Aug. 29, 1944. E. R. MUDDIMAN 2,357,054

HOISTING HOOK FOR APERTURED ARTICLES

Filed Aug. 18, 1943

FIG. 2.

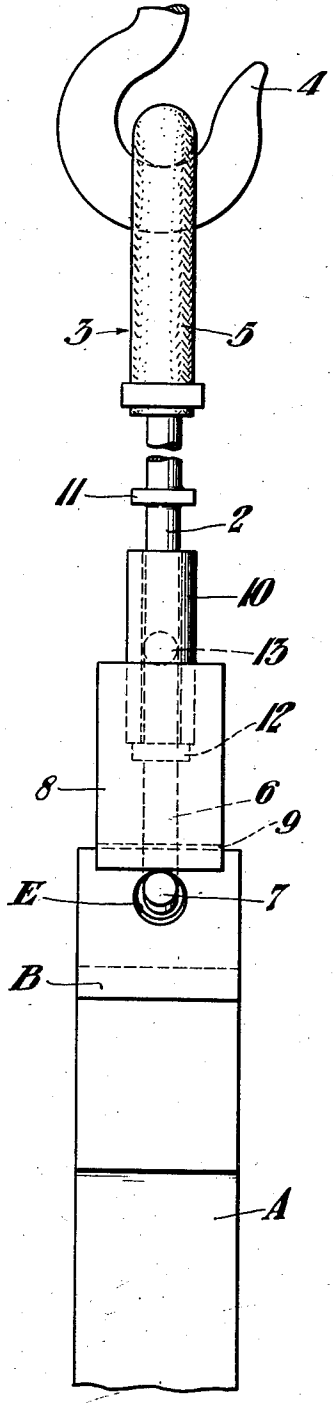
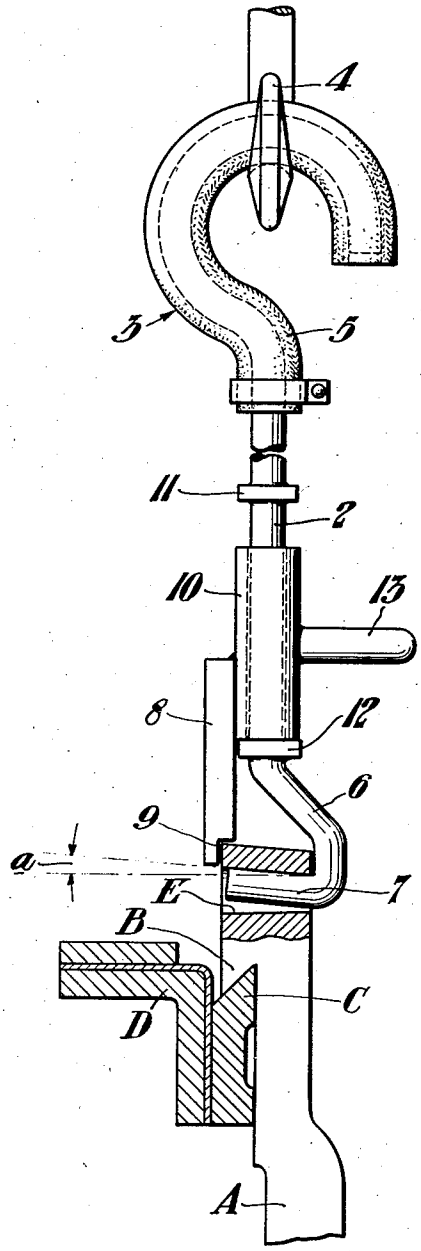


FIG. 1.



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HOISTING HOOK FOR APERTURED ARTICLES

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3 Claims. (Cl. 294—83)

This invention relates to improvements in hoisting hooks for apertured articles, such as plating anodes and the like.

Plating anodes, as for example, the tin anodes employed in the production of electrolytic tinplate, are elongate bars normally disposed vertically in the plating tank or bath. In continuous plating apparatus, such anodes are disposed between series of rolls and plating passes of the strip metal, necessitating considerable care in positioning and removing said anodes. Since such anodes are frequently replaced in a continuous plating process, it is desirable to provide efficient means for handling the same easily and without hazard to the operators and equipment.

My invention contemplates a hoisting hook designed to coact with the anode structure so as to insure a positive connection with the anode and support the latter in substantially vertical position, while raising and lowering said anode with respect to the plating apparatus.

Additional objects and advantages will become apparent from the following description taken in connection with the accompanying drawing wherein:

Fig. 1 is an elevational view, partly in section, showing my invention in supporting engagement with a plating anode; and

Fig. 2 is an elevational view thereof at right angles to Fig. 1.

Referring to the drawing, A designates a plating anode, as for example, a tin anode employed in the continuous production of electrolytic tin plate. Such anodes are cast from the plating metal in elongate form, having at the upper end or head thereof an offset downwardly facing flange B for supporting engagement with a complemental rail C, the latter forming a part of the anode bridge D which extends horizontally across a plating tank or bath, not shown. The head of the anode is also formed with a lifting eye or aperture E, extending therethrough in a direction substantially normal to the said anode bridge, said eye being cast in the anode and therefore formed with a taper throughout.

In practice, the anodes A are engaged and disengaged with the bridge rail C by movement of said anodes in a substantially vertical plane adjacent said bridge, the space within which the anodes may travel being restricted due to the plating apparatus, such as the conductor rolls, and the successive vertical passes of the strip being plated.

My invention provides a hoisting hook for raising and lowering the anodes A, said hook including an elongate vertical shank 2, having its upper end formed into a hook or eye 3 for engagement by the hook 4 of a hoist or the like. The hook or eye 3 is preferably provided with a rubber covering 5 to electrically insulate the hoisting hook from the hoist proper.

The lower end of the hoisting hook is bent to form an anode-engaging hook 6, including a free terminal portion 7 of smaller diameter than the minimum diameter of the eye E, said terminal being inclined upwardly from the horizontal to an angle *a*, substantially corresponding to the angle of the taper of the wall of the eye or aperture E in the anode and thereby providing a stable suspension for the anode in substantially a vertical plane. The terminal portion 7 traverses the vertical center line of the hoisting hook proper and extends on either side thereof so as to support the anode A engaged thereby substantially in line with said vertical center line.

In order to insure a positive connection between the hook terminal 7 and the anode A, a latch 8 is provided in the form of a vertical plate having its lower edge adjacent the terminal 7 notched at 9 for engagement over an upper corner of the anode head, as indicated in Fig. 1, the plane of said latch being substantially coincident with that of the outer face of the anode when the latter is received upon the hook. Said latch is freely slidable upon the shank 2 by means of a tubular sleeve 10, slidable between upper and lower stops or collars 11 and 12 respectively, defining the latching travel of said latch. A handle 13 may be provided on the sleeve 10 for the convenience of the operator in engaging and disengaging the hook and anode.

The hoisting hook of my invention is readily and easily engaged and disengaged from anodes of the character herein described, and provides a positive hoisting support therefor which will prevent the accidental dropping of anodes, thereby eliminating such hazards to operators and equipment. It will be seen that the hook is so constructed as to insure substantially vertical suspension of the anode therefrom to thereby facilitate the passage of the latter between adjacent structure.

Various changes and modifications are contemplated within the scope of the following claims.

I claim:

1. A hoisting hook for articles having a tapered aperture therein, including an elongate shank having means at its upper end for suspending said hook, said shank having a hook at its lower

end including a free terminal inclined from the horizontal at an angle substantially corresponding to the angle of taper of the said aperture, and a latch movable with respect to the terminal portion to selectively permit engagement and prevent disengagement of the terminal portion and the aperture of said article.

2. A hoisting hook for articles having a tapered aperture therein, including an elongate shank having means at its upper end for suspending said hook, said shank having a hook at its lower end including a free terminal inclined from the horizontal at an angle substantially corresponding to the angle of taper of the said aperture, said terminal portion traversing the vertical center line of the hook proper and extending on either side thereof, and a latch movable with respect to the terminal portion to selectively permit engagement and prevent disengagement of the terminal portion and the aperture of said article.

3. A hoisting hook for articles having a tapered aperture therein, including an elongate shank having means at its upper end for suspending said hook, said shank having a hook at its lower end including a free terminal inclined from the horizontal at an angle substantially corresponding to the angle of taper of the said aperture, a latch movable with respect to the terminal portion to selectively permit engagement and prevent disengagement of the terminal portion and the aperture of said article, and spaced stops on the shank defining the sliding travel of the latch.

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