Oct. 30, 1928. 1,689,663

J. COOPER

LATCHING MEANS FOR ADJUSTABLE TABLES

Filed Feb. 10, 1927 2 Sheets-Sheet 1

Fig. 1.

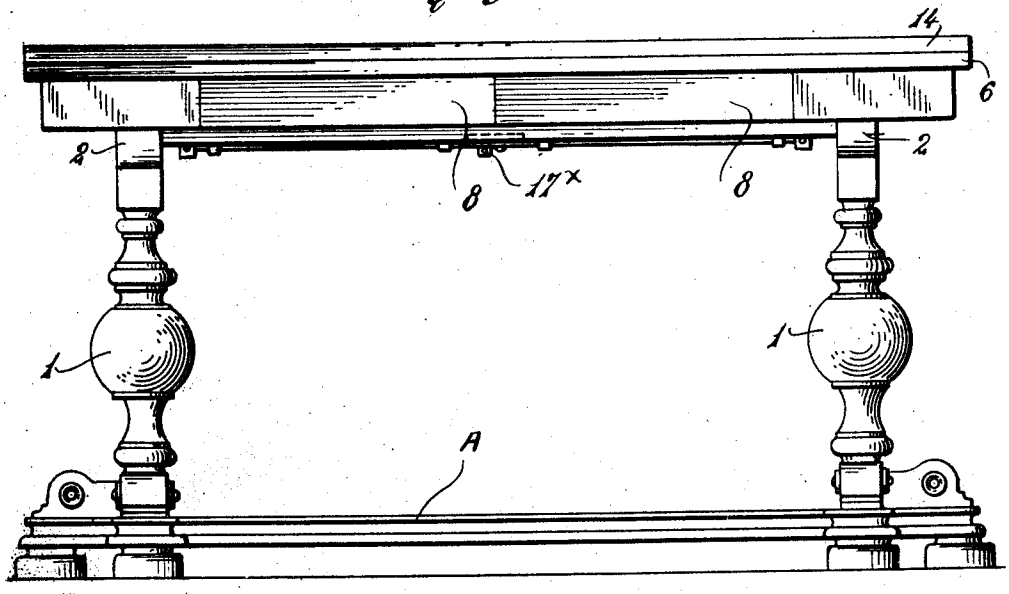



Fig. 2.

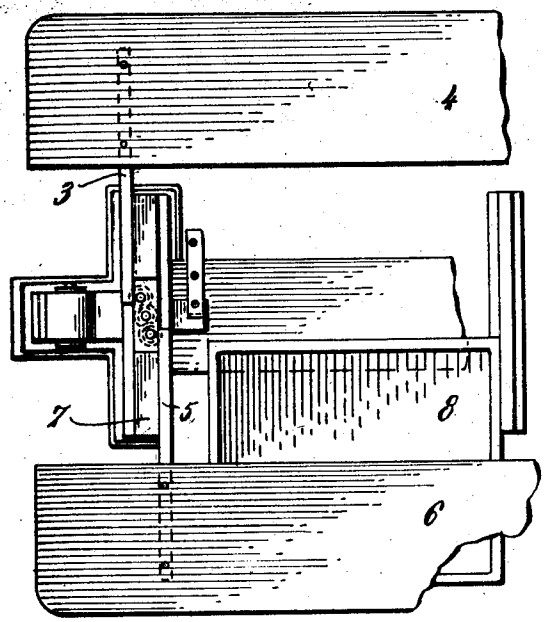



Fig. 3.

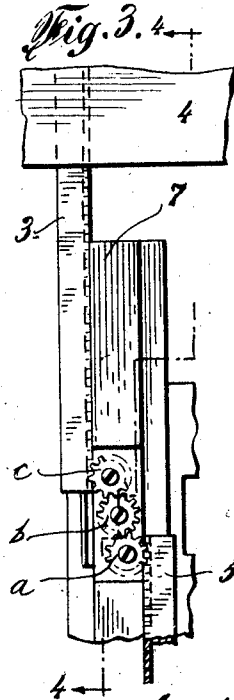
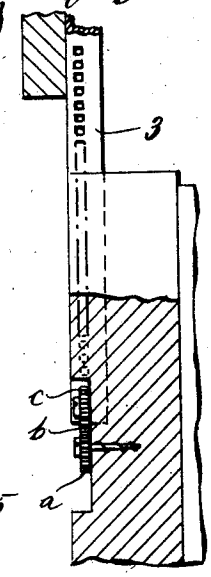



Fig. 4.




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Filed Feb. 10, 1927 2 Sheets-Sheet 2

Fig. 5.

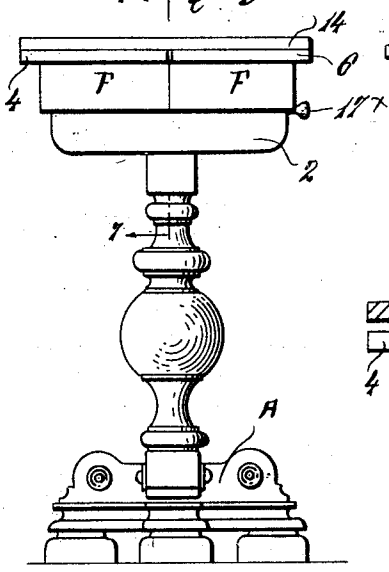



Fig. 6.

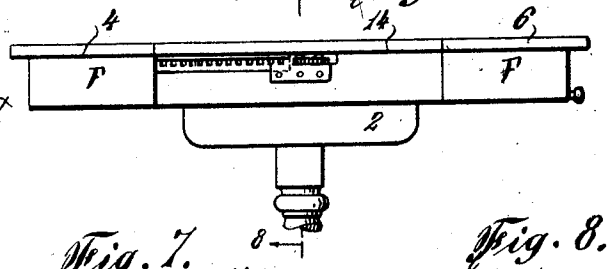



Fig. 7.

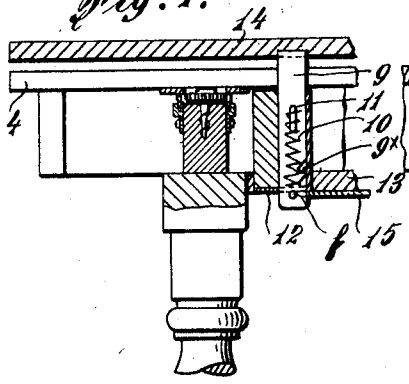



Fig. 8.

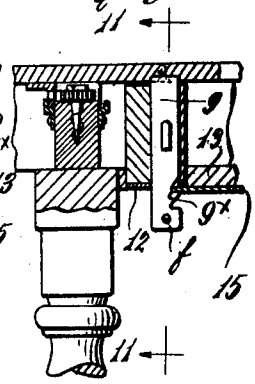



Fig. 9.

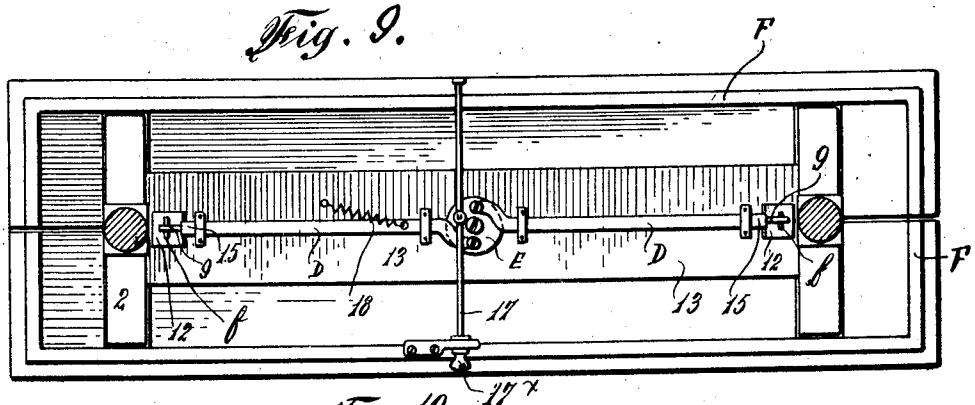



Fig. 10

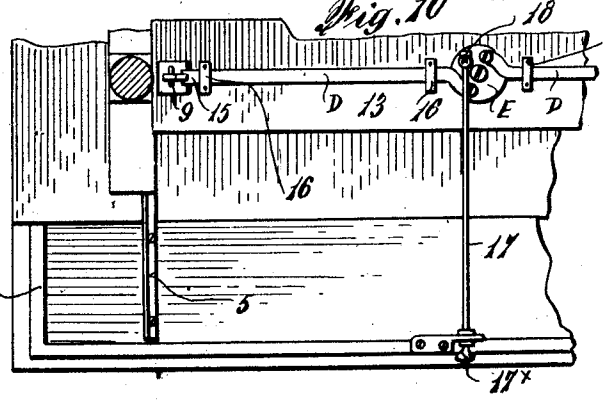
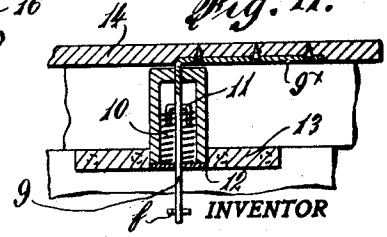



Fig. 11.




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# UNITED STATES PATENT OFFICE.

JOSEPH COOPER, OF NEW YORK, N. Y.

## LATCHING MEANS FOR ADJUSTABLE TABLES.

Application filed February 10, 1927. Serial No. 167,089.

The object of the present invention is to provide an adjustable table of a novel type, the table consisting of three top members which, when the table is closed, lie two in the same horizontal plane and the third member superposed upon the same. The invention comprises means for permitting the said third top member to be moved downward into the same horizontal plane as the first two top members, when the table is extended, and to latch the top members in position.

The said latching means is so constructed and combined with coacting mechanism that when it releases the said third top member, the latter is automatically moved out of register with the first two members and into such position that the table may immediately be closed to its minimum dimensions. Other objects of the invention will hereinafter appear.

The invention will be described with reference to the accompanying drawings, in which—

Figure 1 is a front elevation of an embodiment of the invention;

Figure 2 is a fragmentary plan of said embodiment, the table members being adjusted to open position;

Figure 3 is an enlarged plan view of certain guiding and operating elements for the adjustable top sections of the table, and

Figure 4 is a sectional view on the line 4—4, Figure 3;

Figure 5 is an end elevation of the said embodiment with the table closed, and

Figure 6 is a similar view with the table in extended position;

Figure 7 is a fragmentary vertical section on the line 7—7, Figure 5;

Figure 8 is a fragmentary vertical section on the line 8—8, Figure 6;

Figure 9 is a bottom plan view of the table in closed position;

Figure 10 is a fragmentary bottom plan of the table in extended position, and

Figure 11 is a vertical section on the line 11—11, Figure 8.

Referring to the Figures 1 and 5 it will be seen that the embodiment of the invention illustrated comprises a base member A from which rise spaced pedestal members 1, the said members carrying at their upper ends the transversely extending supports 2. Slidably mounted upon each support 2 is a slide bar 3 which carries a top unit 4. Also slidably mounted upon each support 2 is a slide bar 5 carrying a top unit 6. Slide bars 3 and 5 are separated by a horizontal supporting member 7. Member 7 rotatably carries a train of pinions or spur gears *a*, *b*, *c* (Figure 3). Slide bar 5 is preferably made of metal and the bar in its vertical wall is formed with a plurality of apertures, as shown more particularly in Figures 3 and 4, these apertures being entered by the teeth of spur gear *a*. Slide bar 3 in constructed identically with slide bar 5 and its apertures are entered by spur gear *c*. The spur gears *a* and *c* are operatively connected by gear *b*.

The arrangement is such that top units 4 and 6 are accurately guided in their movements toward closed and extended position, and movement of one unit will effect a corresponding movement to the second unit. The arrangement also permits the top units 4 and 6 to be separated a much greater distance than if a single connecting gear was employed for the two slide bars.

Top member 6 may carry any suitable supporting means for one or more of the drawers 8, the position of the drawers being indicated in Figures 1 and 2.

When top units 4 and 6 are moved together in the position illustrated in Figure 5, there is provided a slight gap or space between them for the passage of two or more vertical supporting bars 9, which are shown more particularly in Figures 7 to 11 inclusive. Each bar is normally held in raised position by any suitable means such as the coiled springs 10 which are connected to the individual bar at 11, and at their lower ends bear upon a plate 12 carried by the longitudinal extending strut 13 which connects, and is supported by, the transverse supporting members 2. Each vertical supporting bar 9 is formed with an angular extension $9^x$ upon which rests the table top unit 14. Springs 10 act upon vertical supporting members 9 to normally hold top unit 14 slightly above the upper surfaces of top units 4 and 6, as shown in Figures 5 and 7. A pin *f* limits the movement of each member 9.

When the top units 4 and 6 are separated, as shown in Figure 2, table top unit 14 may be manually depressed to lie in the same horizontal plane as units 4 and 6 and means are provided for automatically latching said unit 14 in such position. Such means will now be described.

Each vertical supporting bar 9 is formed with one or more shoulders $9^x$ (Figure 8), over which a latch pawl 15 is adapted to pass. Latch pawl 15, in the present embodiment of the invention is, in each case, the outer end of a rod D, the inner end of which is pivoted to an actuator E in such manner that when the actuator is rotated an endwise movement will be imparted to the pawl in one of two directions. Each rod D is supported on the underface of strut 13 by means of straps 16. Actuator E is given motion by a rod 17 having a finger piece or handle $17^x$ at the front of the table (Figures 5 and 10). When the top sections 4 and 6 are separated, rod 17 moves idly in the aperture of a stud 18 carried by actuator E, and when the table is thus completely extended the parts will assume the position illustrated in Figure 10. Top unit 14 may then be manually depressed until the pawls 15 automatically spring into engagement with the shoulders $9^x$ of vertical supporting members 9. Such action is accomplished by a spring $18^x$ having one end connected to strut 13 and the other end connected to one of the bars D, as shown in Figure 9. When it is desired to restore the table to its position as illustrated in Figure 5, an outward movement of rod 17 through the intermediary of finger piece $17^x$ will move the actuator E to withdraw pawls 15 from shoulder $9^x$ and thereupon springs 10 will, through members 9, lift the top unit 14 above the upper surfaces of top units 4 and 6. The table may then be quickly closed by moving either of members 4 and 6 toward the other member.

It will be understood that the top units 4 and 6 may be provided with the usual side rails F, as shown in the drawings, and that various modifications may be made in the form and arrangement of the elements without departing from the spirit of the invention, what I claim and desire to secure by Letters Patent being as follows:—

1. In latching means for adjustable tables, comprising two opposed table top units and a third top unit normally disposed above said first named top units, of a supporting member connected to the third top unit and projecting upwardly between the first named units, a spring acting upon said supporting member, a pawl adapted to engage a shoulder formed on said supporting member, a rotatable actuator, a link connecting the pawl with the rotatable actuator, and means for manually imparting movement to the actuator.

2. In latching means for adjustable tables comprising two opposed table top units and a third top unit normally disposed above said first named top units, of a supporting member connected to the third top unit and projecting upwardly between the first named top units, a spring acting upon said supporting member, a pawl adapted to engage a shoulder formed on said supporting member, a rotatable actuator, a link connecting the pawl with the rotatable actuator, means for manually moving the actuator in one direction, and means for automatically moving the actuator in the opposite direction.

In testimony whereof, I have signed my name to this specification.

JOSEPH COOPER.