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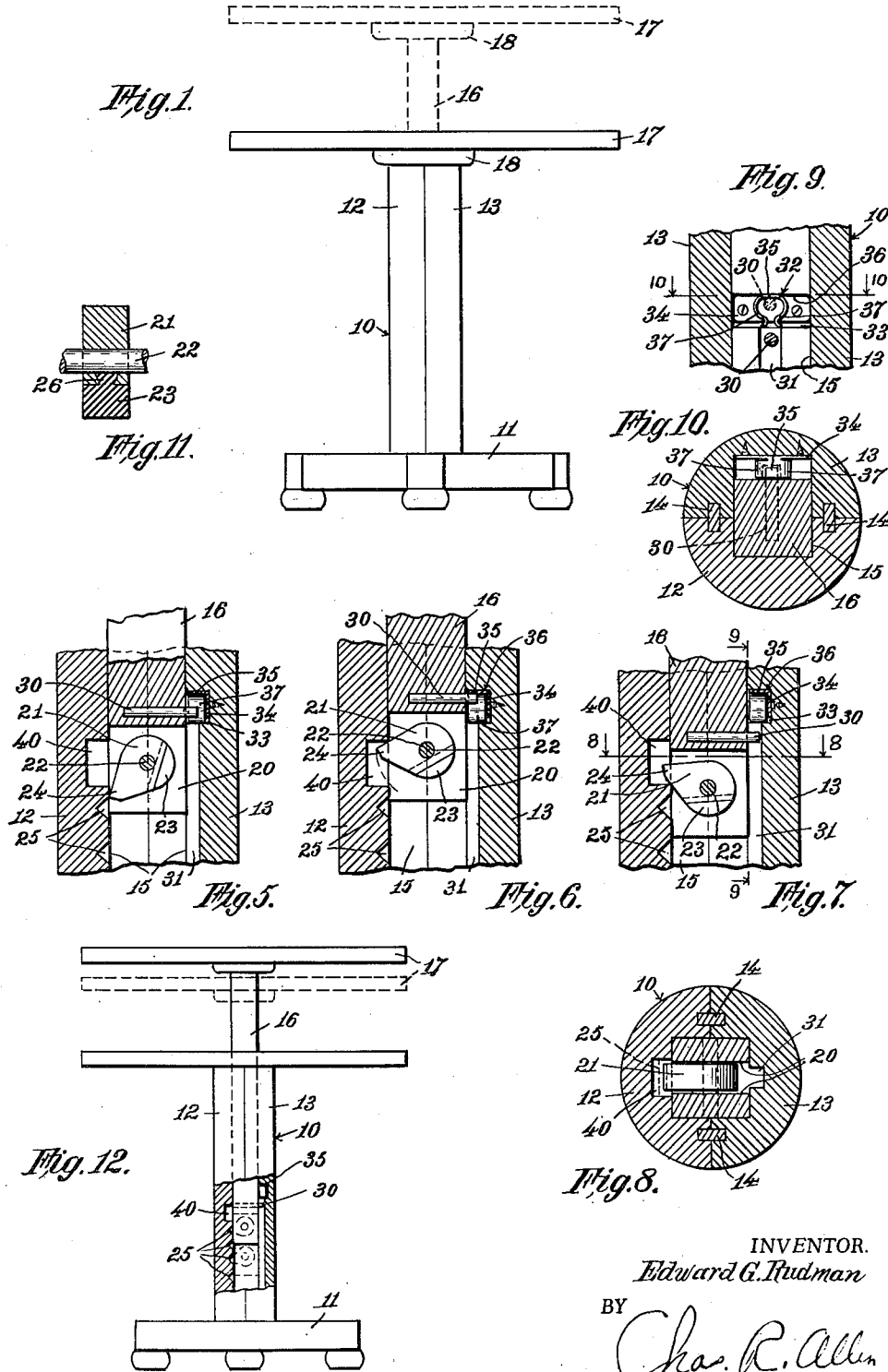
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VERTICALLY ADJUSTABLE TABLE TOP

Filed April 13, 1951

2 Sheets-Sheet 1



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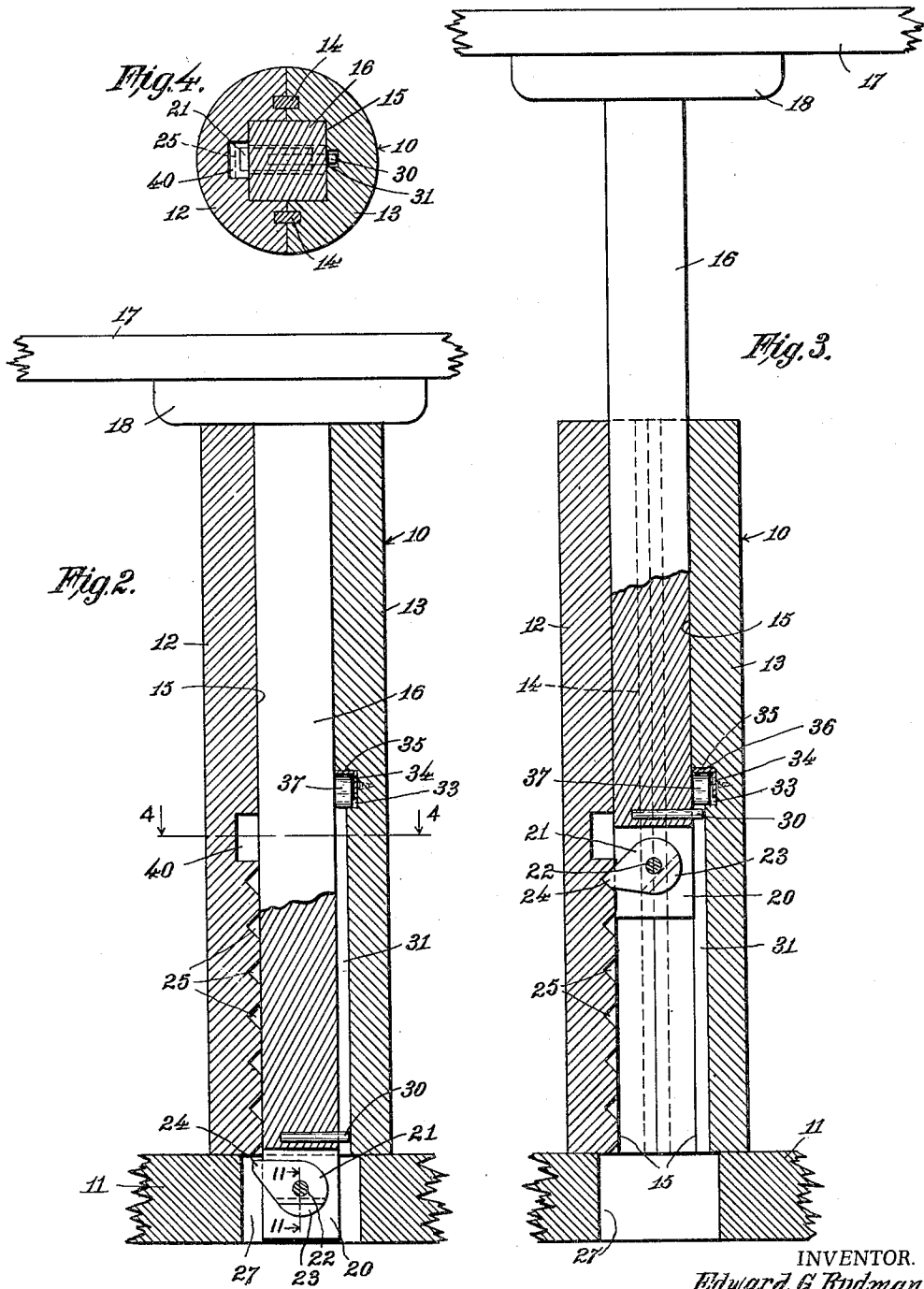
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## UNITED STATES PATENT OFFICE

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## VERTICALLY ADJUSTABLE TABLE TOP

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1 Claim. (Cl. 311—39)

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This invention relates to tables, and particularly a table having a vertically adjustable top.

I am aware that tables have been provided in which the tops may be raised and lowered as found desirable, and the top held in adjusted position by various supporting devices. However, such devices require special means for operating the same, or the top must be turned or otherwise manipulated to secure or release said devices.

The object of the present invention is to provide a table with a vertically adjustable top, which top may be raised to, and securely supported at any of several positions, and also returned to its lowermost position, by merely raising and lowering the top without the manual operation of any stop or release mechanism.

A further object of the invention is to provide a table as mentioned which shall be of comparatively simple construction, and which will stand long and hard usage without getting out of order.

Other objects will appear hereinafter.

With these objects in view the invention consists generally in a table comprising a pedestal base, a top, a depending shaft fixed to said top and telescoping within said pedestal base, a vertical series of notches on the inner face of said pedestal, a pivoted pawl on said shaft adapted to engage said notches, a stop for limiting the upward movement of the shaft, a tripping recess for said pawl when the latter reaches the upper limit of its movement, and a clearance space for said pawl at the lowermost limit of its movement, where said pawl will reset itself.

The invention further consists in a table as above stated in combination with novel means for indicating when the top has reached the highest point possible without reversing the pawl.

The invention further consists in various details of construction and arrangement of parts, as will be fully described hereinafter and particularly pointed out in the claim.

The invention will be more readily understood by reference to the accompanying drawings forming a part of this specification and in which:

Fig. 1 is an elevation of a table embodying the invention, the top being illustrated in full lines in lowermost position, and in dotted lines in uppermost supported position;

Fig. 2 is a vertical section of the device upon an enlarged scale, parts being illustrated in elevation;

Fig. 3 is a view similar to Fig. 2 with the top in raised position;

Fig. 4 is a cross-section on the line 4—4 of Fig. 2;

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Fig. 5 is a detail vertical sectional view illustrating the lower end of the movable shaft approaching the position for reversing the action of the pawl;

Fig. 6 is a similar view with the shaft raised to its upper limit, and the pawl released and reset for returning to lowermost position;

Fig. 7 is a similar view illustrating the manner of tripping the pawl as the shaft and top begin the downward movement;

Fig. 8 is a cross-section on the line 8—8 of Fig. 7;

Fig. 9 is a detail vertical section on the line 9—9 of Fig. 7;

Fig. 10 is a horizontal section on substantially the line 10—10 of Fig. 9;

Fig. 11 is a detail sectional view of the pawl, taken substantially on the line 11—11 of Fig. 2; and

Fig. 12 is an elevation, partially in section, illustrating a modified form of table wherein the same is provided with a fixed top and an adjustable top.

Referring to the drawings, 10 indicates the pedestal or pillar of a table which is fixedly mounted upon a suitable base 11. The pillar is preferably cylindrical, but may be of any desired external configuration. Said pillar is formed of two similar longitudinal sections 12 and 13 secured together by splines 14, and are worked, before joining, to form a vertical bore 15 into which a vertical shaft 16 is telescopically mounted. Upon the upper end of the shaft 16 is fixedly secured a table top 17, as by a bridge 18. The shaft 16 and bore 15 are preferably square or rectangular in cross-section, as illustrated in the drawings, in order to prevent relative rotation of the same, and to simplify the construction.

The shaft 16 is substantially the length of the pillar 10 plus the thickness of the base 11, so that when the table top is in the lowermost position with the bridge 18 resting upon the upper end of the pillar 10, the lower end of the shaft will extend substantially to the bottom of the base 11, as illustrated in Fig. 2. Said lower end of the shaft is bifurcated, forming a recess 20 in which is pivotally mounted a pawl 21 upon a transverse pin 22; and said pawl is provided with an eccentrically mounted counterweight 23 which constantly tends to project the end 24 of the pawl beyond the recess 20 and into alignment with a vertical series of notches 25 worked into the face of one side of the bore 15. The counterweight 23 is preferably formed of lead, and is dovetailed into the body of the pawl, as at 26. See Fig. 11.

When the table top is raised, the end 24 of the pawl will successively engage the notches 25, and when the desired height is attained, the top is locked in position by merely releasing the same, the end of the pawl seating itself in the adjacent notch 25. Any number of notches 25 may be provided within reasonable limits. In the drawings, six notches are illustrated which provide for seven positions of the top, one for each notch and one when the top is in lowermost position.

When in lowermost position the end 24 of the pawl 21 extends into an enlarged reset recess 27 below the lowermost notch 25, and preferably within the base 11. In practice, the recess 27 is formed by jigsawing the base 11 before assembling the table. This reset recess permits the pawl to return to normal operative position, after the top 17 has been lowered as will more fully appear hereinafter.

A strike-pin 30 is fixed in the shaft 16 and projects into a vertical groove 31 formed in the wall of the bore 15 opposite the notches 25. As illustrated, the notches 25 are formed in the pillar section 12 and the groove 31 in the section 13. At the upper end of the groove 31 is a stop member 32 engageable by the pin 30 to limit the upward movement of the shaft 16 and top 17. The stop member 32 is preferably arranged in a transversely extending recess 33, and comprises a base 34, an integral abutment flange 35 which extends into the path of the projecting end of pin 30, and is seated against the upper wall 36 of the recess 33, and a pair of reversely curved spring arms 37 extending downwardly from the opposite sides of the abutment 35 and forming therewith a friction catch for the pin 30, the function of which will appear hereinafter.

Above the uppermost notch 25 is a tripping slot 40 which when the top is raised sufficiently, allows the end of the pawl to swing past center and thereby permit lowering of the top. Upon any appreciable upward movement of the top beyond the position where the pawl 21 engages the uppermost notch 25, and before the end of the pawl reaches the slot 40, the pin 30 will engage the contracted curved lower portions of the spring arms 37 which offer sufficiently appreciable yielding resistance to clearly indicate to the operator that further upward movement will permit the pawl to swing out of top supporting position.

The operation of the device is as follows: When it is desired to raise the top 17, said top is grasped and lifted to the desired degree, and released. As the top is being raised the nose of the eccentrically weighted pawl is maintained in engagement with the notched wall, and when the top is released said pawl will engage in the adjacent notch 25. After the top is raised to the uppermost locking position, any further movement will bring the pin 30 into abutment with the contracted lower ends of the spring arms 37, which will apprise the operator that the uppermost locking position has been reached.

When it is desired to lower the top, the top is raised until the pin 30 enters the clasp formed by the spring arms 37 and engages the abutment 35 of the stop member. It should be noted that the abutment portion 35 is positioned against the upper wall 36 of the recess 33, so that continued engagement of the pin 30 therewith, even with force, will not damage the same. As the pin 30 passes into the clasp the nose end 24 of the pawl will enter the tripping slot 40, as illustrated in Fig. 6, so that upon downward movement, the

pawl will be reversed and cannot operatively or lockingly engage in the notches 25. See Fig. 7.

When the top reaches lowermost position, the pawl will enter the reset recess 27 in the base 11, whereby it will resume its normal position ready to engage the notches 25 upon again raising the top.

In the modified form of the invention illustrated in Fig. 12, the table is provided with a fixed top secured to the upper end of the pedestal 10, in addition to the movable top 17. Otherwise the construction and operation of the device is identical with the form previously described. The double top construction provides a novel and convenient dumwaiter table, as is obvious.

It will be noted that with the construction disclosed, there are no spring actuated locking elements to get out of order, and that there are no manually actuated elements for either locking or releasing the movable top. The top may be adjusted to any of the plurality of levels desired, and the entire operation is performed merely by raising and lowering the top without recourse to manual operation of any locking or releasing elements.

While the invention is primarily designed for application to tables, particularly of the pedestal type, and is so illustrated in the drawings, it is to be understood that the same is applicable to various types of furniture such as chairs, stools, stands and the like.

I claim:

A table comprising a pedestal and base, a top, a depending shaft fixed to said top and telescoping within said pedestal, said pedestal being provided on its inner face, with a vertical series of notches, an eccentrically weighted pawl pivotally mounted in the lower portion of said shaft and adapted to selectively engage said notches to support said top at the desired height, a tripping recess above the uppermost of said notches, a strike-pin projecting from said shaft, said pedestal having a vertical groove in which said pin travels, a spring clasp at the upper end of said groove and comprising a stop member and a pair of downwardly extending reversely curved arms located in the path of said strike-pin, said arms terminating in outwardly flared portions with the inner parts of said flared portions being spaced apart less distance than the diameter of said strike-pin whereby said arms provide appreciable yielding resistance to the upward movement of said top prior to the pawl reaching said tripping recess, and said spring arms being of insufficient tension to support the weight of said top and shaft.

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