July 1, 1924. 1,499,755

J. H. STEBBINS

ADJUSTABLE POST

Filed Oct. 25, 1923

Fig. 1.

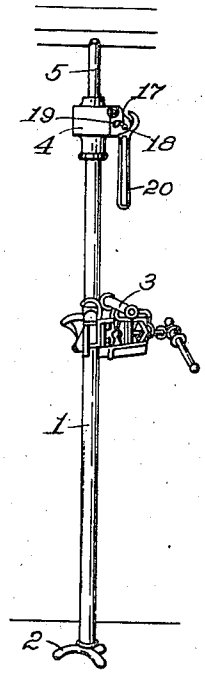


Fig. 2.

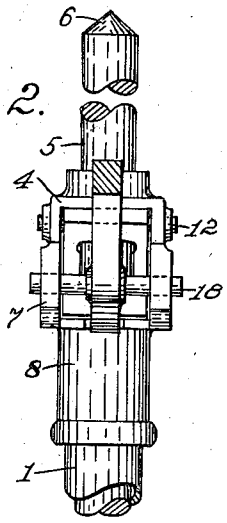




Fig. 3.

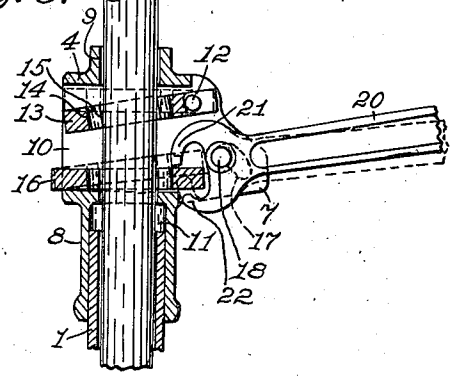


Fig. 4.

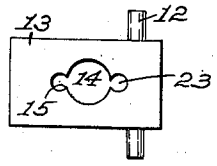
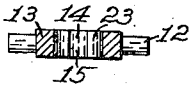


Fig. 5.



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UNITED STATES PATENT OFFICE.

JAMES H. STEBBINS, OF WATERLOO, IOWA.

ADJUSTABLE POST.

Application filed October 25, 1923. Serial No. 670,722.

To all whom it may concern:

Be it known that I, JAMES H. STEBBINS, a citizen of the United States of America, and a resident of Waterloo, Blackhawk County, Iowa, have invented certain new and useful Improvements in Adjustable Posts, of which the following is a specification.

My invention relates to improvements in adjustable posts, and the object of my improvement is to supply posts of the type which have relatively adjustable members furnished with means for varying their relative positions and releasably securing them together in their adjusted positions, one of the members being used to support an implement or appliance such as a vise, so that the post device may be set up and fixedly secured in any convenient place.

This object I have accomplished by the means which are hereinafter described and claimed, and which are illustrated in the accompanying drawings, it being understood that changes in the precise embodiment of invention herein can be made within the scope of what is claimed without departing from the spirit of the invention.

In said drawings, Fig. 1 is an elevation of my improved adjustable post as mounted between fixed supports, and as carrying on one of its members detachably, a vise. Fig. 2 is a fragmentary front elevation on an enlarged scale, of the upper portions of my device, with parts sectioned or broken away. Fig. 3 is a fragmentary side elevation of the same parts of the device, partly in central longitudinal section, and having other parts broken away. Fig. 4 is a plan of the upper pivoted clutch element, and Fig. 5 is a cross section of this element taken through the medial opening therein.

My improved adjustable post is made up of two telescoping outer and inner elongated members 1 and 5 respectively, the member 5 being preferably solid and having a coned upper end 6 to engage an overhead beam or fixed support, the lower member 1 being tubular and having feet 2 to rest on any suitable fixed base. A vise 3 or any other body or appliance to be supported for convenient use may be clamped upon the lower member 1 removably. The numeral 4 denotes a hollow housing element, having a rectangular hollow 10 open at opposite sides, and has a tubular depending part 8 which is forced tightly upon or otherwise fixedly mounted on the upper end of the lower post member 1. In the housing 4 are longitudinally alined openings, as at 9 to slidably receive and fit about the cylindrical post element 5 whose lower part may also pass into the hollow of the lower element 1 of the post. The housing 4 has a pair of integral brackets 7 projecting forwardly in parallel from it laterally and the brackets have alined bearing holes to receive respectively the end parts of pintles 12 and 18, to rock therein. The lower pair of openings 19 open into inclined slots 17, into which the pintles 18 may be withdrawn forwardly as hereinafter described.

The numeral 13 denotes a clutch-plate from whose opposite longitudinal edges at one end the said pintles 12 project into the upper pair of bearing holes. As shown in Figs. 4 and 5, this plate, which is swingingly positioned across the upper part of the hollow of the housing 4, has a central vertical circular opening 14 which is loosely traversed by said post element 5 when the plate 13 is substantially horizontal or at a right angle to the element 5. Smaller holes 23 are drilled through the plate to the front and rear of the central hole 14 in the median line of the plate to intersect the wall of said hole 14 thus providing two opposite pairs of sharp angular detents or angles 15 extending vertically, so that when the plate 13 swings downwardly under the action of gravity, the detents at upper and lower corners thereof engage and clutch the element 5 and hold it securely in an adjusted position relative to said lower post element 1.

A like clutch-plate 16 is swingingly mounted within the lower part of the hollow 10 of the housing 4, but has no pintles such as the pintles 12. This plate has a duplicate set of openings 14 and 23 to releasably receive the element 5 and engage and

clutch it alternately as operated by a tool or appliance to be described. This plate 16 normally lies horizontally within the hollow 10 and loosely upon the element 5, as shown by the full lines in said Fig. 3. To operate this lower plate by a step by step action upon the element 5, I employ a hand tool or detachable lever 20, which has upper and lower forks or spaced inwardly curved prongs 21 and 22. The lever is mounted by slipping its pintles into the holes 19 in said brackets 7, to position the forks 21 and 22 respectively above and below the adjacent end of the lower clutch-plate 16, the combination of lever and clutch-plate 16 thus providing a ratcheting device for said element 5.

In operation, the post element 1 is placed on a fixed floor or other base under some cross-beam or other fixed support above, the clutch-plate 13 then lifted by a finger to make it loose on the element 5, and then the element 5 is moved upwardly to bring its terminal coned end 6 against the beam above. The clutch-plate 13 is then released, dropping by gravity, so that its detents 15 at front and rear of the opening will engage and clutch the element 5 holding it in its adjusted position relative to the element 1 and the overhead support. The operator then engages the forks 21 and 22 alternately with the upper and lower faces of the clutch-plate 16 by swinging the lever up and down as indicated by the full and dotted lines in said Fig. 3, the upwardly swung lever causing the upper prong 21 to depress the plate 16 to its loose horizontal position, while the downward swing of the lever engages the lower prong 22 with the plate to swing that end of it upwardly so that in this movement the detents 15 engage the element 5 and the continued upward movement of the lever lifts the element 5 a short distance. This step by step method of elevating the element 5 is repeated as necessary to force and embed the point 6 into the wood, so as to firmly and tightly fix the post in place, and it will readily be understood that while the element 5 is moving upwardly the clutch-plate 13 lifts enough thereon to be loose, but drops at once into engagement when the movement of the lever is reversed, to hold the element at each step of its progress.

When the element 5 is thus fixed, the lever pintles 18 may be withdrawn forwardly into the inclined slots 17, so that the lever may hang vertically and out of the way of anyone.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is:

1. In combination, a hollow element, a hollow housing fixed thereon and in communication therewith and having a slideway alined with the hollow of said element, an extension body mounted slidably in said communicating bodies, and a plate having an end pivoted within the hollow of said housing and having an opening with oppositely dentated wall, said extension body traversing said opening loosely in one position of the plate, the detents on the opposite sides of the wall of the opening in the plate engaging and holding the extension body in another position of the plate.

2. In combination, a tubular element, a hollow housing member mounted fixedly thereon with their hollows in communication, said housing having an opening alined longitudinally with the hollow of the tubular element and an elongated extension body seated slidably in said communicating hollows, a catch-plate positioned within the hollow of the housing member transversely to said extension body and having an opening loosely traversed by said body, said plate having other openings intersecting the wall of the first-mentioned opening to provide in the front and rear spaced vertically disposed angular detents adapted to engage and clutch said body when the plate is tilted by gravity relative thereto.

3. In combination, an elongated element, an apertured body supported swingingly at one end, said elongated element loosely traversing the aperture in said body, and the aperture in said body being shaped with spaced angular parts which engage said elongated body only clutchingly when the apertured body is tilted relative to the elongated body in one direction.

4. In combination, a housing member having both longitudinal and lateral openings at opposite places, an elongated element mounted to slide through one pair of said openings loosely, a clutch-element terminally pivoted in said housing member to swing vertically to be loose upon said elongated element in one position and to engage and clutch same releasably in another position, and a ratchet-device pivotally mounted in said housing member to swing up and down to be loose upon said elongated member in one position and having oppositely positioned recesses to produce detents which engage and clutch and lift it while in another position and being positively moved in one direction.

5. In combination, a housing member having both longitudinal and lateral openings at opposite places, an elongated element mounted to slide through one pair of said openings loosely, a clutch-element terminally pivoted in said housing to swing vertically to be loose upon said elongated element in one position and to engage and clutch same releasably in another position, another clutch-element within said housing mounted to swing vertically to be loose upon

said element in one position and having oppositely positioned pointed detents to engage and clutch same releasably in another position, and a lever fulcrumed on said housing and having a terminal fork whose prongs are above and below the adjacent end of the last-mentioned clutch-plate to engage same alternately when the lever is swung reversely to releasably clutch said plate and lift said elongated element and release it by a step by step actuation thereon.

Signed at Waterloo, Iowa, this 23rd day of October, 1923.

JAMES H. STEBBINS.