Jan. 16, 1962 P. W. R. JOHNSON 3,017,153

LEG ASSEMBLY

Filed June 22, 1959

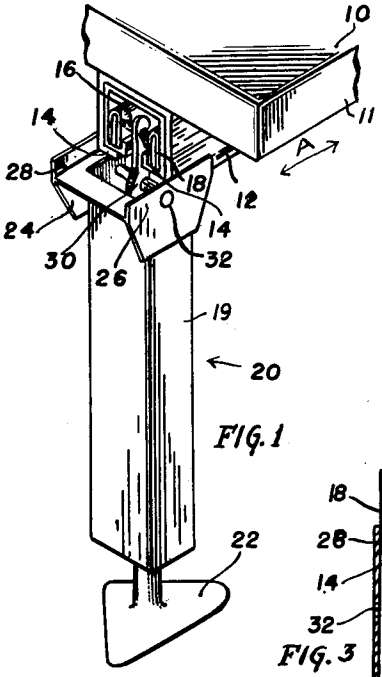

FIG. 1

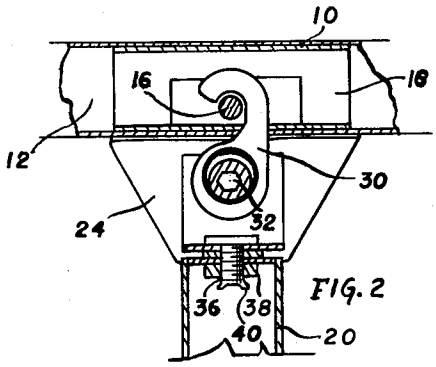

FIG. 2

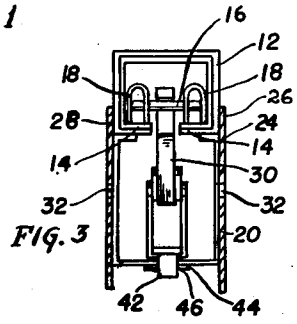

FIG. 3

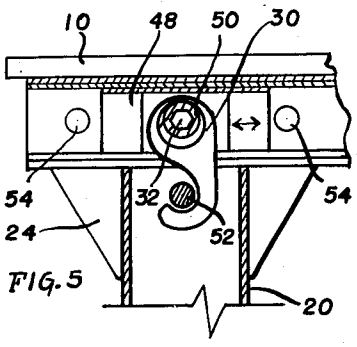

FIG. 5

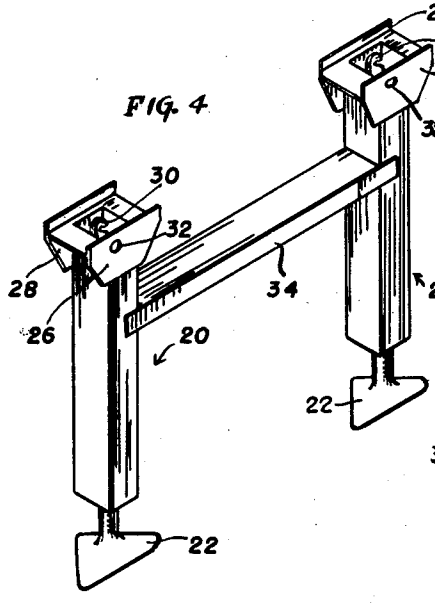

FIG. 4

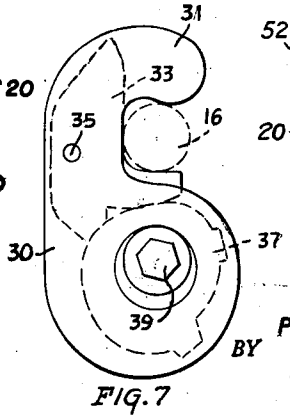

FIG. 7

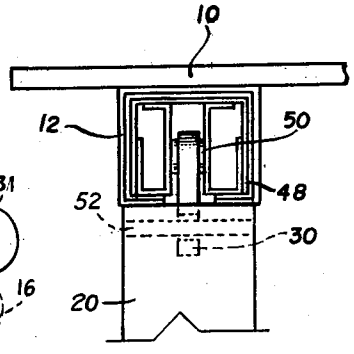

FIG. 6

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3,017,153
LEG ASSEMBLY

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5 Claims. (Cl. 248—189)

The present invention relates to a leg assembly for use with a work table, conveyor and various other types of manufacturer's proprietary equipment.

It is an object of the present invention to provide either unit legs or double leg integral assemblies which are slidably positioned on support tracks or guides on the underside of a work table or conveyor frame.

It is a further object of the present invention to provide latching means on the support track and the leg for removably positioning the leg at selected positions along the support track.

It is another object of the present invention to provide a swiveling cam latch on a leg which permits the cam latch to rotate to a position whereby the cooperative latching means on an angular guide track may be engaged and the leg firmly secured to the guide track of a table top or conveyor while permitting the front planar leg surface to be parallel to the front of the table top.

Another object of the present invention is the provision of an intermediate latching means designed to removably secure a leg unit or assembly to a support track of a work table top or a conveyor frame.

A still further object of the present invention is to provide a movable latch rod assembly which is slidable along an elongated support track and may secure a leg thereto at any selected position thereof.

Another object of the present invention is an anti-rocking leg seat provided with flanges for engaging opposite sides of a support track or channel, the latter being arranged on the underside of a table or conveyor.

The above and other features, objects and advantages of the present invention will be fully understood from the following description considered in connection with the accompanying illustrative drawings.

FIG. 1 is a partial perspective view of the leg assembly and work top embodying my invention secured to a work top,

FIG. 2 is a side elevation view, partly in section of a rotatable cam latch arrangement together with a latching rod and guide channel,

FIG. 3 is a front elevation view, partly in section, of an alternative embodiment of the structure illustrated in FIG. 2,

FIG. 4 is a perspective view of a double leg unit incorporated in the present assembly,

FIG. 5 is a side elevation view of another modification of the present invention,

FIG. 6 is a front elevation view thereof, and

FIG. 7 is a side elevation view of the cam latch.

Referring more particularly to the drawings and especially to FIGS. 1–4 wherein is illustrated my novel quickly detachable and slidable leg assembly that may be used with work tables, conveyors and other manufacturer's proprietary equipment. In FIG. 1, for example, my leg assembly is disclosed in conjunction with a work top **10**. Secured to the underside of work top **10** is a guide rail **12** which in the present form is an inverted channel member having inwardly directed flanges **14**. Adapted to move linearly on flanges **14** in the directions of double-headed arrow A is a latch member or rod **16** secured to spaced supporting elements **18** (FIG. 3). The leg referred to generally by the numeral **20** is provided with a foot **22** of a known, self-leveling type. The upper part of leg **20** is flared outwardly at **24** and is provided with

anti-rock or bracing flanges **26** and **28** which firmly engage the opposite sides of guide rail **12**. Mounted on the top of leg **20** is a cam latch **30** which is operated by means of a hex wrench (not shown) inserted in hole **32**. It should be noted that the assembler of the bench merely slides the necessary number of latch rods **16** and associated structure on guide rails **12** until the proper position for the legs is determined. Subsequently the cam latch on each leg is inserted over each rod **16** and the hex wrench partially rotated until the associated leg and latch rod are securely held together. There is no manipulation of nuts and bolts to removably fasten the leg to a work top, conveyor frame or the like but, on the other hand, the assembler merely inserts a hex wrench into a hole **32** and rotates the wrench until the assembly is securely fastened. By rotating the hex wrench in the opposite direction, the leg and its associated top, conveyor frame or the like are disassembled.

More specifically as seen in FIG. 7, the cam latch **30** has a pair of spaced, fixed plates **31** having a latching means **33** therebetween and pivoted at **35**. The cam **37** is rotatable by a hex wrench inserted in hexagonal hole **39** to cause the latching means **33** to pivot and securely hold the latch **16** or release the same.

FIG. 4 discloses a dual leg assembly incorporating two identical legs as shown in FIG. 1 with the additional of a bracing element **34**. With this construction two dual leg units together with a work top **10** is all that is necessary to construct a work table. The legs **20** will slide along the guide rail **12** until the proper positioning is located and then the assembly may be securely locked to the table top by means of the aforesaid cam latch mechanism.

The cam latch **30** may be rotatable and two constructions thereof are seen in FIGS. 2 and 3 respectively. In FIG. 2 the cam latch **30** is provided with a threaded stud **36** which rotates in nut **38** and is swedged at **40** in order to prevent the stud and nut from becoming disassociated. With the foregoing arrangement, it is apparent that the cam latch device may be rotated more than 360° and therefore permits the cam latch to be secured to a guide rail **12** placed at any angle on the underside of a work top. Thus, an unusual amount of flexibility is achieved with the present construction. FIG. 3 shows an alternate construction of a rotatable cam latch **30** in which the latter is provided with a projection **42** which passes through an aperture in leg **20**. A cotter pin **44** in aperture **46** of projection **42** permits the cam latch **30** to also rotate more than 360° and to be located in many different angular positions relative to a bench top or a conveyor frame. It should be apparent that the foregoing construction has the advantage that if short guide rails **12** are affixed to the underside of the work top at an angle to the edges thereof the swiveling cam latch permits the leg to be secured to short guide rail **12** and at the same time permits rotatable adjustment of the bottom portion of the leg whereby the front planar leg surface **19** is positioned parallel to the edge **11** of the table **10** (see FIG. 1). This arrangement allows clear spaces on the front underside of the table for the installation of other attachments, if necessary.

FIGS. 5 and 6 illustrate an alternative embodiment of my invention in which a slidable support **48** is provided with a support shaft **50** mounting the cam latch **30** in an upside-down position. In this assembly the latching means or rod **52** is located in the top portion of the leg **20**. The support **48** may be slidable along guide rail **12** and may be positioned in a multiplicity of locations aligned with a plurality of holes **54** in the guide rail **12**. Thus, by inserting a hex wrench through one of the holes **54** and the aligned hole **32** the leg may be secured to a table

top or a frame merely by means of a partial rotation of the hex wrench.

Additional braces may be easily attached to the legs if extremely heavy duty work requires the same, however, under normal heavy duty work the use of the present quickly detachable legs and a suitable work top is all that is necessary for the work operations performed thereon. It should be noted that the present leg assembly may be attached and removed from a bench top or conveyor frame without the use of nuts and bolts.

It should be apparent that the present leg assembly may be utilized as a common leg support for adjoining table tops, conveyor sections, or other sectional apparatus which permits simple, quick and positive attachment of a number of adjacent sections. Such a common leg arrangement is disclosed in my co-pending U.S. patent application Serial No. 786,182, entitled, Work Bench System and filed on Jan. 12, 1959.

While I have shown and described the preferred embodiment of my invention, it will be understood that the latter may be embodied otherwise than as herein specifically illustrated or described and that in the illustrated embodiment certain changes in the details of construction and in the arrangement of parts may be made without departing from the underlying idea or principle of the invention within the scope of the appended claims.

What I claim is:

1. A leg assembly for a support comprising a guide track secured to the underside of said support, a latch member assembly slidable in said guide track and having a latch rod therein, a leg, a cam latch, means mounting said cam latch for rotational movement on the top of said leg, said leg having a top portion thereof conforming to the shape of the bottom of said guide track, and a pair of flanges engaging the sides of said guide track to prevent rocking of the secured leg relative to said table top, said cam latch being adapted to removably engage said latch rod at preselected locations on said guide track to securely hold said leg to said support.

2. A leg assembly for a support comprising a guide track secured to the underside of said support, a latch member assembly slidable in said guide track and having a latch rod therein, a leg, a cam latch, screw connecting means on said cam latch and in the top of said leg for permitting complete rotational movement of said cam latch, said cam latch being adapted to removably engage

said latch rod at preselected locations on said guide track to securely hold said leg to said support.

3. A leg assembly for a support comprising a guide track secured to the underside of said support, a latch member assembly slidable in said guide track and having a latch rod positioned transverse to said guide track, a leg, a cam latch provided with a stud, said leg being provided with an aperture shaped correspondingly to said stud, means mounted on said stud when the latter is inserted in said aperture for mounting said cam latch for rotational movement, said cam latch being adapted to removably engage said latch rod at preselected locations on said guide track to securely hold said leg to said support.

4. A leg assembly for a work table top comprising a guide track secured to the underside of said table top, a leg movable along said guide track and provided with a flat plate engaging the bottom of said guide track and a pair of flanges engaging the sides of said guide track to prevent rocking of the secured leg relative to said table top, and latching means on said guide track and leg for removably securing said leg to said guide track at selected locations on said guide track to securely retain said leg on said table top.

5. A leg assembly for a work table top comprising a pair of guide tracks secured at spaced locations on the underside of said work table top, a pair of legs provided with a connecting spacer member to form a C-shaped unit, said leg assembly being movable along said guide tracks and provided with a part thereof conforming to the shape of the bottom of said guide tracks and a pair of flanges engaging the sides of said guide tracks to prevent rocking of the legs with respect to said table top, and latching means on each corresponding leg and guide track for removably securing said leg to said guide track at selected locations on said guide track.

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