

UNITED STATES PATENT OFFICE.

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SAFETY HOISTING-HOOK.

SPECIFICATION forming part of Letters Patent No. 742,761, dated October 27, 1903.

Application filed March 17, 1903. Serial No. 148,198. (No model.)

To all whom it may concern:

Be it known that I, JAMES MARSHALL WAID, a citizen of the United States, and a resident of Colebrook, in the county of Ashtabula and State of Ohio, have invented certain new and useful Improvements in Safety Hoisting-Hooks, of which the following is a specification.

This invention relates to hooks for hoisting buckets and other articles.

It consists of a special hook and peculiar safety-catch with novel locking-dogs, all as will be hereinafter fully described and the novel features pointed out in the claims.

In order to enable others to make and use my invention, I will now proceed to describe it in detail with reference to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation illustrating my invention, and Fig. 2 is a similar view with one side of the hook removed and the catch in locked position. It also shows a part of the catch in dotted lines turned to open position.

In carrying out my invention I may employ a hook A formed in one piece or constructed, as shown, of side plates A', with an upper block A² and a lower block A³ arranged between them. The members just described are secured together by bolts, rivets, or other suitable means. It will be noticed that the upper block A² is provided with an eye A⁴, whereby the hook is adapted for connection with a lifting-chain and with a lower projection A⁵, which will be referred to farther on.

B denotes my improved catch device, whose outer edge is substantially circular in form. The catch device is supported with pivotal movement on a pin B', which consists of a bolt or rivet extending through both side plates A'.

In constructing my catch device B, I form it with a weighted handle portion B² and an upwardly-curved finger B³. The free end of the finger B² is spaced from an upper shoulder B⁴ on the catch device, as shown in Fig. 2.

In the lower edge or side of the block A³, I arrange a freely-swinging hook B⁵, having support on a pin B⁶. In the lower edge of my catch device B, I arrange a dog B⁷, having pivotal support on a pin B⁸. It will be no-

ticed that this dog has projecting ends, the inner of which is provided with a head B⁹, adapted for engagement with the freely-swinging hook B⁵ on the block A³, as shown. The outer end B¹⁰ of the dog B⁷ extends into the open space B¹¹ of the handle B². The inner lower edge of the handle B² may be recessed, as indicated at B¹², adapted to receive the outer end B¹⁰ of the dog when it is pushed down to unlocking position, as shown by dotted lines in Fig. 2.

The operation of my improved safety-catch will be understood from the above description.

In use when it becomes necessary to disengage the hook from a bucket or other article being hoisted the handle B² is grasped with the little finger resting on the projecting end B¹⁰ of the dog B⁷. It is apparent that simple pressure on the end B¹⁰ of the dog B⁷ will lift its hooked head B⁹ out of engagement with the freely-swinging hook B⁵. The catch device B may then be turned until its shoulder B⁴ contacts the inner side of the projection A⁵. It will be noticed that in this position of the parts the extreme upper end of the finger B³ is drawn down into the nose or engaging end of the hook A. When the bucket or other article being hoisted is disengaged from the hook A, the weighted handle will operate to turn the catch device B until the upper end of the finger B³ contacts the outer side of the projection A⁵, as shown by full lines in Fig. 2. During the turning movement of the catch device just described the weighted and hooked end B⁹ of the dog B⁷ will engage the free swinging hook B⁵, fixed to the block A³, and thereby lock the catch device to closed position.

Among the advantages residing in my invention may be mentioned the fact that in any position of the hook A the dog and engaged member will remain locked, since the latter, the hook B⁵, is free to follow downward movement of the hooked end of the dog B⁷. In other words, should the hook A assume a position upside down obviously the weighted end of the dog B⁷ would move downwardly. The hook B⁵ being free to swing on its fastening-pin B⁶, obviously when at uppermost position it will follow downward

movement of the inner or weighted end of the dog B' and retain locking engagement therewith. I would also refer to the substantially circular form of my catch device B, which being formed as just stated should the hook A in use contact a beam or other structure the curved outer edge of the catch device would ride it free from holding engagement with the said beam or structure.

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

1. In combination with a hoisting-hook of the character described, a catch device substantially circular in form and having pivoted support near its center, a weighted handle on one side of the said catch device, a curved upwardly-projecting finger on the opposite side of the catch device having movement as specified, and means whereby the said catch device is locked to closed position, substantially as described.

2. The hereinbefore-described safety device for hoisting-hooks, consisting of a substantially circular catch device having pivoted support near its center, a weighted handle on one side of the catch device, a curved upwardly-projecting finger on the opposite side of the catch device, having moving move-

ment as specified, and automatic means adapted to lock the catch device to closed position, substantially as described.

3. The hereinbefore-described safety device for hoisting-hooks consisting of a substantially circular catch device having pivoted support near its center, a weighted handle and a curved upwardly-projecting finger on the catch device, a projection, on the catch-device support, serving to limit turning movement of the said catch device, and means operating automatically, to lock the catch device closed, substantially as described.

4. In combination with a hoisting-hook of the character described employing a substantially circular pivotal catch, locking means consisting of a pivoted dog on said catch, having one end projected whereby it is operated, and its other end formed with a hooked head, and a swinging hook having fixed support on the side plates and adapted for engagement with the hooked head of the said dog, substantially as described.

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Witnesses:

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