Sept. 5, 1939. G. HEITMANN 2,171,653

ADJUSTABLE COLUMN FOR LAMPS AND OTHER ARTICLES

Filed Nov. 23, 1938

Fig. 1

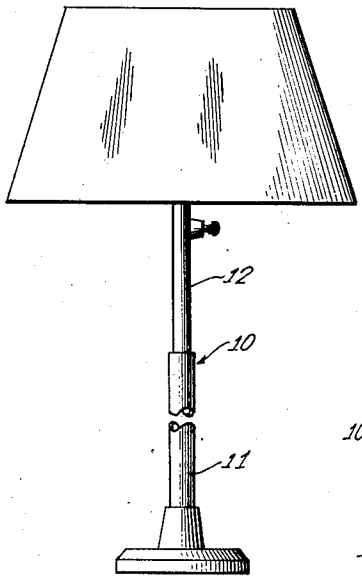
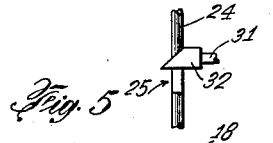



Fig. 5



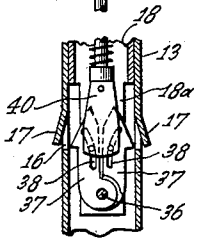




Fig. 4

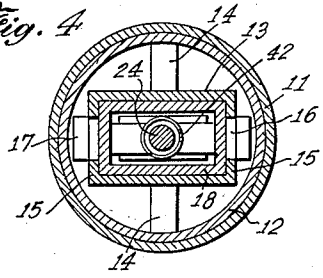



Fig. 2

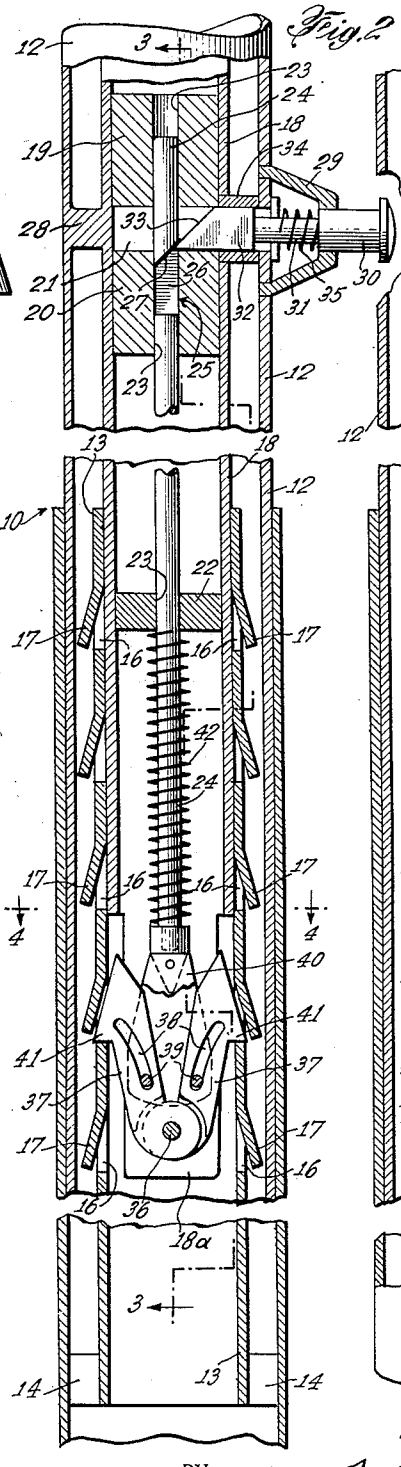
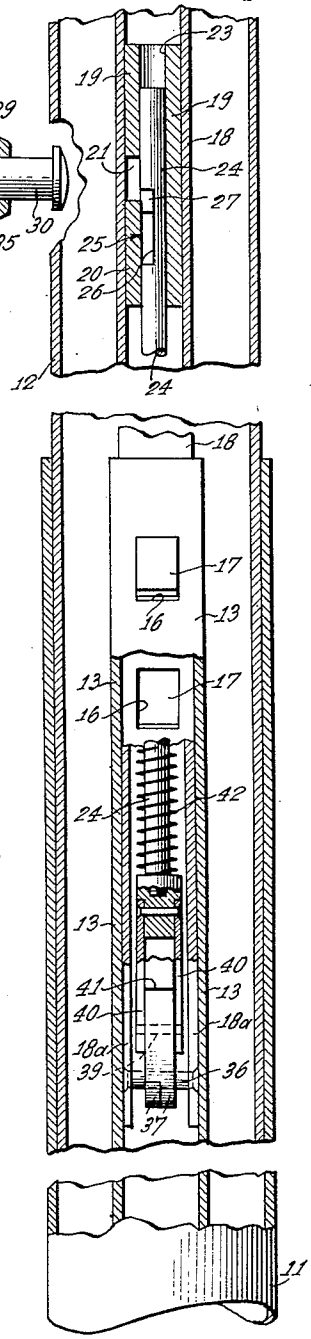



Fig. 3




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# UNITED STATES PATENT OFFICE

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## ADJUSTABLE COLUMN FOR LAMPS AND OTHER ARTICLES

Grace Heitmann, Brooklyn, N. Y.

Application November 23, 1938, Serial No. 241,892

4 Claims. (Cl. 248—161)

This invention relates in general to columns or posts which support, or are adapted to support, articles or devices of any kind, and relates more particularly to such columns as those which support electric lamps, broadcasting microphones, or the like. One object of the invention is to provide such columns with adjustable means whereby the column may be extended or retracted so as to raise or lower the article supported thereon, the adjustable means being operated, after being released, by simply grasping the article or the upper part of the column and raising or lowering the same.

Another object of the invention is the provision of such adjustable means whereby the column will retain its extended or retracted position as soon as the same is released, thus eliminating any manual locking means such as a set screw or the like.

A further object of the invention is the provision of an adjustable column or the like having the means above mentioned together with the features of being simple in construction and inexpensive in cost of manufacture.

The above and other objects will become apparent in the description below, in which characters of reference refer to like-named parts in the accompanying drawing.

Referring briefly to the drawing, Figure 1 is an elevational view of a lamp standard utilizing the invention.

Figure 2 is a fragmentary longitudinal cross-section view through the supporting column of the lamp.

Figure 3 is a cross-sectional view taken on the line 3—3 of Figure 2.

Figure 4 is a cross-sectional view taken on the line 4—4 of Figure 2.

Figure 5 is a fragmentary cross-sectional view showing the upper and lower parts of Figure 2, with the operating means in released position.

Referring in detail to the drawing, the numeral 10 represents the lamp-supporting column generally, which is composed of telescopic sections 11 and 12, the lamp being secured to the latter. A rectangular tube 13 is secured rigidly within the section 11. The rigid securement of the tube 13 within the section 11 may be accomplished, as shown, by means of cross members 14, of which for the sake of simplicity only two are shown, or it may be achieved by having the four corners of the tube 13 secured at the bottom to the inside walls of the section 11, or in any other suitable way. The opposite walls 15 of the tube 13 are provided with square openings or notches 16 arranged in equidistant horizontal pairs formed by pressing out of the said walls along three sides rectangular ears 17 and turning them outward on the fourth or upper side as a hinge.

Within the tube 13 a second rectangular tube 18 is snugly slidably mounted. At vertically spaced apart positions near the top of the tube 18, a pair of filler blocks 19 and 20 are rigidly secured within the tube 18, with a space or recesses 21 therebetween. A second filler block 22 is similarly mounted near the lower end of the tube 18. Each of the blocks 19, 20 and 22 has a central vertical channel 23 passing therethrough, in which a rod 24 is slidably mounted. Near the upper end of the rod 24, a notch 25 is cut out of the rod from one side of the center thereof, leaving the inner wall 26 of the notch coincidental with a vertical plane through the axis of the rod. The roof 27 of the notch 25 is cut at a downward angle, as shown.

Near the upper end of the section 12, the tube 18 is held rigid to the section 12 in any suitable manner, such as, for instance, by means of webs 28 of which but one is shown. A housing 29 is secured on the outside of the section 12, in which a button 30 is slidably mounted radially with respect to the section 12. An opening is provided in the wall of the section 12, through which a stem 31, rigid and coaxial with the button, passes slidably into the section 12. Inside the section 12 and surrounded by a sleeve 34, a wedge or cam block 32 is rigid on the end of the stem 31 and has its outer surface 33 cut angularly complementarily with the roof 27 of the rod notch 25. A spring 35 normally urges the button and wedge outward, but in its extreme outward position the surface 33 of the wedge remains in partial contact with the notch roof 27. The wedge 32 has been omitted from Figure 3 for the sake of clarity.

At its lower end the tube 18 has its opposite side walls extended downward in the form of elongated tongues 18a between which a rigid pin 36 is supported. A pair of upwardly extending mutually diverging wings 37 are pivotally mounted on the pin 36. Each wing 37 has a longitudinal slot 38 therethrough, in each of which a pin 39 is slidably mounted. A pair of parallel spaced-apart ears 40 are secured to the lower end of the rod 24 and extend downward therefrom, being somewhat fan-shaped. The pins 39 are rigidly secured between the ears 40, one pin being on each side of the continuation of the axis of the rod 40, as shown in Figure 2. It is apparent that lifting of the rod 24 while the tube 18 remains

stationary, will cause the wings 37 to be retracted upward and toward each other.

On their outer sides the upper portions of the wings 37 are widened to form dogs 41 which are adapted to register in the lower portions of the notches 16, with the under edge of the dog resting on the sill of the notch 16. A coiled spring 42 normally urges the rod 24 downward, hence, it normally urges the wings 37 outward and the dogs 41 normally into the notches 16. In this position, the column section 12 is rigidly supported above the section 11.

The operation of the device will now be apparent. Assuming that the column 10 has its sections 11 and 12 in the positions shown, and it is desired to lower the lamp, the button 30 is pushed in, thereby raising the rod 24 and moving the dogs 41 inward out of the notches 16. The section 12 with the lamp thereon will then drop of its own weight. When it has been lowered to the desired level, the button 30 is released, causing the dogs 41 to enter the next lower pair of notches 16, and the lamp will be firmly supported in its new lowered position. Raising of the lamp is accomplished by the same procedure excepting that the section 12 must be lifted to its new position.

It is apparent from the above that the operation of raising or lowering a lamp has been reduced to a very simple procedure, and of course the same principle may be utilized in the case of any other article or device which it may be desired to raise or lower on occasion.

Obviously, modifications in form and structure may be made without departing from the spirit and scope of the invention.

I claim:

1. In a telescopic column or the like having two sections, the upper of said sections being slidably mounted in the lower, a rectangular tube rigidly mounted within the said lower section and having vertically spaced apart pairs of notches on opposite walls thereof, a second rectangular tube slidably mounted in said first rectangular tube and rigidly secured in said upper section, filler blocks rigid in spaced-apart relation in said second tube, said blocks having coaxial channels passing vertically therethrough, a rod slidably mounted in said channels and having an ear on its lower end, said rod having a notch cut out near its upper end, the roof of said rod notch extending angularly upward and outward, a wedge slidably mounted in said upper section and having a surface angularly inclined complementarily with said roof, the edge of said surface lying normally in contact with the edge of said roof, upwardly and outwardly extending wings pivotally mounted on said ear and having longitudinal slots therein, said ear having rigid pins slidably mounted in said slots, a spring normally urging said rod downward, said rod in its normal lower position causing said pins to lie in the lower ends of said slots and said wings to be extended outward on their pivot, said wings having dogs thereon adapted to register in said notches of said first tube in said outward extended position to support said upper section securely in said lower section, raising of said rod causing said pins to retract said dogs from said tube notches to permit sliding of said upper section within said lower section, said rod being raised by pushing said wedge into said rod notch.

2. In a telescopic column or the like having two sections, the upper of said sections being slidably mounted in the lower, a rectangular tube rigidly mounted within said lower section and having vertically spaced apart pairs of notches on opposite walls thereof, a second rectangular tube slidably mounted in said first rectangular tube and rigidly secured in said upper section, filler blocks rigid in spaced-apart relation in said second tube, said blocks having coaxial channels passing vertically therethrough, a rod slidably mounted in said channels and having an ear on its lower end, upwardly and outwardly extending wings pivotally mounted on said ear and having longitudinal slots therein, said ear having rigid pins slidably mounted in said slots, a spring normally urging said rod downward, said rod in its normal lower position causing said pins to lie in the lower ends of said slots and said wings to be extended outward on their pivot, said wings having dogs thereon adapted to register in said notches of said first tube in said outward extended position to support said upper section securely in said lower section, raising of said rod causing said pins to retract said dogs from said tube notches to permit sliding of said upper section within said lower section, and means for raising or lowering said rod.

3. In a telescopic column or the like having two sections, the upper of said sections being slidably mounted in the lower, a rectangular tube rigidly mounted within said lower section and having vertically spaced apart pairs of notches on opposite walls thereof, a second rectangular tube and rigidly secured in said upper section, filler blocks rigid in spaced-apart relation in said second tube, said blocks having coaxial channels passing vertically therethrough, a rod slidably mounted in said channels and having an ear on its lower end, upwardly and outwardly extending wings pivotally mounted on said ear and having longitudinal slots therein, said ear having rigid pins slidably mounted in said slots, a spring normally urging said rod downward, said rod in its normal lower position causing said pins to lie in the lower ends of said slots and said wings to be extended outward on their pivot, said wings having dogs thereon adapted to register in said notches of said first tube in said outward extended position to support said upper section securely in said lower section, raising of said rod causing said pins to retract said dogs from said tube notches to permit sliding of said upper section within said lower section, and means for raising or lowering said rod, said notches of said tube having downward and outward ears thereabove.

4. In a telescopic column or the like having two sections, the upper of said sections being slidably mounted in the lower, a tube rigidly mounted within said lower section and having vertically spaced apart pairs of notches on opposite walls thereof, a second tube slidably mounted in said first tube and rigidly secured in said upper section, filler blocks rigid in spaced-apart relation in said second tube, said blocks having coaxial channels passing vertically therethrough, a rod slidably mounted in said channels and having an ear on its lower end, said rod having a notch cut out near its upper end, the roof of said rod notch extending angularly upward and outward, a wedge slidably mounted in said upper section and having a surafce angularly inclined complementarily with said roof, the edge of said surface lying normally in contact with the edge of said roof, upwardly and outwardly extending wings pivotally mounted on said ear and

having longitudinal slots therein, said ear having rigid pins slidably mounted in said slots, a spring normally urging said rod downward, said rod in its normal lower position causing said pins to lie in the lower ends of said slots and said wings to be extended outward on their pivot, said wings having dogs thereon adapted to register in said notches of said first tube in said outward extended position to support said upper section securely in said lower section, raising of said rod causing said pins to retract said dogs from said tube notches to permit sliding of said upper section within said lower section, said rod being raised by pushing said wedge into said rod notch.

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