C. E. BOWERS.

TABLE LOCK.

APPLICATION FILED MAY 23, 1921.

1,425,833. Patented Aug. 15, 1922.

Fig. 1.

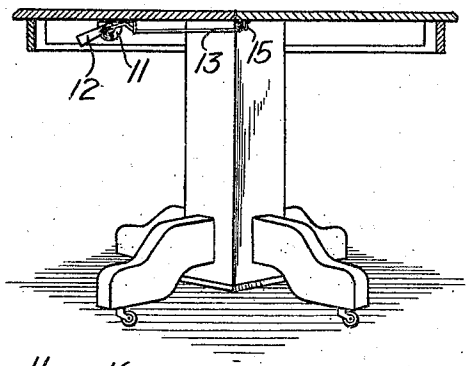
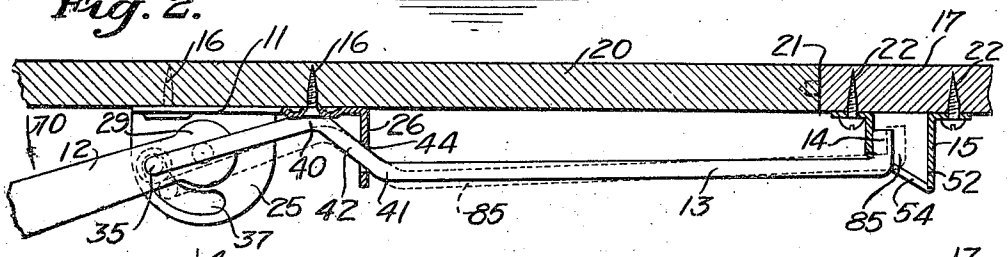


Fig. 2.



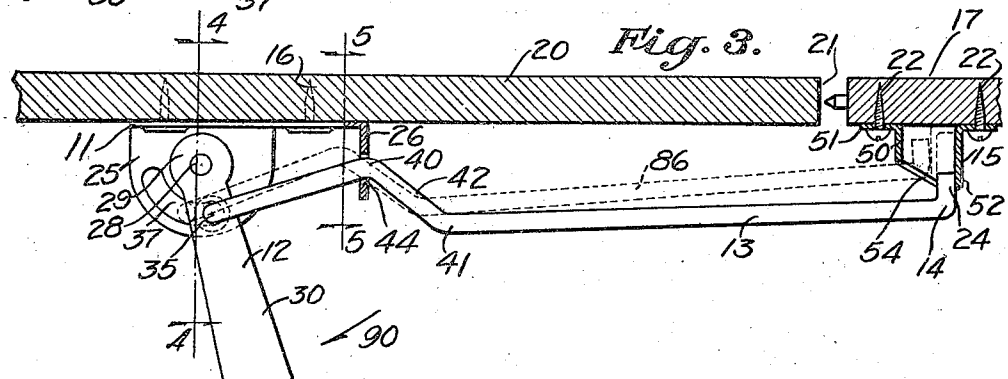


Fig. 3.

Fig. 4.

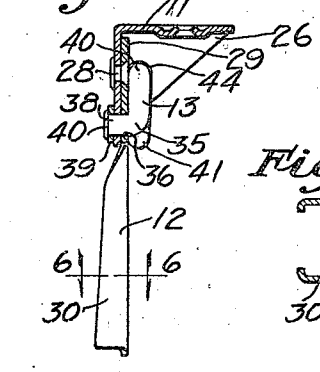


Fig. 5.

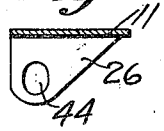


Fig. 7.

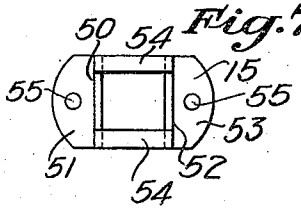
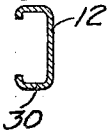


Fig. 6.



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UNITED STATES PATENT OFFICE.

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TABLE LOCK.

1,425,833. Specification of Letters Patent. Patented Aug. 15, 1922.

Application filed May 23, 1921. Serial No. 471,680.

To all whom it may concern:

Be it known that I, CLAUDE E. BOWERS, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Table Lock, of which the following is a specification.

This invention relates to the manufacture of extension tables, and relates particularly to locking devices for holding the top divisions securely together when the table is not in use in extended position.

It is the principal object of this invention to provide a table lock which may be attached to the under side of the table in such a manner that the actuating lever may be easily accessible for operation and which table lock will also have the function of breaking the joint between the two top portions by forcing them apart upon the disengagement of the locking device.

It is a further object of this invention to provide a rigid mounting for the actuating elements of the lock which may be integrally formed from sheet metal and which mounting will include all such means as are necessary to control both the lateral movement and the vertical movement of the locking bar associated therewith.

It is also a very essential object to provide in such a device certain novelties in construction and features of formation, as hereinafter set forth, which will be conducive of extremely low manufacturing costs.

Other objects and advantages will become evident hereinafter.

Referring to the drawing which is for illustrative purposes only:

Fig. 1 is on elevational view of an extension table having the top thereof shown in section perpendicular to the line of division of the two parts forming the top. In this view a locking device of my invention is shown in application.

Fig. 2 is an enlarged view of the locking device shown in Fig. 1 and illustrates the parts of the lock disposed in active relation.

Fig. 3 is a view similar to Fig. 2 showing the locking device opened and illustrating the manner in which the joint between the top portions is opened.

Fig. 4 is a section through the mounting plate on a plane represented bv the line 4—4 of Fig. 3.

Fig. 5 is a section taken on a plane represented by the line 5—5 of Fig. 3.

Fig. 6 is a section taken on a plane represented by the line 6—6 of Fig. 4.

Fig. 7 is a bottom plan view of the catch plate I employ and which is illustrated in Figs. 2 and 3.

The locking device which I have invented comprises essentially a plate 11 which mounts a lever 12 adapted to actuate a catch bar 13 provided with a hooked end 14 which engages a catch plate 15. The mounting 11 is attached by means of screws 16 to the underside of one of the divisions 20 of the table top in such a position that the hooked end 14 will extend a slight distance beyond the joint 21, as illustrated, and the catch plate 15 is secured by means of screws 22 to the underside of the other division 17 of the table top in such a position that it may be engaged by the hooked end 14.

The plate 11 is stamped from sheet metal and is provided with a bent up tongue 25 and a bent up tongue 26, the advantages of which formation will hereinafter be set forth. The lever 12 is attached to the tongue 25 by a rivet 28 which is countersunk in an enlarged flat hub portion 29 from which the grip 30 of the lever extends .

The catch bar 13 is provided with a bent portion 35 which projects through a hole 36 provided in the lever 13 and also projects through an arcuated slide 37 punched in the tongue 25. Upon the extreme end 38 of the portion 35 is placed a washer 39 and the end 38 is riveted over as illustrated at 40 in Fig. 4. The bar 13 is bent at points 40 and 41 to provide a reciprocating cam 42, these bends 40 and 41 being so located that the cam 42 will actuate in an elongated hole 44 in the tongue 26 which hole serves as a slide for the cam 42.

The catch plate 15 is integrally formed by stamping same from sheet metal and is provided with a short forward leg 50 rising from a plate 51, and a somewhat longer rear leg 52 rising from a plate 53, and the ends of the legs are surmounted by connecting strips 54 which are formed by punching out the therebetween included metal. Holes 55 are provided in the bases 51 and 53 for the passages therethrough of the screws 22.

In opening the table lock, which is accomplished by moving the lever 12 in the direc-

tion indicated by the arrow 70 in Fig. 2, the combined movements imparted to the catch bar 13 by the lever 12 and the action of the cam 42 in the slide 44 results in a forward motion as illustrated by the dotted lines 85 in Fig. 2. Then the advancing lever carries the catch bar 13 into the position shown in dotted lines 86 in Fig. 3; at this point of advance the hooked end 14 of the bar 13 comes into contact with the leg 15, and as the advance is continued; the table top divisions 20 and 17 are forced apart and the disposal of parts assumes the relationship shown in Fig. 3. It will be noticed that the movement of the end 35 of the catch bar 13 during this last portion of the operation is substantially in a horizontal direction, while the cam 42 still acts to carry the bar 13 downward. This combination of movements lowers the position of the hooked end 14 to that shown in Fig. 3 which will permit the passage thereby of the leg 50 of the catch plate 15 as the divisions of the table top are drawn apart to insert leaves therebetween.

When it is desired to close the table, such leaves as may be in use are removed and the divisions brought together until the leg 52 of the catch plate 15 rests against the end 24 of the bar 13, whereupon the lever 12 is actuated in the direction of the arrow 90 in Fig. 3 and the end 14 of the bar 13 is carried up through the position 86 and engages the leg 50 of the catch plate 15 and draws the divisions of the table together thereby.

My invention resides particularly in the feature of combining all of the actuating means by which the lock is operated upon a single integrally formed mounting plate as hereinbefore described, thereby confining the required number of parts to a minimum, and the novel combination of elements to produce a movement in the catch bar to accomplish the results set forth.

I claim as my invention:

In a locking device, the combination of: a catch bar; a hook on the free end of said catch bar; a catch plate adapted to be engaged by said hook; said catch plate having a short forward leg and a long rear leg; a lever to actuate said catch bar; a plate; a tongue integrally formed on said plate to pivotally mount said actuating lever; said tongue being formed to provide an arcuated opening; a bent up portion upon the end of said catch bar opposite to said hook adapted to extend through an opening provided therefor in said lever and to actuate in said opening provided in said tongue; a washer riveted upon said bent up portion of said catch bar to retain said end in operating position; a toe formed upon said plate, having a hole formed therein; and a sliding cam formed by suitably bending said catch bar, said cam acting in said hole formed in said toe to lower the position of said free end of said catch bar as said hook is actuated against said longer leg of said catch plate when the locking device is being disengaged.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 17th day of May, 1921.

CLAUDE E. BOWERS.