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(12) **United States Patent Header**

(10) **Patent No.:** US 10,077,589 B2
(45) **Date of Patent:** *Sep. 18, 2018

(54) **DOOR CATCH**

(56) **References Cited**

(71) Applicant: **Gregory Header**, Richland, PA (US)

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(72) Inventor: **Gregory Header**, Richland, PA (US)

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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This patent is subject to a terminal disclaimer.

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(21) Appl. No.: **15/688,643**

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(22) Filed: **Aug. 28, 2017**

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(65) **Prior Publication Data**

US 2017/0356224 A1 Dec. 14, 2017

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Related U.S. Application Data

Primary Examiner — Alyson M Merlino
(74) *Attorney, Agent, or Firm* — Stone Creek Services LLC; Alan M Flum

(60) Continuation of application No. 14/957,609, filed on Dec. 3, 2015, now Pat. No. 9,745,785, which is a (Continued)

(57) **ABSTRACT**

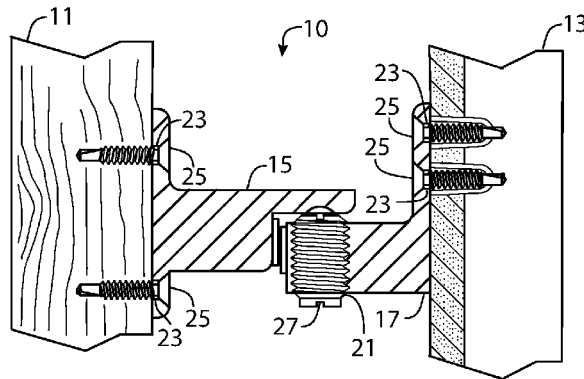
(51) **Int. Cl.**
E05C 19/00 (2006.01)
E05F 5/02 (2006.01)
(Continued)

Disclosed is a door catch that can help to prevent door sag, especially for heavy or tall residential or commercial doors, and provides for post-installation catch tension adjustment without removal or adjustment of mounting members. In one aspect, the door catch can include a ball catch base, a threaded ball plunger assembly, a catch bumper, and a bumper base. In another aspect, the catch bumper and the bumper base can optionally be combined into a single catch bar bracket. The ball plunger assembly is adjustably mounted within a threaded aperture of ball catch base. A ball captive in one end of the ball plunger assembly engages a detent in the catch bumper, or catch bar bracket, providing friction to hold the door open. The position of the ball plunger assembly can be adjusted vertically to increase or decrease the tension between the detent and the ball plunger assembly.

(52) **U.S. Cl.**
CPC *E05F 5/02* (2013.01); *E05C 17/46* (2013.01); *E05C 17/52* (2013.01); *E05C 19/04* (2013.01); *Y10T 16/61* (2015.01)

(58) **Field of Classification Search**
None
See application file for complete search history.

13 Claims, 17 Drawing Sheets



Related U.S. Application Data

division of application No. 13/960,308, filed on Aug. 6, 2013, now Pat. No. 9,228,387.

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(51) **Int. Cl.**

E05C 19/04 (2006.01)
E05C 17/46 (2006.01)
E05C 17/52 (2006.01)
E05B 15/02 (2006.01)

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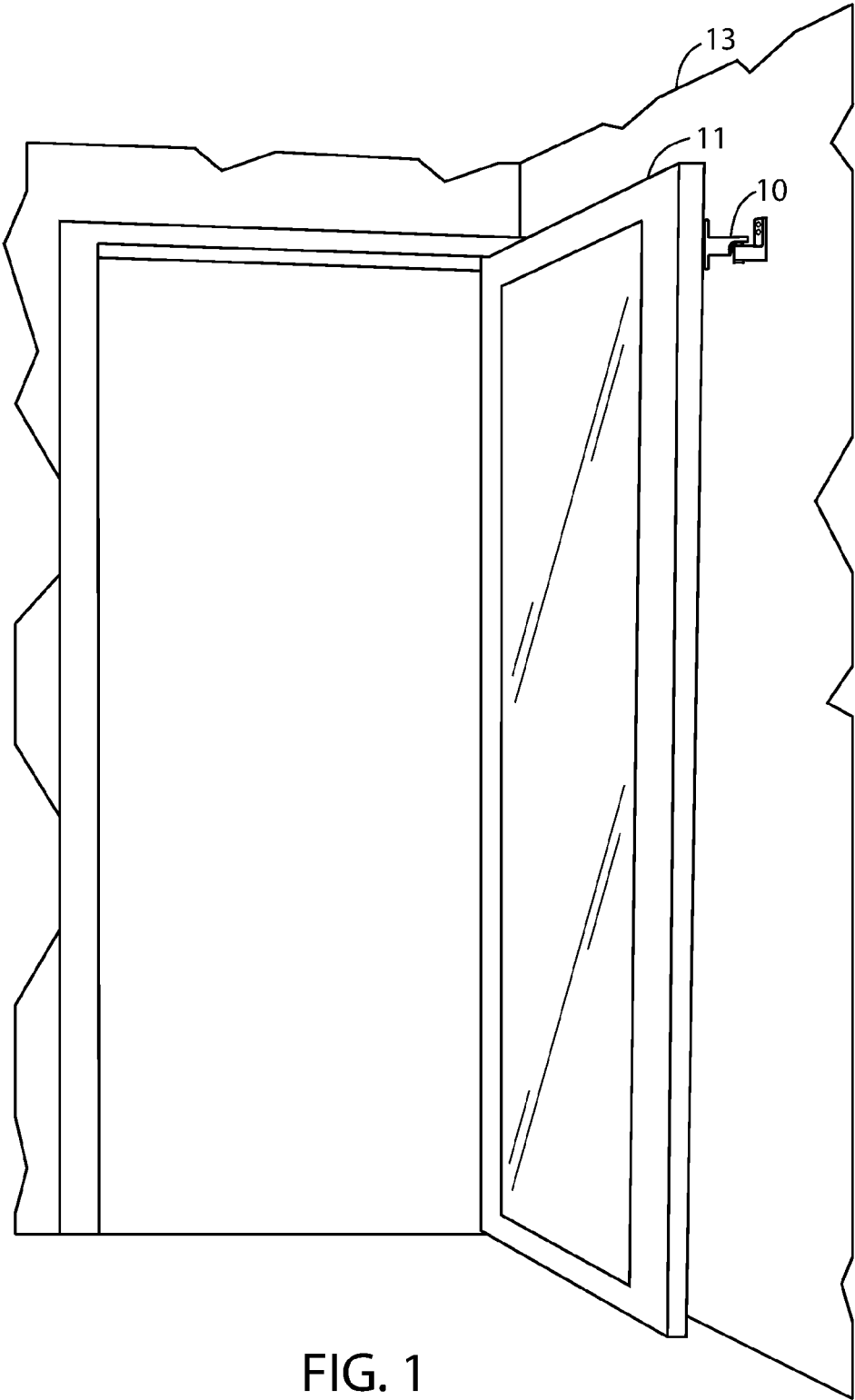


FIG. 1

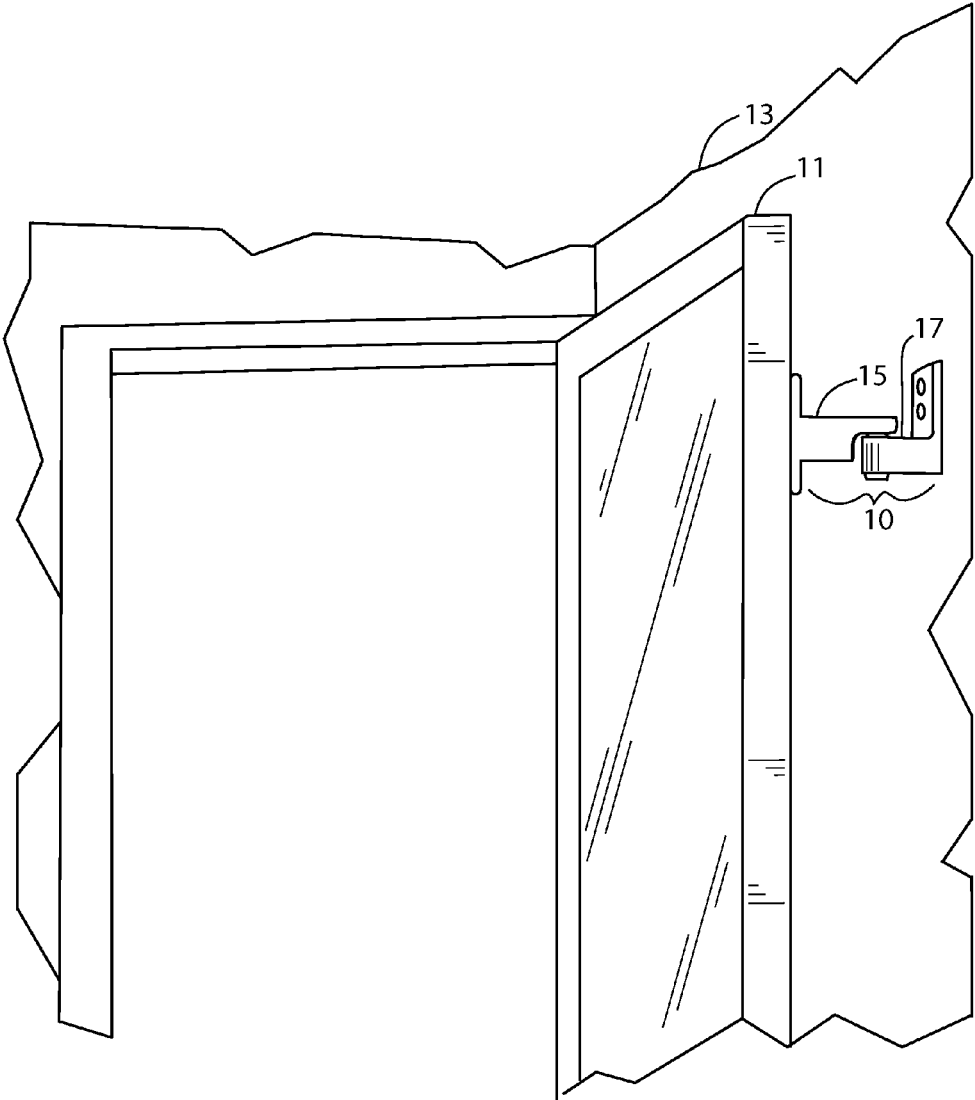


FIG. 2

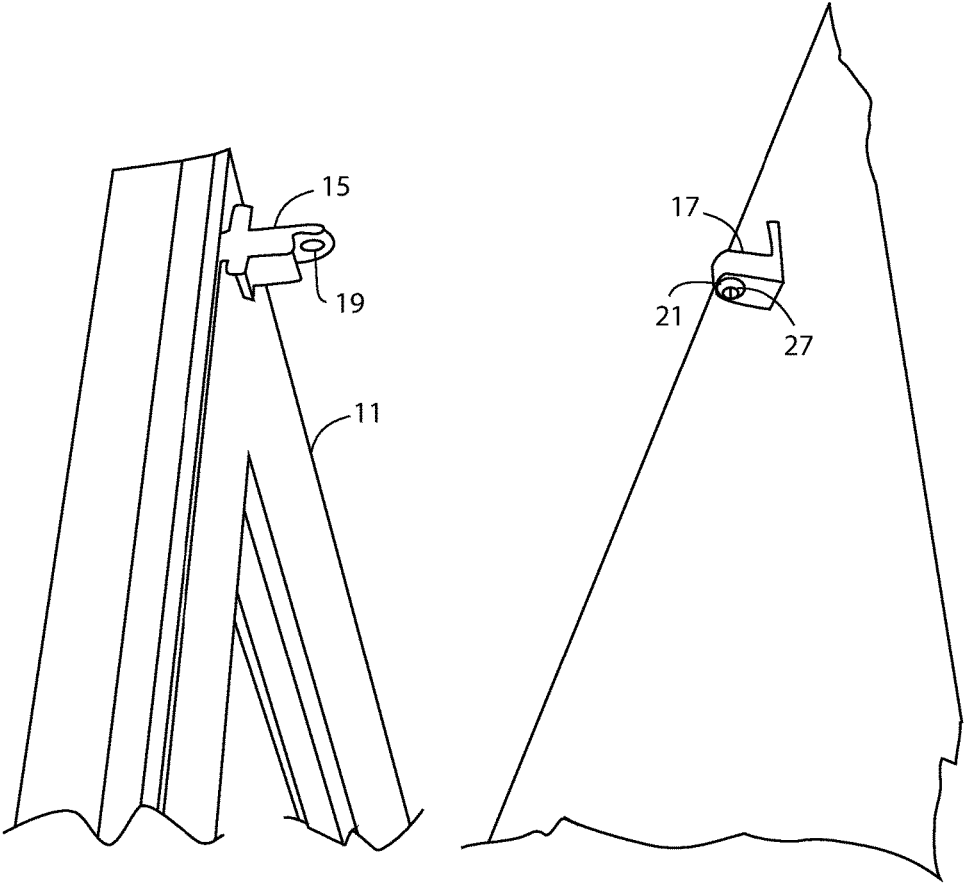
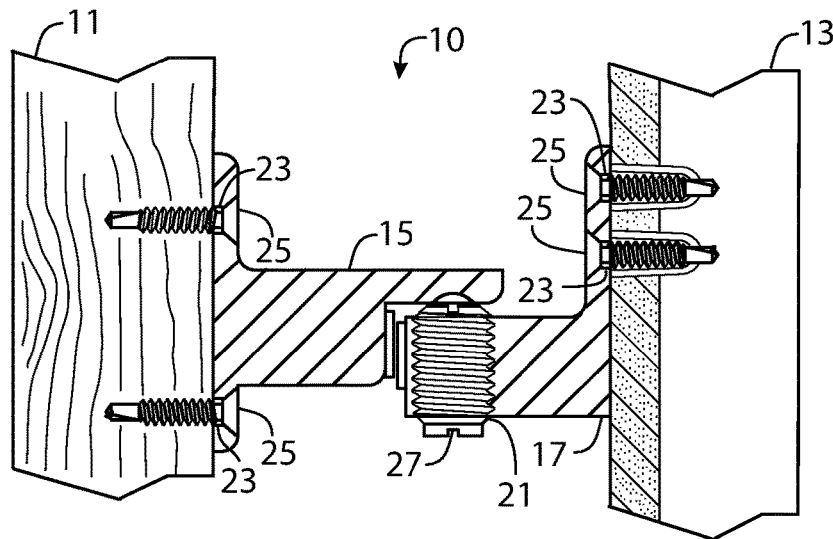
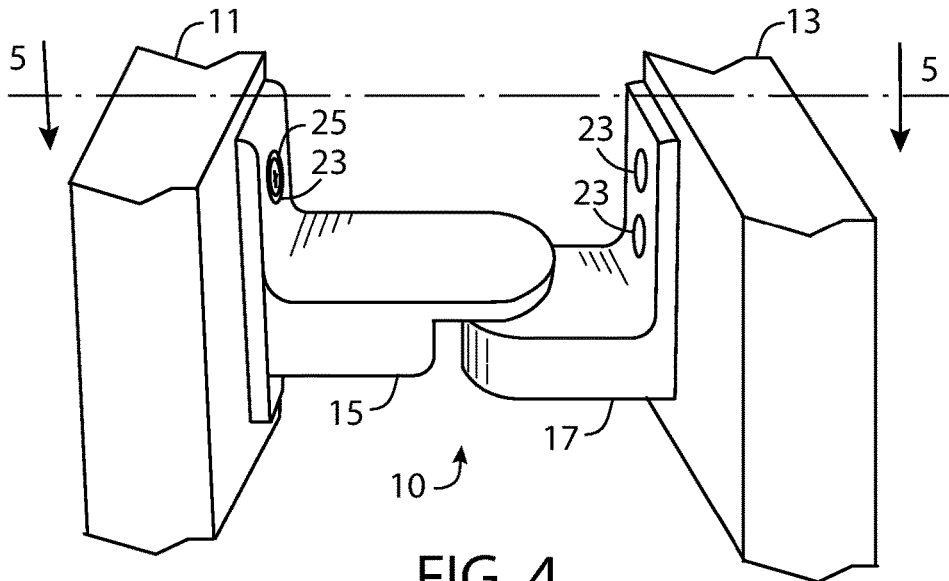


FIG. 3



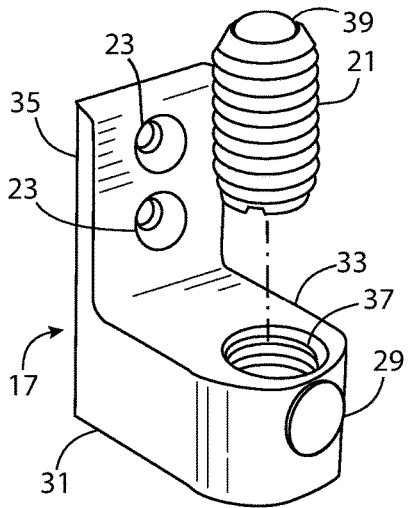


FIG. 6

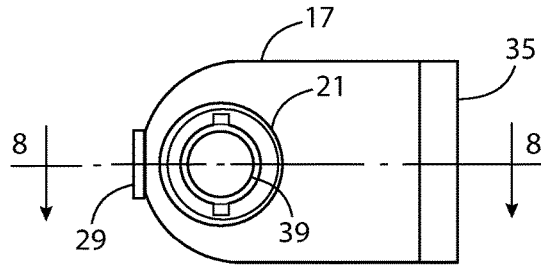


FIG. 7

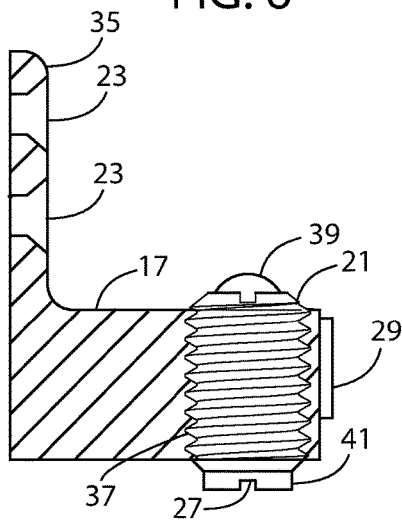


FIG. 8

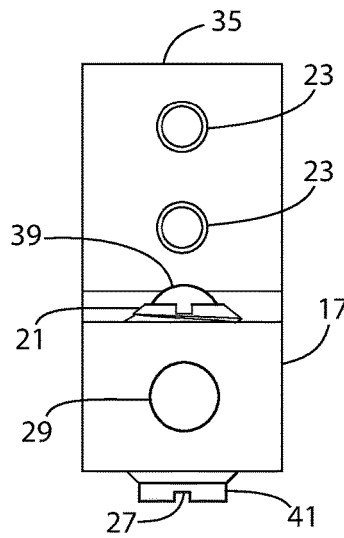


FIG. 9

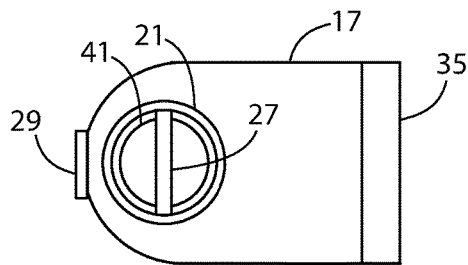


FIG. 10

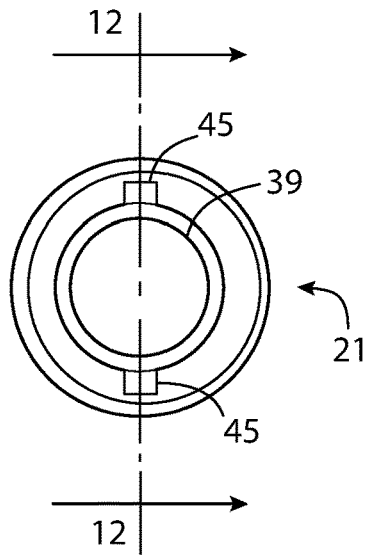


FIG. 11

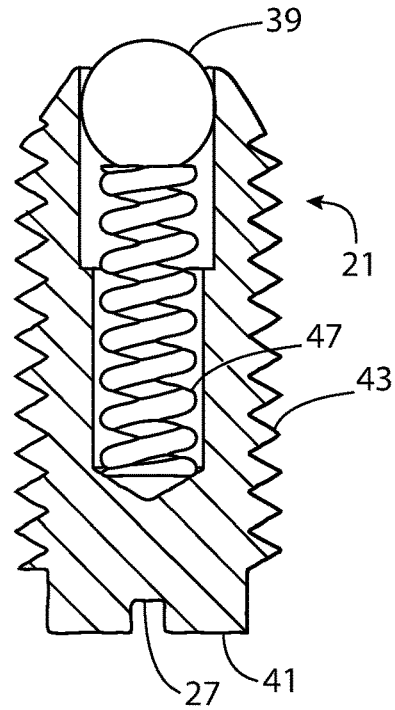


FIG. 12

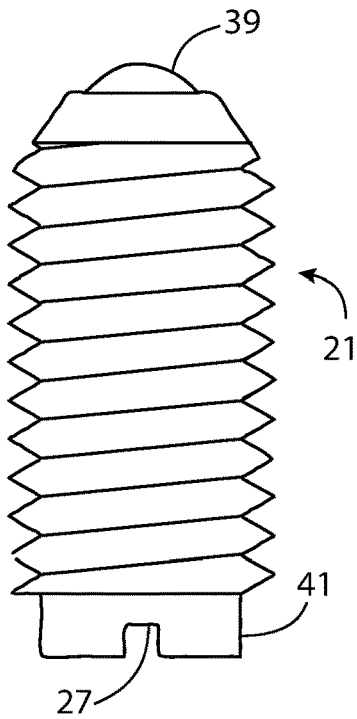


FIG. 13

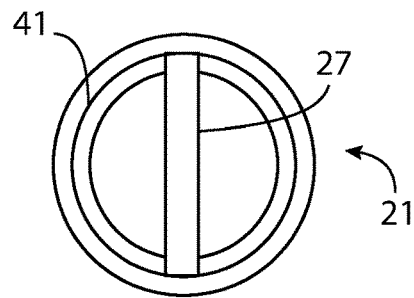


FIG. 14

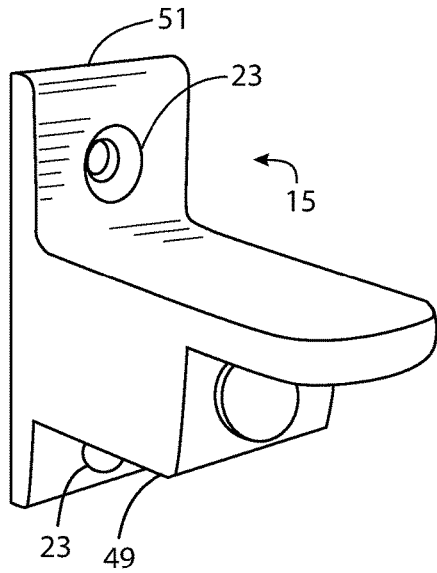


FIG. 15

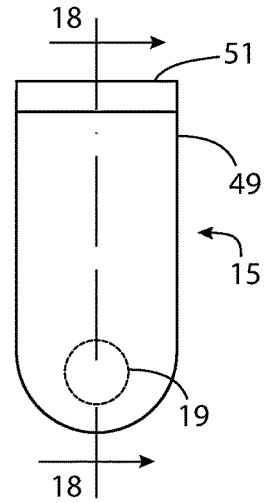


FIG. 17

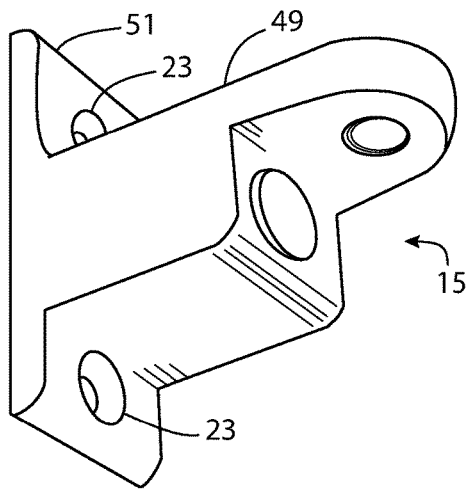


FIG. 16

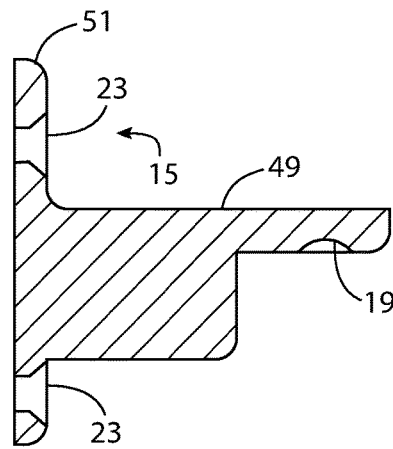


FIG. 18

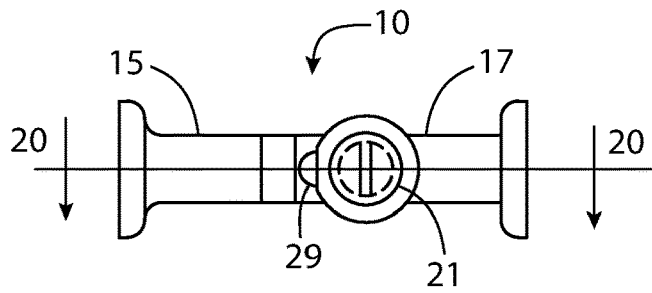


FIG. 19

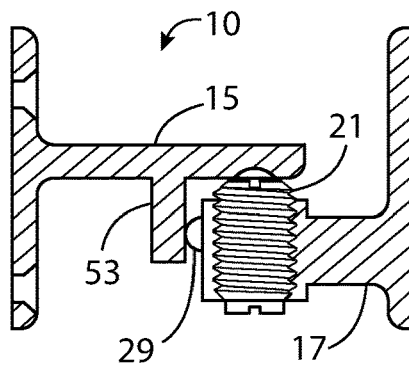


FIG. 20

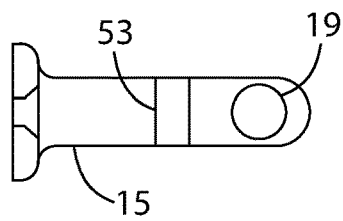


FIG. 21

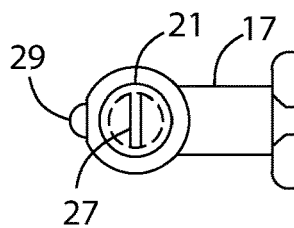


FIG. 22

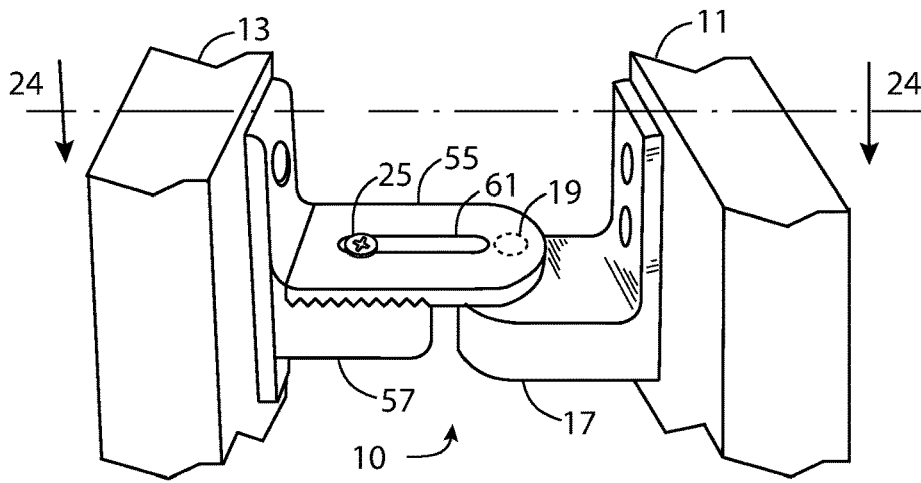


FIG. 23

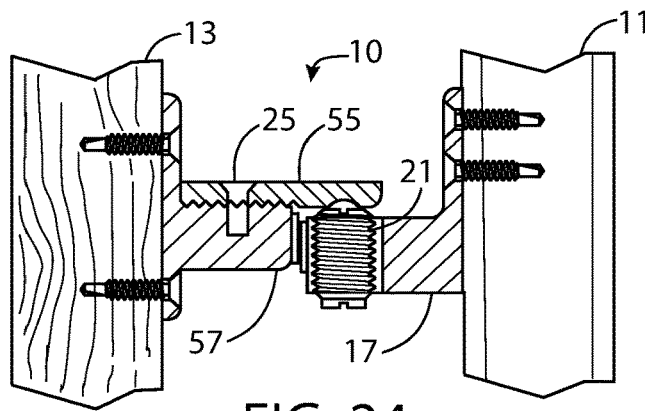


FIG. 24

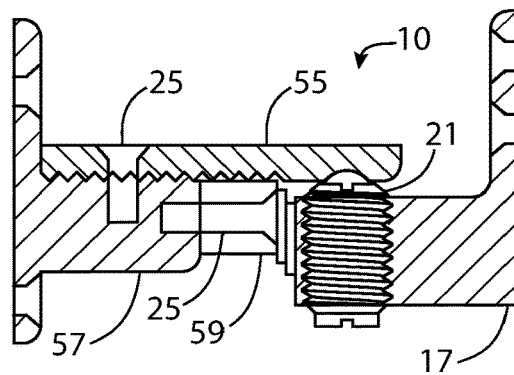


FIG. 25

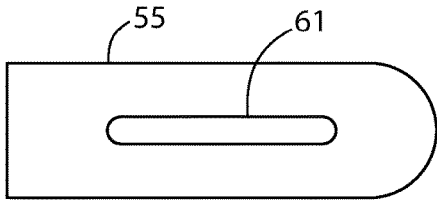


FIG. 26

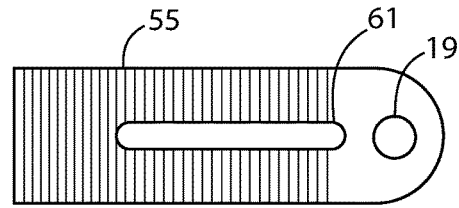


FIG. 27

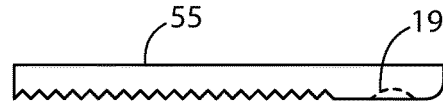


FIG. 28

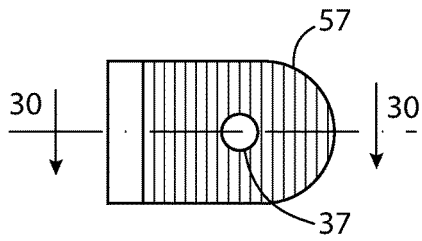


FIG. 29

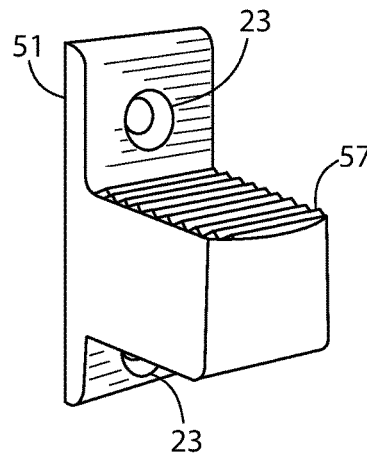


FIG. 31

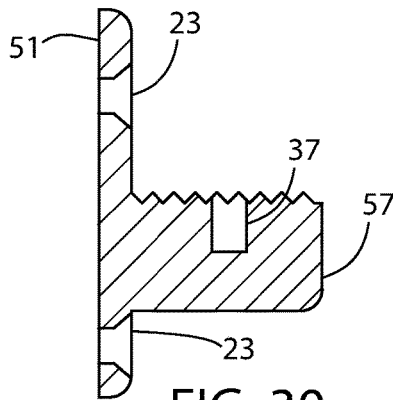
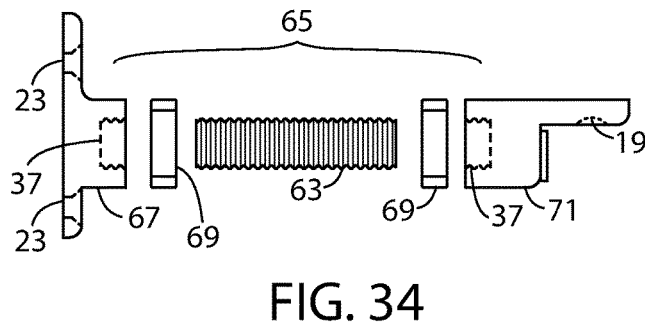
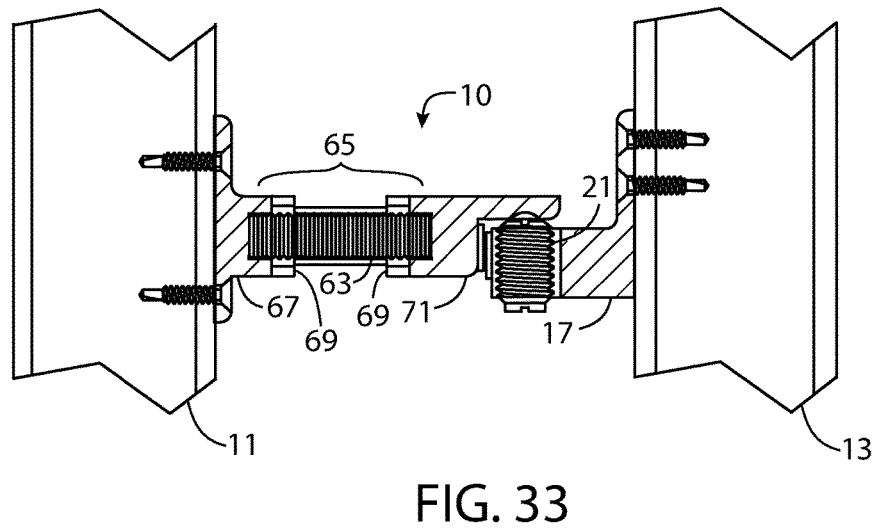
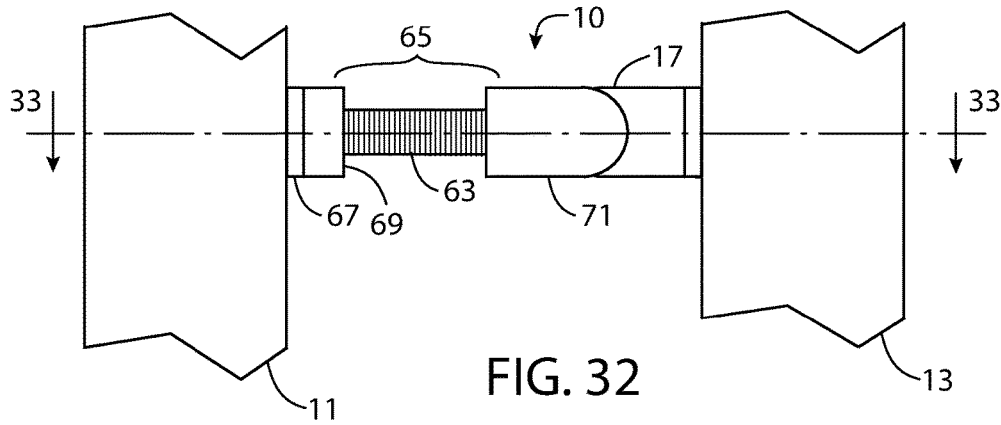


FIG. 30



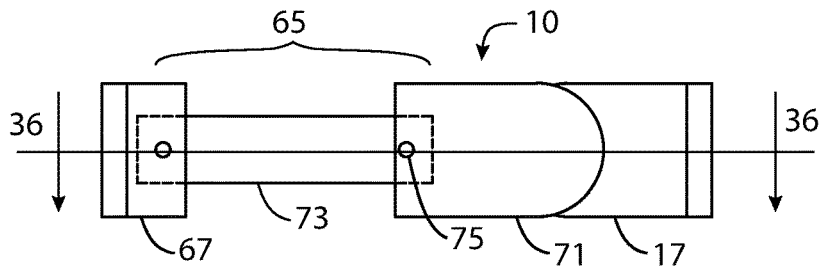


FIG. 35

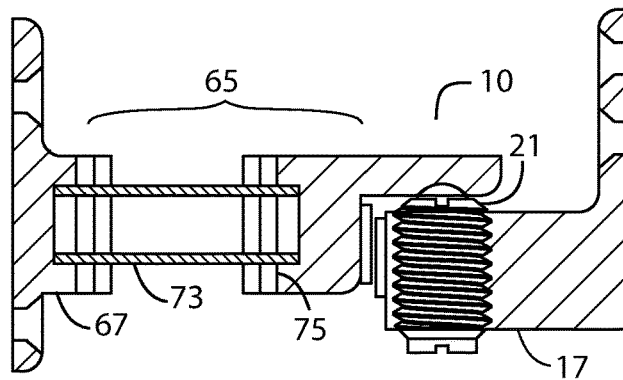


FIG. 36

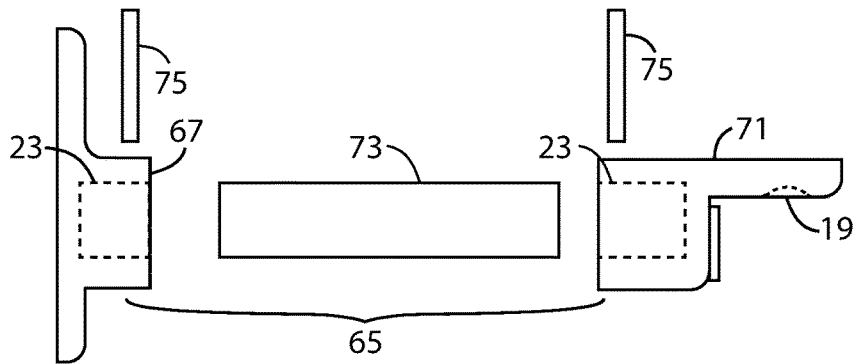


FIG. 37

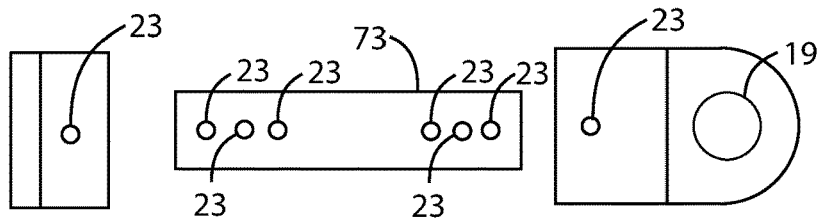


FIG. 38

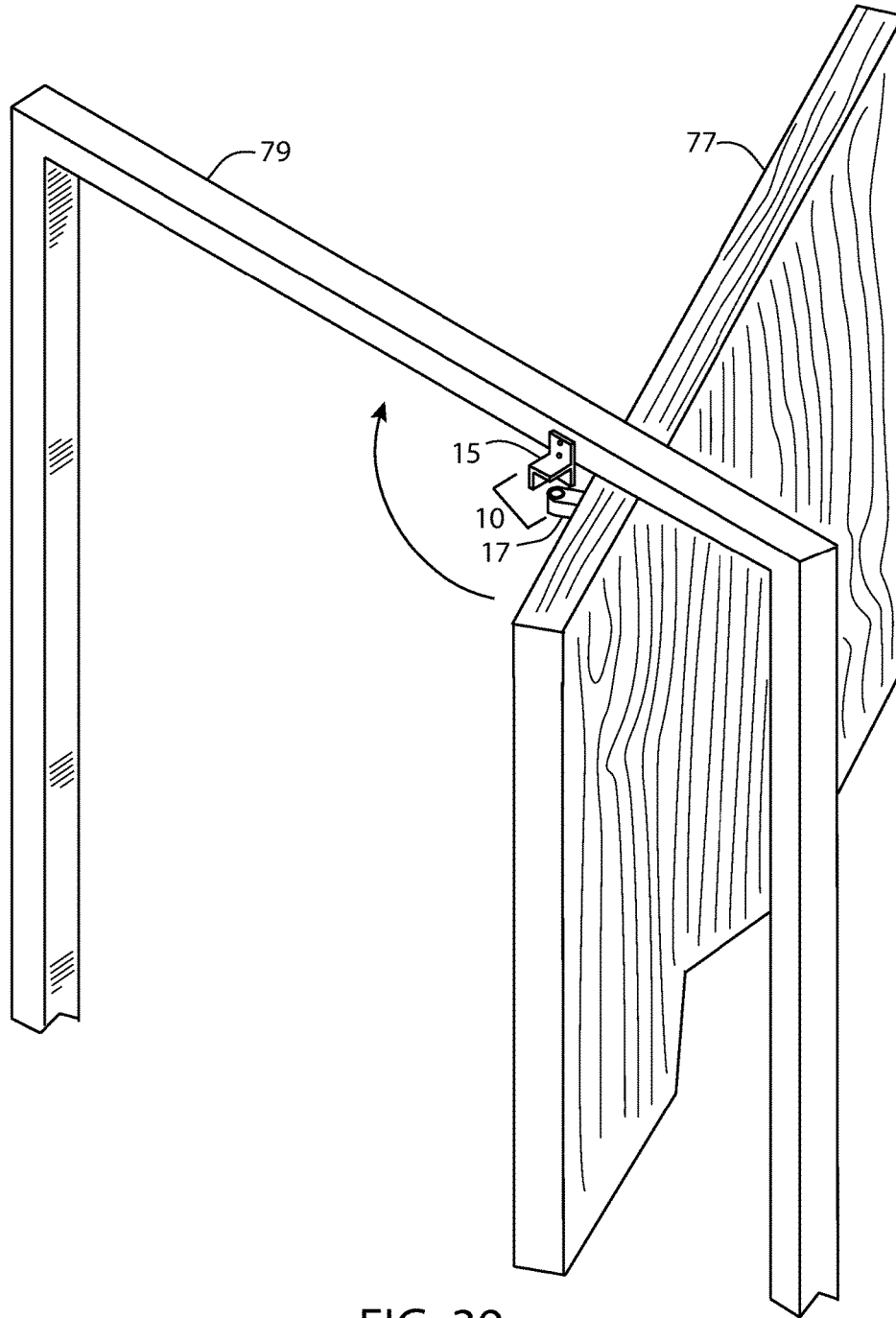


FIG. 39

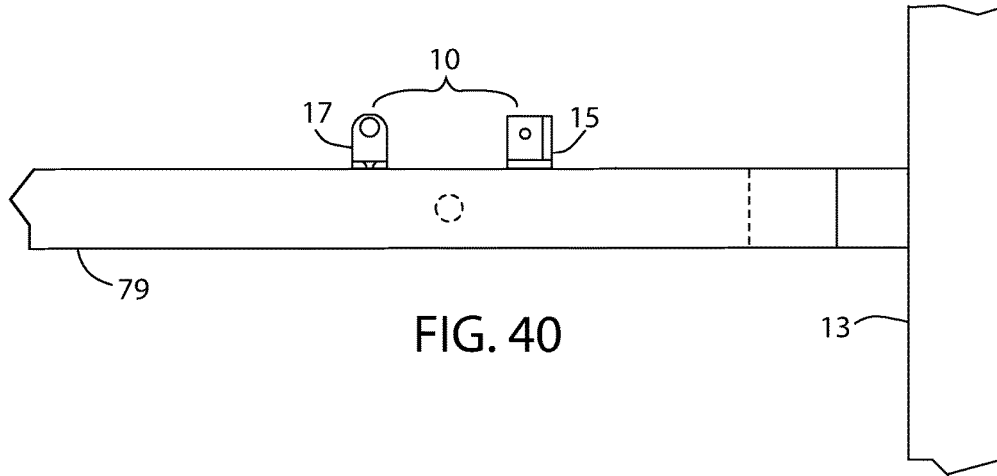


FIG. 40

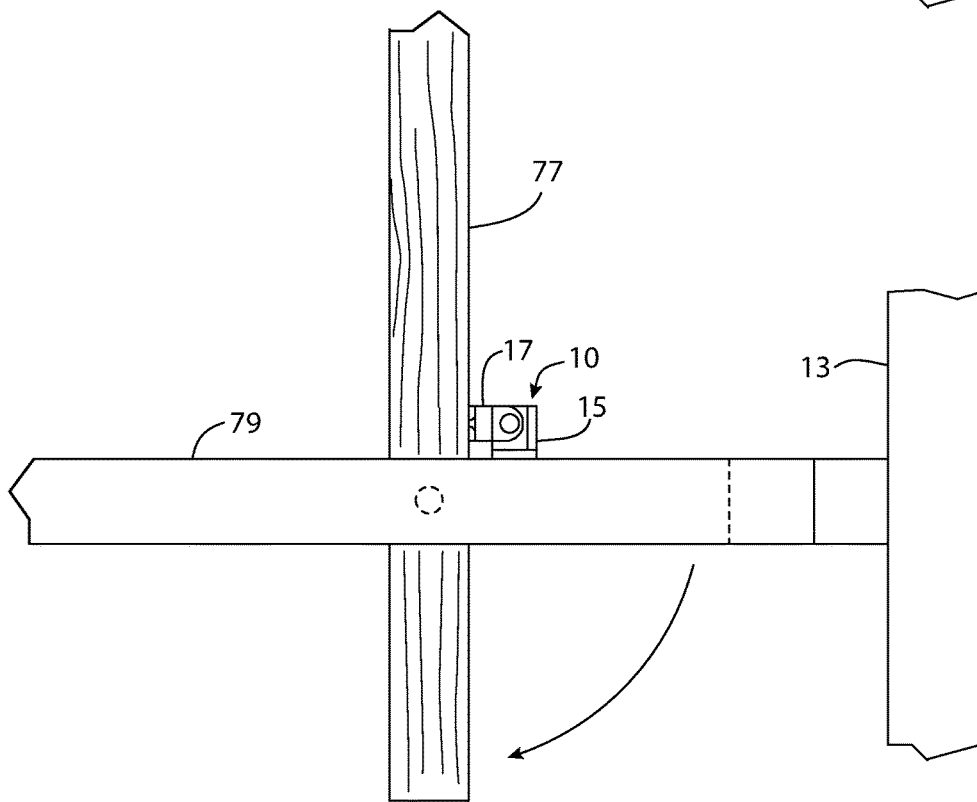


FIG. 41

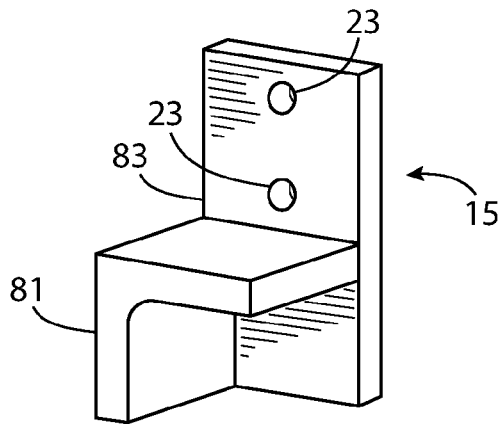


FIG. 42

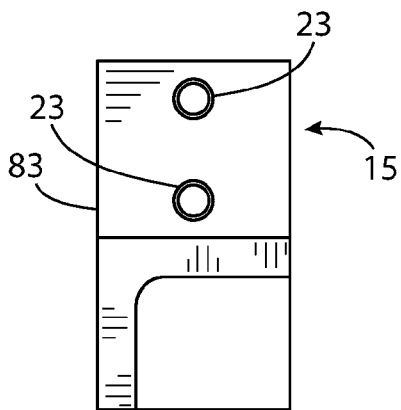


FIG. 43

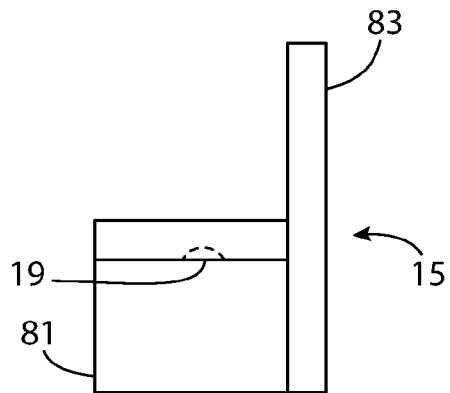


FIG. 44

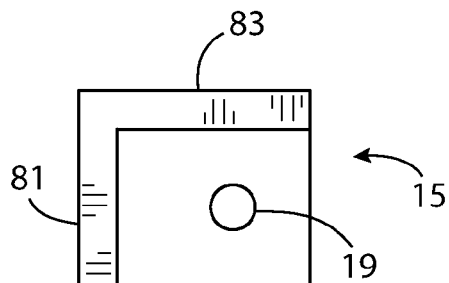


FIG. 45

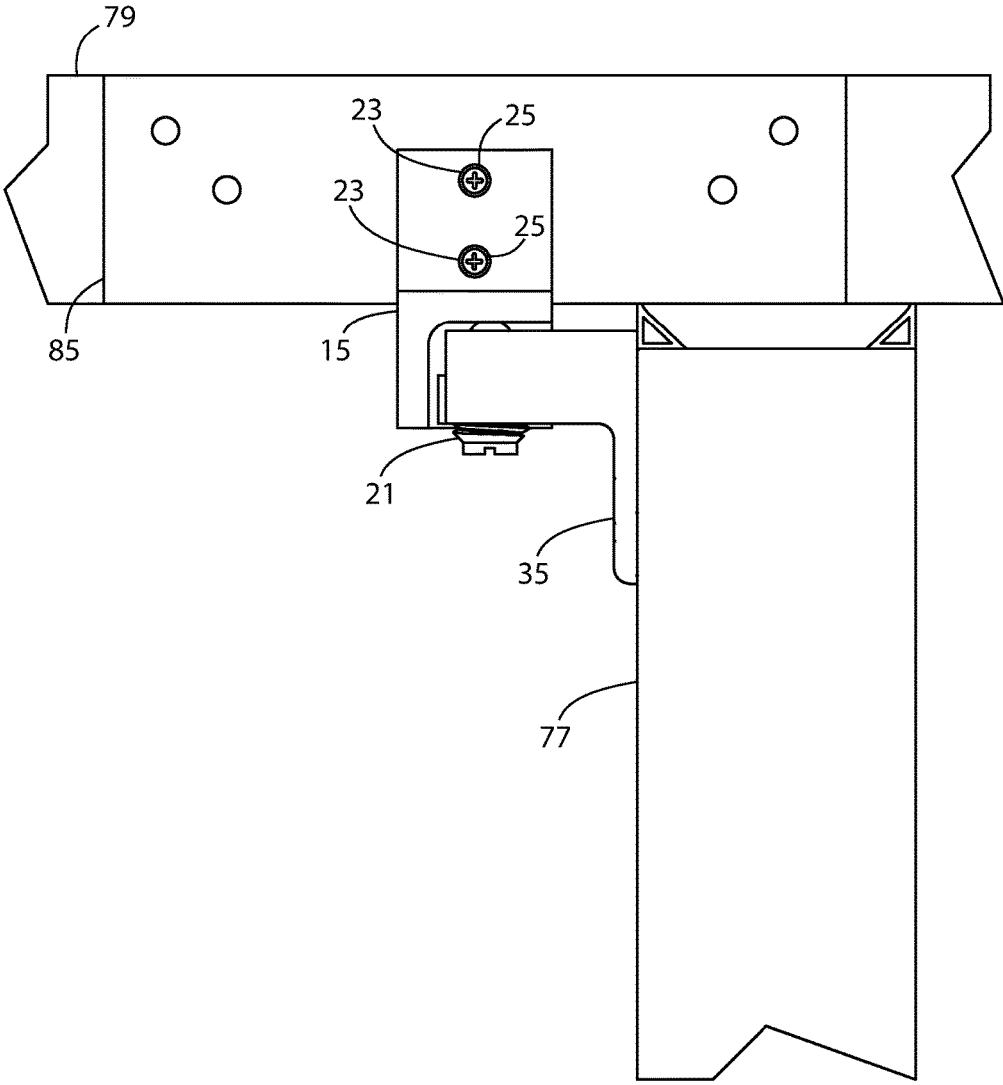


FIG. 46

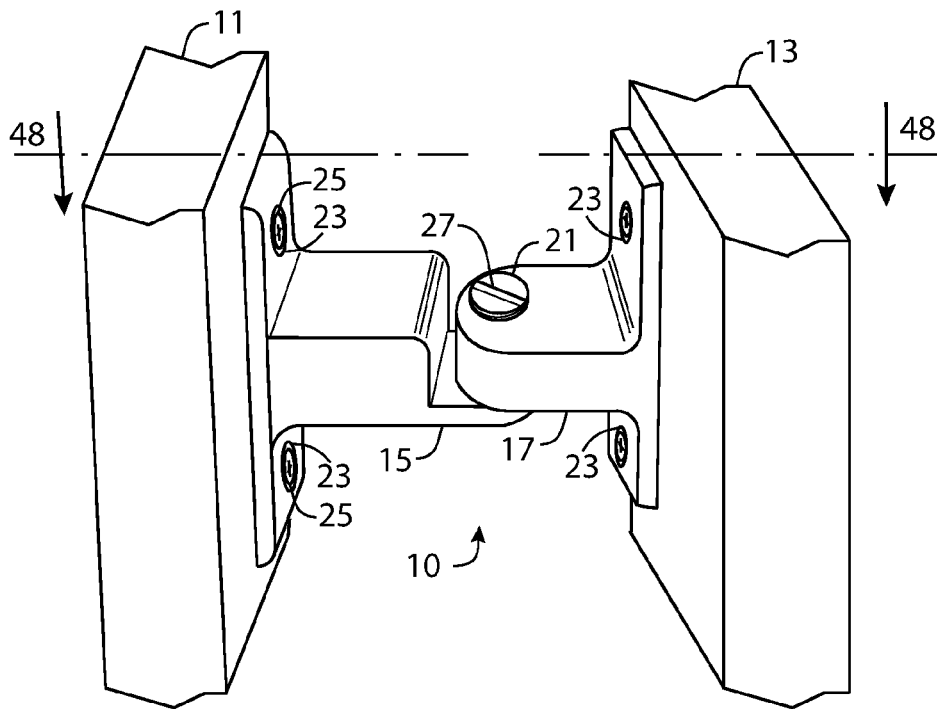


FIG. 47

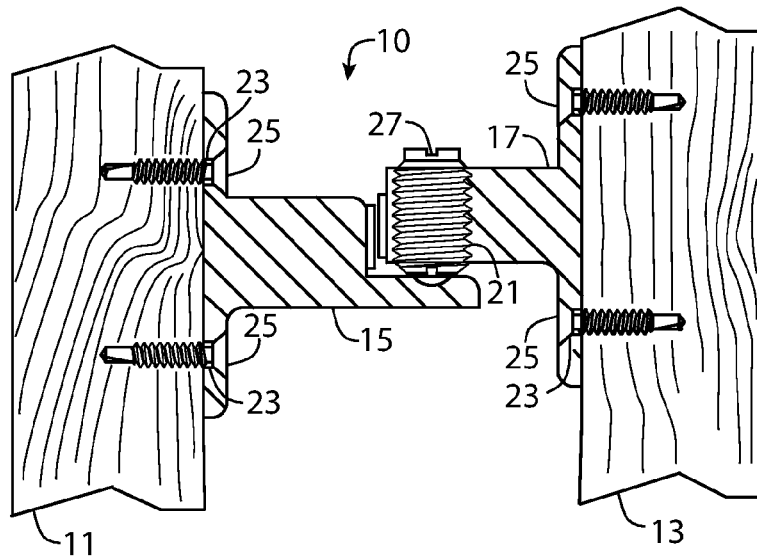


FIG. 48