(No Model.) 2 Sheets—Sheet 1.

D. J. HAYNES & V. LAPHAM.

EXTENSION TABLE.

No. 589,388. Patented Aug. 31, 1897.

Fig. 1.

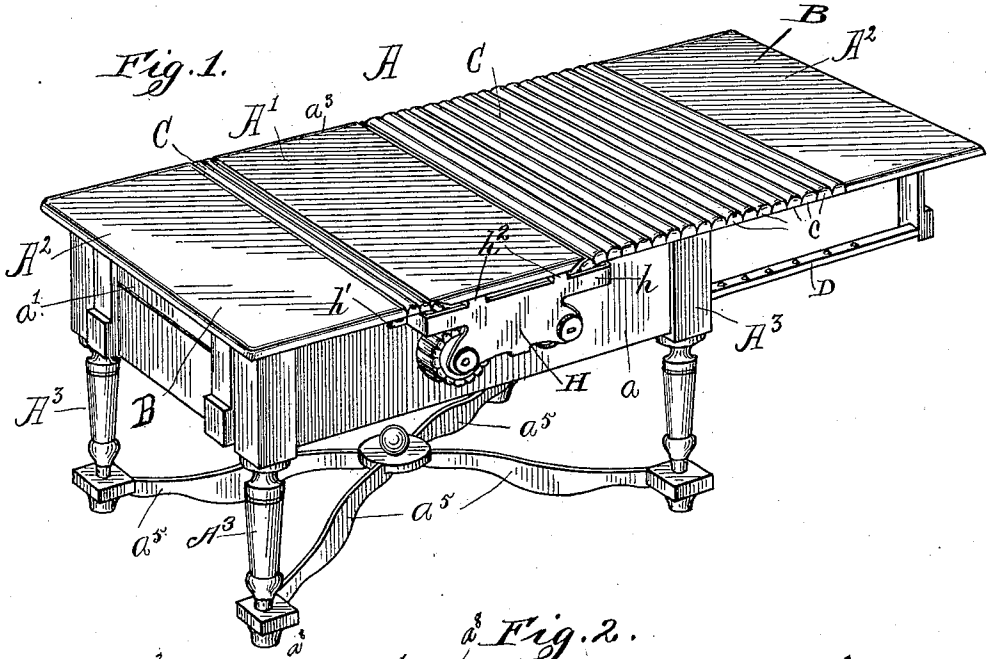


Fig. 2.

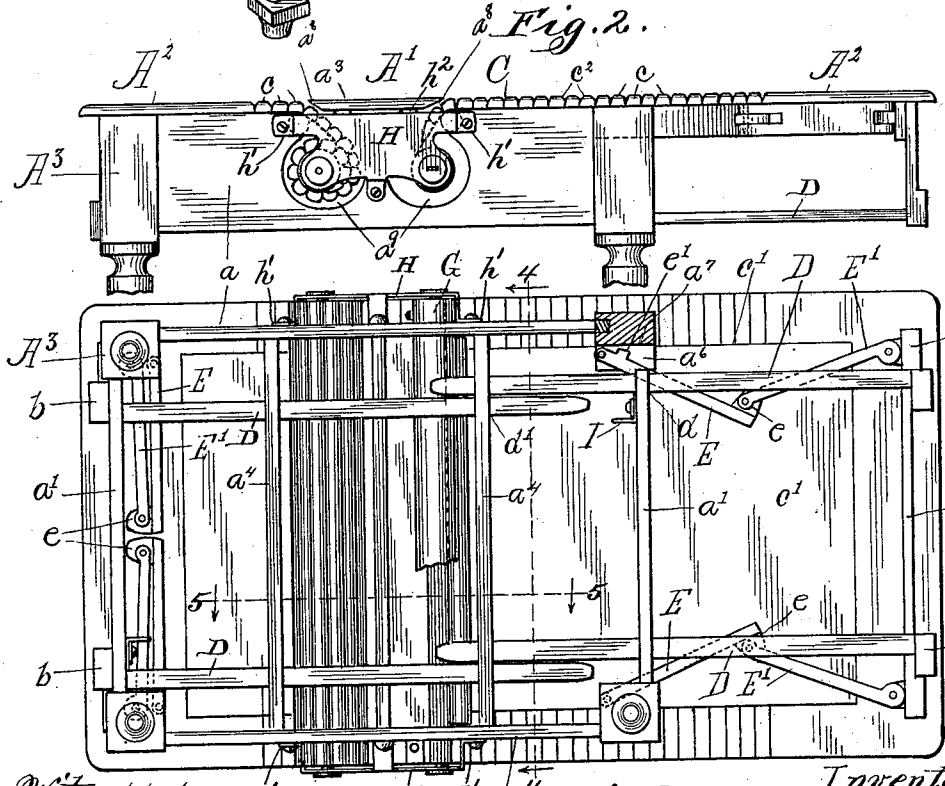


Fig. 3.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

D. J. HAYNES & V. LAPHAM.

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Fig. 4.

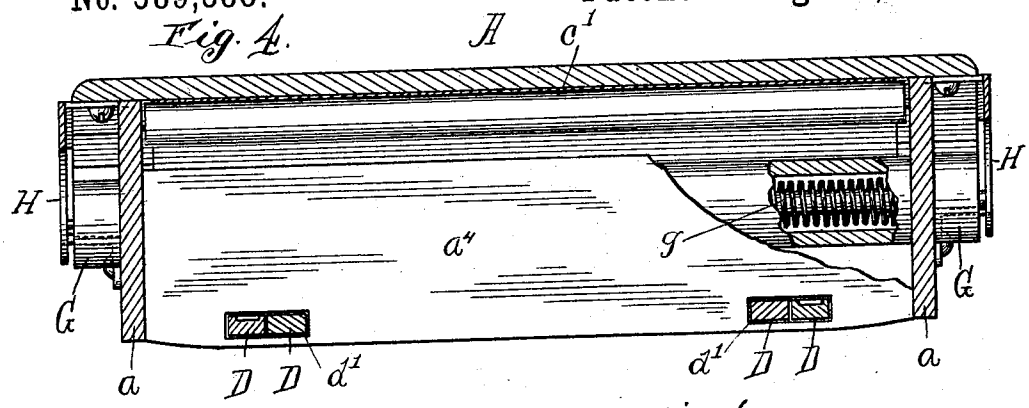


Fig. 6.

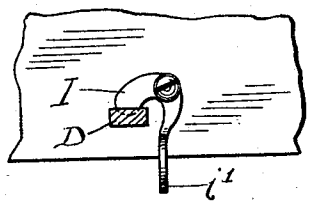


Fig. 5.

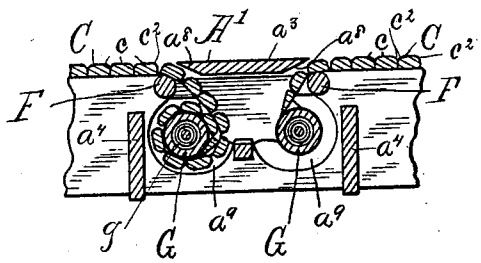


Fig. 7.

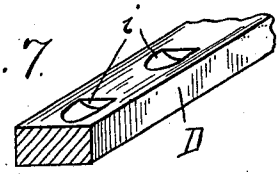
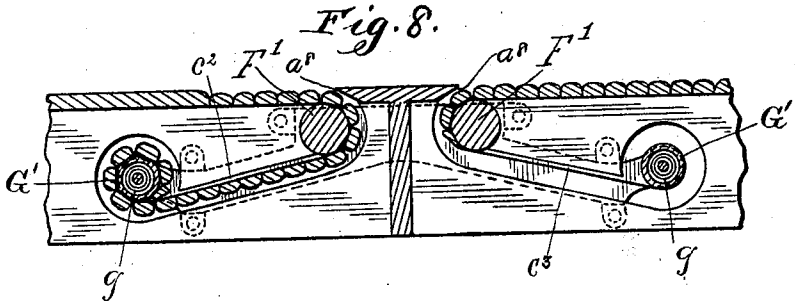


Fig. 8.



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UNITED STATES PATENT OFFICE.

DANIEL J. HAYNES AND VALENTINE LAPHAM, OF CHICAGO, ILLINOIS.

EXTENSION-TABLE.

SPECIFICATION forming part of Letters Patent No. 589,388, dated August 31, 1897.

Application filed March 29, 1897. Serial No. 629,803. (No model.)

To all whom it may concern:

Be it known that we, DANIEL J. HAYNES and VALENTINE LAPHAM, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Extension-Tables, of which the following is a specification.

This invention relates to improvements in tables, and refers more specifically to improvements in extension-tables of that class particularly designed or adapted for use for domestic purposes, but nevertheless capable of use in other ways.

A principal object of the invention is to provide a table which shall be complete in itself whether closed to its smallest size, extended to its greatest length, or arranged in any intermediate position, as distinguished from those tables heretofore commonly used which required the addition of auxiliary leaves or filling-pieces when it was desired to extend or enlarge the table, the invention thus overcoming the necessity of keeping auxiliary parts of the table in storage except when occasionally needed. At the same time the invention has in view the production of a table which is more convenient of adjustment, of neat and finished appearance, and of simple, durable, and generally improved construction.

The invention consists in the matters hereinafter described, and more particularly pointed out in the appended claims, and the same will be readily understood from the following description, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a table embodying an improved form of our invention. Fig. 2 is a side elevation of the same, one end being partly extended and the legs being broken off to reduce the height of the figure. Fig. 3 is a bottom plan view of the table shown partly extended, as in the previous figure. Fig. 4 is a transverse vertical sectional view taken on line 4 4 of Fig. 3 and looking in the direction of the arrows. Fig. 5 is a fragmentary view taken in longitudinal vertical section on line 5 5 of Fig. 3. Fig. 6 is a detail view of one of the latches which serve to hold the table in its adjusted position. Fig. 7 is a perspective view of a fragmentary portion of one of the guide-bars, showing particularly the form of the notches therein which are engaged by the latch. Fig. 8 is a view similar to Fig. 5, showing a modified form of the invention.

While we have chosen to illustrate herein a table having the general design of an ordinary dining-table, yet it is to be understood that in its broadest scope the present invention is not confined to the particular details shown, but that the invention may be embodied in other forms, and the following description is therefore to be taken as setting forth one preferred and practical embodiment of our invention.

Referring to the drawings, A designates as a whole a table, comprising generally a main body or central portion A′ and movable extension portions A^2 at each end thereof. The main body of the table comprises a rectangular box-shaped frame consisting of side and end frame pieces a a', respectively, arranged with their upper edges in the same horizontal plane and connected at the several angles of the frame with suitable supporting-legs a^2 in any usual or suitable manner, in the present instance by being mortised together. A fixed top-board portion a^3 is secured to extend transversely across and rest upon the central portion of the rectangular supporting-frame, and preferably one or more transverse frame members a^4 will be arranged to extend between the side frame members at points intermediate between the ends of the frame, as best indicated in Fig. 3.

The side frame-pieces are arranged to extend parallel with the side margins of the table-top and are set some distance inside of the edges thereof, so as to provide an overhanging ledge, as is usual in tables of this class. Desirably the several legs of the table will be connected with each other near their lower ends by means of ornamental braces a^5, but these are, of course, not essential.

The extension portions A^2 each consist of an inflexible leaf portion B, supported so as to be held and carried longitudinally in the same plane with the fixed top portion, and a flexible or roller-top portion C, connected with the inner margins of the inflexible portion and arranged to bridge the space between the latter and the central fixed top portion.

In the present instance the inflexible leaf

portion is provided on its under side with two depending frame-pieces b and a connecting frame piece or member b', extending transversely of the table adjacent to and parallel with the end margin of the leaf, as is best indicated in Figs. 2 and 3. With the lower ends of the frame-pieces b are rigidly connected horizontal parallel guide-bars D, which are arranged to extend at their inner ends through guide-apertures d d', formed in the cross frame-bars a' a^4, respectively, thereby serving to support and maintain the leaf portion in proper alinement with the fixed top portion in any position of adjustment of the table.

The flexible or folding portions of the table in the preferred construction illustrated herein are composed of strips of wood c of uniform width and mounted closely adjacent to each other so as to extend transversely of the table upon a suitable flexible web or fabric c', preferably formed of heavy canvas. In order to give said strips a more finished appearance and also to facilitate the passage of the same through an opening of minimum width as the flexible portion is carried into a folded position the upper angles of the strips are rounded off slightly, as indicated at c^2 in the drawings.

The upper edge of the rectangular main frame serves to support that part of the flexible or roll-top portion C which overlies the said frame, and in order to support that part of the flexible portion which extends beyond the main frame folding supports are provided, constructed and arranged as follows: E E' designate the two members, respectively, of two pairs of folding supports or toggles, the members of each pair of which are flexibly united with each other by means of a suitable pivotal joint e of such construction as to hold said members in rigid horizontal alinement with each other while permitting them to flex freely laterally. The outer end of the member E' is pivotally connected with the depending frame-piece b. In order to support the inner end of the member E, the table-leg is rabbeted at its upper end, at the inner side thereof, (see sectional part of plan Fig. 3,) in such manner as to form a horizontal ledge a^6, upon which the end of the said member E is pivoted in such manner as to sweep across and be supported by said ledge in any position of adjustment of the table. In order to limit the extent to which the extensible portion may be drawn out, stops e' are formed upon the members E adjacent to the attached end thereof, which are so arranged as to be carried into contact with the vertical inner side wall a^7 of the rabbet a^6 when the leaf is drawn out, as indicated clearly in said Fig. 3. It may be noted in this connection that the said stops are so arranged as to prevent the toggle members from being drawn into a position exactly in alinement with each other, so that the toggles are always flexed inwardly as the table is closed.

To next describe the manner in which the flexible portions are carried into folded or rolled position as the extensible portions are closed inwardly, it is to be understood that this may be varied somewhat, but in the preferred construction illustrated herein is accomplished as follows: The side margins of the central fixed table portion a^3 are beveled, as indicated at a^8, and guide-rollers F are suitably mounted to extend between the side frame members a parallel with the beveled portions a^8 of the fixed portion and at such distance therefrom as to carry the flexible rolling top in close proximity to the beveled portion, so that the flexible portions and the fixed portions together form a practically continuous upper surface. In order to provide a suitable holder to receive the folded portion of the roll-top, the side frame members are apertured or recessed, as indicated at a^9, to provide room for a pair of receiving-rolls G. The receiving-rolls G are of the full length of the width of the folding top and are provided with trunnions, arranged to bear in suitable supporting-plates H, mounted upon the side frame members a, said plates being in the present instance provided at their upper parts with laterally-extending arm portions h, which form guides to hold the roller-top in accurate alinement with the fixed top portion and are bent inwardly and secured against the side frame members, as indicated at h'. Desirably, also, the upper edges of the supporting-plates will be provided with inturned ears or attaching-lugs h^2, which extend beneath and are secured to the under surface of the fixed top portion. The supporting-plates thus constructed and arranged serve to support the receiving-rollers, to form guides for the roller-top portions and to form shields which practically cover the openings in the side frame members, thus giving a finished appearance to this part of the table.

In order that the receiving-rolls shall automatically wind up the flexible roll-top portions as the leaves are pushed inwardly into closed position, coiled springs g are arranged within the interior of the rolls and adapted to act upon the latter in such manner as to tend to wind up the roll-top portions, the tension of said springs being preferably so adjusted as to be insufficient to move the leaf until it is pushed inwardly by the operator. Inasmuch, however, as there is a constant tendency for the leaves to close under the influence of the spring-rollers gravity-latches I are pivotally mounted upon the frame members a' in such position as to swing downwardly by gravity and engage notches i, formed in the guide-bars D, said notches being made of ratchet form, so as to permit the leaves to be drawn outwardly without interference, but to hold the latter from inward movement until the latches are lifted by means of thumb-pieces i'.

The operation of the table thus described has been sufficiently indicated in the forego-

ing description and need not, therefore, be repeated in detail.

In Fig. 8 we have illustrated a slight modification which is more particularly adapted for use in tables of larger size—*i. e.*, tables which are constructed to be drawn out to a greater extent than that heretofore described. In this construction the receiving-rolls G′ are arranged at a greater distance apart and also at a greater distance from the guide-rolls F′, and the slats or strips of the roll-top are omitted from that portion of the web c^3 which extends from the receiving-roll to the guide-roll when the leaf is in its fully-extended position. Obviously when the roller-top is carried inwardly the part of the web unprovided with slats will first be wound upon the roller, occupying very little thickness thereon, and thereafter a considerable portion of the slatted web may be accommodated upon the roller without unduly increasing the size of the roll. The supporting-plate will obviously be changed in form to conform to the changed positions of the rolls, as indicated in the dotted lines in Fig. 8, but in other respects the constructions are substantially identical.

We claim as our invention—

1. In an extension-table, the combination with the supporting-frame and a fixed table-top portion mounted thereon, of an extensible roll-top portion, folding supports coöperating with said roll-top portion, an inflexible leaf portion secured to the outer end of the roll-top portion, a receiving-roll adapted to receive the roll-top portion as the latter is closed, a spring arranged to act upon said receiving-roll, guides arranged to maintain said inflexible leaf portion in the same plane with the fixed top portion and a latch adapted to lock the extensible part of the table in adjusted position.

2. In an extension-table, the combination with the supporting-frame embracing parallel side frame members arranged at a distance apart less than the width of the table, and a fixed table-top portion mounted upon said frame, of an extensible roll-top portion, recesses formed in said side frame members, a receiving-roll mounted in said recesses and adapted to receive the roll-top portion, guides for directing the roll-top portion into the same plane with the fixed table-top portion and folding supports coöperating with said roll-top portion.

3. In an extension-table, the combination with the supporting-frame embracing parallel side frame members arranged at a distance apart less than the width of the table, a fixed table-top portion mounted upon said frame, of an extensible roll-top portion, recesses formed in said side frame members, supporting-plates arranged to overlie said recesses, a receiving-roll mounted in said recesses, having bearing in said supporting-plates, and adapted to receive the roll-top portion, guides for directing the roll-top portion into the same plane with the fixed table-top portion and folding supports coöperating with said roll-top portion.

4. In an extension-table, the combination with the supporting-frame embracing parallel side frame members arranged at a distance apart less than the width of the table, a fixed table-top portion mounted upon said frame, of an extensible roll-top portion, recesses formed in said side frame members, supporting-plates arranged to overlie said recesses, a receiving-roll mounted in said recesses, having bearing in said supporting-plates and adapted to receive the roll-top portion, guides for directing the roll-top portion into the same plane with the fixed table-top portion and folding supports coöperating with said roll-top portion; the said supporting-plates being provided with extensions acting as guides to hold the folded roll-top portion in alinement with the fixed top portion.

In testimony that we claim the foregoing as our invention we affix our signatures, in presence of two subscribing witnesses, this 27th day of March, A. D. 1897.

DANIEL J. HAYNES.
VALENTINE LAPHAM.

Witnesses:
JOHN LEWSON,
ALBERT H. GRAVES.