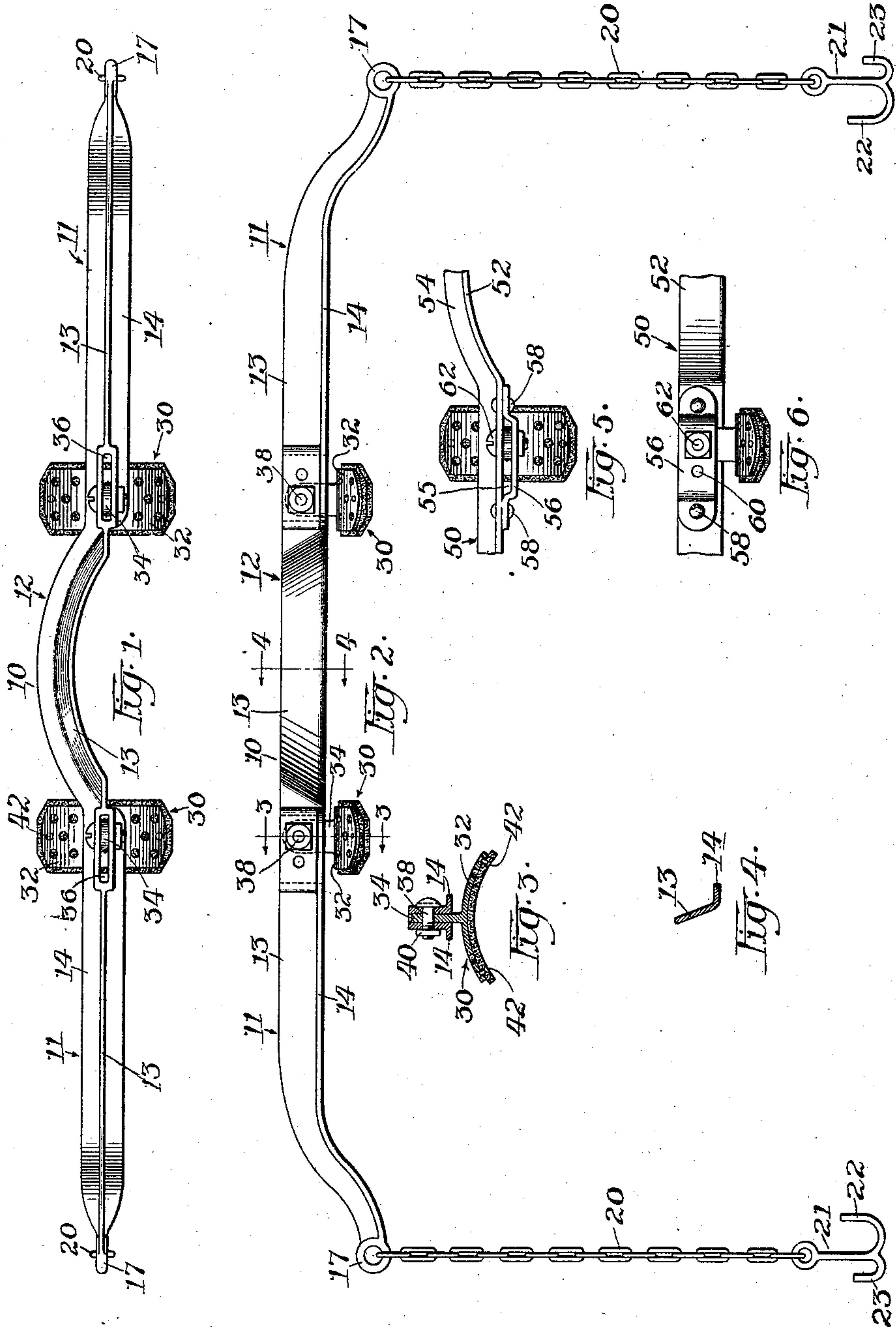


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CARRYING YOKE.

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966,562.

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OTTO KNOERZER, OF HAMMOND, INDIANA.

CARRYING-YOKE.

966,562.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, OTTO KNOERZER, a citizen of the United States, residing at Hammond, in the county of Lake, State of Indiana, have invented a new and useful Carrying-Yoke, of which the following is a specification.

This invention relates to an improved carrying-yoke of the kind which is designed to be placed across and to rest upon a man's shoulders, and to support a load suspended from each end.

The present invention relates more especially to a yoke embracing several improved features of construction combining to produce strength and lightness and cheapness of manufacture, and also adapting it to be more comfortably carried than the ordinary form of yoke in common use.

The novel features of my invention are more specifically pointed out in the appended claims, and are illustrated by the accompanying drawing in which:

Figure 1 is a top plan view of one form of my improved yoke. Fig. 2 is a view in front elevation thereof. Fig. 3 is a vertical section on line 3—3 of Fig. 2, looking in the direction indicated by the arrows. Fig. 4 is a vertical section on line 4—4 of Fig. 2, looking in the direction indicated by the arrows. Fig. 5 is a fragmentary top plan view illustrating a modification of the yoke shown in Figs. 1 to 4 inclusive. Fig. 6 is a view in front elevation thereof.

As shown in said drawings, in Figs. 1 to 4 inclusive, 10 indicates as a whole the beam or bar constituting the essential part of the device. Said beam consists of end portions 11, 11, which project outwardly beyond the shoulders of a person carrying the yoke, and support the loads at their outer ends, and a center portion 12 rigidly connecting the same. Said end portions 11, 11, as here shown, take the form of inverted T beams, each T beam consisting of a vertical web portion 13, 13, and a double horizontal flange 14, 14. Each of said T beams at its outer end is curved downwardly for a few inches, for a purpose which will be explained hereinafter, and terminates in the form of a ring, 17 and 17. From said rings are suspended chains, 20, 20, each provided at its lower end with a double pronged hook, 21, 21, preferably formed with a large prong, 22, 22, and a comparatively smaller one 23, 23, for convenience in attaching several objects

to one chain, and for carrying objects of different shapes and sizes. The said center portion 12 of the beam or bar 10 is curved in a horizontal plane, to fit around the back of the wearer's neck, and from the inside of such curved portion the horizontal flange 14 is omitted in order that the beam may lie flat against the wearer's neck. For a similar purpose, the web portion of said curved part 12 is slanted forward in the form of a portion of a truncated cone, adapting it to fit accurately to the base portion of the wearer's neck. The importance of this will be explained hereinafter.

Referring now to the novel means of supporting the beam upon a man's shoulders, 30, 30, indicates, as a whole, fulcrum blocks which are pivotally attached to the beam in a manner permitting their movement in the vertical plane of the beam. Each of said blocks consists of a curved base portion 32, and a vertical web or flange 34. The latter engages in a slot 36 in the vertical web 13 of the beam, said web being thickened at two places to permit of such slotting. Said slots 36, 36, are arranged in the beam at the inner ends of the outer or end portions 11, 11, thereof. The weight of the beam, and load, is carried upon the fulcrum blocks by means of headed bolts 38, 38, provided with nuts 40, 40, and passing through openings in the walls of the slots and in the flange 34. Each wall is provided with more than one opening, so that the blocks may be shifted toward or from each other to adapt the device to be carried by persons with different breadths of shoulders. It is not necessary that the distance between the two blocks be adjusted accurately, as they may be moved about their points of pivotal attachment to the beam to vary the distance between them.

The curved base portion of each block 30 is fitted on its under side with a pad 42 of felt or other material, and is perforated as shown, to save weight and to facilitate ventilation. The pad is conveniently secured in place by rivets, 42, 42, as shown.

The practical importance of the employment of fulcrum blocks 30, 30, and of their construction as above described, is that they may adjust themselves about their points of attachment to the beam 10 to accommodate themselves to the slant of the wearer's shoulders, and may always be arranged to rest flat thereon. Likewise, they permit of freedom of movement of the wearer's arms

and shoulders, adjusting themselves to the rise and fall thereof, and to changes in their slant.

By reason of the downward curvature of the outer ends of the beam, the center of gravity of the loaded beam will fall below the point of support of the device upon the wearer's shoulders, and there will therefore be no tendency of the beam to overturn and fall off. When the wearer is stooping forward to load or unload the device, the curved part 12 of the beam is designed to rest flat against the back of his neck, in order to prevent the yoke from overturning forward, and sliding off his shoulders.

In Figs. 5 and 6 is illustrated a modified form of the yoke which is designed more especially for cheapness in manufacture. In such modified form one of the horizontal flanges of the beam is omitted, the latter taking the form of a plain angle beam, or angle bar 50, consisting of vertical and horizontal flanges 52 and 54 respectively. With the same object in view, cheapness of manufacture, the center portion of the beam is cylindrically curved, instead of conically, as in Figs. 1 to 4 inclusive. The curve is so described as to leave the horizontal flange 54 at the outside thereof. In place of the slots 36, 36, above described, the flanges 34 of the fulcrum blocks engage in slots 55 formed between the faces of the vertical flange 52, and vertical plates 56, which are secured thereto by rivets 58, 58. Said plates, at their ends, are bent as shown, in order that their center portions may be spaced at

the proper distance from the flange 52. The plates and the flange 52 are provided with openings 60, 60, to engage with headed bolts 62 which carry the weight of the beam and load upon the fulcrum blocks as above described.

I claim as my invention:

1. In a carrying-yoke, the combination of a beam and fulcrum blocks affixed thereto, and relatively movable in the vertical plane of the beam, and means for varying the distance between the points of attachment of said blocks to said beam, said beam consisting of a web portion and a flange disposed at an angle thereto, and being downwardly curved at its ends, and the center portion thereof being shaped to rest against the body of a person carrying the same.

2. In a carrying-yoke, the combination of a beam and a relatively movable fulcrum block affixed thereto, said beam being provided with a slot and said block with a flange adapted to engage therewith, pairs of openings through the walls of said slot, an opening through said flange, and a pin adapted to engage in said openings, said beam consisting of a web portion and a flange disposed at an angle thereto, and being downwardly curved at its ends, and the center portion thereof being shaped to rest against the body of a person carrying the same.

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