

Sept. 9, 1924.

J. W. YOUNG ET AL

1,507,651

GRABHOOK

Filed Sept. 7, 1922

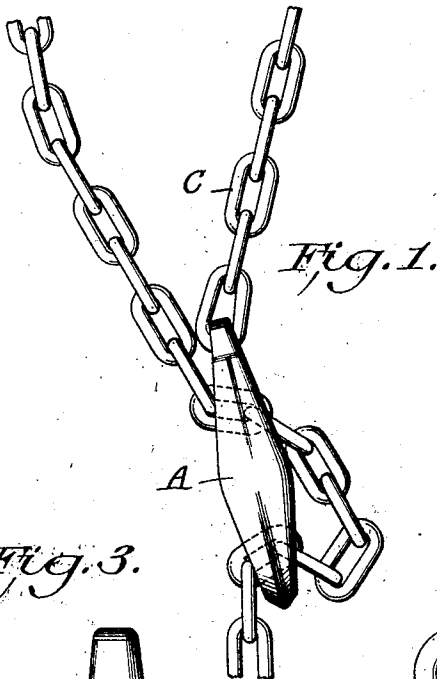
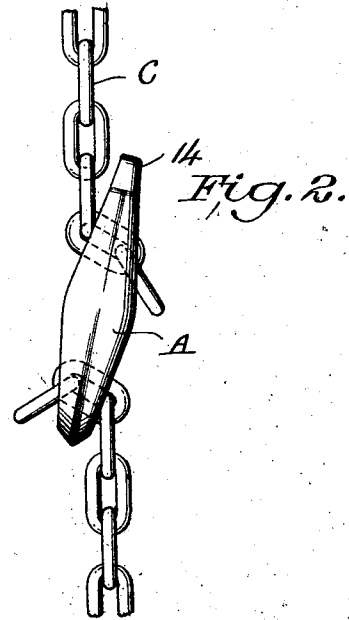


Fig. 3.

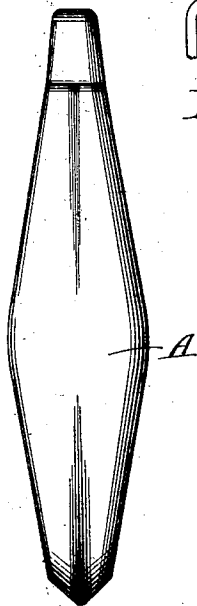


Fig. 4.

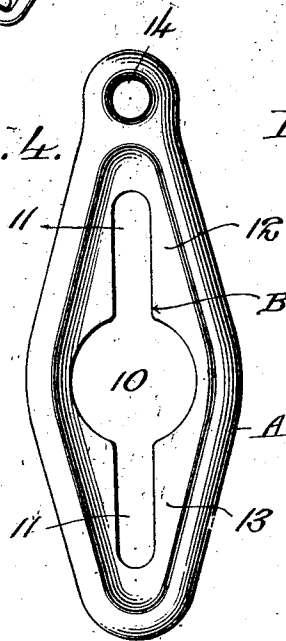


Fig. 5.

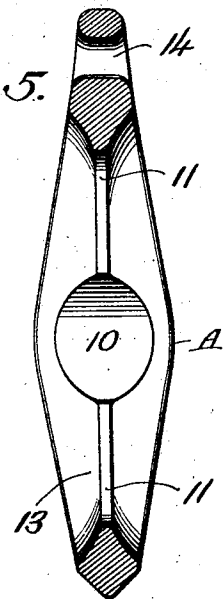
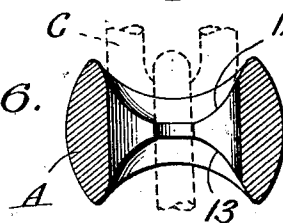


Fig. 6.



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UNITED STATES PATENT OFFICE.

JAMES W. YOUNG AND EDWARD LYNCH, OF ELMIRA, NEW YORK.

GRABHOOK.

Application filed September 7, 1922. Serial No. 586,737.

To all whom it may concern:

Be it known that we, JAMES W. YOUNG and EDWARD LYNCH, citizens of the United States, and residents of Elmira, in the county of Chemung and State of New York, have invented certain new and useful Improvements in Grabhooks, of which the following is a specification.

By present methods of chain rigging for hoisting and pulling heavy loads it is usual to tie knots in chains and to utilize open end hooks for making hitches, while as a rule, wire and other materials of a like nature are used to make splices when a chain breaks. To knot a chain, however, is to weaken it, for the reason that the links thereof become crossed and thereby subject to a bending moment that results most frequently in the chain snapping with consequent damage to the machine or other load being moved and often with loss of life or more or less serious injury to workmen. Furthermore, in the use of heavy chains, it is extremely difficult and at the best a tedious, exhaustive and time consuming operation to knot the same, while regardless of pains and effort expended in tying a knot there always exists the possibility of the same slipping with the disastrous results mentioned. On the other hand the use of open end hooks serves to overcome some of the disadvantages mentioned in respect to knotting a chain, but open end links are liable to and quite frequently do spread and allow a chain to slip and snap under load, also with disastrous results, and it is to overcome these disadvantages that we have produced our present grab hook which not only permits an effective hitch that will not slip to be made quickly and easily, but enables a broken chain to be efficiently spliced without the use of wire, weak open links or other materials.

With the foregoing and other purposes in view, our invention consists in the novel features of construction and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings and defined in the appended claims.

In the drawings wherein like characters of reference denote corresponding parts in the different views

Figure 1 is an elevation showing one manner of utilizing our improved grab hook to form a hitch;

Figure 2, an elevation showing one manner of utilizing our improved grab hook for forming a splice;

Figure 3, an enlarged edge view of our improved grab hook;

Figure 4, a face view of the grab hook shown in Figure 3;

Figure 5, a central longitudinal section through our improved grab hook; and

Figure 6, a central transverse section on the line 6—6 of Figure 4.

Referring to the drawing our improved grab hook is shown as comprising an elongated casting A of outline preferably conforming to that shown in the drawing, but not necessarily limited thereto. We provide this casting, in the direction of its long axis, with a slot B and this slot is enlarged centrally to form an opening 10 of sufficient diameter to permit the links of a chain C to pass freely therethrough, irrespective of the position of said hook links relatively to the casting. As will be apparent the terminal portions 11 of the slot B are of a width to only permit the edgewise insertion of a chain link therein and when a link is so inserted in either terminal portion 11 the adjacent links are disposed to effectively prevent the movement of the chain through the slot transversely of the casting. Both faces of the casting are dished to provide seats 12 and 13 for the ends of chain links as clearly shown in Figure 6. The dishing of the casting faces is such as to shape the seats 12 and 13 to conform to the ends of the links of the size chain with which the particularly grab hook is designed to be used. By providing this relatively extensive bearing between a link under stress and the casting, the strength of the union of which the grab hook is a component element is greatly enhanced.

In certain uses of our grab hook it is necessary to attach the same to an end link of a chain and for this purpose we provide the casting A at one end with an eye 14. When it is desired to utilize the grab hook in hitching or looping a chain over a beam or the like the end link of such chain is engaged through the eye 14 and a suitably located length of such chain passed through opening 10, when desired links are passed edgewise in the terminal portions 11 of the slot B to complete the formation of the hitch or loop all as shown in Figure 1.

When it is desired to simply use the grab hook to splice two chain sections, the ends

of such sections are passed through opening 10 and suitable links of such sections inserted edgewise in the terminal portions 11 respectively of slot B as illustrated in Figure 2.

While we have specifically illustrated two uses of our grab hook, it will be obvious that it is in no way limited to such specified uses, but on the other hand is adapted for use in any instance where it is desired to unite portions of chains.

We claim:—

1. A chain grab hook of the class described, comprising an elongated flattened body casting recessed on one of two opposing faces and provided with a slot in the direction of its long axis connecting said recesses, a portion of said slot being enlarged in lateral cross-section to permit passage of chain links therethrough in any rotative position with respect to the casting and an end portion of said slot being so restricted in width as to permit only edgewise passage of chain links therethrough, the face recess being of greatest width contiguous to the enlarged slot portion and of gradually decreasing width therefrom throughout its length.

2. A chain grab hook of the class described; comprising an elongated flattened body casting recessed on two opposing faces and provided with a slot in the direction of its long axis connecting said recesses a portion of said slot being enlarged in lateral cross-section to permit passage of chain links therethrough in any rotative position with respect to the casting and an end portion of said slot being so restricted in width as to permit only edgewise passage of chain links therethrough, the face recesses being of greatest width contiguous to the enlarged slot portion and of gradually decreasing width therefrom throughout its length.

3. A chain grab hook of the class described, comprising an elongated flattened body casting recessed on one of two oppos-

ing faces and provided with a slot in the direction of its long axis connecting said recesses, a portion of said slot being enlarged in lateral cross-section to permit passage of chain links therethrough in any rotative position with respect to the casting and an end portion of said slot being so restricted in width as to permit only edgewise passage of chain links therethrough, the face recess being of greatest width contiguous to the enlarged slot portion and of gradually decreasing width therefrom throughout its length, the depth of such recess, relative to its width, being such as to permit a chain link end disposed transversely of the slot to seat in the recess with its extreme end portion in contact with the recess and slot meeting edges.

4. A chain grab hook of the class described, comprising an elongated flattened body casting recessed on one of two opposing faces and provided with a slot in the direction of its long axis connecting said recesses, a portion of said slot being enlarged in lateral cross-section to permit passage of chain links therethrough in any rotative position with respect to the casting and an end portion of said slot being so restricted in width as to permit only edgewise passage of chain links therethrough, the face recess being of greatest width contiguous to the enlarged slot portion and of gradually decreasing width therefrom throughout its length, the depth of such recess, relative to its width, being such as to permit a chain link end disposed transversely of the slot to seat in the recess with its extreme end portion in contact with the recess and slot meeting edges, the walls of the slot being of substantially uniform length measured between the connected faces.

In testimony whereof we hereunto affix our signatures.

JAMES W. YOUNG.
EDWARD LYNCH.