May 6, 1947. N. J. MacKENZIE 2,420,256

SHACKLE

Filed Oct. 14, 1944

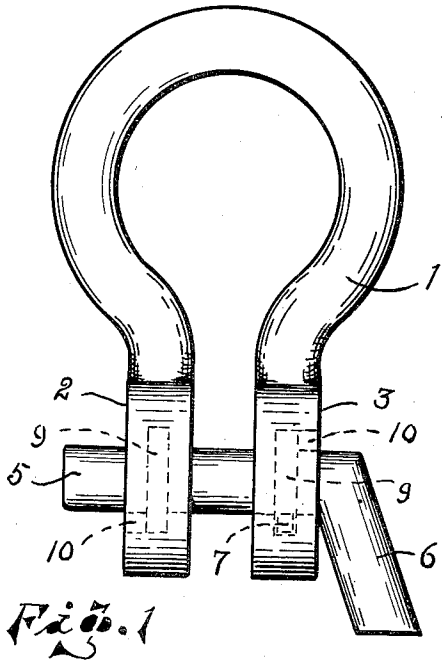


Fig. 1

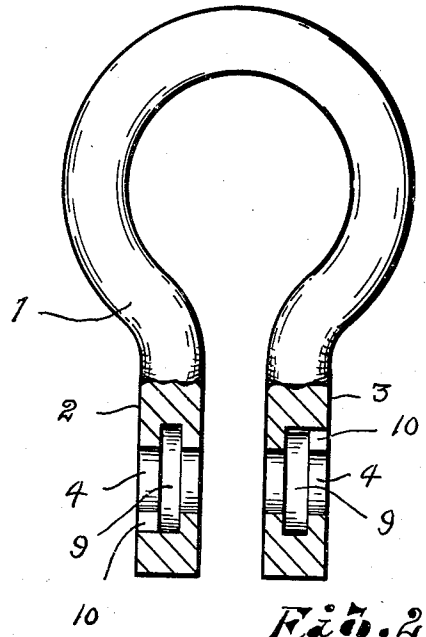


Fig. 2

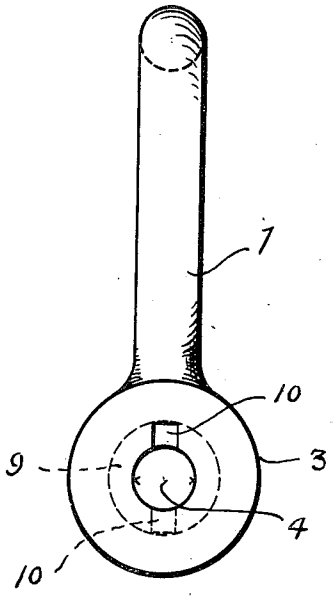


Fig. 3

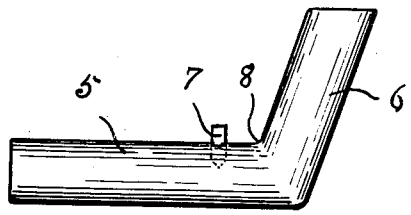


Fig. 4

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SHACKLE

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2 Claims. (Cl. 59—86)

1

This invention relates to improvements in shackles and the like having a locking bolt associated therewith when in use.

The principal object of the instant invention is to provide more simple locking means for the bolt or pin employed in the normal functioning of the shackle.

Other objects and advantages may appear in the further description of the invention.

Referring now to the accompanying drawing, forming part of this application, and in which like reference numerals indicate like parts:

Fig. 1 is a front elevation of a common shackle with one of the improved locking bolts installed therein,

Fig. 2 is a similar view of the shackle only, and showing the spaced adjacent termini in section,

Fig. 3 is a side elevation of the shackle only as seen from the right of Fig. 1, and

Fig. 4 is an elevation of the locking bolt.

In the drawing, 1 represents the bight of the shackle which terminates in the depending spaced arms 2 and 3, through which the eyes 4—4 are formed for reception of the locking bolt 5, this bolt deemed novel in that it is formed of an integral piece of metal with the handle portion 6 thereof at a decided inclination to the main body portion thereof, such being for the purpose of keeping the handle away from interference with the bight of the shackle, which is usually made of circular form as shown.

A simple, preferably square-headed locking pin or key 7 is screw-threadedly mounted within the body portion of the bolt 5, and at a distance from the apex 8 of the angle formed by the inclined handle 6 with the main body portion, substantially equal to or slightly more than the thickness of the outermost wall of the annular keyway 9 of the eye 4 in each arm.

The annular major keyways 9—9 are preferably centrally positioned in each arm as shown, with a rectangularly shaped minor key passageway 10 as entrance for the key 7 into either eye 4, the one in the arm 3 being in the upper terminus thereof, and a similar keyhole or way 10 at the lowermost terminus of the eye 4 in the other arm 2.

Thus it will be noted, that these keyholes appear diagonally disposed, with respect to the shaft openings in the two arms, this being for the purpose of selective use of the locking bolt 5 in respect to the position of the shackle when being used. For example, if the shackle, per adventure, should be used in the form of a clevis, such as used on a plow, and in horizontal position, the locking feature, which obviously is the gist of the instant invention, would function admirably well were the bolt inserted through the arms of the shackle from either side thereof. That is to say; if the bolt were inserted sufficiently far from either side

2

of the shackle for the key 7 to fall within the channel in either arm, the gravitating effect of the handle would at all times retain the bolt in locked position against the longitudinal movement. Whereas, if it should so happen that the bight 1 of the shackle or clevis, as the case may be, were in reverse position to that shown in the drawing, which may frequently happen in hoisting apparatus; then the bolt would have to be inserted from that side presenting the keyhole above its respective eye, in which instance, the functioning of the key 7 as locking means, would be identical with that previously described, though the bolt would be inserted from the opposite side thereof.

I am aware that several patents have been issued on somewhat similar devices, though vastly more complicated and possibly more dependable for some purposes. However, the crux of this invention is simplicity.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. In a shackle having a pair of spaced arms, with aligned bolt-receiving openings therethrough, a major annular keyway within each of said openings, minor diametrically opposed keyways one through the outermost wall of each of said major key ways, a bolt for engagement within said openings from either of opposite sides of said shackle, said bolt carrying a locking key extending radially therefrom for selective entrance into either of said annular key ways through its respective minor keyway.

2. A shackle having a pair of spaced arms with aligned openings therethrough for reception of a locking bolt having a radially extending key thereupon from either side of said shackle, an annular keyway centrally of each opening, diametrically opposed radially disposed keyways for entrance of the key on said bolt into its respective annular channel from either side of said shackle whereby locking of said bolt may be accomplished irrespective of the suspended position of said shackle.

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