Sept. 29, 1959 T. RAMSKILL 2,905,997

SAFETY LOCK FOR CRANE HOOK

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FIG. 1.

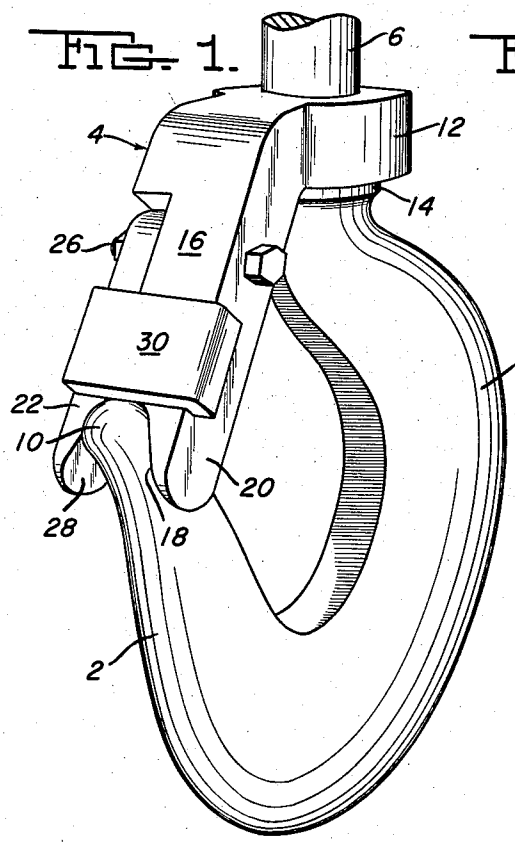


FIG. 2.

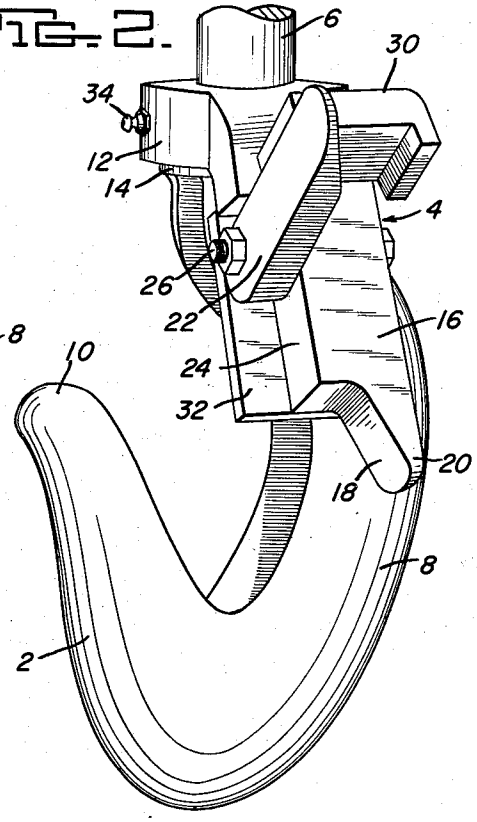
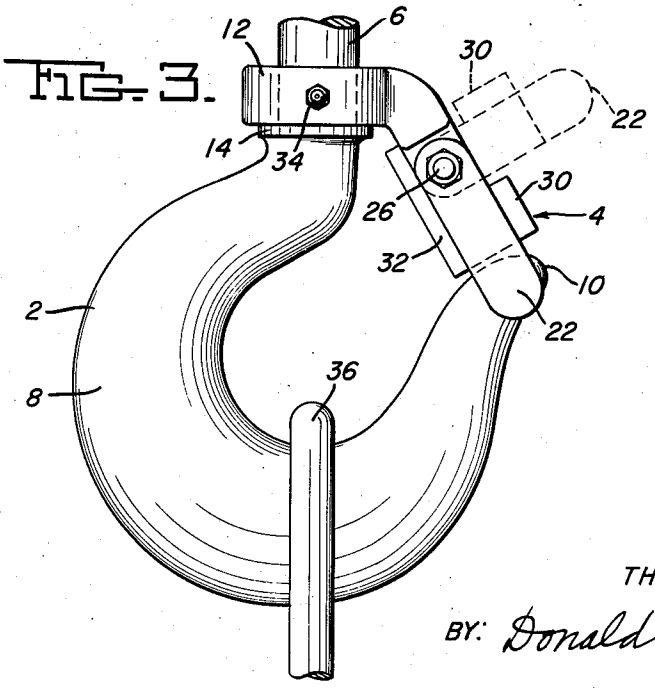


FIG. 3.



INVENTOR:
THOMAS RAMSKILL,

BY: Donald G. Dalton
his Attorney.

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SAFETY LOCK FOR CRANE HOOK

Thomas Ramskill, Torrance, Calif., assignor to United States Steel Corporation, a corporation of New Jersey

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3 Claims. (Cl. 24—241)

The present invention relates generally to lift crane equipment and more particularly to a safety lock or latch for a lift crane hook.

It is an object of the present invention to provide a safety lock which may be easily installed on a crane lift hook to prevent accidental displacement of an article therefrom.

It is another object of the present invention to provide a safety lock for a crane lift hook which is adapted to be mounted for swivel movement on the shank of a lift hook whereby it can be easily and quickly moved from operative to non-operative position.

It is a further object of the present invention to provide a safety lock for a crane lift hook as described above which is provided with a pivotal latch for positively securing the lock in operative position.

These and other objects will become more apparent after referring to the following specification and attached drawing in which:

Figure 1 is a view in perspective showing the device of the invention in locking position on a lift crane hook:

Figure 2 is a view similar to Figure 1 showing the device of the invention in open position; and

Figure 3 is a side elevational view of a lift crane hook having the device of the invention installed thereon.

Referring more particularly to the drawings reference numeral 2 designates the lift hook of a crane having the safety lock of the invention, which is generally designated by the reference numeral 4, installed thereon. The hook 2 is provided with a conventional shank 6, body 8 and nose 10.

The safety lock 4 includes a collar 12 which is mounted for swivel movement on the shank 6 at its juncture with the body 8 of the hook. Although the form of the hook itself and the weight of the safety lock will maintain the collar 12 in position at the juncture of the shank and the body, if desired, a circumferential flange 14 may be provided at the juncture of the shank and the body to provide a seat for the safety lock. A bar 16 which may be integral with the collar 12 projects angularly therefrom in the direction away from the shank 6. A seat 18 is provided on one side of the free end 20 of the bar for engaging one side of the hook nose 10. A latch 22 is pivotally mounted by its end on the side 24 of the bar 16 by suitable nut and bolt means 26. Latch 22 may be pivoted from a position parallel with the bar 16 as best shown in Figure 1 to a position normal to the bar, as best shown in Figure 2.

A seat 28 is provided on the inner side of the free end of the latch 22 for engaging the side of the nose 10 remote from the free end of the bar 16 when the latch is in position parallel with the bar.

The latch is provided with a laterally extending recessed projection 30 which engages the bar 16 when the latch 22 is in position parallel with the bar.

A stop plate 32 which projects laterally from the rear surface of the bar 16 rearwardly of the latch 22 functions

to restrict the pivotal movement of the latch rearwardly of the bar 16.

A lubricant fitting 34 may be provided on the collar 12 for introducing lubricant to the inner surface of the collar.

In operation, when it is desired to block the throat of the hook 2 to prevent accidental displacement of a lift ring 36 or the like therefrom, the collar 12 and bar 16 are swiveled to the position where the seat 18 engages the nose 10. Then the latch 22 is pivoted to position parallel with the bar so that the seat 28 engages the other side of the nose 10. The lock is then in operative position, as shown in Figure 1. When it is desired to move the safety lock to inoperative position, latch 22 is pivoted to a position substantially normal to the bar 16 and the collar 12 together with the bar 16 are swiveled away from the nose 10, as best shown in Figure 2.

The safety lock 4 is easily installed on the hook 2 by sliding the collar 12 on the shank 6 before the hook is attached to the crane.

While one embodiment of my invention has been shown and described, it will be apparent that other adaptations and modifications may be made without departing from the scope of the following claims.

I claim:

1. In a lift hook having a shank, a body and a nose, the improvement therewith of a safety lock which comprises a collar mounted on and surrounding said shank for swivel movement therearound, a bar projecting angularly from said collar, a seat on the free end of said bar adapted to engage one side of said nose, a latch pivotally mounted on said bar for movement from a position parallel with the bar to a position normal thereto, a seat on the free end of said latch in spaced relation with the said seat on said bar for engaging the side of said nose remote from its said one side when the latch is in position parallel with said bar and the first named seat is in engagement with said nose, and means for limiting the pivotal movement of said latch.

2. In a lift hook having a shank, a body and a nose, the improvement therewith of a safety lock which comprises a collar mounted on and surrounding said shank for swivel movement therearound, a bar projecting angularly from said collar, a seat on the free end of said bar adapted to engage one side of said nose, a latch pivotally mounted on said bar for movement from a position parallel with the bar to a position normal thereto, a seat on the free end of said latch in spaced relation with the said seat on said bar for engaging the side of said nose remote from its said one side when the latch is in position parallel with said bar and the first named seat is in engagement with said nose, a projection extending normal to said latch intermediate its ends for engaging said bar when said latch is in position parallel with the bar, said bar having means for limiting the pivotal movement of said latch.

3. In a lift hook having a shank, a body and a nose, the improvement therewith of a safety lock which comprises a collar mounted on and surrounding said shank for swivel movement therearound, a bar projecting angularly from said collar, a seat on the free end of said bar adapted to engage one side of said nose, a latch pivotally mounted on said bar for movement from a position parallel with the bar to a position normal thereto, a seat on the free end of said latch in spaced relation with the said seat on said bar for engaging the side of said nose remote from its said one side when the latch is in position parallel with said bar and the first named seat is in engagement with said nose, a recessed projection extending normal to said latch intermediate its ends for engaging said bar in the recess thereof when said latch is in position parallel with the bar, and a stop plate

extending laterally from said bar and rearwardly of said latch for limiting the pivotal movement of said latch.

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