



(12) **United States Patent Header**

(10) **Patent No.:** US 9,725,936 B2
(45) **Date of Patent:** Aug. 8, 2017

(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 40 days.

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(22) Filed: **Dec. 3, 2015**

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(65) **Prior Publication Data**
US 2016/0083985 A1 Mar. 24, 2016

Roller and Ball Catches, accessed on the Internet at: <http://www.baldwinhardware.com/products/categories/Accessories/Door-Accessories/Roller-Ball-Catches.aspx> on Jul. 22, 2013.

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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

(62) Division of application No. 13/960,308, filed on Aug. 6, 2013, now Pat. No. 9,228,387.

(57) **ABSTRACT**

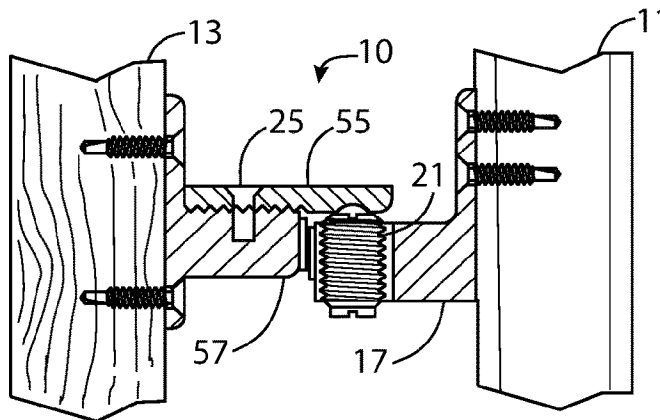
(51) **Int. Cl.**
E05C 19/00 (2006.01)
E05C 19/04 (2006.01)
E05F 5/02 (2006.01)
E05C 17/46 (2006.01)
E05C 17/52 (2006.01)
E05B 15/02 (2006.01)

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 *E05C 19/04* (2013.01); *E05C 17/46* (2013.01); *E05C 17/52* (2013.01); *E05F 5/02* (2013.01); *Y10T 16/61* (2015.01)

(58) **Field of Classification Search**
CPC Y10S 292/60; E05F 5/02
USPC 292/DIG. 60
See application file for complete search history.

2 Claims, 17 Drawing Sheets



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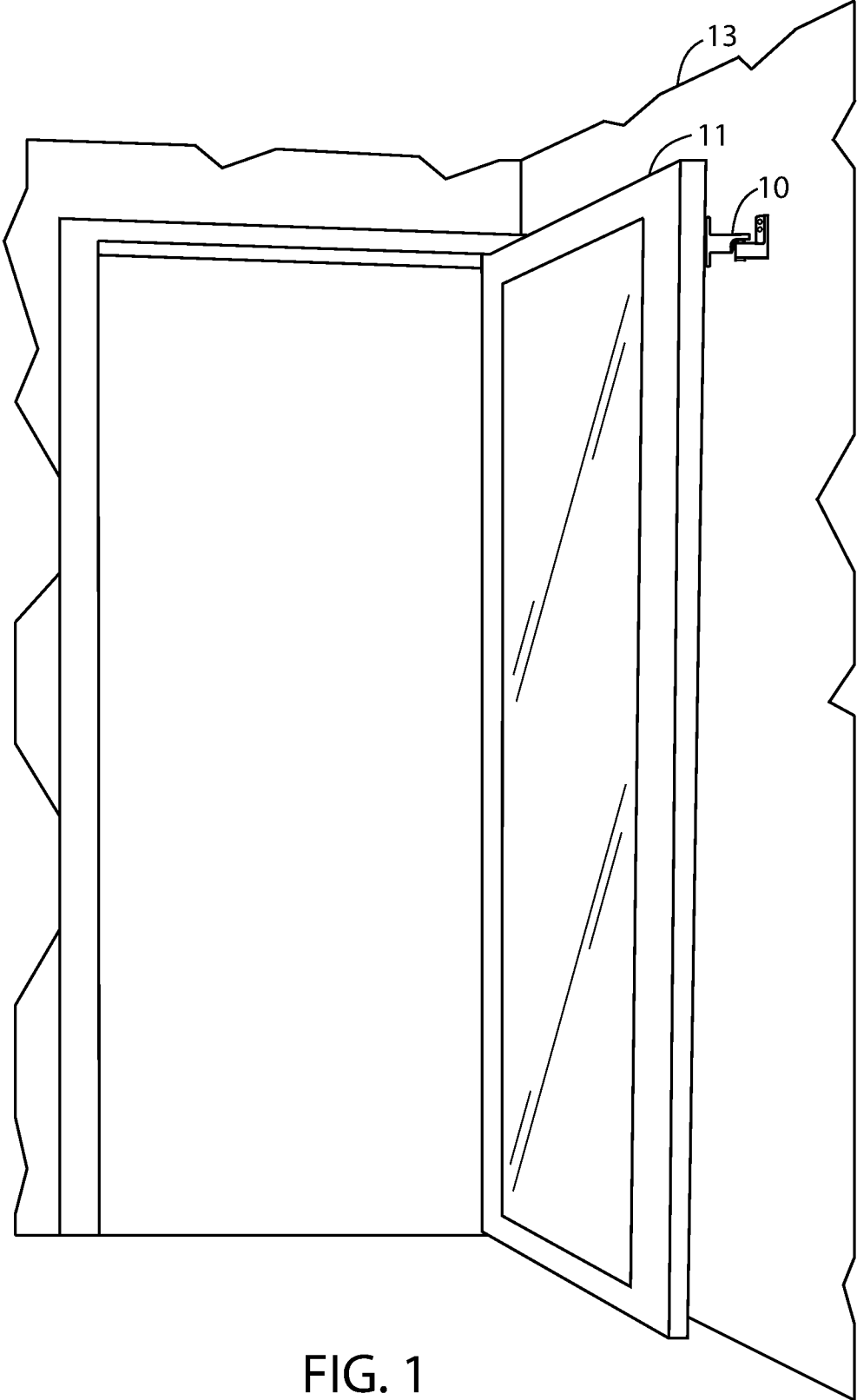


FIG. 1

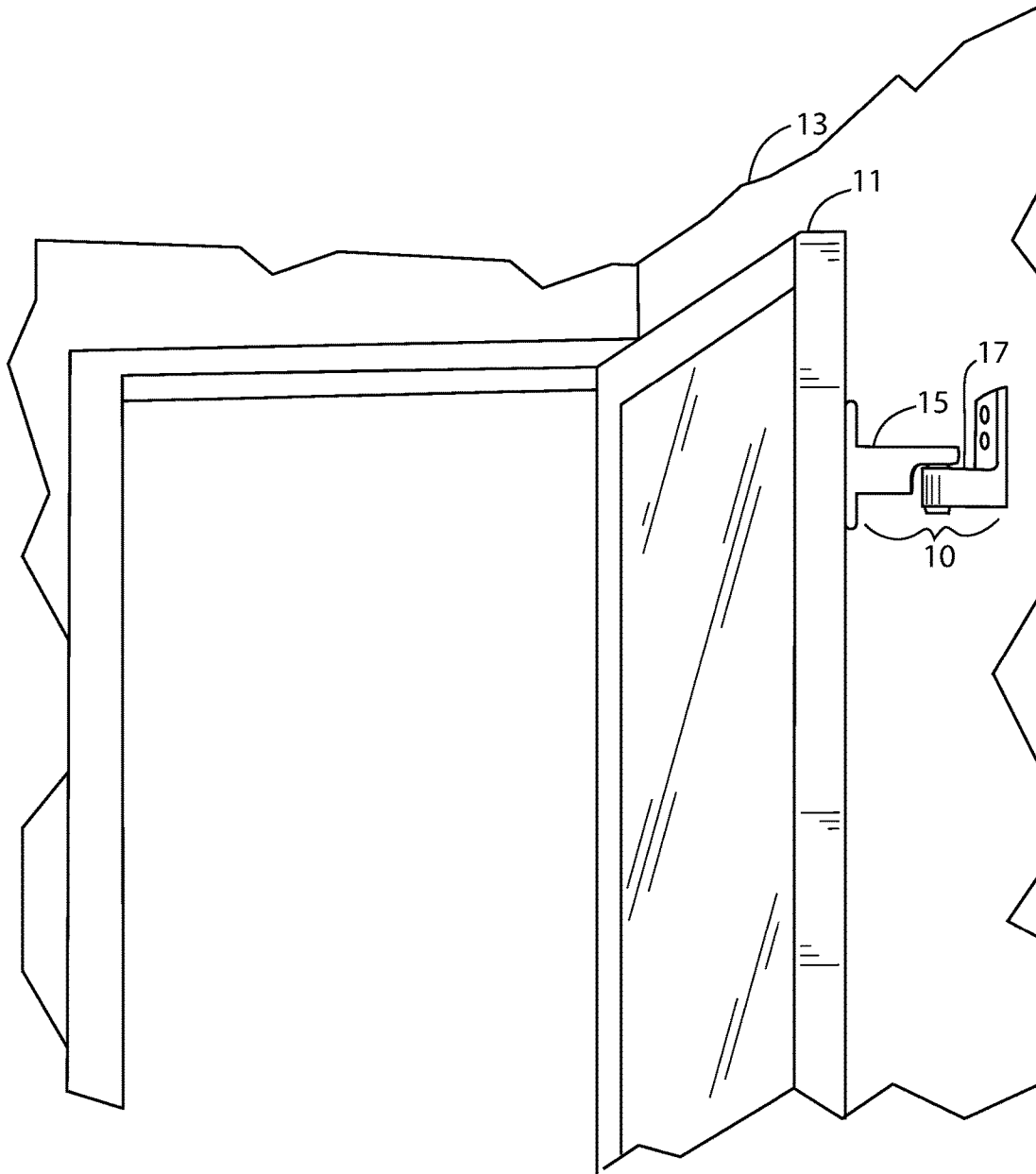


FIG. 2

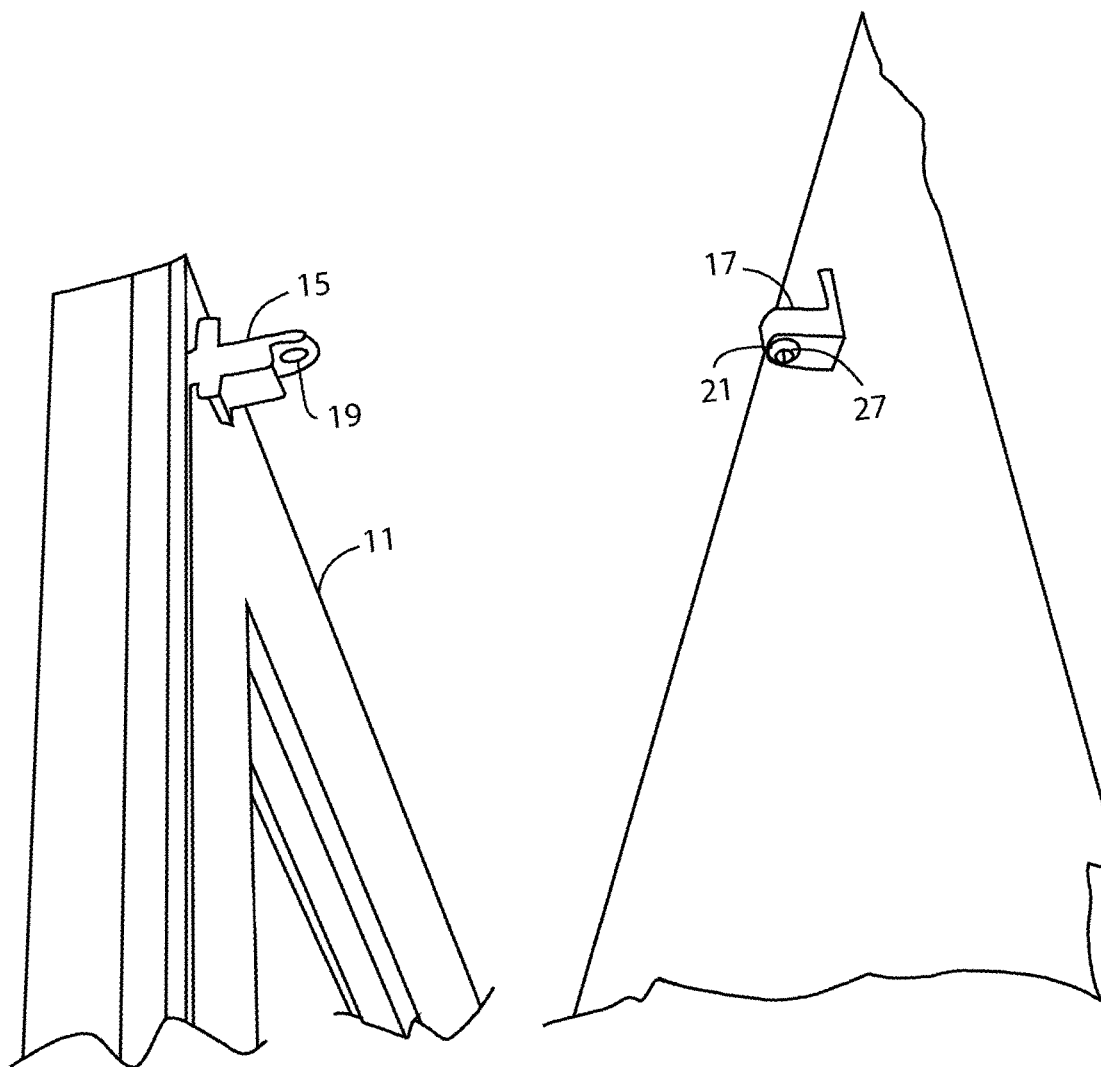


FIG. 3

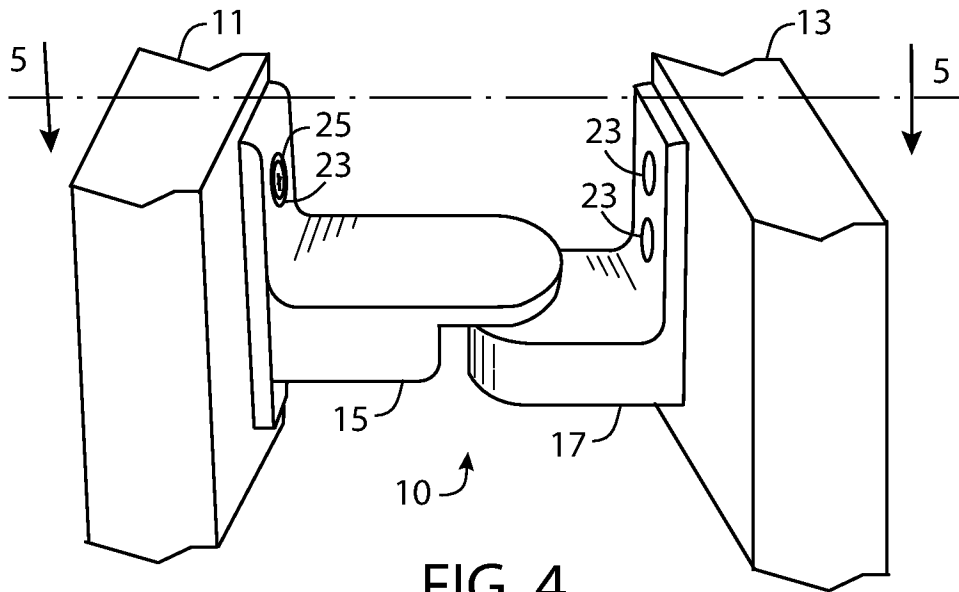


FIG. 4

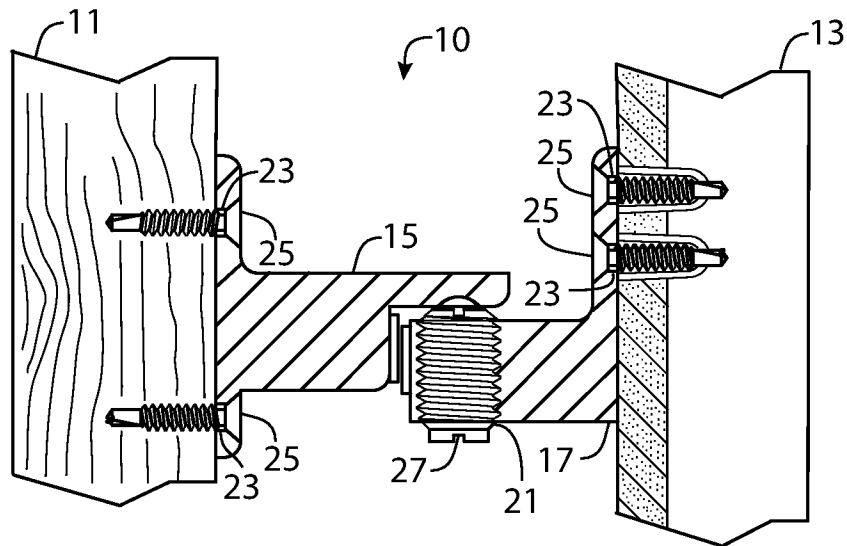


FIG. 5

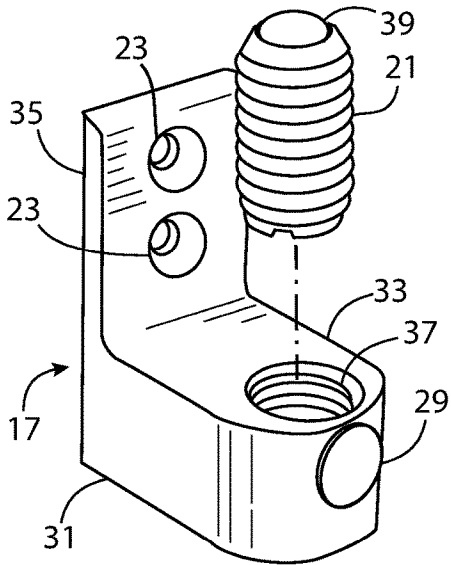


FIG. 6

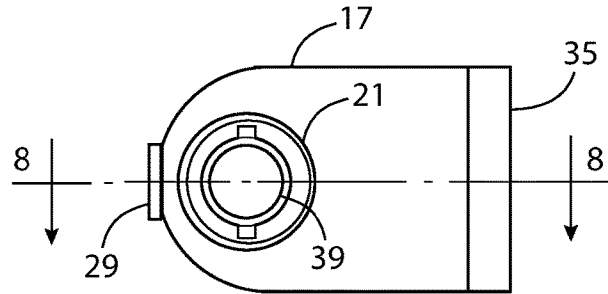


FIG. 7

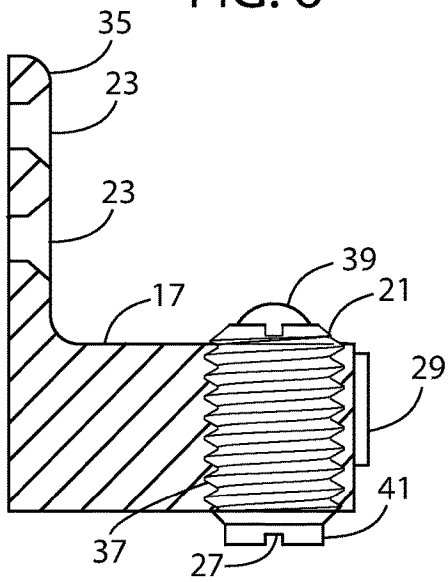


FIG. 8

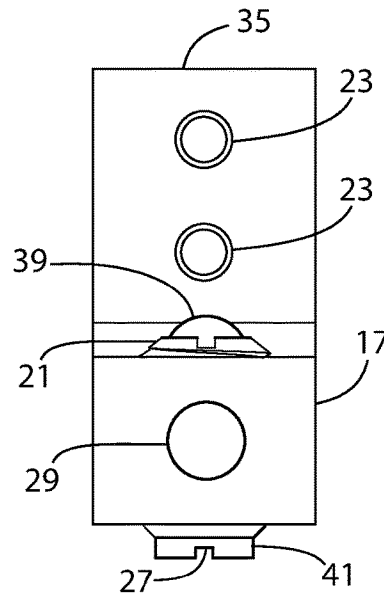


FIG. 9

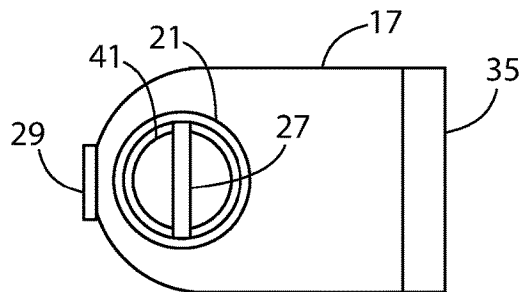


FIG. 10

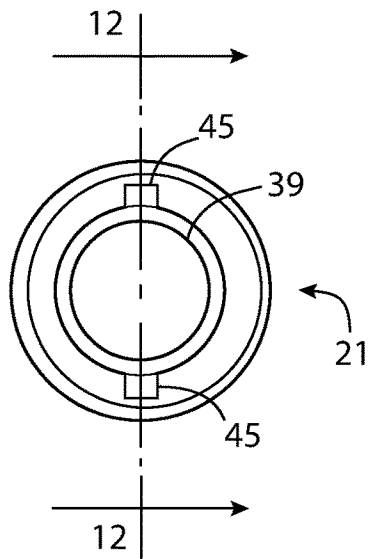


FIG. 11

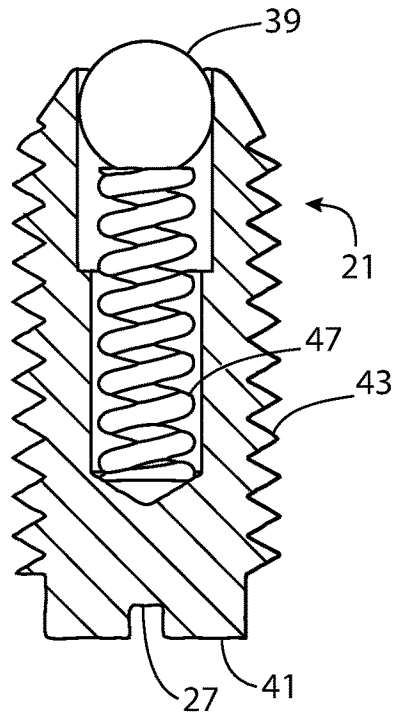


FIG. 12

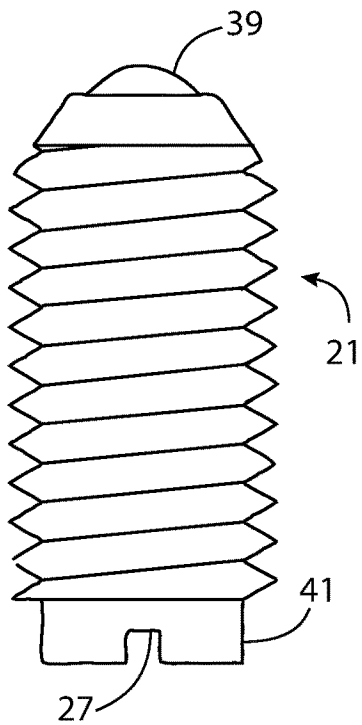


FIG. 13

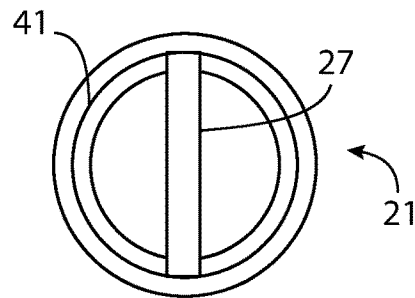


FIG. 14

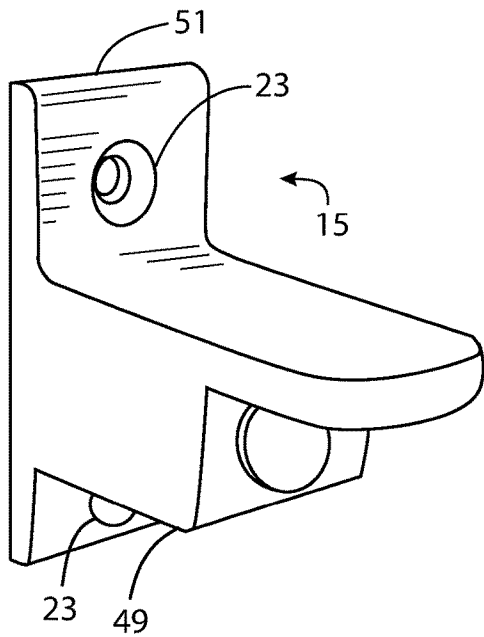


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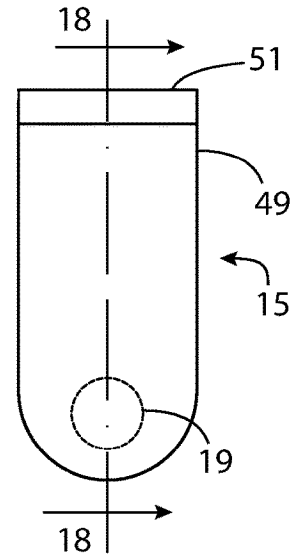


FIG. 17

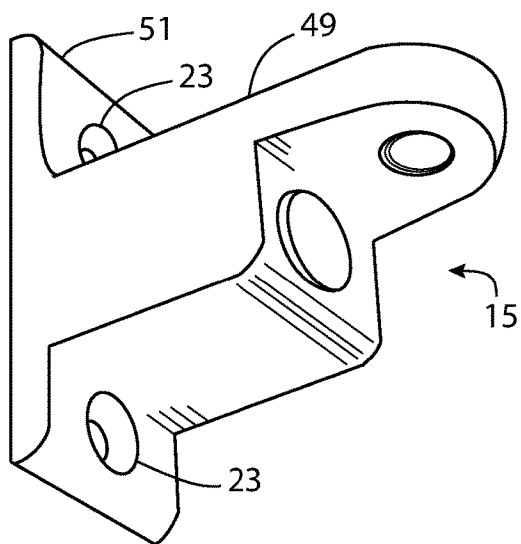


FIG. 16

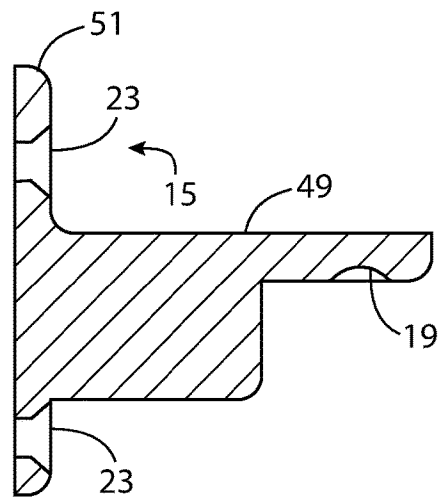


FIG. 18

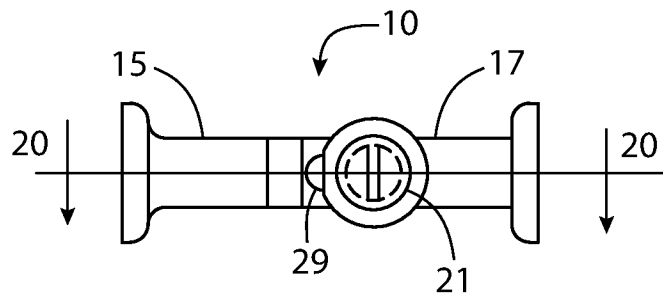


FIG. 19

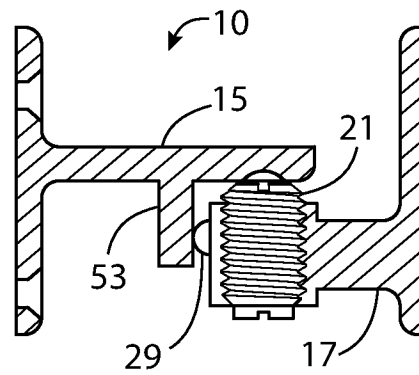


FIG. 20

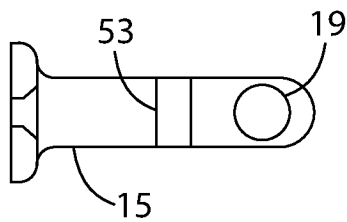


FIG. 21

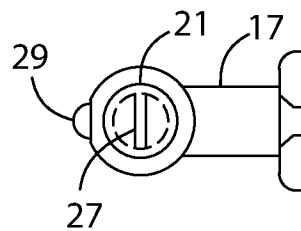


FIG. 22

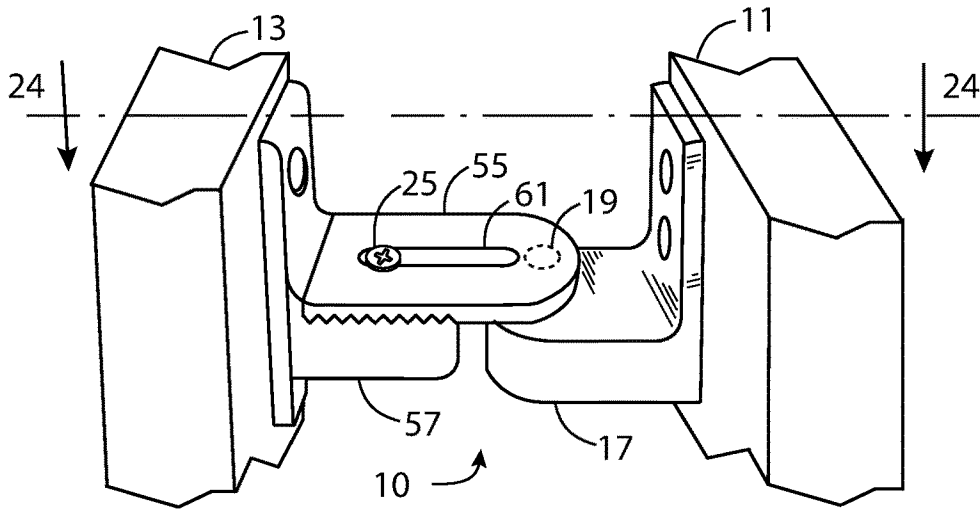


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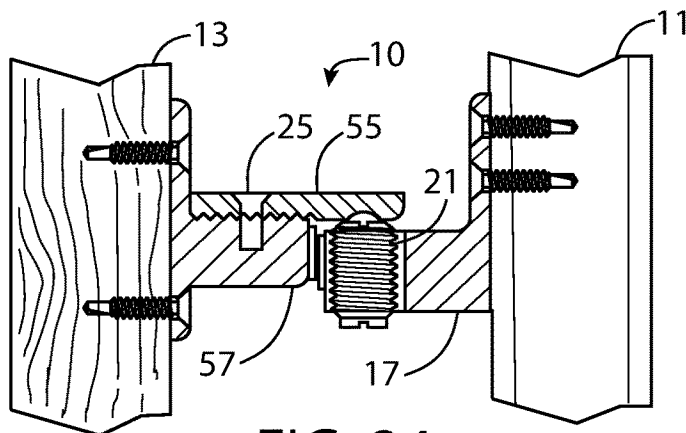


FIG. 24

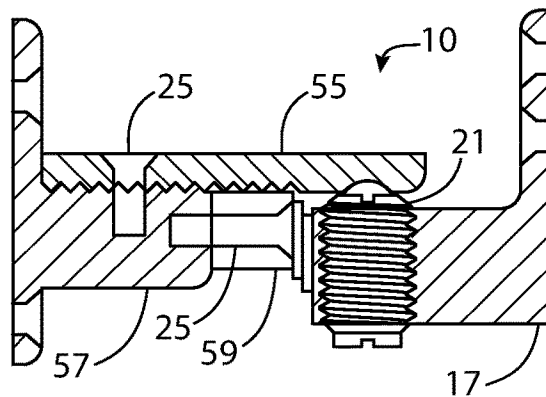


FIG. 25

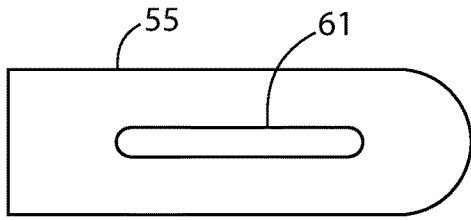


FIG. 26

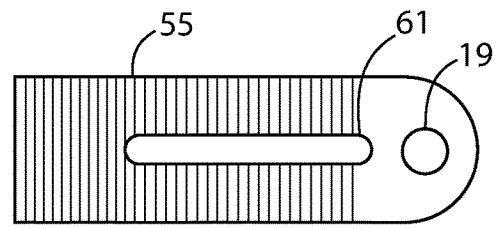


FIG. 27

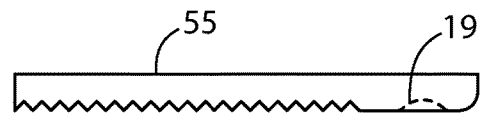


FIG. 28

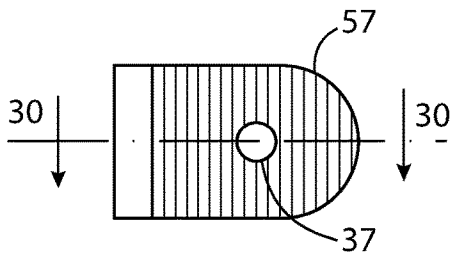


FIG. 29

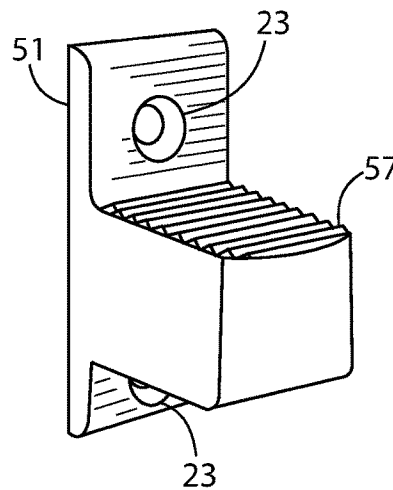


FIG. 31

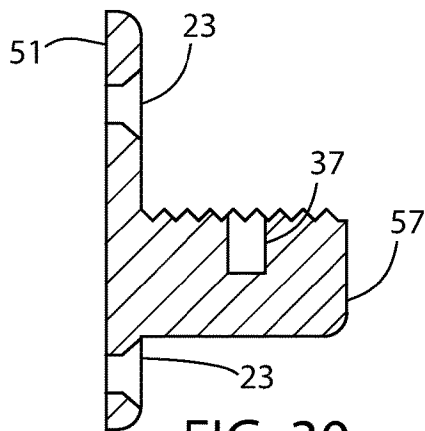
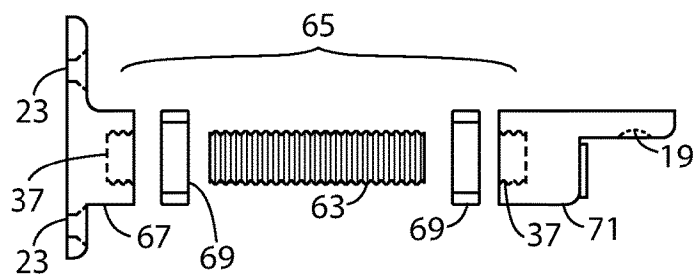
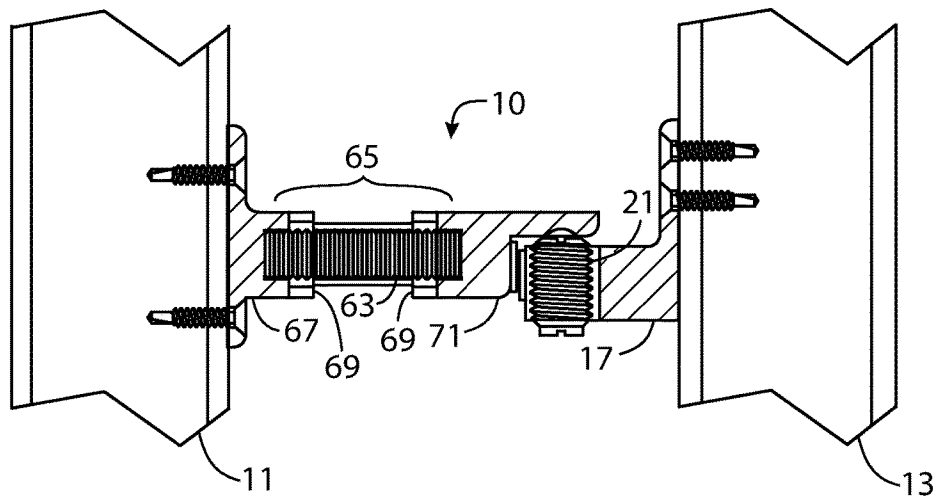
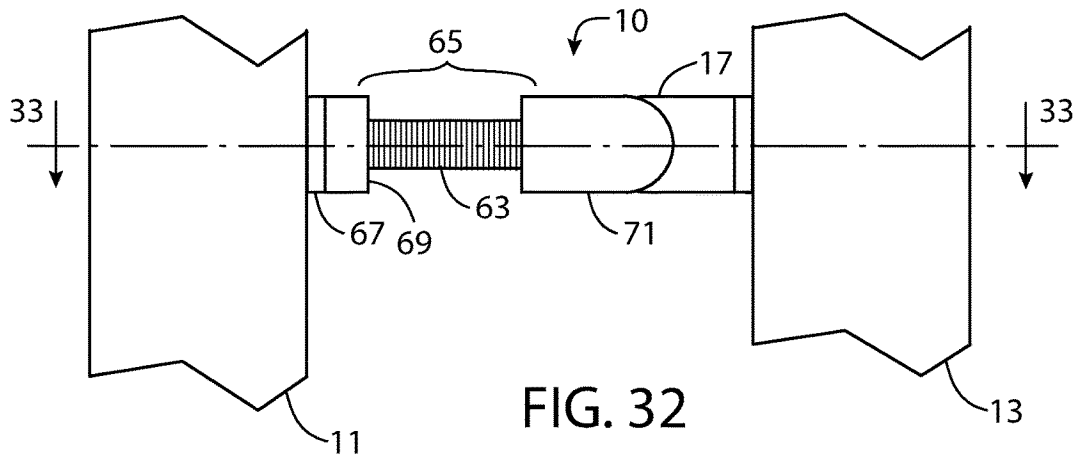


FIG. 30



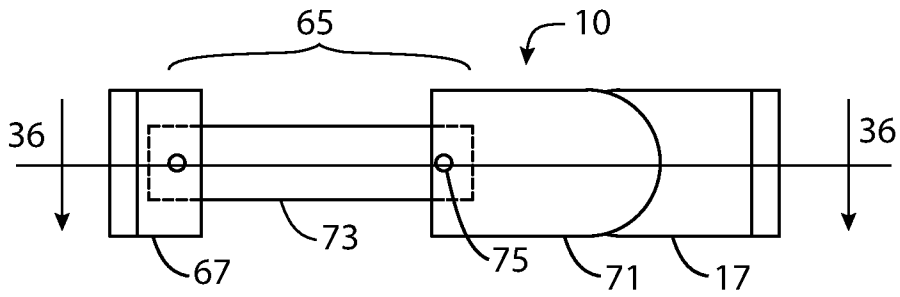


FIG. 35

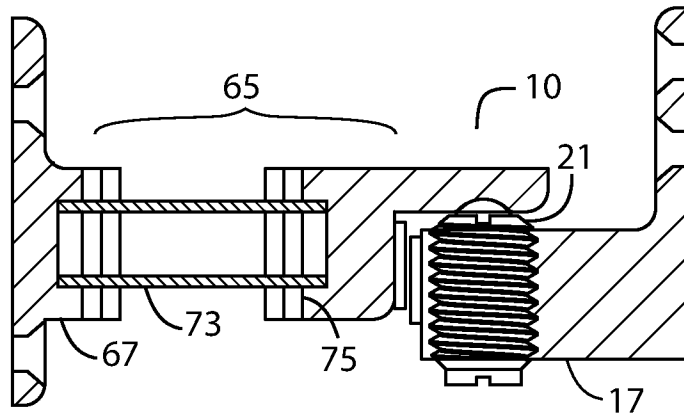


FIG. 36

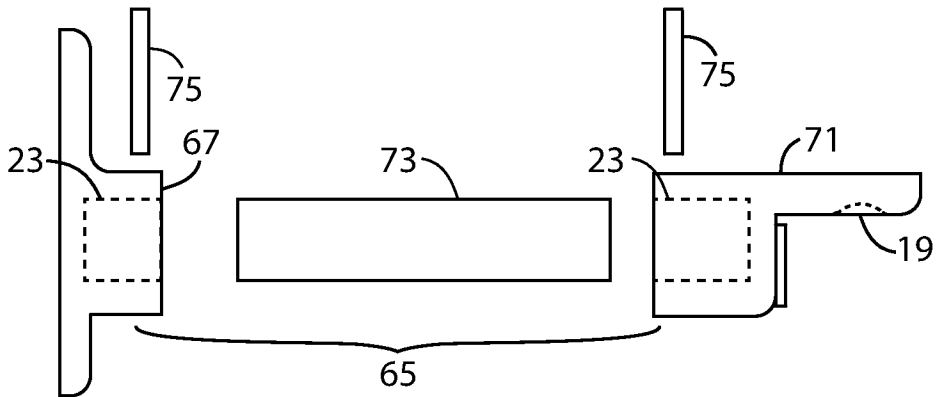


FIG. 37

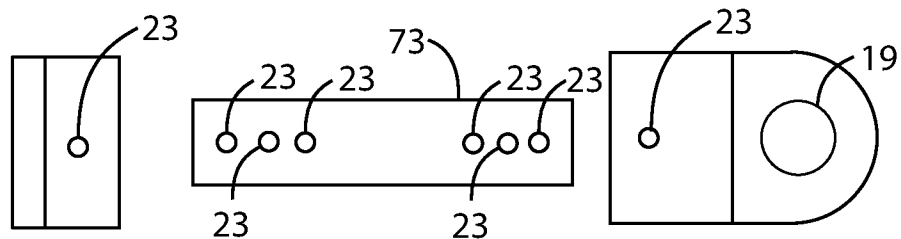


FIG. 38

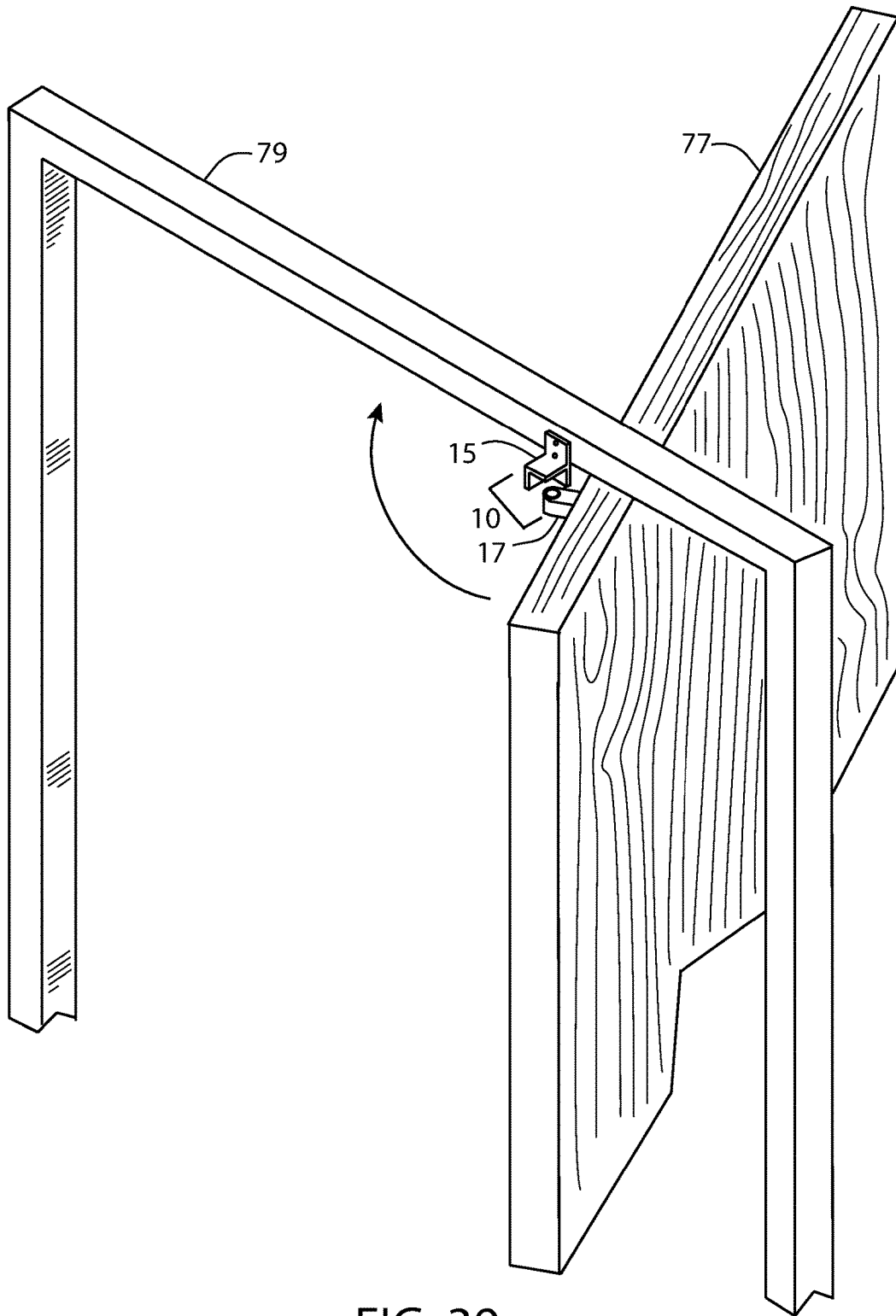


FIG. 39

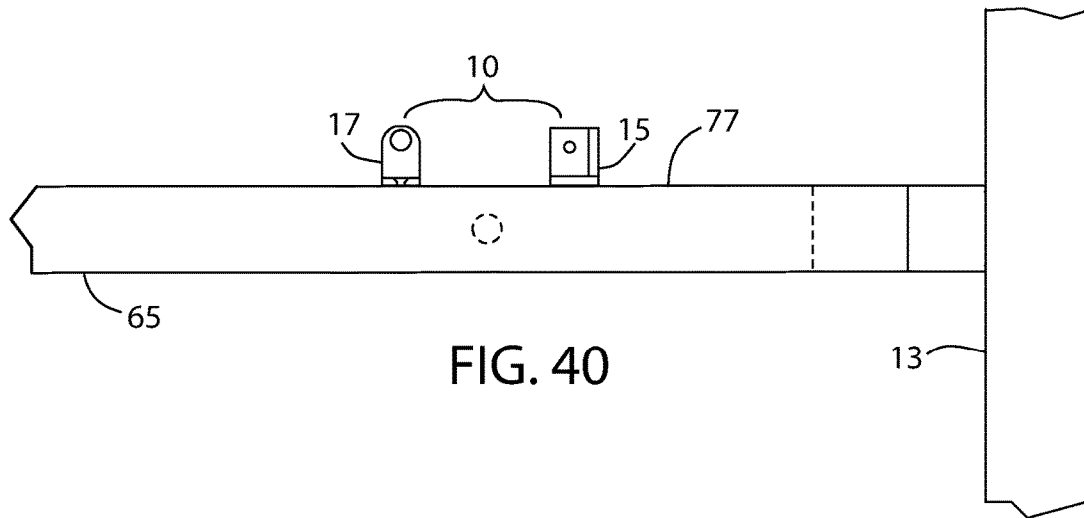


FIG. 40

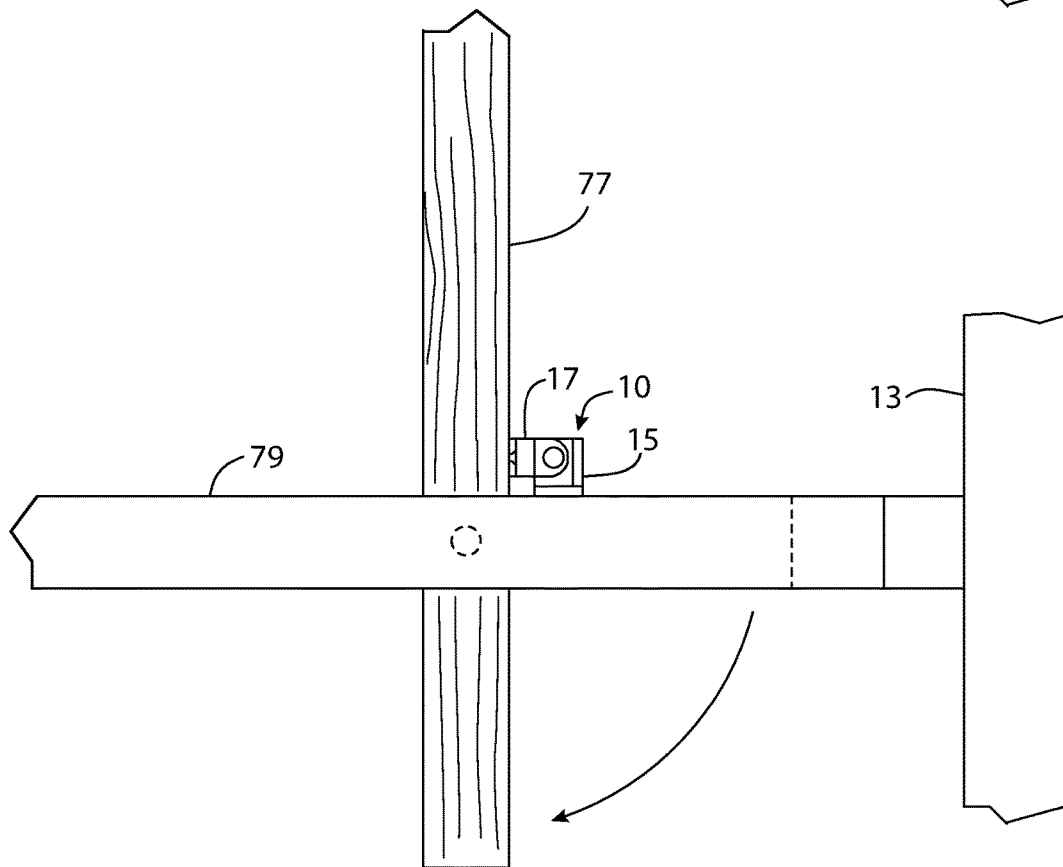


FIG. 41

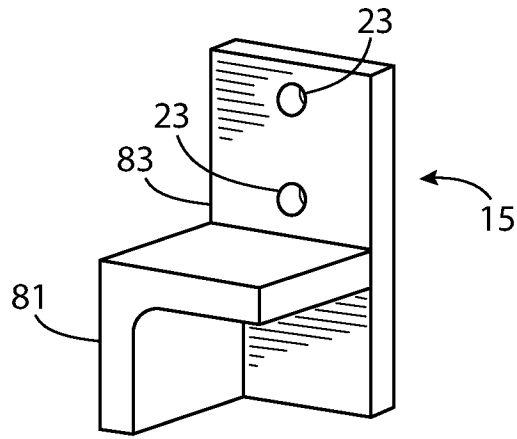


FIG. 42

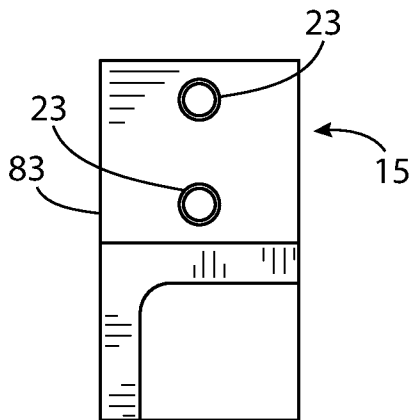


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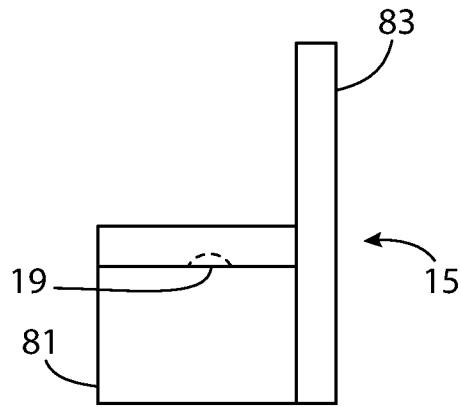


FIG. 44

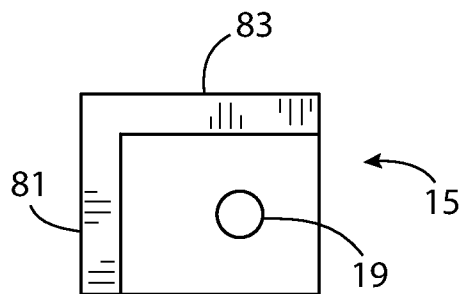


FIG. 45

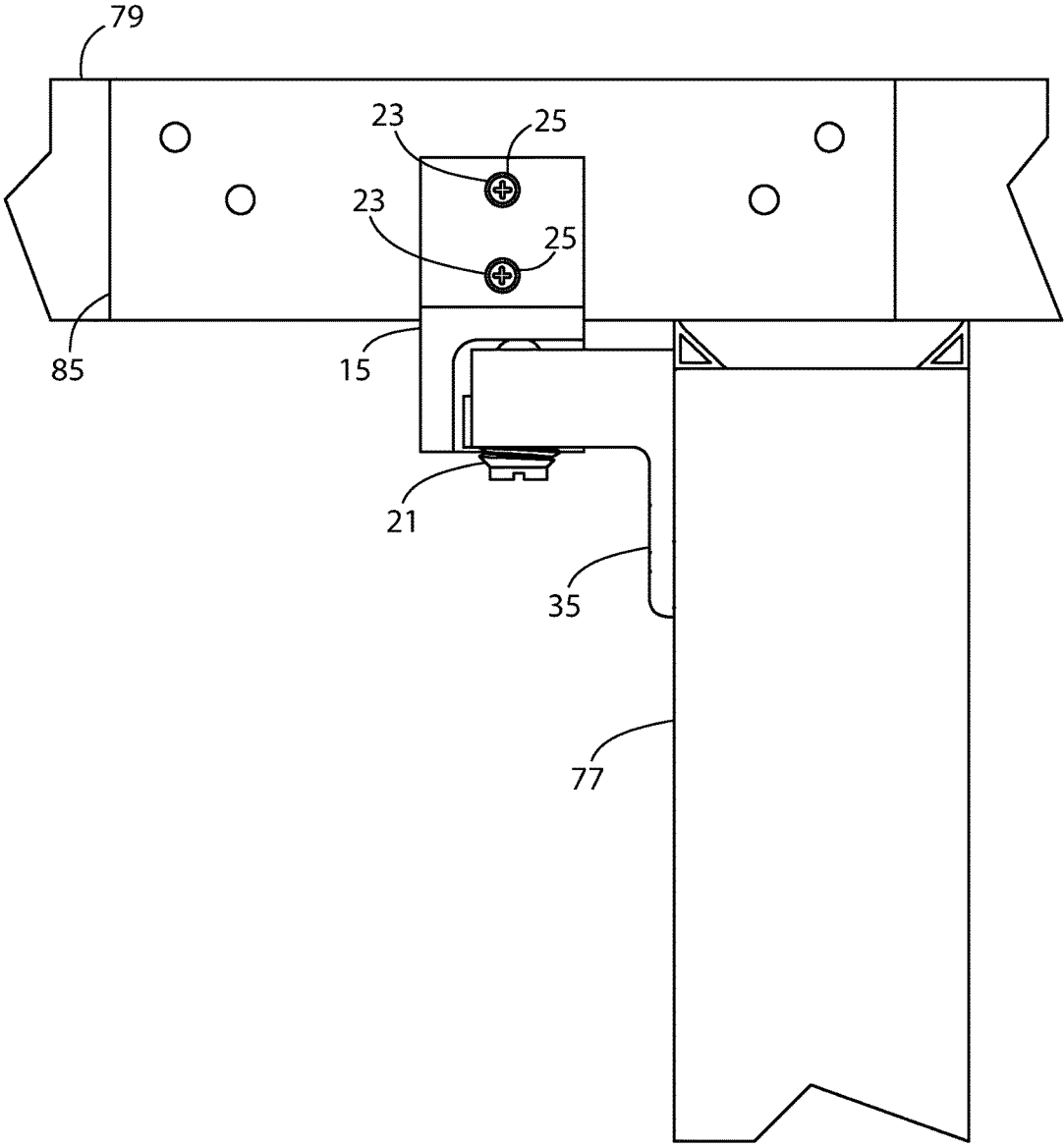


FIG. 46

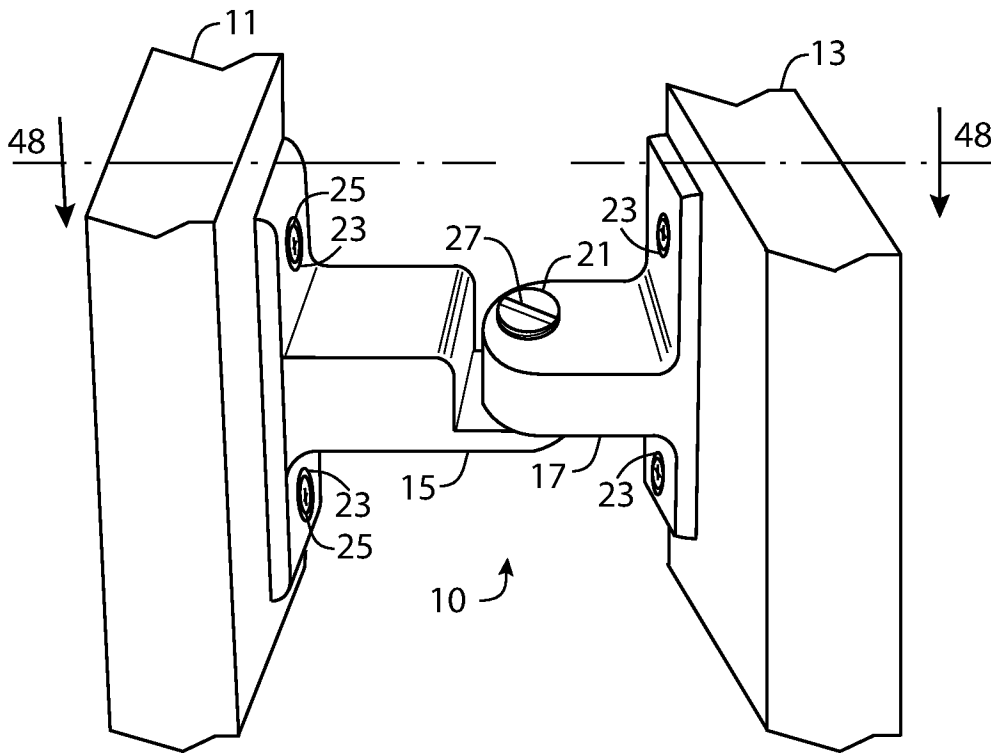


FIG. 47

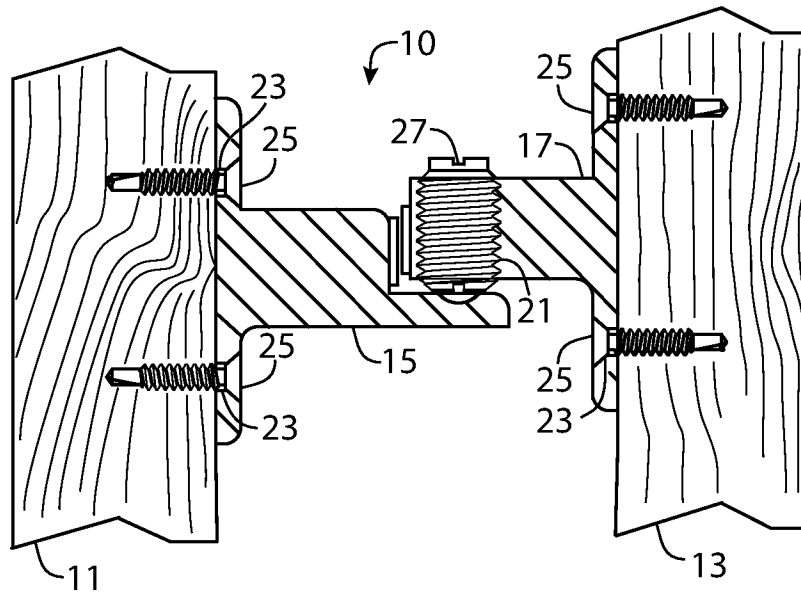


FIG. 48