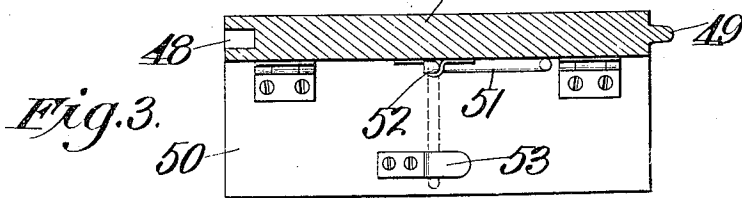
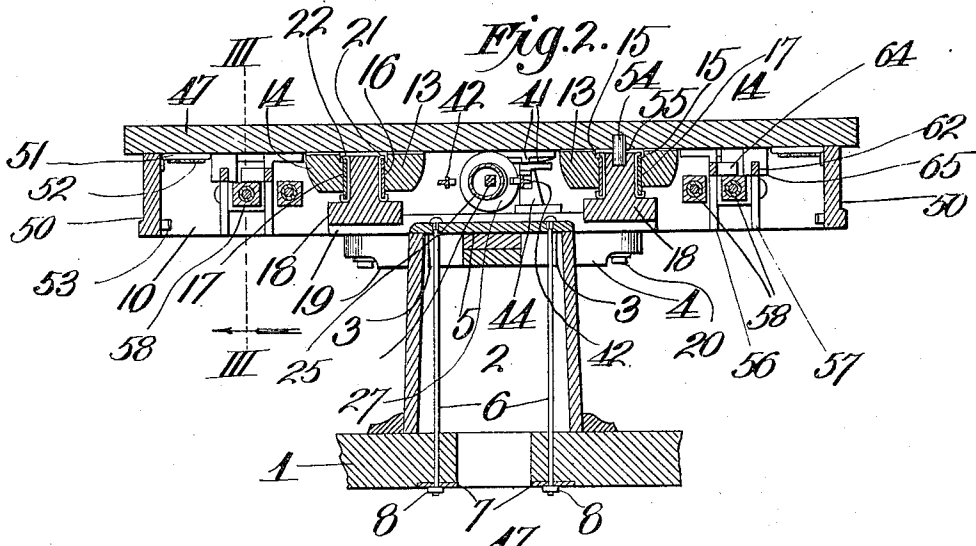
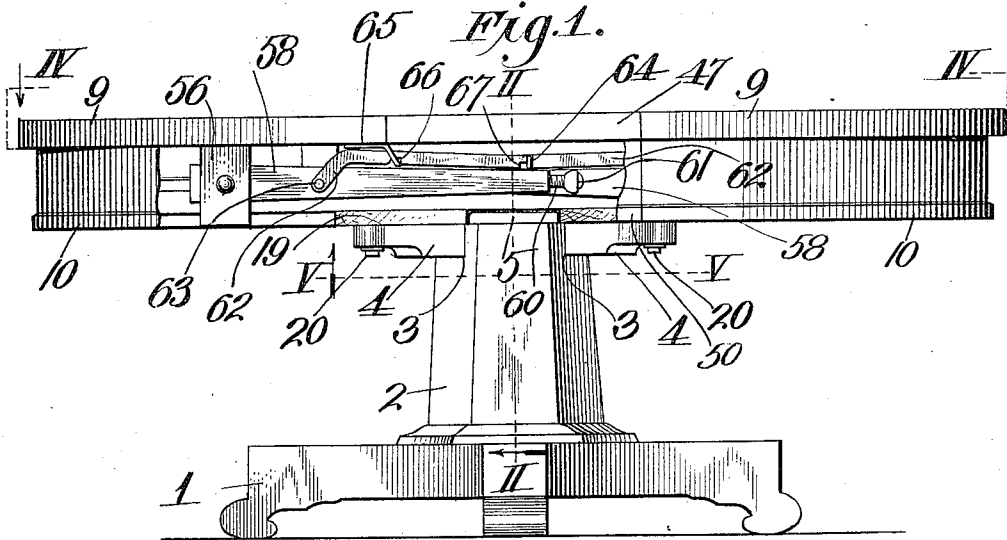


A. H. STONE.
EXTENSION TABLE.
APPLICATION FILED MAR. 26, 1912.

1,052,859.

Patented Feb. 11, 1913.

3 SHEETS—SHEET 1.



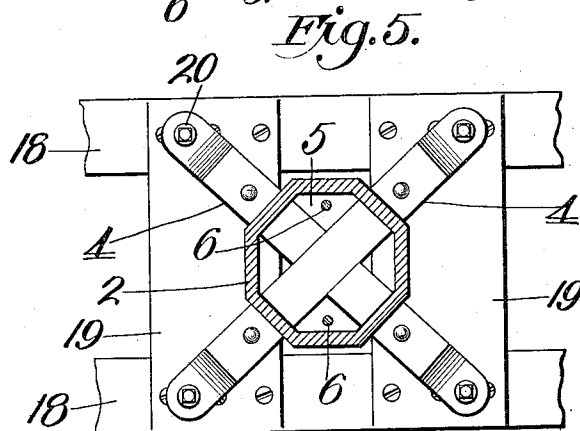
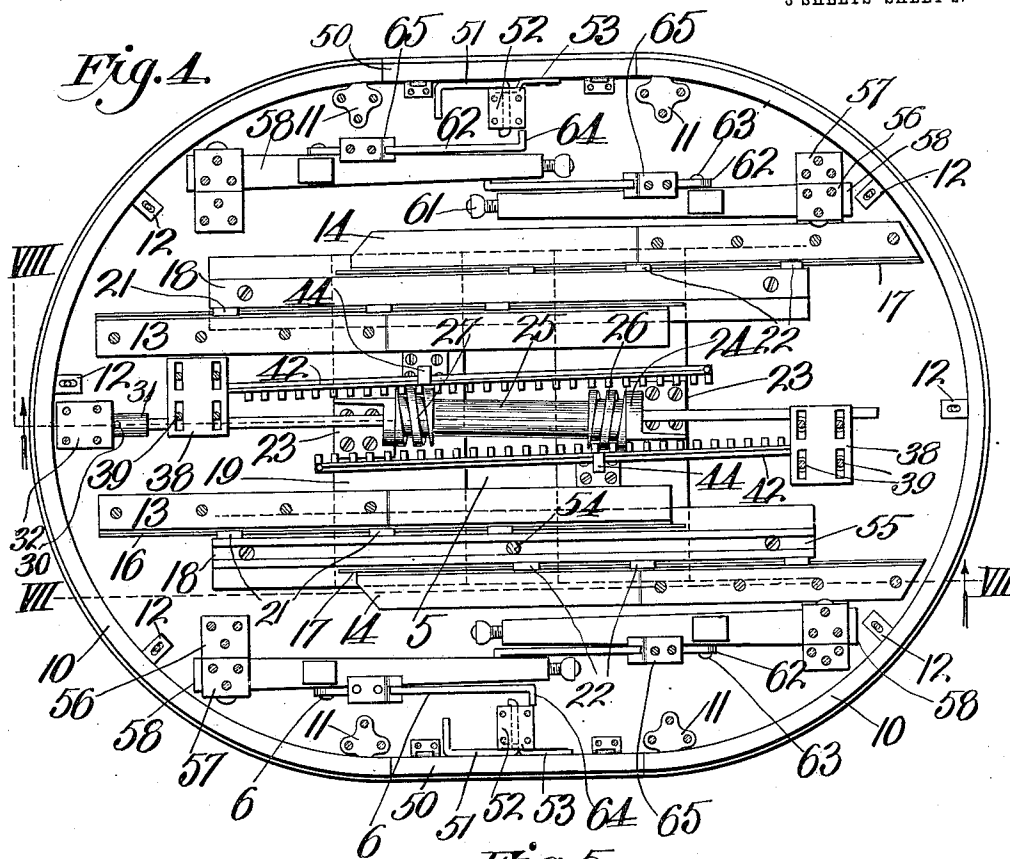
Witnesses
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A. H. Stone
By George J. Thorpe Atty.

Patented Feb. 11, 1913.

3 SHEETS-SHEET 2.

1,052,859.



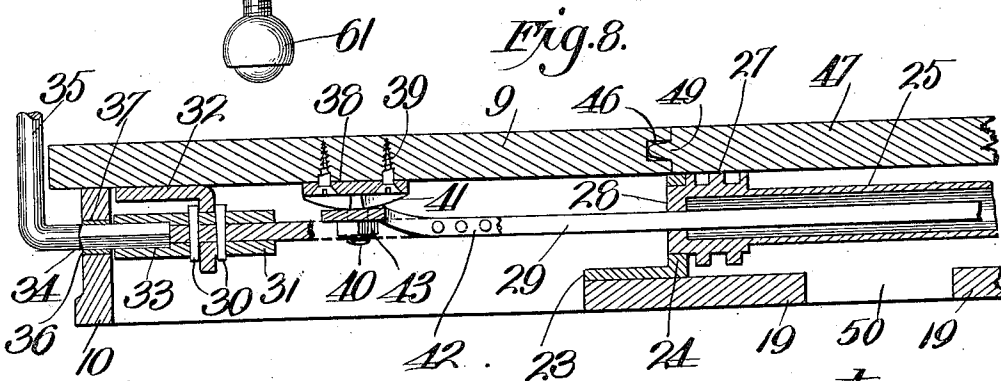
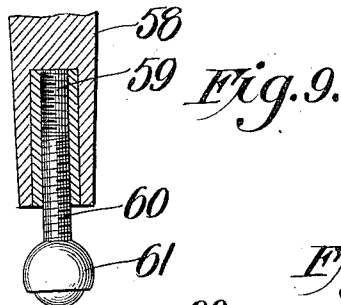
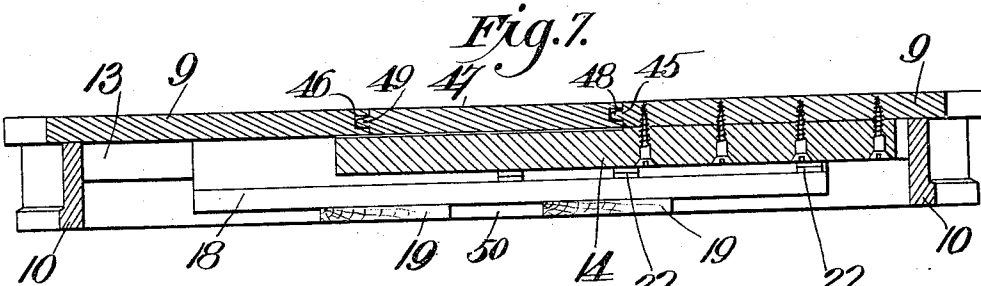
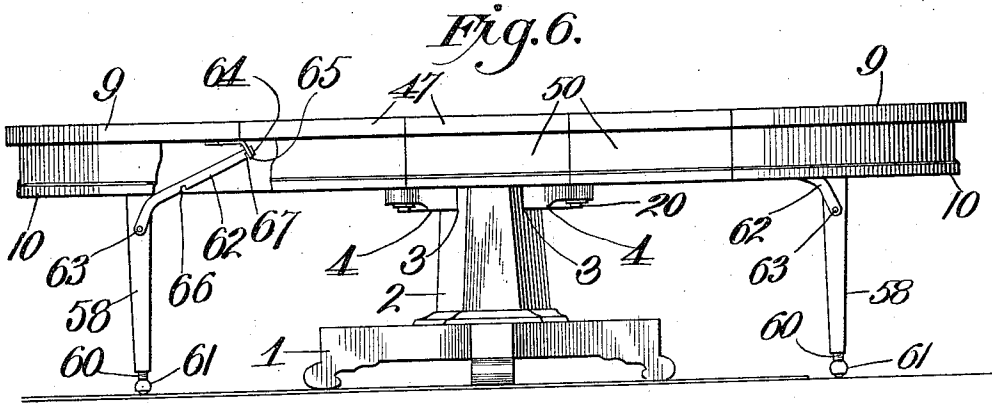
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3 SHEETS—SHEET 3.

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UNITED STATES PATENT OFFICE.

ANDREW H. STONE, OF KANSAS CITY, MISSOURI.

EXTENSION-TABLE.

1,052,859.

Specification of Letters Patent.

Patented Feb. 11, 1913.

Application filed March 26, 1912. Serial No. 686,247.

To all whom it may concern:

Be it known that I, ANDREW H. STONE, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Extension-Tables, of which the following is a specification.

This invention relates to tables, and has for its object to produce a non-split pedestal table which is strong and rigid when extended to its fullest extent.

Another object is to produce a table which can be quickly and easily extended.

A further object is to produce a table of this character provided with legs which can be lowered to operative position or reëlevated to inoperative position only when the table is extended.

With these and other objects in view, the invention consists in certain novel and peculiar features of construction and organization as hereinafter described and claimed; and in order that it may be fully understood reference is to be had to the accompanying drawings, in which—

Figure 1, is a side view of an extension table embodying my invention, with the rim broken away to expose parts otherwise hidden. Fig. 2, is a section on line II—II of Fig. 1. Fig. 3, is a detail section of one of the detachable leaves or extensions of the table, taken on line III—III of Fig. 2. Fig. 4, is a horizontal section on line IV—IV of Fig. 1. Fig. 5, is a horizontal section on line V—V of Fig. 1. Fig. 6, is a side of the table, partly broken away, showing legs in operative position and three leaves in place. Fig. 7, is a section on line VII—VII of Fig. 4. Fig. 8, is an enlarged section on the dotted line VIII of Fig. 4. Fig. 9, is a vertical section of the lower end of one of the legs.

In the said drawings, 1 indicates the base, 2 a hollow pedestal thereon, provided with diagonally opposite sets of notches 3 in its upper end, 4 crossed bars extending through said notches and stepped together at their middle, so as to lie in the same horizontal plane, 5 a top plate bridging the top of the pedestal, and 6 vertical tie-rods extending

through the top plate, the pedestal and the base 1. Washers 7 are mortised in the bottom of the base to receive the pressure of the clamping nuts 8, engaging the lower ends of the tie-rods.

The top of the table consists of two semi-circular sections 9, with their straight edges disposed inwardly or toward each other, and depending from said sections are semicircular rim sections 10, which abut together endwise when the straight edges of the top come together.

To secure the rim sections and the top sections rigidly together, angle brackets 11 and 12 are secured to the top sections and to the inner sides of the rim sections, the arms of brackets 12 secured to the top sections being slotted radially of said sections so that said rim sections may expand or contract at intermediate points—where slight expansion or contraction would be unnoticeable—without affecting their extremities, it being noted by reference to Fig. 4, that the brackets 11 are of larger size to insure the retention of the ends of the two rim sections in longitudinal alinement.

Secured to the underside of one section of the top and extending from a point near the rim 10 to a point a considerable distance beyond the straight edge of said section, is a pair of parallel cleats 13, a similar pair of cleats 14 being secured to the other section, and said cleats 13 at their upper outer corners and cleats 14 at their upper inner corners are grooved or rabbeted at 15, and secured to the outer sides of cleats 13 and the inner sides of cleats 14 are track rails 16 and 17 respectively, and fitting between said track rails are the stem portions of a pair of T-shaped guide bars 18 connected rigidly together by cross bars 19, rigidly bolted at 20, to the ends of crossed bars 4 of the pedestal. The head portion of each inverted-T-shaped bar underlies adjacent track rails 16 and 17, and secured to the inner sides of bars 18 are clips 21 which slidably hook over and under the track rails 16, similar clips 22 secured to the outer sides of bars 18 hooking over and under the track rails 17, the rabbets or grooves being provided to accommodate the upper ends of said clips as

shown most clearly in Fig. 2. By this arrangement it will be seen that the sections of the top of the table are slidably connected to each other and to the pedestal by all-metal connections, and that for this reason there is no possible chance for such warpage to occur as would cause the parts to bind and make it difficult to extend or contract the table.

Secured to the upper sides of the cross bars 19 are angle brackets 23, having up-standing bearings 24 receiving the extremities of a shaft 25, provided externally at its opposite ends, with right and left hand worm threads. At one end said shaft is provided with a head 28 through which a rectangular shaft 29 extends with a slidable and non-rotatable relation, and pinned at 30, to one end of said shaft 29, is a sleeve 31, which terminates at its outer end near the adjacent rim section 10. Sleeve 31 is journaled in the depending arm of an angle bracket 32, secured to the underside of the superposed top section 9, said bracket fitting between the pins 30 to prevent endwise movement of the sleeve and shaft attached thereto. The outer end of the sleeve is provided with an angular socket 33 for the reception of the angular end 34 of a detachable crank 35, adapted to be inserted in said socket through an opening 36 in the rim 10, a bushing 37 fitting in said opening to prevent wear on the rim.

A pair of slotted brackets 38 are secured by screws 39 extending through the slots of the brackets, to the undersides of the sections of the top, the said brackets being clamped rigidly in place when the desired adjustment is obtained. It will be understood that the adjustment of the brackets is effected at the factory. The brackets 38 are provided with vertically depending bolts or threaded stems 40, and with crossed ribs 41, at the upper ends of the bolts or stems as bearings for the rack bars 42 retained on said bolts or stems by nuts 43, the rack-bars fitting loosely on the bolts and bearings against said ribs so as to be capable of slight lateral and vertical movement to avoid possibility of binding. The rack bars extend in parallel relation and at a slight angle to the shaft 29, so that one shall engage the outer side of worm 26 and the other the outer side of worm 27, it being noted that the sleeve 25 extends at a different angle to the shaft 29 so that there shall be no possibility of the teeth of either rack bar engaging both worms, as such engagement would of course lock the worms against rotation and prevent expansion or contraction of the table, and for retaining the rack bars in operative relation to their respective worms, brackets 44 project upward from the cross bars 19

and engage the outer, upper and lower sides of the rack bars, and prevent undue vertical or lateral movement of the latter. To interlock the inner or straight edges of the top sections together, one is provided with a tongue 45 and the other with a groove 46 to receive said tongue, it being noted that the tongue and groove terminate short of the outer margins of the said sections so as to be completely hidden when the latter are interlocked together.

Assuming that the table is contracted to its smallest size, that is with the straight edges of the top sections abutting together with their tongues and grooves interlocked, and it is desired to increase the size of the table, the crank handle is slipped into the bushing 37 and socket 33, and turned in the proper direction. This action imparts rotation to the shaft 25 and through the worms 26 and 27, imparts longitudinal movement in an outward direction to the rack-bars and hence to the sections of the table top. When the latter are separated a sufficient distance, a leaf 47 is placed upon the cleats 13 and 14 and the rotation of the crank handle is reversed to cause the sections of the top to engage opposite sides of the leaf and clamp the same firmly in place and in this connection it will be noted that the leaf is provided in one edge with a groove 48 to receive the tongue 45 and at the opposite edge with a tongue 49 to enter groove 46. To provide an unbroken or continuous rim, the leaf is provided at each end with a hinged rim section 50 to abut at its opposite ends against the adjacent ends of the rim sections 10 and form in effect a continuation thereof, and to lock said hinged rim sections 50 of the leaf reliably in position, U-shaped braces 51 are pivoted to clips 52 secured to the underside of the leaf and are adapted when swung to a pendent position, to engage retaining hooks 53 secured to the inner sides of the rim sections (see Fig. 3). When thus arranged the rim sections are held a depending position.

To avoid the necessity of adjusting the leaf carefully preliminary to securing it in position, it is provided at a suitable point with a depending pin 54 to be dropped in to longitudinal channel 55 in the upper side of one of the T-shaped bars 18, this pin and slot engagement between the leaf and said bar, insuring the proper engagement of the tongue 45 with groove 48 and tongue 49 with groove 46, irrespective of whether the leaf is placed parallel with the inner or straight edges of the top section 9 or not. When the table is expanded only the width of a single leaf, it is supported with the requisite solidity and stability by the pedestal. Should it be desired to use two or more leaves—Fig. 6

shows three leaves in place—it is desirable to provide additional supports for the table near its ends. The supports shown are constructed as follows: 56 and 57 are angle brackets secured to and depending from the top sections 9. 58 are legs fitting between and pivoted to said brackets and adapted to swing downwardly and outwardly or upwardly and inwardly, and embedded in the lower ends of said legs are internally threaded sleeves 59 engaged by the threaded stems 60 of ball casters 61, so that by proper adjustment of the casters the legs will accommodate uneven floors or one or more of said legs may be lengthened to rest upon the floor when the other legs are upon a rug or carpet, as indicated in Fig. 6. For holding the legs in horizontal or inoperative position or for bracing them in vertical or operative position, levers 62 are pivoted to the legs at 63 and are provided at their opposite ends with outturned portions or handles 64. The levers are of obtuse angle form as shown in Fig. 1 and extend slidably through brackets 65 depending from the top sections 9, the lower edges of the levers being provided with notches 66 and 67 for interlocking with the brackets 65, accordingly as the legs are in horizontal or vertical positions, as shown in Figs. 1 and 6, respectively.

Assuming that it is desired to extend the table sufficiently to receive two or more leaves, the top sections 9 are moved apart in the manner hereinbefore explained, and then the operator grasps the handle end of each of the levers successively and pulls them upward slightly. This action results in slight downward or gravitative movement of the legs and sufficient outward movement of the levers to dispose the notches 66 outwardly of the apertured ends of the brackets 65. If released the legs will drop down but it is preferable to control this action by retaining a hold upon the levers, and as the legs attain a vertical position, the notches 67 of the levers, which at this time have assumed a diagonal or bracing position as shown in Fig. 6, interlock with the said bracket 65, and thus guard against accidental collapsing movement of the legs. The leaves are then placed in position with their pins 55 engaging the groove 54 and the handle 35 is turned to cause the sections 9 to approach until the leaves are clamped firmly in position as shown in Fig. 6, and in this connection it will be noted that the only function of the legs is to prevent any possibility of the table tipping when extended, as the cleats 13 and 14 and bars 18 together with the metallic track rails and clips 21 impart sufficient rigidity and strength to the top of the table to guard against any sagging of the table top independent of the legs.

From the above description it will be apparent, that I have produced an extension table embodying the features of advantage enumerated as desirable, and I wish it to be understood that while I have illustrated and described the preferred embodiment of the same, I do not desire to be restricted to the exact details of construction shown and described as obvious modifications will suggest themselves to one skilled in the art.

I claim:

1. An extension table, comprising a pedestal, longitudinal guide bars above and rigid with the same, a table top upon the guide bars and consisting of a pair of sections movable longitudinally toward and from each other, a pair of parallel rack bars below and each attached at one end to different top sections and extending at a slight angle to said guide bars, a tubular shaft under the table top and between said rack-bars and suitably journaled and provided at one end with a right hand worm thread engaging one of said rack bars and at the other with a left hand worm thread engaging the other rack bar, a suitably journaled shaft extending slidably through the tubular shaft and interlocked therewith as regards rotatable movement, rims depending from the table top sections, one of said rims having an opening in alinement with the last-named shaft, and means for insertion through said opening for turning the last-named shaft in one direction or the other.

2. An extension table, comprising a pedestal, longitudinal guide bars above and rigid with the same, a table top upon the guide bars and consisting of a pair of sections movable longitudinally toward and from each other, a shaft extending at an angle to the longitudinal center of the table and suitably journaled and provided at one end with a right hand worm thread and at the other with a left-hand worm thread, a fixed guide standard adjacent to each of said worm threads, a rack bar extending slidably through each guide standard and engaging the adjacent worm thread and each pivotally supported at one end so as to have slight play vertically and laterally, and means for imparting rotation to said worm shaft in one direction or the other.

3. An extension table, comprising a pedestal, a top mounted thereon and consisting of two sections slidable toward and from each other, a pair of parallel rack-bars arranged in the same horizontal plane below the top sections, with their teeth facing each other, a bracket secured to and depending from each top section and each secured to an end of one of the rack-bars, guides rigid with the pedestal and engaging the outer

sides of the rack-bars, a tubular shaft arranged between the rack-bars, bearings for the tubular shaft, between the rack-bars and rigid with the pedestal, reversed worm
5 threads on said tubular shaft, engaging different rack-bars, a shaft extending through said bearings and tubular shaft and slidable longitudinally of and rotatable with the latter, and means for turning the shaft extend-

ing through the tubular shaft to impart 10 rotatable movement to the latter.

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

ANDREW H. STONE.

Witnesses:

H. C. RODGERS,
G. Y. THORPE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."