

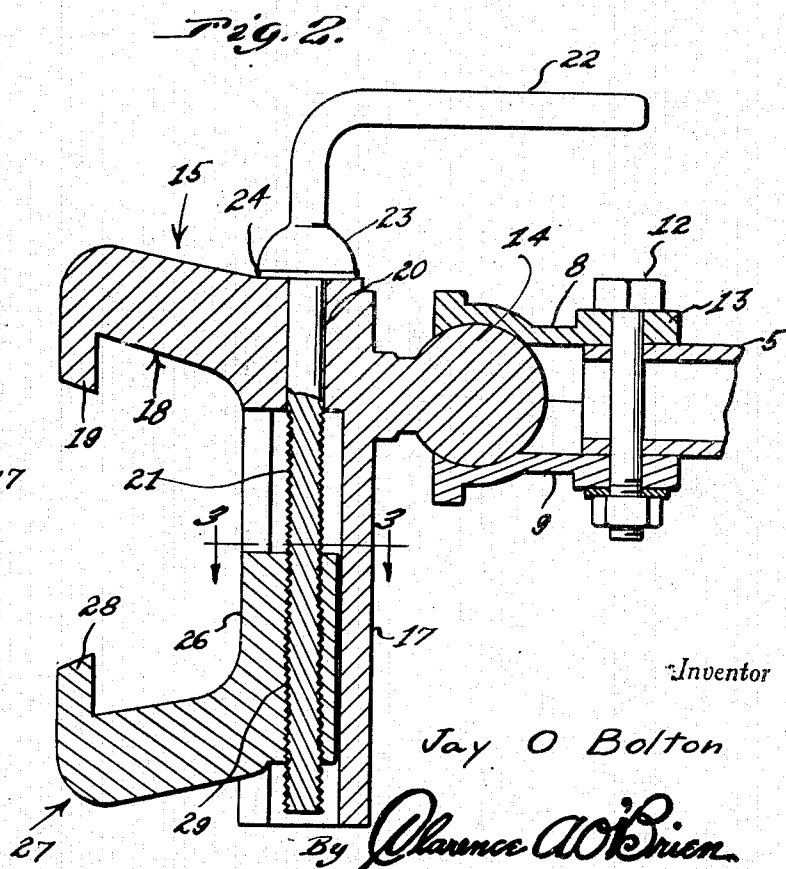
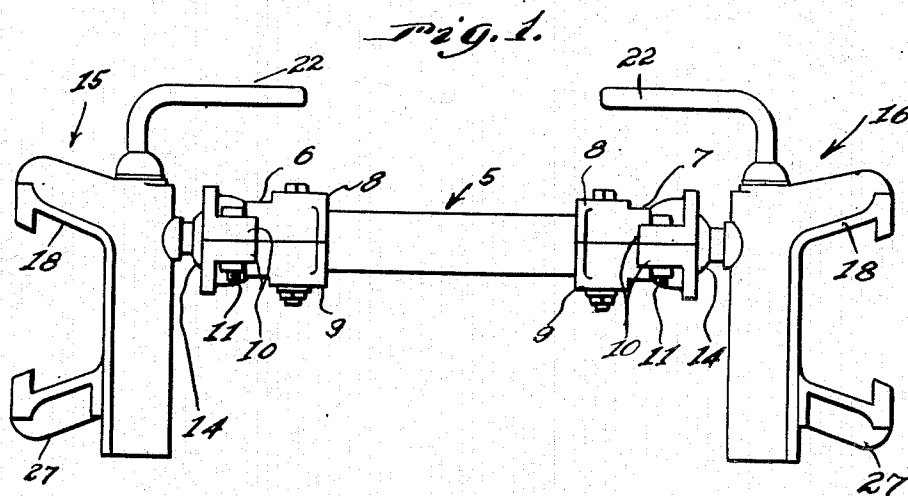
Dec. 30, 1941.

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2,268,181

TOW BAR

Filed Aug. 17, 1940



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UNITED STATES PATENT OFFICE

2,268,181

TOW BAR

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Application August 17, 1940, Serial No. 353,134

1 Claim. (Cl. 280—33.14)

My invention relates to improvements in tow bars, and particularly in tow bars for connecting the opposed front and rear bumper bars of automobiles for towing purposes, and the primary object of my invention is to provide a simple and mechanical efficient arrangement of this character which is instantly adjustable to bumper bars of different widths, and which can be quickly and easily applied and removed.

Other important objects and advantages of my invention will be apparent from a reading of the following description taken in connection with the accompanying drawing, wherein for purposes of illustration I have shown a preferred embodiment of my invention.

In the drawing:

Figure 1 is a general side elevational view of the tow bar.

Figure 2 is a fragmentary enlarged vertical longitudinal sectional view.

Figure 3 is a fragmentary horizontal sectional view taken through Figure 2 approximately on the line 3—3 and looking downwardly in the direction of the arrows.

Referring in detail to the drawing, my improved tow bar consists of a rod or tub 5 which has telescoped upon its opposite ends similar sockets 6 and 7, respectively, each of which is composed of a pair of upper and lower sections 8 and 9 which have diametrically opposed ears 10 through which bolts 11 are passed to clamp the ears on the same sides of the sections. In addition, each socket has a larger bolt 12 in the nature of an anchor which traverses the thickened tubular part 13 of the socket and also the end of the bar or tube 5 as indicated in Figure 2, whereby the socket is securely connected on the bar or tube 5.

Rotatably confined within each of the sockets is a ball 14 on each of the grapple heads 15, 16, respectively, which are similar in construction and arrangement but face in opposite directions.

Each grapple head consists of a stationary jaw of substantially inverted L-shape side elevation including the channel-shaped standard portion 17 on whose upper end is the longitudinally outwardly inclining foot portion 18 which has the depending abutment 19. On the opposite side from the foot portion 18 the ball 14 is attached to the upper part of the standard 17. Longitudinally extending through the upper end of the standard portion 17 is the smooth portion 20 of the jaw operating screw 21 which has a laterally extending handle 22 on its upper end for manual operation of the screw 21, the handle having a flanged portion 23 bearing on the top of the standard portion 17 with a washer 24 interposed.

The standard portion 17 which, as already stated, is of channel-shaped cross section, as illustrated in Figure 3, has the inwardly project-

ing retaining lugs 25 which confines the vertical portion 26 on the movable jaw 27 which is shaped like the foot portion 18 of the upper stationary jaw and is likewise equipped with an upwardly projecting abutment 28 in opposition to the depending abutment 19. The portion 26 of the lower movable jaw is shaped similarly to the opening of the channel in the standard portion 17 of the stationary jaw and has a threaded bore 29 through which the screw 26 is threaded, the lugs 25 engaging in cut-out portions of the movable jaw so as to act as tracks or guides for the vertical movement of the movable jaw.

In using the device of the invention the handle 22 is rotated so as to give the jaws sufficient aperture to accept the bumper bar on the automobile. The handle 22 is then rotated in the opposite direction so as to bring the abutments 19 and 28 to positions in back of the edges of the bumper bar and to bring the facing surfaces of the foot portions of the jaws into engagement with the edges of the bumper bar, this action making the desired connection of the grapple head with the bumper bar concerned. It will be noted that if convenient, both grapple heads may be applied simultaneously to the bumpers of the towing bar and the towed car, simply by using both hands to operate the handles 22, with the grapple heads applied to the bumper bars. Similarly, the grapple heads may be simultaneously loosened from the bumper bars. The space in the sockets 6 and 7 behind the balls 14 may contain lubricant to provide for resistance to unnecessary wear in the ball and socket joints and make them free working.

Although I have shown and described herein a preferred embodiment of my invention, it is to be definitely understood that I do not wish to limit the application of the invention thereto except as may be required by the scope of the subjoined claim.

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

In a tow bar, a pair of grapple heads having projections thereon terminating in balls, a tubular bar, a pair of sectional socket members, each socket member including upper and lower sectional parts forming a tubular member terminating outwardly in a spherical socket for receiving a ball, the inner part of the tubular member receiving an end of the tubular rod, a vertically arranged bolt passing through the inner ends of the sections through the end of the tubular rod and the side portions of the sections adjacent their outer ends having flat shoulder forming portions contacting each other and bolts passing through said shoulder forming portions for connecting the sections together with the ball in the socket.

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