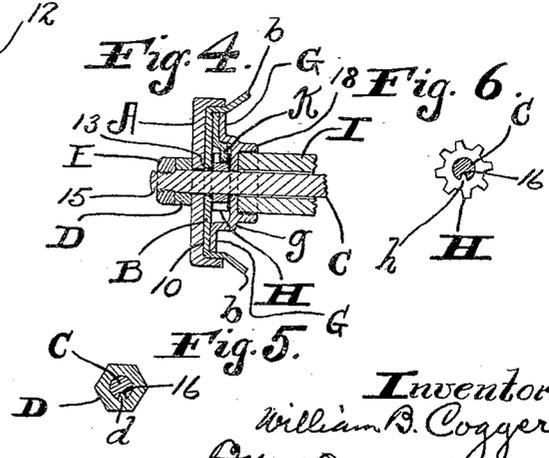
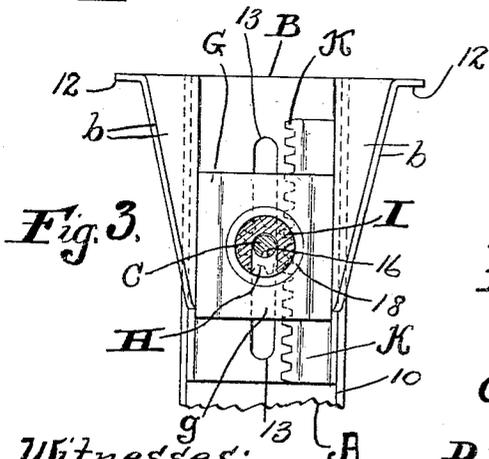
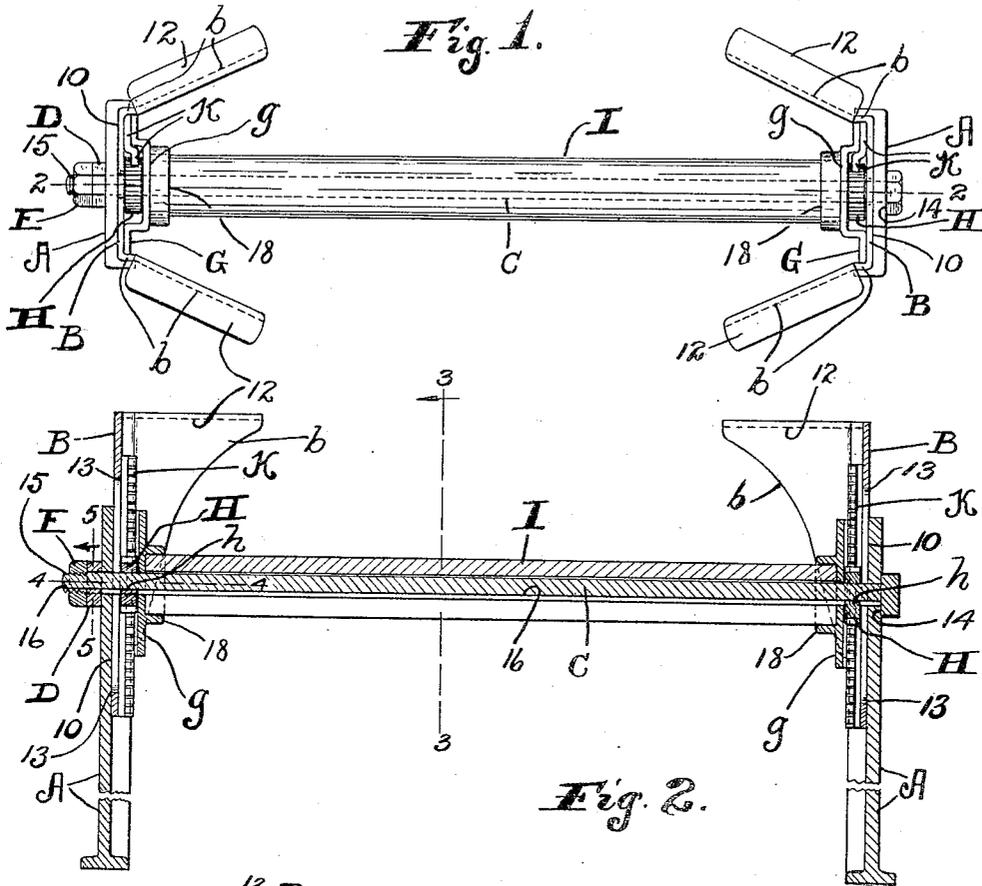


W. B. COGGER.
 ADJUSTABLE SUPPORTING STRUCTURE.
 APPLICATION FILED FEB. 23, 1915.

1,196,084.

Patented Aug. 29, 1916.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM B. COGGER, OF CLEVELAND, OHIO, ASSIGNOR TO THEODOR KUNDTZ, OF LAKEWOOD, OHIO.

ADJUSTABLE SUPPORTING STRUCTURE.

1,196,084.

Specification of Letters Patent.

Patented Aug. 29, 1916.

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To all whom it may concern:

Be it known that I, WILLIAM B. COGGER, a citizen of the United States of America, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Adjustable Supporting Structures; and I hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

This invention relates to improvements in vertically adjustable supporting structures, and pertains more especially to a supporting structure comprising two vertically arranged standards adapted to rest on the floor and provided at their inner sides with vertically arranged slideways engaged by vertically adjustable brackets which are supported from the standards and adapted to carry a desk-top, table, seat or other object.

One object of this invention is to produce a vertically adjustable supporting structure which is simple, strong and durable in construction.

Another object is to provide simple and improved means whereby the adjustable brackets are braced internally when said brackets have been secured in the desired adjustment.

Another object is to facilitate the assembly of the component parts of the supporting structure and effect the reduction to a minimum of the cost of manufacturing said structure.

With these objects in view, and to the end of attaining any other advantage hereinafter appearing, this invention consists in certain features of construction and combinations and relative arrangement of parts, hereinafter described in this specification, pointed out in the claim, and illustrated in the accompanying drawings.

In said drawings, Figure 1 is a top plan of a supporting structure embodying my invention. Fig. 2 is a vertical section on line 2—2, Fig. 1. Fig. 3 is a transverse section on line 3—3, Fig. 2. Fig. 4 is a horizontal section on line 4—4, Fig. 2, looking downwardly. Fig. 5 is a vertical section on line 5—5, Fig. 2, looking outwardly. Fig. 6 illustrates one of the pinions employed in readjusting the brackets vertically and

shows said pinion mounted on and operatively connected with a shaft which is shown in transverse section and extends between and is supported from the standards. Portions are broken away in Fig. 2 to reduce the size of the drawing.

My improved supporting structure comprises two laterally spaced vertically arranged standards A. Each standard A is provided at its inner side with a vertically arranged slideway 10. Two oppositely arranged vertically adjustable spaced brackets are arranged at the inner side of opposite standards respectively, and each bracket comprises a vertically arranged central member B engaging the slideway 10 of the adjacent standard and also comprises two inwardly projecting wings *b* which are spaced transversely of said slideway and form seats for the object to be carried by the brackets. Preferably the wings *b* of each bracket diverge in the direction of the other bracket, and each wing *b* is preferably provided at its upper end with a laterally and outwardly projecting seat-forming flange 12.

The central member B of each bracket is provided centrally between the wings *b* of said bracket with a vertically arranged slot 13. A horizontally arranged shaft C extends loosely through the slots 13 in the brackets and loosely through and has bearing in the standards A. The shaft C is provided at the outer side of one standard with an inwardly facing shoulder 14 overlapping said side of said standard, and said shaft extends a suitable distance beyond the outer side of the other standard and is provided at said side of the last-mentioned standard with a sleeve D which is mounted on and shiftable endwise of the shaft when the sleeve is free to move or forced endwise of the shaft. The sleeve D is hexagonal externally in cross-section, as shown in Fig. 5. The shaft C extends through the sleeve D and beyond the outer end of said sleeve and is screw-threaded externally, as at 15, beyond said end of said sleeve, and a nut E is screwed onto said shaft at said end of said sleeve. The shaft C is provided externally with a groove 16 which preferably extends from the shoulder 14 to the free extremity of the screw-threaded end 15 of the shaft and the sleeve D is provided internally (see Fig. 5) with a tongue *d* which

projects into said groove so that the shaft C, when the nut E is loose relative to said sleeve, can be rotated by rotating said sleeve.

5 Two spaced abutment-plates G are arranged between the central members B of the brackets. That is, at the inner side of the central member B of each bracket is not only arranged an abutment-plate G, but
10 said plate extends between the inner ends of the wings *b* of said bracket. The abutment-plates G have their central portions *g* offset toward each other and each abutment-plate has its offset portion extending from the
15 upper edge to the lower edge of the plate and around the shaft C. That is, the plates G are mounted centrally of their offset portions *g* on the shaft C. Arranged internally of the offset portion *g* of each plate G is a
20 pinion H which is mounted on the shaft C and (see Fig. 6) preferably provided internally with a tongue *h* which projects into the groove 16 in the shaft so as to establish operative connection between the pinion and
25 the shaft.

A horizontally arranged bar I, which is inverted-U-shaped in cross-section, as shown in Fig. 3, extends between the offset portions *g* of the abutment-plates G, and the
30 offset portion of each plate G overlaps the adjacent end face of said bar and has an annular member 18 extending circumferentially of and forming a seat for said bar. The central member B of each bracket is
35 provided between said member of said bracket and the adjacent abutment-plate G with a vertically arranged rack K which meshes with the adjacent pinion H. The racks K of the brackets are arranged at one
40 and the same side of the shaft C.

By the construction hereinbefore described, it will be observed that the wings *b* of each bracket overlap opposite side edges respectively of the adjacent abutment-plate
45 G, that the brackets when rendered free to be readjusted vertically are supported through the medium of the racks K from the pinions H, that the abutment-plates G carry the bar I, that the two abutment-plates G and the bar I interposed between
50 them form a brace for the central members B of the brackets when the brackets are secured in the desired adjustment, that by applying a wrench to and rotating the sleeve D upon loosening the nut E relative to said
55 sleeve the shaft C is rotated and the brackets readjusted vertically, and that upon having manipulated said nut as required to shift it inwardly endwise of the shaft upon a vertical
60 readjustment of the brackets the sleeve is forced inwardly and the standards and central bracket-members B are clamped at

the shoulder 14 of the shaft and at the inner end of said sleeve against the abutment-plates G and consequently against the ends
65 of the brace formed by said plates and the bar I, so that the brackets are efficiently secured in the desired vertical adjustment. I would here remark that the abutment-plates G have their side edges arranged vertically,
70 as shown, and that the wings *b* of the bracket overlap said edges in any adjustment of the brackets and are arranged in such close proximity to said edges as to successfully prevent the rotation of said plates
75 on the shaft.

It will be observed that the component parts of my improved supporting structure are readily assembled, that the structure is simple, strong and durable, and that the
80 central members B of the adjustable brackets are adequately braced when the brackets have been secured in the desired adjustment.

What I claim is:—

In a supporting structure, two vertically
85 arranged laterally spaced standards each whereof is provided at its inner side with a vertically arranged slideway, two vertically adjustable spaced brackets arranged at the inner side of opposite standards respec-
90 tively and having each a vertically arranged central member which engages the slideway of the adjacent standard and is provided with a vertically arranged slot, a horizontally arranged shaft extending loosely
95 through the slots in the brackets and loosely through and supported from the standards, two spaced abutment-plates arranged vertically between the central members of the brackets and mounted on the shaft, a pinion
100 arranged between the aforesaid member of each bracket and the adjacent abutment-plate and mounted on and operatively connected with the shaft, and a bar extending and interposed between and supported from
105 the abutment-plates, the central members of the brackets being provided at the same side of the shaft with vertically arranged racks meshing with the pinions, the shaft being provided with means for clamping the
110 standards and the brackets to the abutment-plates, and the brackets having portions which overlap the side edges of the abutment-plates in any adjustment of the brackets and are arranged to prevent rota-
115 tion of the abutment-plates on the shaft.

In testimony whereof, I sign the foregoing specification, in the presence of two witnesses.

WILLIAM B. COGGER.

Witnesses:

HARRY T. GETTINS,
B. C. BROWN.