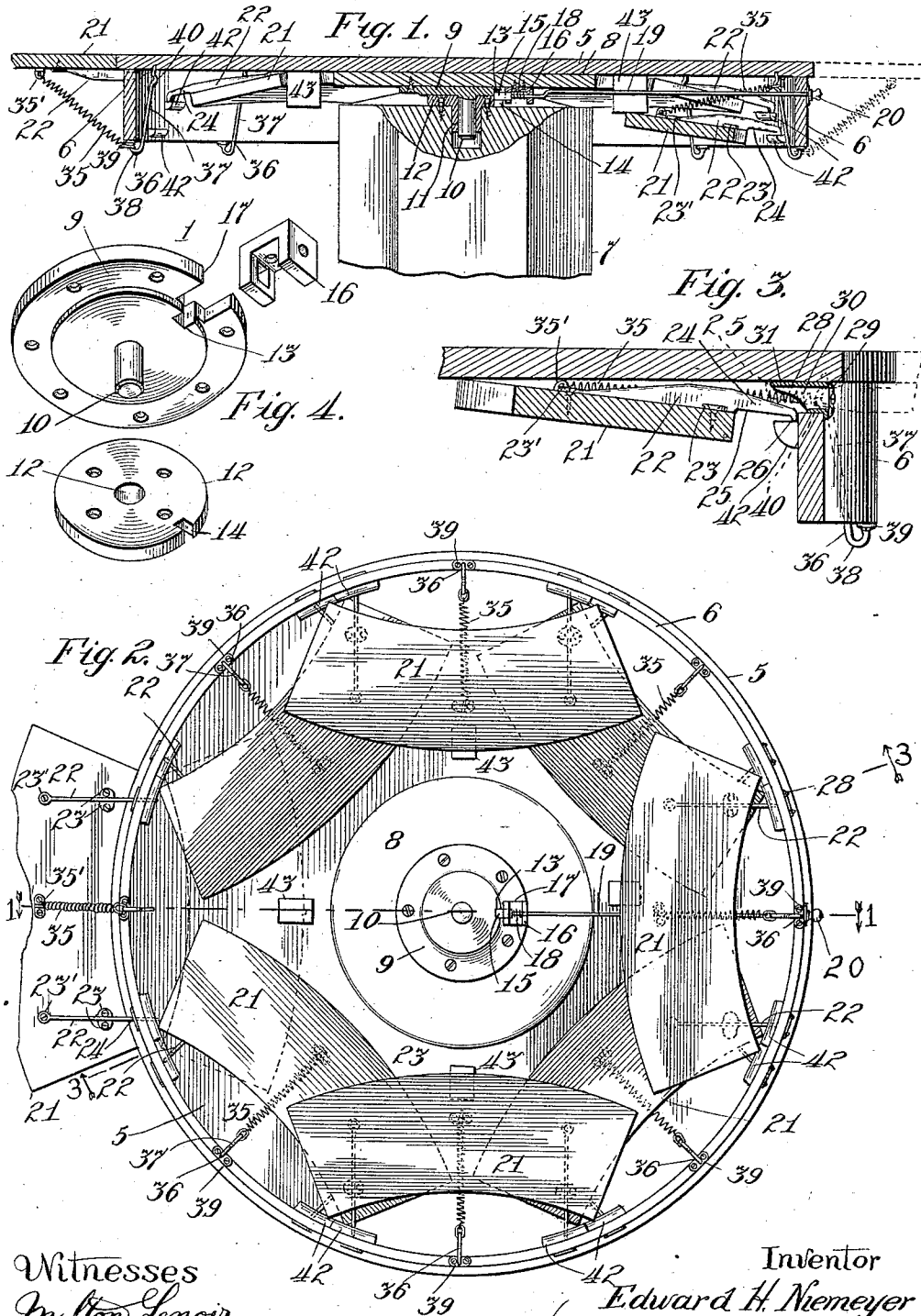


E. H. NIEMEYER.
EXTENSION TABLE.
APPLICATION FILED MAY 4, 1912.

1,059,751.

Patented Apr. 22, 1913.



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UNITED STATES PATENT OFFICE.

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EXTENSION-TABLE.

1,059,751.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWARD H. NIEMEYER, a citizen of the United States, residing at 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.

My invention relates to improvements in extension tables and in some of its features particularly to tables of perimetrically curved or circular form wherein the extension leaves are of suitably curved or arcuate shape adapted jointly to constitute an encompassing or annular extension of a permanent top member.

One of the objects of my invention is to provide a table so constructed that the application or removal of the extension leaves may be easily effected by one person, standing in one position.

Another object of my invention is to provide improved means for the connection of the extension leaves with the table top.

A further object of my invention is to provide an advantageous construction whereby the leaves may be folded under the table top when not in use and effectively held against accidental displacement from folded position.

Other and further objects of my invention will become apparent to those skilled in the art from the following description taken in conjunction with the accompanying drawings, wherein—

Figure 1 is a transverse section (taken on line 1—1 of Fig. 2) through the table, with one leaf member folded under or stored and one leaf member in raised or extended position; Fig. 2 is a bottom plan view of the table top detached from the pedestal; Fig. 3 is a section on line 3—3 of Fig. 2; and Fig. 4 is a perspective detail showing in detached relation the top-locking parts.

The permanent table top board 5 which, in the construction shown is circular in form, is provided near its periphery with a rail or skirt 6, depending from its under side, and is rotatably mounted upon a suitable support 7, shown as a portion of a pedestal of any suitable design. For such rotation, the table top 5, in the construction shown, is provided with a central reinforcing part 8 to which is secured a metallic hub-plate 9, provided with a pintle 10 fitting into the central bearing aperture 11 of

a bearing plate 12, suitably secured to the top of the pedestal 7.

For locking the top against rotation in predetermined position, I form in the two plates 9 and 12, corresponding notches 13 and 14, to be mutually engaged by a bolt 15, which is carried by a small bracket 16, preferably set into a convenient recess 17 formed in the edge of the hub-plate 9. A suitable spring 18 presses the bolt 15 inward, and the bolt may be retracted by means of the stem 19 passing therefrom through the bearings in the bracket 16 and through the rim 6 of the table to a suitable operating knob or handle 20. Manifestly, when the knob 20 is retracted to unlatch the table top, said top may be rotated through a complete revolution before the locking bolt 15 may again engage the registering notches 13 and 14 of the two relatively rotatable plates.

The extension leaves 21 may be of any suitable number jointly to form a perimetric extension for the table top, and are herein shown as eight in number, all of the said extension members being arcuate leaves which are alike in construction and equipment. Each such arcuate leaf has secured to its under side at separated points, two parallel braces, or attaching arms, 22, each of which is preferably in the form of a narrow elongated bar with laterally extended attaching ears 23 and 23' respectively near the center of its length and at one end for screw-attachment to the under side of the extension leaf 21. Each brace extends beyond the inner edge of the leaf to provide a narrow projecting arm portion 24 having in its appropriate edge a recess 25 extending from the edge of the table leaf 21 almost to the extremity of the arm and there terminating at the retaining finger or hook 26. Receptive sockets 28 for these projecting arms 24 are let into and secured to the rim 6 directly under the table top 5. Each such socket 28 is preferably a small casting providing an escutcheon plate 29 secured exteriorly on the rim 6 and made integral with a rectangular tubular portion 30 which extends through the rim 6. The top wall of the tube 30 is sufficiently extended to form an abutment for the recessed portion 25 and finger 26 when arm 24 is slipped therein sufficiently to bring the inner edge of the arcuate leaf into contact with the outer edge

of the table top, and the bottom wall of said tube is preferably shorter.

Manifestly, the table is extended by slipping the several leaves into place each with the projecting arms 24 of its two braces 22 entering the receptive sockets 26 so that the fingers 25 lodge behind the inner ends of the socket-walls 31 to prevent accidental withdrawal of the arms 24. Further to insure against accidental disengagement of the fingers 25 from their positions last described, I provide for each leaf section a tension spring 35, at one end attached to a lug 35' secured to the under side of the leaf near its outer edge and approximately centrally of its arc, and at its opposite end arranged for attachment to the lower portion of the rail 6, as by a spring guide 36, so that the spring pulls inwardly and downwardly upon the leaf. For purposes to be described, the guide 36 is preferably made of wire shaped somewhat like the letter J, with its long limb or stem 37 inclining downward and outward from a point of attachment to the under side of the table top within the confines of the rim 6; its lower bend or loop 38 extending below the bottom level of the rim 6; and its shorter limb connected to a plate 39, which is screwed to the under side of the table rim 6, the longer limb 37 having formed at its upper portion, adjacent the under side of the table top, a bend or retaining kink 40.

The configuration of the spring guide described is particularly designed to enable the single spring 35 to act as a retaining spring for holding the extension leaf in folded position under the table as well as in the extended position above described, the spring having a terminal eye which may slip upon the spring guide. To receive the extension leaves when they are so folded in under the table, I provide on the inside of the rim 6, in alinement with the socket members 28, small brackets 42 on which the ends of arms 24 may rest. Of course, when the table leaves are folded in under the table as shown in Fig. 2 their ends overlap, and therefore the retaining brackets 42 for alternate leaves throughout the series are arranged about midway of the height of the rail 6, and the corresponding brackets for the intervening alternate leaves are arranged near the bottom level of said rim, so that the last said alternate leaves may be positioned at a lower elevation than the first said alternate leaves when all are folded in. To prevent the inner edges of those leaves which are lower when folded from striking the previously infolded leaves in the higher plane, I provide stop-blocks 43 on the under side of the table top to receive the inner edges of those leaves which are intended to lie in the lower plane or tier.

The operation of the table as above described will now be apparent: Assuming all

of the leaves to be folded as shown in Fig. 2, the operation of the table is as follows: The operator, standing at the point where the knob 20 for the table-top lock is accessible; unlatches the table top and turns it slightly so that the lock-bolt is out of register with the notch 14. Then the operator, reaching under the table, lifts the contiguous leaf (which is one of the lower tier of leaves when folded) to remove the ends of arms 24 from supporting brackets 42, and swings said leaf from under the table, incidentally relieving the tension on the spring 35 which will then slip down the long limb 37 of spring guide 36 until its end-eye lies in the loop or bend 38 below the rim 6. The projecting arm portions 24 of braces 22 are then inserted in the receptive sockets 28, until the fingers 26 engage back of the top wall portions 31 of said sockets. In this position, the downward tension of the spring 35, connected between the bottom of the rail 6 and the outer portion of the leaf, serves to retain the leaf against accidental displacement. The operator then turns the table until the next leaf in the lower tier (the third leaf of the series) is opposite him and repeats the first mentioned operation, and so on until all of the alternate leaves on the lower tier are in place. Then the table is again turned and the remaining alternate leaves are correspondingly brought into place, such operation completing the extension of the table. To restore the table to the original smaller size, the operation first described is just reversed, those leaves which are to form the upper tier when folded being first restored to folded position, and then the intervening leaves of the lower tier. In the course of such operation, each leaf, intentionally freed from its socket, is passed under the table (being turned upside down so that the spring overlies the leaf) and the spring is sufficiently stretched so that the free ends of arms 24 may be placed upon the appropriate brackets 42. In the course of this restoration of the leaf to folded position, the spring rides up the inclined long limb 37 of the spring guide until it seats itself in the retaining bend 40, the tension of the spring tending to pull the now-inner edge of the leaf (normally-outer end thereof) outward and upward and so effectively maintaining the free ends of arms 22 against displacement from the brackets 42.

It will be observed that the rotatability of the table top not only enables the operation of the table to be effected from one position of the operator, but it also enables the table to be set or cleared from whatever point may be most convenient. The position of the operating handle 20 also serves as an index for directing the order in which the leaves shall be successively operated in opening and closing the table.

While I have herein described in some detail a particular embodiment of my invention which I have found advantageous and useful, it will be apparent to those skilled in the art that many changes in the details of construction and arrangement might be made without departure from the spirit of the invention and within the scope of the appended claims.

10 What I claim is:

1. In a table, the combination of a base, a permanent top member mounted thereon and provided with a rim adjacent its edge, a plurality of extension leaves, brackets on one edge of the leaves, and cooperating means on said rim to receive said brackets when the leaves are in extended position outside of the top and when the leaves are in reversed position folded within the rim, whereby the same brackets are supported by the rim in either extended or folded position of the leaves.

2. In a table, the combination of a base, a permanent top member mounted thereon, and provided with a rim adjacent its edge, a plurality of extension leaves, brackets on said leaves, means on the rim arranged to be detachably engaged by said brackets when the leaves are on the outside of the rim, means carried by said rim adapted to be detachably engaged by said brackets when the leaves are on the inside of the rim, and means to support said leaves upon the rim for movement to the outside or to the inside of the rim for engagement respectively with the first said or with the second said bracket-engaged means of said rim, whereby the leaves are carried by the rim when in extended or folded position.

3. In a table, the combination of a base, a permanent top member mounted thereon and provided with a rim adjacent its edge, a plurality of extension leaves, brackets on said leaves arranged to detachably engage the rim when the leaves are on the outside or on the inside of the rim, and resilient connections between each leaf and the rim operable to hold said leaf with its bracket in firm engagement of the rim when said leaf is on the outside or on the inside of the rim, whereby said leaves are carried by the rim when in extended or when in folded position.

4. In a table, the combination of a base, a permanent top member mounted thereon and provided with a rim adjacent its edge,

a plurality of extension leaves, brackets on said leaves extending from the inner edge of each thereof, bracket-engaging means upon the inner surface of said rim, below the upper edge thereof, means carried by said rim to receive in engagement therewith said brackets from the outside of the rim, and resilient means to retain each leaf with its bracket in engagement with the rim-carried bracket-engaging means on either the outside or the inside of the rim.

5. In a table, the combination of a base, a permanent top member mounted thereon and provided with a rim adjacent its edge, a plurality of extension leaves, brackets on the leaves arranged to detachably engage the rim when the leaves are outside or inside of the rim, a spring secured to each leaf near its outer edge, the other end of the spring being slidably secured to the rim, whereby the leaves are carried by the rim when in extended or in folded position and are resiliently held in extended or in folded position by said springs.

6. In an extension table, the combination of a permanent circular top board, a rim extending below said top board near its edge, retaining sockets in said rim, arcuate extension leaves, arms on said leaves to engage said sockets, tension springs engaging said leaves, spring brackets on said rim engaged by said spring, each providing an inner leg along which the spring is vertically shiftable, and means on the inside of said rim to be engaged by the extension leaf arm when said leaves are in folded position within the rim.

7. In a folding table, the combination of a base, a circular top board rotatably mounted on said base, a rim extending below said top board near its edge, retaining sockets in said rim, arcuate extension leaves, arms on said leaves to engage said sockets, tension springs engaging said leaves, spring brackets on said rim engaged by said spring, each providing an inner leg along which the spring is vertically shiftable, and means on the inside of said rim to be engaged by the extension leaf arms when said leaves are in folded position within said rim.

In testimony whereof I hereunto set my hand in the presence of two witnesses.

EDWARD H. NIEMEYER.

In the presence of—

W. L. PERKINS,

MARY F. ALLEN.