

No. 700,222.

Patented May 20, 1902.

C. W. MUNZ.
EXTENSION TABLE.

(Application filed Feb. 18, 1901.)

(No Model.)

2 Sheets—Sheet 1.

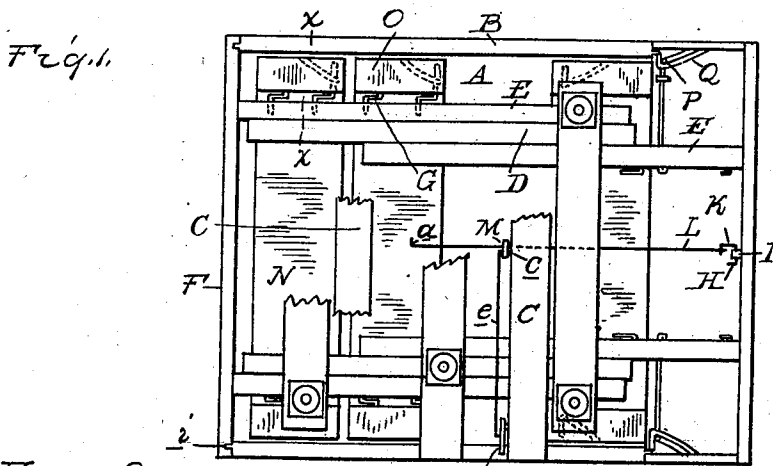
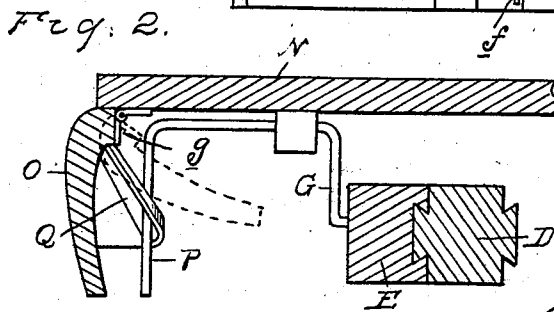


Fig. 3.

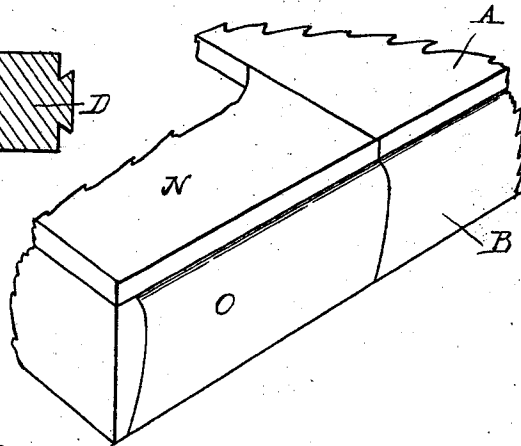
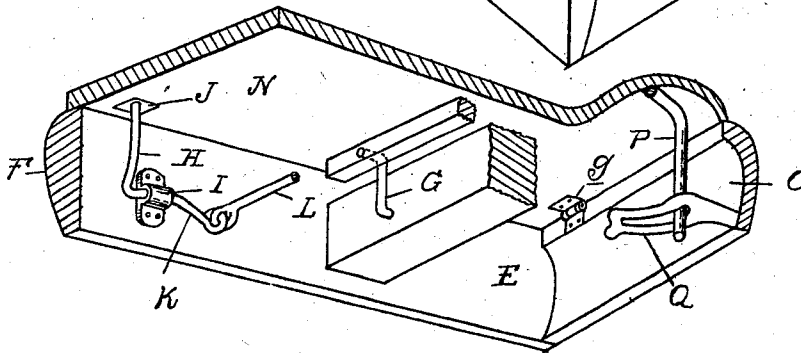


Fig. 4.



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C. W. MUNZ.
EXTENSION TABLE.

(Application filed Feb. 16, 1901.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 5.

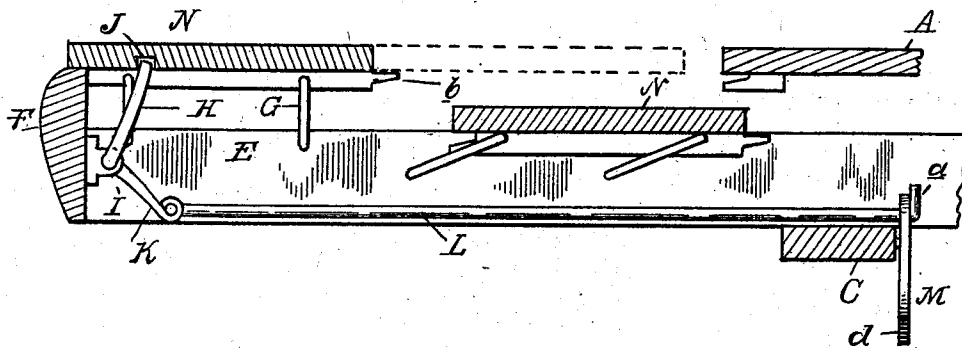


Fig. 6.

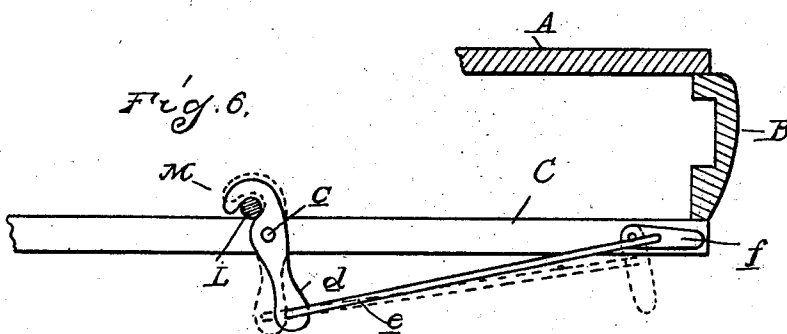
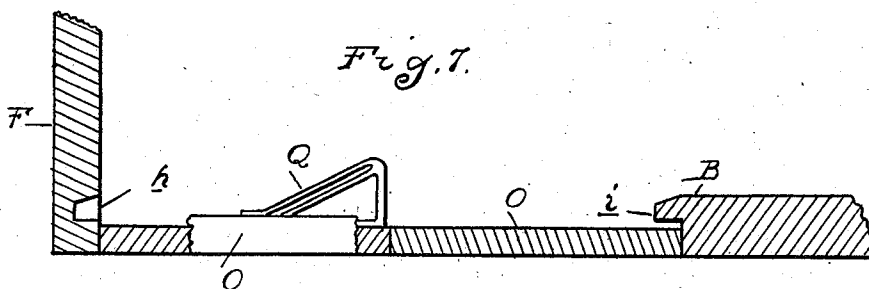


Fig. 7.



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UNITED STATES PATENT OFFICE.

CHARLES W. MUNZ, OF DETROIT, MICHIGAN.

EXTENSION-TABLE.

SPECIFICATION forming part of Letters Patent No. 700,222, dated May 20, 1902.

Application filed February 16, 1901. Serial No. 47,651. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. MUNZ, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Extension-Tables, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to that class of extension-tables in which the leaves are permanently attached to an extensible end section of the table and when not in use are stored beneath the fixed top of the table between the side rails thereof. With this type of table the extension portion when drawn is usually unprovided with side rails. As a consequence when the table is used without a cloth in extended position it has an unfinished appearance.

It is the object of my present improvement to provide extensions for the side rails of the table in the drawn position thereof, the said extensions being adapted to be stored with the leaves and when the table is drawn to automatically assume a position in extension of the fixed side rails.

It is a further object of my invention to provide means for automatically lifting the leaves when the table is drawn to the level of the fixed top, and, further, to provide a lock which prevents the separation of the fixed and extension sections while the table is in use.

The invention consists in the construction and arrangement of parts, as hereinafter described and claimed, whereby the objects set forth are accomplished.

In the drawings, Figure 1 is a plan view of an extension-table to which my improvements are applied. Fig. 2 is an enlarged cross-section substantially on line *x x*, Fig. 1. Fig. 3 is a perspective view of the table-top and extension-section, showing one of the side-rail extensions in position. Fig. 4 is a sectional perspective view illustrating the mechanism for elevating the leaves. Fig. 5 is a longitudinal section thereof. Fig. 6 is a cross-section showing the mechanism illustrated in Fig. 5, and Fig. 7 is a horizontal section through the fixed and extended side rails.

The improvements are shown as applied to

a well-known type of extension-table, in which A is the fixed top. B represents side rails depending therefrom. C represents cross-bars extending across at opposite ends to said side rails beneath the same, and D represents the fixed guides secured to said cross-bars. E represents the extension-slides, having a tongue-and-groove engagement with the guides D. The outer ends of the slides E are attached to the end rail F of the table, which corresponds to and joins with the side rails of the table.

A table constructed as above described when closed has the appearance of having a continuous rail extending around on the sides and ends of the table. When drawn, however, the end rails are separated from the side rails, so as to leave an open gap varying in width according to the number of leaves in use. The latter are attached to the slides E by a swinging connection comprising the parallel links or rock-arms G, pivotally attached at one end to said slides and at their opposite ends to the under side of the leaf. When the leaves are stored, the links G are turned so as to rest said leaves upon the slides E; but when the table is drawn the leaves must be elevated. This is usually accomplished by the operator grasping the leaf at opposite ends after the slides are drawn and swinging it up into a position where one edge rests upon the top of the end rail, the opposite edge coming in line with the fixed top and having a dowel-and-socket engagement therewith.

In order to simplify the operation of extending the table, I have provided means for automatically throwing up the end leaf when the slides are drawn, so that the operator only needs to draw the slides to their limit and then move them in again until the dowels are in engagement with their sockets. The mechanism employed for this purpose is constructed as follows:

H is a rock-arm pivotally secured in a suitable bearing I upon the inner face of the end rail of the table, the free end of said arm being adapted to engage with a socket or shoulder J on the under face of the leaf. Attached to this rock-arm is an operating rock-arm K, the two arms together constituting a bell-crank lever. The arm K is connected to a rod

L, which extends inward and is slidably secured in a bearing M, preferably upon one of the cross-bars C. The rod is also provided near its end with a shoulder or stop *a*, adapted to strike against the bearing M before the slides are fully drawn, so as to pull upon the rod L and rock the bell-crank, causing the arm J thereof to swing the leaf N upward into position and alinement with the fixed top of the table. When the leaf is thus swung into position, it is only necessary to move the slides inward until the dowels *b* engage with their sockets. To then prevent the accidental disengagement of the dowels, I provide a locking device, and to this end the bearing M is made in the form of a hook pivotally secured at *c* to one edge of the cross-bar C and having a downwardly-extending arm *d* below the pivot. This arm is connected to a rod *e*, extending to near the side of the table and having suitable means, such as the crank *f*, for drawing thereon to rock the bearing M and clamp the hook thereof against the rod L. Thus after the leaf is in position the operator needs only to turn the crank *f*, which will clamp the rod L so firmly in the bearing M that the table cannot be drawn until said clamp is released.

In order to avoid the gap in the side rails when the table is extended, I provide each of the leaves N with a side-rail section O at each end thereof. These sections are hinged at *g* to the under face of the leaves and are of a shape corresponding to the fixed side rails of the table, so that when turned down into a vertical position they exactly match with said fixed rails. In the storing of the leaves the sections O must be folded upward beneath the leaf into the position shown in dotted lines, Fig. 2. To automatically accomplish this movement, as well as to throw the sections down into position when the table is extended, a rock-arm P is secured to the under side of the leaf, having an operating connection with one of the links G. This rock-arm engages with a suitable cam, such as Q, upon the inner face of the section O, which is adapted upon the rocking of said arm to swing the section inward into the dotted position, Fig. 2. It will thus be readily understood that the swinging of the sections O is automatically accomplished without attention from the operator, who only needs to extend or contract the table. When the sections O are in position, as shown in Fig. 3, the table in its extended position will have the appearance of being provided with a continuous rail extending around on all sides.

In prior constructions of extension-tables of the type to which my improvements are applied it has been customary to form the ends of the end rails with rabbets engaging with the ends of the side rails in order to form a firmer joint between the two. Were such a construction used with the side-rail sections O, the latter would not match exactly with said end rails, as the rabbet would leave an

unfinished gap. I have therefore modified the construction of table so as to leave the end rails their full thickness at opposite ends to match with the end of the section O, and in order to make a firm joint with the side rails I form a groove *h* on the inner face of said end rails near the end thereof, said groove being adapted to match with the tongue *i* on the end of the side rail. This tongue-and-groove engagement will form a firm joint between the end and side rails and will not interfere with the operation of the swinging sections O. In order to avoid the tongue *i*, however, the sections O upon the inner ends must be reduced in thickness to avoid said tongue, as shown in Fig. 7.

What I claim as my invention is—

1. In an extension-table, the combination with the stationary section comprising a top and side rails, of an extension-section provided with a top or leaf and a side rail both adapted to be stored in the space inclosed by the top and sides of said stationary section, and means for automatically moving said extension side rail into alinement with said fixed side rail upon the movement of said extension top or leaf into the plane of said fixed top.

2. In an extension-table, the combination with the stationary section comprising a top and side rails, of an extension-section provided with a top or leaf and a side rail, both adapted to be stored in the space inclosed by the top and side rails of said stationary section, and means for automatically moving said extension side rail into or out of alinement with said stationary side rail upon the corresponding movement of said extension top or leaf in or out of the plane of said stationary top.

3. In an extension-table, the combination with the stationary section comprising a top and side rails, of an extension-section having a leaf permanently carried thereby, an extension side-rail section corresponding to said leaf and hinged thereto, means for raising and lowering said leaf to move the same into or beneath the plane of said stationary top, and means operated thereby for swinging said rail correspondingly in or out of alinement with said fixed side rails, whereby said extension-rail is automatically folded and stored by the contraction of the table.

4. In an extension-table, the combination with the stationary section comprising a top and side rails, of an extension, a leaf carried thereby, a swinging link connection between said leaf and said extension-section permitting of raising and lowering of the former, an extension side-rail section hinged to said leaf and a connection between said swinging link and said hinged side-rail section, whereby the latter is turned into alinement with the fixed side rail or folded for storing by the corresponding raising or lowering of said leaf.

5. In an extension-table, the combination with stationary and extension slides, comprising extension-slides and an end rail of a leaf

carried by said extension-section and having a swinging connection therewith whereby it may be raised or lowered, a bell-crank lever carried by said extension end rail having one
5 arm in engagement with said leaf, a rod connected to the other arm of said bell-crank, and having a sliding engagement with said stationary section, and a stop for limiting the movement of said rod when the table is being
10 extended whereby said bell-crank lever is actuated to swing said leaf upward into the plane of the stationary top.

6. In an extension-table, the combination with a stationary section and a movable top or leaf adapted to be stored therein, of a side-rail section carried by said leaf and movable
15 in relation thereto from a position permitting of storing into a position complementary to said stationary section and means for automatically operating said extension side rail
20 by the movement of said leaf.

7. In an extension-table, the combination with stationary and extension sections, of a

rod longitudinally and centrally arranged being fixedly connected to one of said sections 25 and having a sliding engagement with the other, a clamping-lever for locking said rod from its sliding movement, an operating-rod for said lever extending to the side of the table, and a crank-arm for actuating said rod 30 and lever and locking the same in position for clamping.

8. In an extension-table, the combination with a stationary section and a movable top or leaf, of a side-rail section carried by said 55 leaf and means for automatically moving said side-rail section relative to said leaf by the movement of the latter relative to said stationary top.

In testimony whereof I affix my signature 40 in presence of two witnesses.

CHARLES W. MUNZ.

Witnesses:

M. B. O'DOGHERTY,
H. C. SMITH.