Jan. 5, 1954 G. STARCEVICH 2,664,977

ADJUSTABLE CAP FOR STRUCTURAL COLUMNS

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Fig. 1

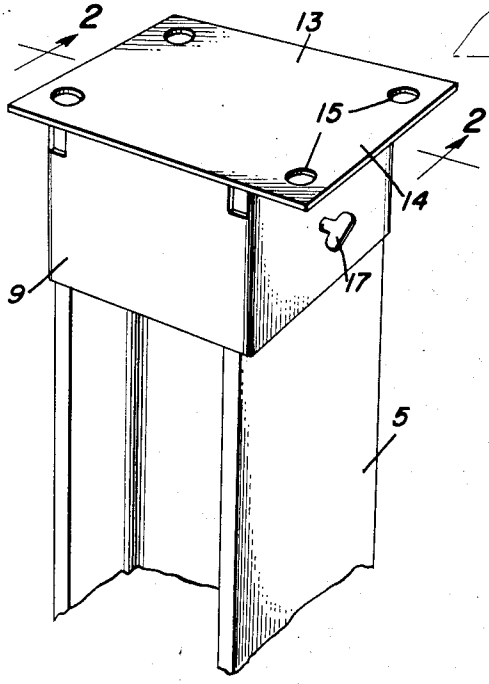


Fig. 3

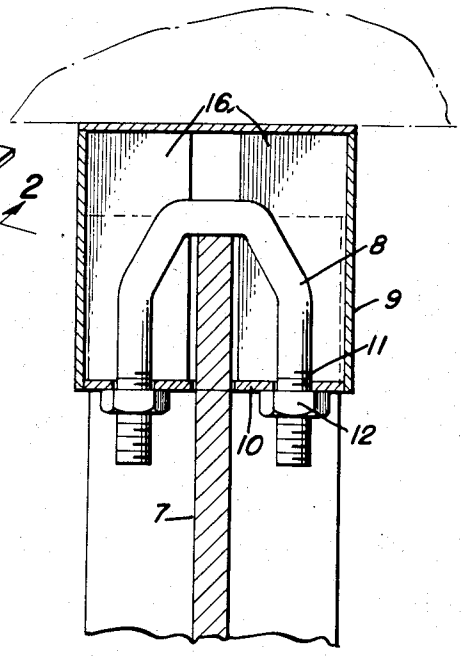


Fig. 2

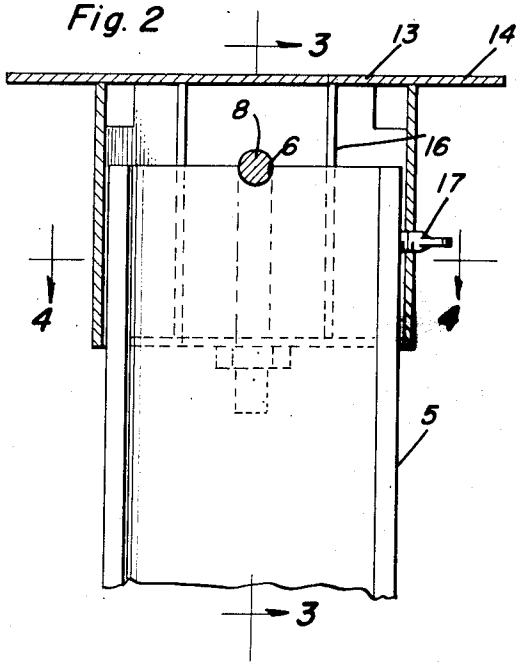
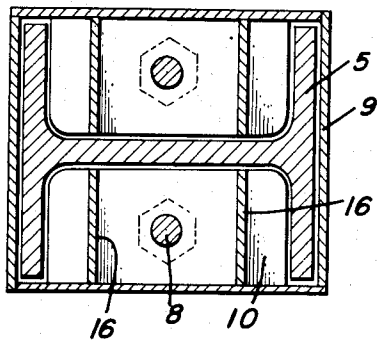


Fig. 4



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Fig. 5

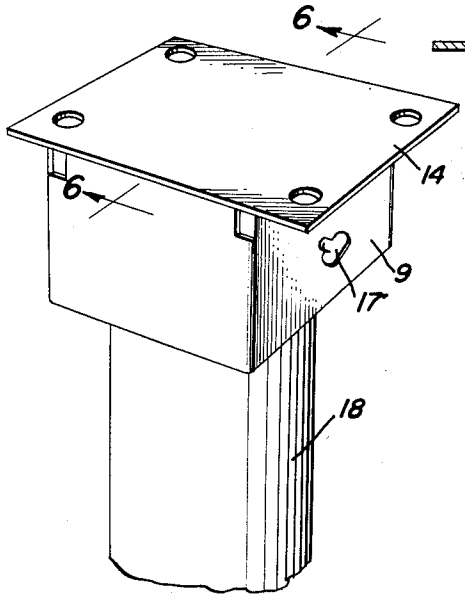


Fig. 7

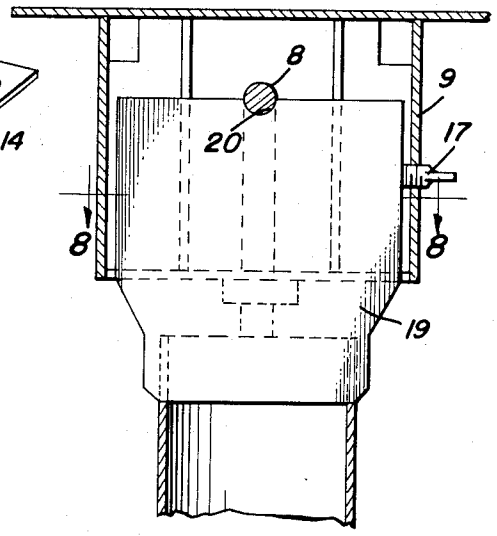


Fig. 6

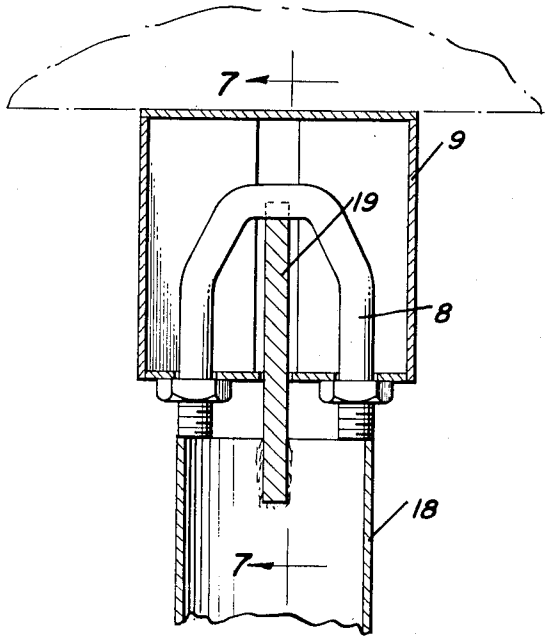
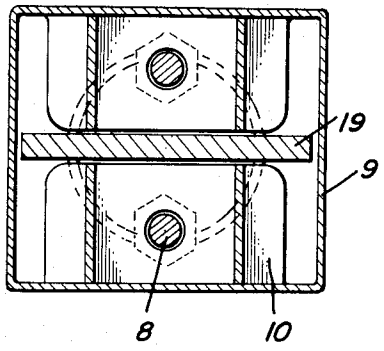


Fig. 8



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ADJUSTABLE CAP FOR STRUCTURAL COLUMNS

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Application July 28, 1952, Serial No. 301,261

6 Claims. (Cl. 189—42)

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The present invention relates to new and useful improvements in caps for structural columns and more particularly to an adjustable cap to subject a supported structure to a jacking action after the column has been placed in position.

An important object of the invention is to provide a U-bolt placed in a straddling inverted position on the upper edge of a steel or iron column and a cap supported by the U-bolt in a position whereby the tightening of nuts on the lower ends of the U-bolt will gradually raise the cap against the underside of a floor sill to eliminate sag in the floor and without danger of damage to the sill or floor, such as frequently happens when extreme and sudden jacking force is subjected thereto.

Another object is to adapt the adjustable cap to either I-beam tubular or other types of columns and wherein the cap may be placed either on top of or under the column.

A further object is to provide a device of this character of simple and practical construction, which is strong and durable, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, in which:

Figure 1 is a perspective view.

Figure 2 is a vertical sectional view taken on a line 2—2 of Figure 1.

Figure 3 is a vertical sectional view taken on a line 3—3 of Figure 2.

Figure 4 is a transverse sectional view taken on a line 4—4 of Figure 2.

Figure 5 is a perspective view showing the cap used with a tubular column.

Figure 6 is a vertical sectional view taken on a line 6—6 of Figure 5.

Figure 7 is a vertical sectional view taken on a line 7—7 of Figure 6 and

Figure 8 is a transverse sectional view taken on a line 8—8 of Figure 7.

Referring now to the drawings in detail and first with respect to the construction illustrated in Figures 1 to 4 inclusive, the numeral 5 represents an I-beam column having a notch 6 in the upper edge of its web 7 to receive an inverted U-bolt 8 which straddles the web. A cap 9 of substantially square shape is sleeved over the top of the column and is formed at its bottom

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with inwardly projecting horizontal flanges 10 having openings 11 to receive the lower ends of the U-bolt to project below the cap. Nuts 12 are threaded on the lower ends of the U-bolt to tighten against the underside of the cap.

The top of the cap is closed by a plate 13 which is welded or otherwise secured to the cap and projects outwardly at least at two sides of the cap to form attaching flanges 14 having openings 15 therein to receive fasteners (not shown) for attaching to a floor sill or other structure to be supported by the column.

Vertical webs 16 are welded to the flanges 10 and top plate 13 to brace the former.

The cap 9 is held in position on the column, while the column is being erected or otherwise handled, by a set screw 17 which may be removed after the column is in position.

In Figures 5 to 8 inclusive the cap 9 is shown mounted on a tubular column 18 by means of an adaptor plate 19 which is welded in a vertical position inside the top of the column to project above the column. The U-bolt 8 of the cap straddles the plate 19 and is seated in a notch 20 in the upper edge of the plate.

In either form of the invention, the U-bolt 8 is assembled in the cap 9 and the cap is then placed over the end of the column to rest the U-bolt in the notch 6 of the I-beam column 5 or in the notch 20 of adaptor plate 19 of tubular column 18. When the cap is placed on top of the column the tightening of the nuts 12 will raise the cap against the underside of a floor sill or other structure to be supported in a jacking action.

A similar result is obtained by placing the cap at the bottom of the column.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. In combination, a structural column having a vertical web, a U-bolt placed in straddling position with respect to the web, a hollow body enclosing the U-bolt and also enclosing the web,

said body having a wall at its inner end and through which the ends of the U-bolt project, and nuts threaded on the outer ends of the U-bolt and bearing against said wall of the body to adjust the body endwise with respect to the column.

2. In combination, a structural column having a vertical web, a U-bolt placed in straddling position with respect to the web, a hollow body enclosing the U-bolt and also enclosing the web, a pair of opposed flanges at the inner end of the body and through which the ends of the U-bolt project, internal braces in the body for the flanges, and nuts threaded on the outer ends of the U-bolt and bearing against the flanges to adjust the body endwise with respect to the column.

3. An adjustable cap for structural columns of a type having a vertical web, a hollow body adapted for sleeving over an end of the column, opposed flanges at the inner end of the body positioned at opposite sides of the web, a U-bolt internally of the body and having its ends projecting outwardly through the flanges, said U-bolt being adapted to straddle the web, and nuts threaded on the outer ends of the U-bolt and bearing against the flanges to adjust the body endwise on the column.

4. In combination, a structural column, an adjustable hollow body mounted for endwise movement on one end of the column, a U-bolt positioned internally of the body and straddling the adjacent end of the column, said U-bolt

having end portions projecting outwardly of the body, and adjusting means on the outer ends of the U-bolt and engaging the body to adjust the body endwise with respect to the column.

5. In combination, a structural column having a vertical web portion, an adjustable hollow body mounted for endwise movement on one end of the column, a U-bolt positioned internally of the body and straddling the web portion of the column, said U-bolt having end portions projecting outwardly of the body, and adjusting means on the outer ends of the U-bolt and engaging the body to adjust the body endwise with respect to the column.

6. In combination, a structural column having a vertical web portion, an adjustable hollow body mounted for endwise movement on one end of the column, a U-bolt positioned internally of the body and straddling the web portion of the column, said U-bolt having end portions projecting outwardly of the body, and nuts threaded on the outer ends of the U-bolt and engaging the body to adjust the body endwise with respect to the column.

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