United States Patent [19]

Crosthwaite

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[54] **AUTO BODY AND FRAME PULLER**

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[52] **U.S. Cl.** **72/302,** 72/705

[51] **Int. Cl.** **B21d 1/12**

[58] **Field of Search** 72/302, 316, 705; 254/65, 254/188

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Assistant Examiner—M. J. Keenan
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[57] **ABSTRACT**

An auto body and frame puller which includes a generally horizontal box girder base member supported on casters for moving from place to place. An upright post is supported from the base member and has a plurality of vertically spaced eyes for attachment of one block of a block and fall. A winch on the base member is provided for winding in the block and fall cable under power. A hook is provided on a second block of the block and fall for attachment to a portion of the frame to be straightened and a second hook on the outer end of the base member has a chain attached thereto for connection to the opposite side of the frame to be straightened. Operation of the winch causes the second block to move toward the post to pull on the portion of the frame to be straightened. The first block can be hooked into anyone of the eyes on the post to vary the direction of the pull with respect to the horizontal.

5 Claims, 7 Drawing Figures

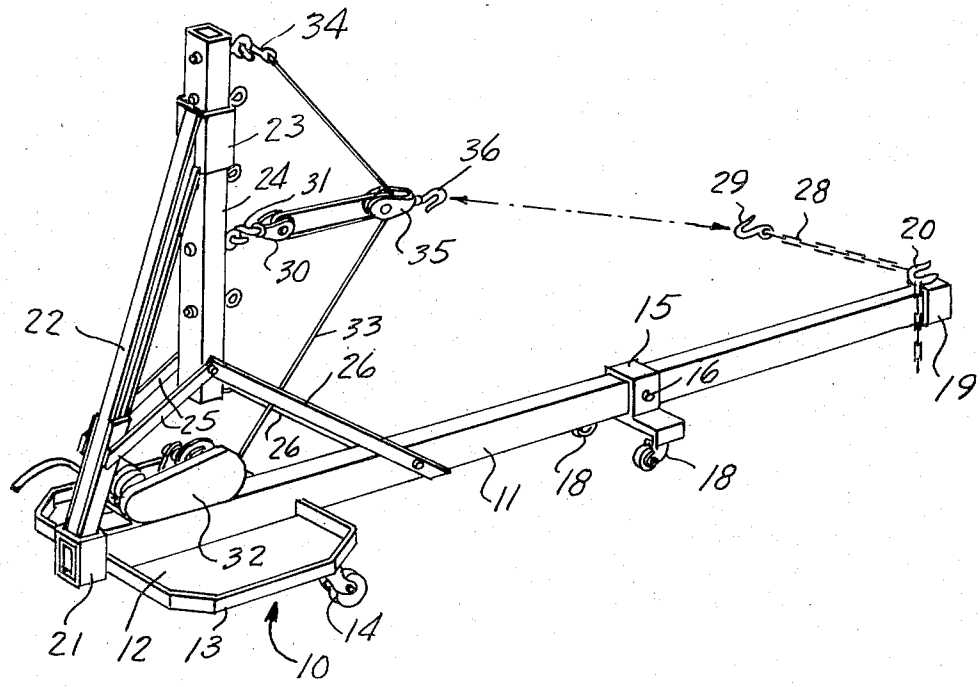


FIG. 1.

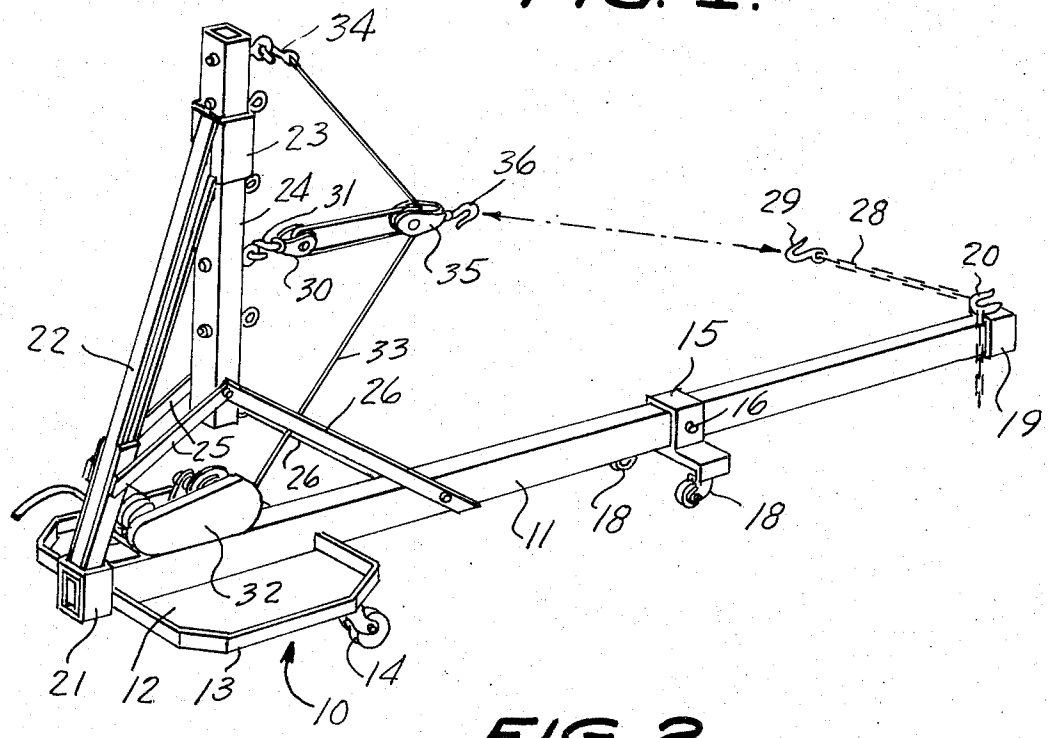


FIG. 2.

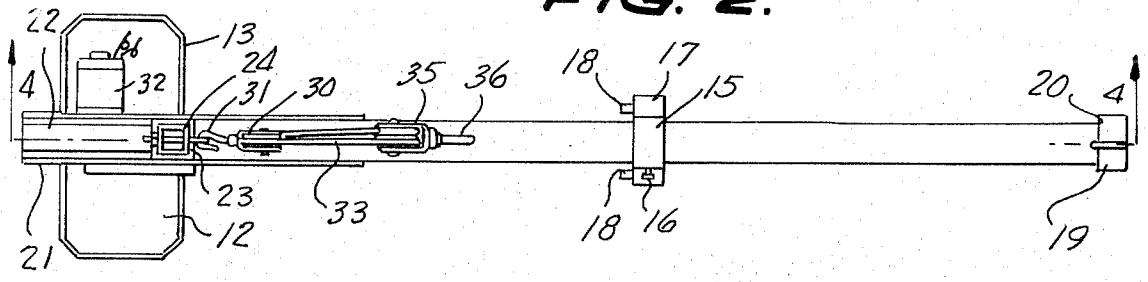
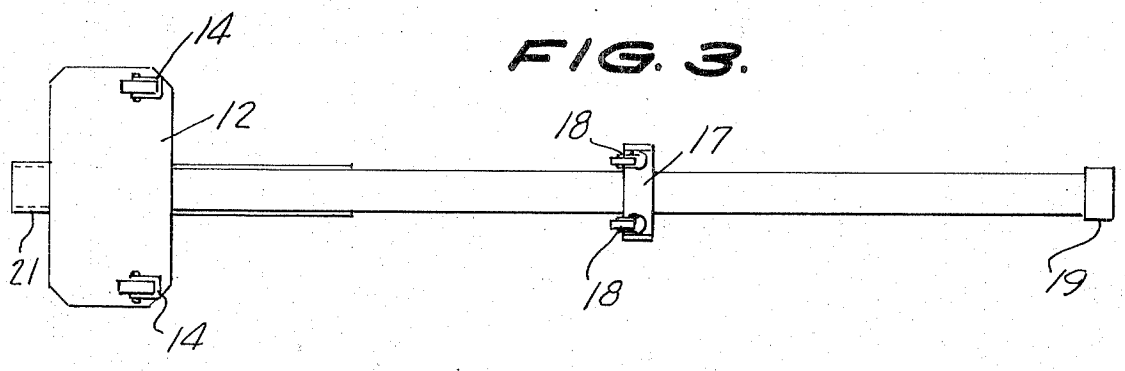


FIG. 3.



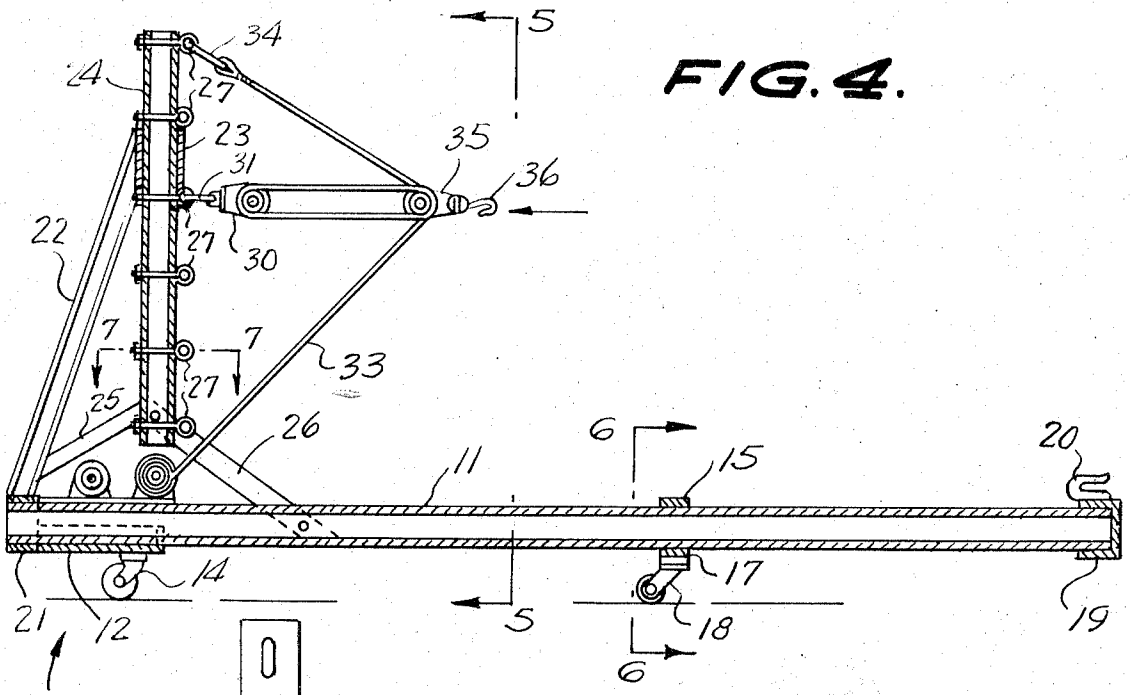


FIG. 4.

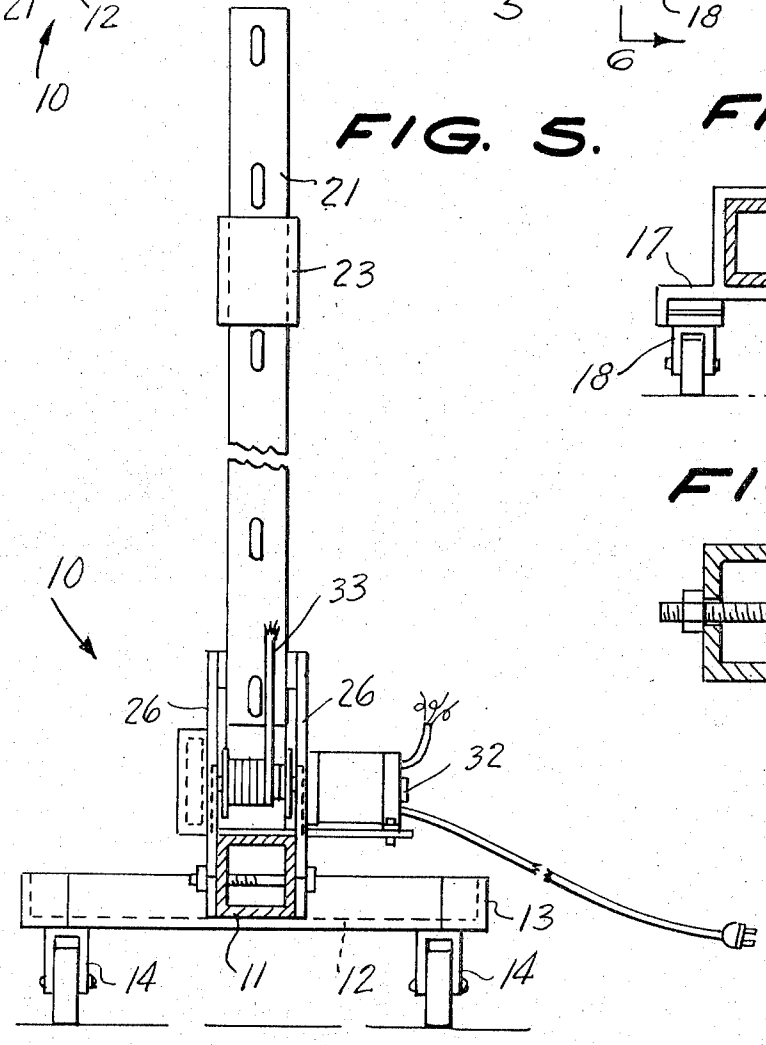
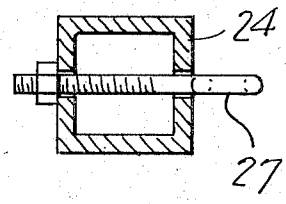


FIG. 5.

FIG. 6.

FIG. 7.



AUTO BODY AND FRAME PULLER

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention is directed to an auto body and frame puller.

2. Summary of the Invention

The auto body and frame puller includes an elongate base member supported on casters and carrying an upright post thereon. The post has a plurality of vertically spaced block and fall attaching eyes and a winch on the base member is provided for winding in the cable of the block and fall. An opposition chain is connected to the far end of the base member for connection to the opposite side of the object to which the block and fall is attached so as to spread the device being straightened as the winch is operated.

The primary object of the invention is to provide a complete self contained auto body and frame puller actuated by an electric winch.

Other objects and advantages will become apparent in the following specification when considered in the light of the attached drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the invention;

FIG. 2 is a top plan view of the invention;

FIG. 3 is a bottom plan view of the invention;

FIG. 4 is a vertical longitudinal sectional view, taken along the line 4—4 of FIG. 2, looking in the direction of the arrows;

FIG. 5 is an enlarged fragmentary vertical sectional view, taken along the line 5—5 of FIG. 4, looking in the direction of the arrows;

FIG. 6 is an enlarged fragmentary vertical sectional view, taken along the 11ne 6—6 of FIG. 4, looking in the direction of the arrows; and

FIG. 7 is an enlarged fragmentary horizontal sectional view, taken along the line 7—7 of FIG. 4, looking in the direction of the arrows.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings in detail, wherein like reference characters indicate like parts throughout the several figures, the reference numeral 10 indicates generally an automobile body and frame puller constructed in accordance with the invention.

The automobile body and frame puller 10 includes an elongate box girder base member 11 arranged in generally horizontal relation supported on a transverse horizontal plate 12 having a peripheral upstanding flange 13 rigidly secured thereto. The plate 12 and flange 13 form trays for tools and parts. Casters 14 are secured to the tray 12 on opposite sides thereof for supporting the plate 12 and thereby the base 11.

A rectangular socket 15 is slidably engaged over the base member 11 and is secured in adjusted position therealong by set screws 16. A bar 17 extends horizontally across the bottom of the rectangular socket member 15 and supports a pair of casters 18 therebeneath at opposite ends thereof. The socket 15 and casters 18 support the outer end of the base member 11. A generally rectangular socket member 19 is rigidly secured to the outer ends of the base member 11 and has a chain hook 20 rigidly secured to the upper portion thereof.

A socket member 21 encompasses the base member 11 at the end thereof opposite the socket member 19 and is rigidly secured thereto by welding of the like. An eye beam 22 has its lower end rigidly secured to the socket member 21 and slopes upwardly and forwardly therefrom. A generally rectangular socket member 23 is rigidly secured to the upper end of the eye beam 22 and has an upright post 24 rigidly secured therein in a position overlying and aligned with the base member 11. A pair of angular braces 25 are rigidly secured to opposite sides of the eye beam 22 adjacent the lower end thereof and to the lower end of the post 24 on opposite sides thereof. A second pair of angular braces 26 are rigidly secured to opposite sides of the base member 11 and to opposite sides of the lower portion of the post 24.

A plurality of vertically spaced eyes 27 are mounted in the post 24 for reasons to be assigned. A chain 28 having a hook 29 thereon is releasably engaged in the hook 20 for reasons to be assigned. A single pulley block 30 has its hooks 31 engaged in a selected one of the eyes 27. An electric winch 32 is mounted on the base member 11 under the post 24 and has a cable 33 wound thereon and extending outwardly therefrom. The cable 33 has its far end connected to a hook 34 which is engaged with a second selected one of the eyes 27. The cable 33 is trained over a double pulley block 35 carrying a hook 36 and is trained over the single pulley block 30 prior to extending to the hook 34. Operation of the winch draws the cable 33 inwardly so as to move the block 35 toward the block 30 to draw the hook 36 toward the post 24.

In the use and operation of the invention base member 11 is rolled under a vehicle to have its frame straightened or some portion of its body straightened and the hook 29 is engaged with one side of the object to be straightened and the hook 36 is engaged with the opposed side of the same object. The electric winch 32 is then actuated to cause the object to be pulled until straight whereupon the pressure is released. By moving the block 30 to other of the eyes 27 the direction of pull with respect to the vehicle can be adjusted.

The socket member 15 can be adjusted longitudinally of the base member 11 so as to give the desired support when needed.

Having thus described the preferred embodiment of the invention it should be understood that numerous structural modifications and adaptations may be resorted to without departing from the spirit of the invention.

What is claimed is:

1. An automobile body and frame puller comprising an elongate generally horizontal base member, means supporting said base member for movement from place to place, a post positioned above said base member and extending perpendicularly thereto with its lower end spaced above said base member, a beam rigidly secured to one end of said base member and sloping upwardly and toward the other end of said base member, means securing the upper end of said beam to said post adjacent the upper end of said post rigidly supporting said post, brace means extending angularly downwardly from the lower end of said post to said base member, brace means extending angularly downwardly from the lower end of said post to said beam, a plurality of vertically spaced eyes secured to said post, a block and tackle selectively connected to one of said eyes, an

electric winch mounted on said base member beneath the lower end of said post with the cable from said block and tackle wound thereon, and means on the outer end of said base member for connecting to one side of an object to be straightened with said block and tackle connected to the opposite side of an object to be straightened.

2. A device as claimed in claim **1** wherein said base member is a generally rectangular box girder member.

3. A device as claimed in claim **1** wherein a tool and parts tray is rigidly secured to one end of said base member and the means for supporting said base member comprised in part casters mounted beneath said tray.

4. A device as claimed in claim **3** wherein the means supporting said base member includes a generally rectangular socket member slidably mounted on said base member and a pair of casters secured to said socket member.

5. A device as claimed in claim **4** wherein means are provided on said socket member for clamping said socket member to said base member in longitudinally adjusted position thereon.

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