables of this class.

It consists in the construction, arrangement and combination of parts as hereinafter particularly described and pointed out in the claims.

In the accompanying drawing like characters designate the same parts in the several figures.

Figure 1 is an inverted plan view of an extension table embodying the invention and having a central pedestal which is shown in cross section, the table being shown closed; Fig. 2 is a similar fragmentary view showing one of the slides extended; Fig. 3 is an enlarged cross section of one of the slides on the line 3—3, Fig. 1; and Fig. 4 is a fragmentary inverted plan view showing a modified arrangement of the train of equalizing pinions.

According to this invention, a table is provided with two slides, each comprising three slide bars 1, 2 and 3. The middle or relatively fixed bars 1, of the slides are mounted on and fastened to the cap or cross piece 4, of the pedestal 5, parallel with each other. The relatively movable or floating bars 2 and 3 of the slides, are fastened to the separable top sections 6 and 7 of the table, the slides 2 being fastened to the section 6, and the slides 3 to the section 7. The movable or floating bars are slidably connected with and guided on opposite sides of the relatively fixed bars 1, by the usual or any suitable means, as for example, by blocks 8, secured in longitudinal T-grooves in the sides of the several bars and provided with metal washers or plates 9 engaging with the corresponding grooves in the adjoining bars, as shown in Fig. 3.

The bars 2 and 3 are provided on the under side thereof with opposing parallel racks 10, and on each middle or relatively fixed bar 1, are rotatably mounted longitudinally spaced pinions 11, which may be offset from the longitudinal center of the slide, as shown in Figs. 1 and 2, so that one pinion will mesh with the rack on one side, and the other pinion will mesh with the rack on the opposite side of the middle bar 1. The pinions 11 of each slide are so connected with each other that they are compelled to rotate simultaneously in the same direction when either of the table top sections 6 or 7 is drawn outwardly or pushed inwardly, thereby causing the other section to be shifted simultaneously and equally in the opposite direction. In other words, both sections are compelled to move simultaneously outward or inward to the same extent when either section is drawn outwardly or pushed inwardly in opening or closing the table.

The pinions 11 may be connected by any suitable means to compel them to rotate simultaneously in the same direction, preferably by a train of an unequal number of pinions 12, rotatably mounted on the under side of each bar 1, in mesh with one another and with the pinions 11, as shown in Figs. 1 and 2. The several pinions may be of less diameter than the distance between the opposing racks 10, and all of the intermediate pinions 12 of each slide may be arranged to clear both racks. The pinions, which are made of metal, may be rotatably connected with the bars 1, by round or oval headed wood screws 13, while the racks, which are also made of metal, may be fastened rigidly to the bars 2 and 3 by countersunk flat headed wood screws 14, as shown in Fig. 3. The wood slide bars are recessed on the under side to receive the racks and pinions so that they will clear the cap or cross support 4,

at the top of the pedestal 5, and will thus be prevented from binding thereon and from interfering with the free operation of the slides.

The extent of the relative movement of the slide bars and hence the spread or extension of the table, may be varied by varying the number of the intermediate pinions 12, it being necessary however, to employ an uneven number of intermediate pinions for each slide, in order to rotate the end pinions 11 simultaneously in the same direction. Instead of offsetting the end pinions 11 of each train and making them of smaller diameter than the distance between the opposing racks 10, so that each pinion will mesh with but one rack, they may be made of larger diameter and centrally mounted so that they will both mesh with the racks on opposite sides thereof, as shown in Fig. 4, in which the end pinions of the train are designated 11′. Alternate intermediate pinions of the train may also be made of larger diameter so as to mesh with both racks, since such alternate pinions are rotated in the same direction as the end pinions 11′. In Fig. 4, showing a train of five pinions, the middle pinion 12′ is of the same diameter as the end pinions 11′, and like them, meshes with both racks 10. The bars are provided with suitable means such as the stops 15, for limiting their movement relative to one another and preventing their separation. In opening or extending the table, the several pinions are rotated in the directions indicated by arrows on Figs. 1 and 4, and in closing the table, they are rotated in the opposite directions. With equalizing connections as herein shown and described, the floating or movable bars 2 and 3 may be withdrawn to a greater extent relative to the fixed bars 1, than is possible with equalizing slides of the ordinary construction each having a single centrally located equalizing pinion, and a greater extension of the table without increasing the length of the slide bars and without weakening or impairing the support they afford for the top sections of the table, is thus provided for.

Various changes in the details of construction and arrangement of parts other than those specially shown and mentioned, may be made without departure from the principle and scope of the invention as defined in the following claims.

I claim:

1. In an extension table slide the combination of a relatively fixed bar, movable bars connected with opposite sides of the fixed bar and provided with longitudinal racks, pinions mounted on the fixed bar at a distance from each other and meshing with the racks on opposite sides thereof, and a connection between said pinions compelling them to rotate in the same direction.

2. In an extension table slide the combination of a relatively fixed slide bar, movable bars connected with and guided on opposite sides of the fixed bar, and provided with longitudinal parallel racks, end pinions rotatably mounted on the fixed bar at a distance from each other and meshing with said racks, and an uneven number of intermediate pinions meshing with one another and with the end pinions.

3. In an extension table slide the combination of a relatively fixed slide bar, movable slide bars connected with and guided on opposite sides of the fixed bar and provided with longitudinal racks, longitudinally spaced pinions of less diameter than the space between the racks rotatably mounted on the fixed bar in offset relation to each other and each meshing with one of said racks, and an uneven number of intermediate pinions rotatably mounted on the fixed bar in mesh with one another and with the offset pinions meshing with the opposite racks.

4. In combination with an extension table having a central support and separable top sections, of extension slides each composed of a slide bar fixed on said support and of floating slide bars fixed to the top sections and connected with and guided on opposite sides of the fixed bar, opposing longitudinal racks attached to the movable bars parallel with each other, longitudinally spaced and offset pinions rotatably mounted on each fixed bar in mesh with said racks, and an uneven number of intermediate pinions of less diameter than the distance between the opposing racks mounted on each fixed bar in mesh with one another and with the offset end pinions.

In witness whereof I hereto affix my signature in presence of two witnesses.

EMIL W. SCHULTZ.

Witnesses:

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