United States Patent [19]

Wilbur et al.

[11] **3,771,753**

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[54] **SHORE BRACKET**

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[52] **U.S. Cl.** ..... **248/295,** 249/18, 249/219 R

[51] **Int. Cl.** **A47f 5/10,** A47h 33/00

[58] **Field of Search** ..... 248/295, 296; 249/18, 20, 219 R, 205

[56] **References Cited**

UNITED STATES PATENTS

2,386,525	10/1945	White	249/18 UX
3,425,659	2/1969	Eriksson	249/18
3,504,879	4/1970	Strickland	248/296

FOREIGN PATENTS OR APPLICATIONS

108,912	11/1943	Sweden	16/19

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Attorney—William B. Kerkam, Jr. et al.

[57] **ABSTRACT**

A shoring bracket for overhead form work has a support head engageable with a form work beam. The head is vertically adjustable for positioning of the form work. The head of the bracket includes a roller engaging the form work beam and a lock for the roller to prevent rotation thereof when the head is supporting the form work. The roller is unlocked for longitudinal rolling of the form work beam over the roller for removal of the form work.

9 Claims, 3 Drawing Figures

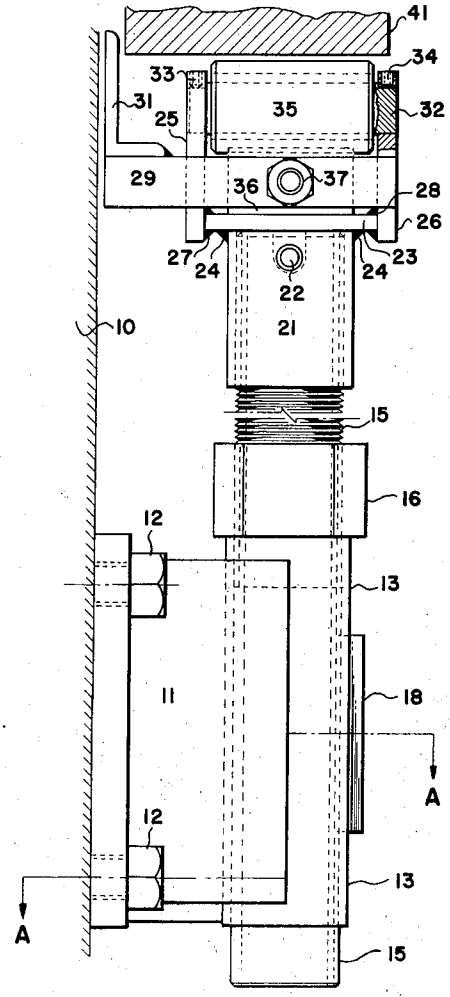
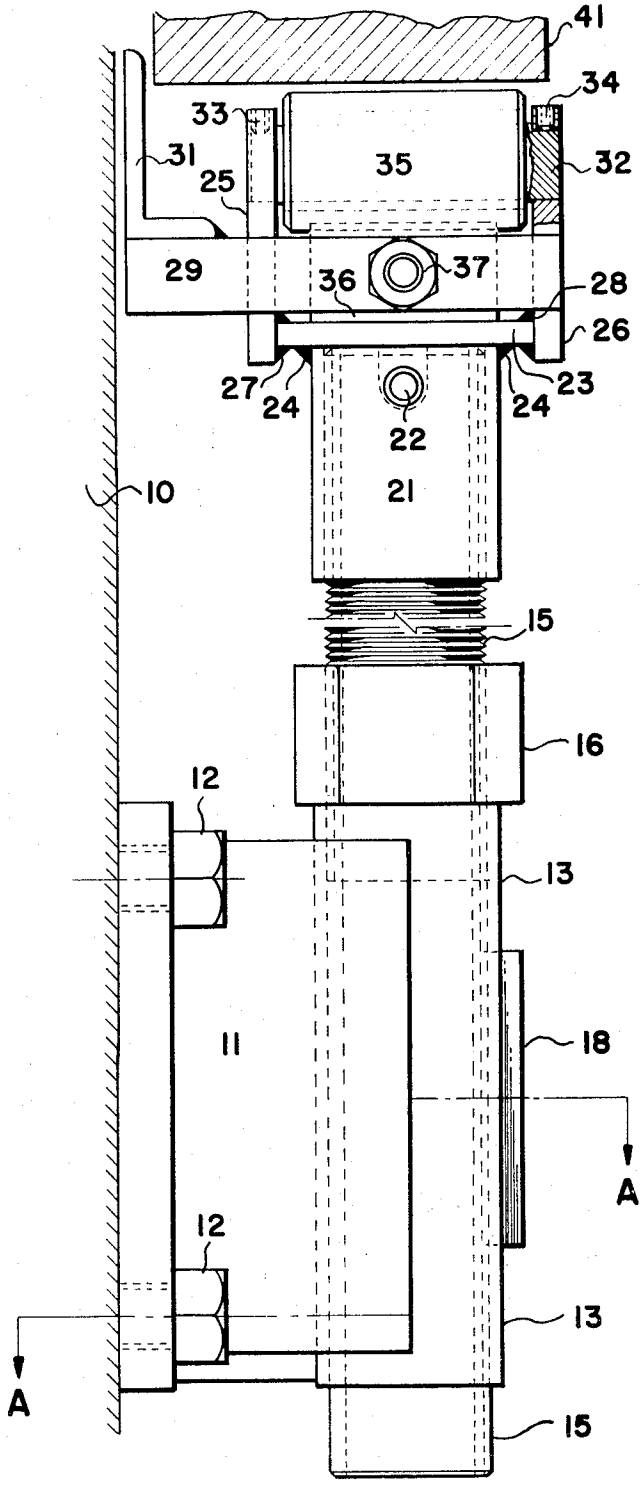


FIG. 1


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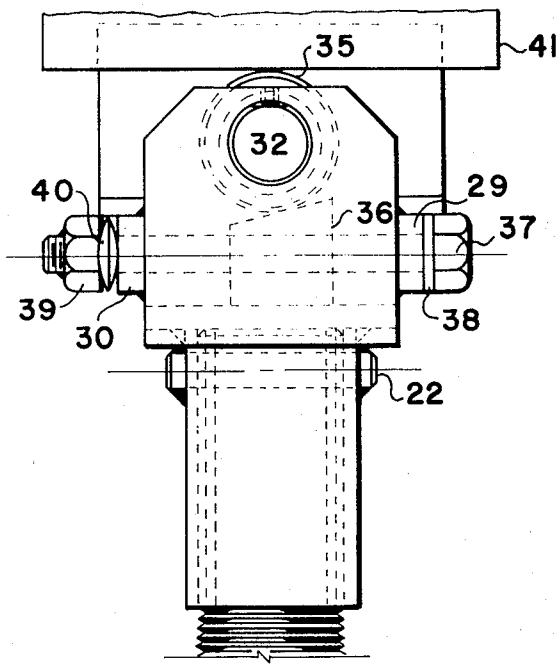


FIG. 2

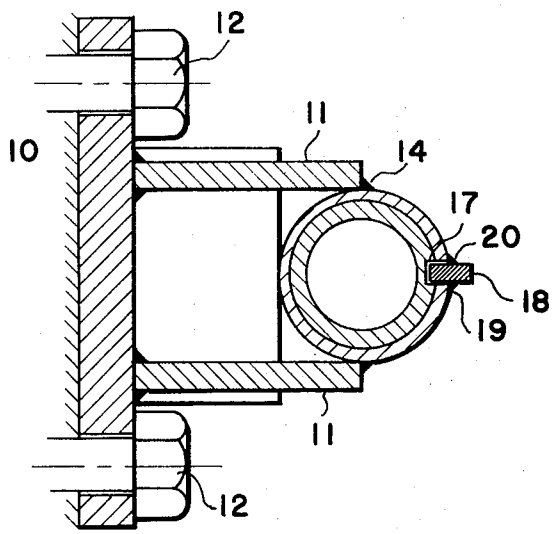


FIG. 3

SECTION A-A

SHORE BRACKET

BACKGROUND OF THE INVENTION

The present invention relates to support brackets for shoring for form work and more particularly relates to a bracket mounted on a column for vertically adjustable support of the form work. A roller head is released for removal of the form work.

A column shore bracket as disclosed in U.S. Pat. No. 3,504,879 and the several patents cited during the prosecution thereof are considered to be the most pertinent prior art in this field. The shore bracket of the patent aforesaid has a plate support for the beam of the form work and when this support is lowered the beam comes into engagement with a roller for removal of the beam and form work.

The present invention has a less complicated and less expensive construction to manufacture and use while providing secure support for the beam of the form work by locking the roller head against rotation and yet permitting easy removal of the beam and form work by unlocking the roller and freeing it for rotation for removal of the supported beam.

SUMMARY OF THE INVENTION

The shore bracket of the present invention comprises a base secured to a vertical column by suitable bolts or other securing means and this base has vertically mounted thereon a tubular housing in which a threaded shaft is mounted for vertical movement. A nut is mounted on the threaded shaft and engages the top of the tubular member. A roller bracket is mounted at the top of the threaded shaft and a roller is mounted for rotation in the bracket. A lock for the roller is also mounted in the bracket and is moved into and out of engagement with the roller by suitable means such as a threaded bolt or the like. The roller bracket may also include a vertically extending member to act as a stop for the adjacent beam of the form work when the beam is resting on the roller.

BRIEF DESCRIPTION OF THE DRAWINGS

A preferred embodiment of the present invention is shown in the accompanying drawings, in which like reference characters indicate like parts. In these drawings, FIG. 1 is a view of a preferred embodiment of the present invention in beam supporting position mounted on a vertical column;

FIG. 2 is a partial view of the embodiment of FIG. 1 showing the construction for locking the roller of the head of the bracket against rotation; and

FIG. 3 is a partial sectional view of the embodiment of FIG. 1 on the line A—A thereof.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference now to the drawings, a preferred embodiment of the shore bracket of the present invention utilizes a vertical column **10** to which a base **11** for the bracket is suitably secured by bolts **12.** A hollow tubular housing **13** is secured vertically in base **11** as by welds **14** and threaded shaft **15** is slidably mounted therein. Nut **16** is mounted on the threads of shaft **15** and rests upon the top of tubular housing **13.** Shaft **15** is slotted at **17** (FIG. 3) to receive a key **18** and key **18** passes through a corresponding slot **19** in housing **13** and is secured in position by welds **20.** Key **18** prevents shaft **15** from rotating on actuation of nut **16** permitting shaft **15** to slide vertically in tubular housing **13.** Shaft **15** is notched at its upper end to engage rod **22.** A head **21** is mounted on the upper end of threaded shaft **15** and is aligned for direction and prevented from rotating on shaft **15** by the engagement of notches in shaft **15** with rod **22.** Rod **22** is secured on each end by welds to head **21.** A plate **23** is secured across the top of cap **21** by welds **24** and spaced uprights **25** and **26** are secured to plate **23** by welds **27** and **28,** respectively. Cross bars **29** and **30** are secured across uprights **25** and **26** and a flange **31** is secured across bars **29** and **30** adjacent column **10.** Uprights **25** and **26** are suitably bored to receive a shaft **32** which is locked in position by set screws **33** and **34** and a roller **35** is mounted for rotation on shaft **32.**

A wedge lock **36** rests on plate **23** between uprights **25** and **26** and is mounted upon threaded bolt **37.** The head of bolt **37** is spaced from cross member **29** by washer **38** and the force required to rotate bolt **37** is adjusted by positioning nut **39** against spring washers **40** which bears against cross member **30.** Rotation of threaded bolt **37** moves wedge **36** into and out of engagement with roller **35** and when in engagement with roller **35** prevents roller **35** from rotating as well as supporting a part of the load applied upon said roller.

In use, base **11** is bolted to column **10** adjacent the position for the form work and nut **16** is rotated in the appropriate direction to position roller **35** adjacent the position of the form work. With wedge **36** in position to lock roller **35** against rotation, a beam **41** for the form work is mounted on roller **35** and is spaced from column **10** by bracket **31.** Beam **41** is then suitably plumbed or positioned by appropriate rotation of nut **16,** it being understood that beam **41** will extend over and be supported by a plurality of the shore brackets and the form work will then be completed. After completion of the form work, concrete is poured and permitted to harden.

When the form work is to be removed, nut **16** is appropriately rotated to allow shaft **15** and roller **35** to drop and the lowered form work frees itself from the hardened concrete. Thereafter, bolt **37** is suitably actuated to withdraw wedge **36** from engagement with roller **35** and beam **41** and adjacent portions of the form work may then be withdrawn laterally and away from the hardened concrete over roller **35** for reuse elsewhere.

The shore brackets are then removed and reused for form work support elsewhere in the building being constructed.

Changes in or modifications to the above-described preferred embodiment of the present invention may now be suggested without departing from the present inventive concept. Reference should therefore be had to the appended claims to determine the scope of this invention.

What I claim is:

1. A shore bracket for supporting form work used in concrete construction for vertical mounting on columns or walls comprising a base secured vertically to the column, a hollow tubular housing mounted vertically on said base, a non-rotating threaded shaft slidably mounted in said housing, a threaded nut mounted on said shaft and engaging the upper end of said housing, a roller for engaging the form work mounted on the

upper end of said shaft vertically above said nut and means for locking said roller against rotation.

2. A shore bracket for supporting form work used in concrete construction for vertical mounting on columns or walls comprising a base secured vertically to the column, a hollow tubular housing mounted vertically on said base, a non-rotating threaded shaft slidably mounted in said housing, a threaded nut mounted on said shaft and engaging the upper end of said housing, a roller for engaging the form work mounted on the upper end of said shaft vertically above said nut and means for locking said roller against rotation, said locking means including a wedge movable into engagement with said roller and manually actuable screw means for moving said wedge.

3. A shore bracket for supporting form work used in concrete construction for vertical mounting on columns or walls comprising a base secured vertically to the column, a hollow tubular housing mounted vertically on said base, a non-rotating threaded shaft slidably mounted in said housing, a threaded nut mounted on said shaft and engaging the upper end of said housing, a roller for engaging the form work mounted on the upper end of said shaft vertically above said nut and means for locking said roller against rotation, including a head mounted on said shaft, spaced uprights on said head, said roller being mounted between said uprights and a wedge for locking said roller against rotation mounted on said head between said uprights.

4. A bracket as described in claim 3, including a flange secured to said head and spaced from said roller for engagement by a portion of the form work supported by said roller.

5. A bracket as described in claim 3, including a manually actuable screw carried by said head and moving said wedge carried by said head into and out of engagement with said roller.

6. A shore bracket for supporting form work used in concrete construction for vertical mounting on columns or walls comprising a base secured vertically to the column, a hollow tubular housing mounted vertically on said base, a non-rotating threaded shaft slidably mounted in said housing, a threaded nut mounted on said shaft and engaging the upper end of said housing, a roller for engaging the form work mounted on the upper end of said shaft vertically above said nut and means for locking said roller against rotation, including a key mounted in said housing and a longitudinal slot in said shaft receiving said key whereby rotation of said shaft in said housing is prevented.

7. A shore bracket for supporting form work used in concrete construction for vertical mounting on columns or walls comprising a base secured vertically to the column, a hollow tubular housing mounted vertically on said base, a non-rotating threaded shaft slidably mounted in said housing, a threaded nut mounted on said shaft and engaging the upper end of said housing, a roller for engaging the form work mounted on the upper end of said shaft vertically above said nut and means for locking said roller against rotation, including a head mounted in said shaft and notches in upper end of said threaded shaft engaging a rod welded in said head whereby said roller is positively aligned for direction in relation to form work.

8. A shore bracket for supporting form work used in concrete construction for vertical mounting on columns or walls comprising a base secured vertically to the column, a hollow tubular housing mounted vertically on said base, a non-rotating threaded shaft slidably mounted in said housing, a threaded nut mounted on said shaft and engaging the upper end of said housing, a roller for engaging the form work mounted on the upper end of said shaft vertically above said nut and means for locking said roller against rotation, including a head mounted on said shaft and notches in the upper end of said threaded shaft engaging a rod welded in the head of said bracket whereby rotation of said head on said threaded shaft is prevented.

9. A shore bracket for supporting form work used in concrete construction for vertical mounting on columns or walls comprising a base secured vertically to the column, a hollow tubular housing mounted vertically on said base, a non-rotating threaded shaft slidably mounted in said housing, a threaded nut mounted on said shaft and engaging the upper end of said housing, a roller for engaging the form work mounted on the upper end of said shaft vertically above said nut and means for locking said roller against rotation, said locking means including a wedge movable into engagement with and on the under side of said roller whereby said wedge supports part of the load to be applied upon said roller.

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