A. L. COON.

SAFETY HOOK.

APPLICATION FILED JUNE 11, 1921.

1,390,023.

Patented Sept. 6, 1921.

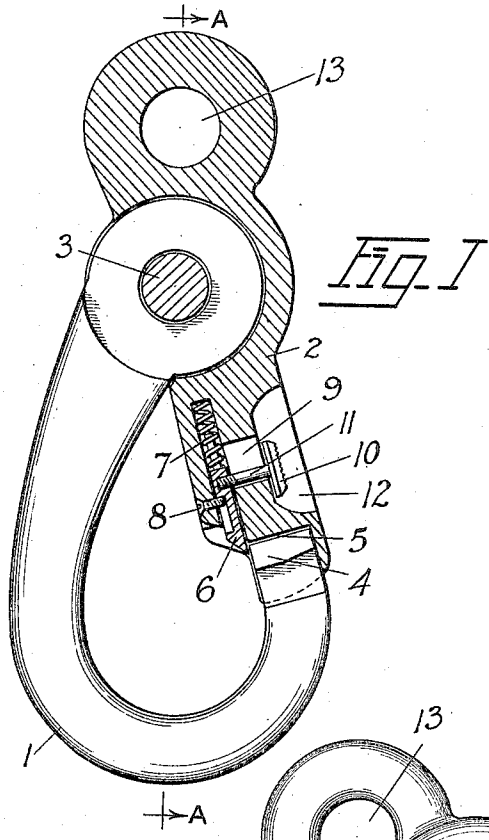


Fig. I

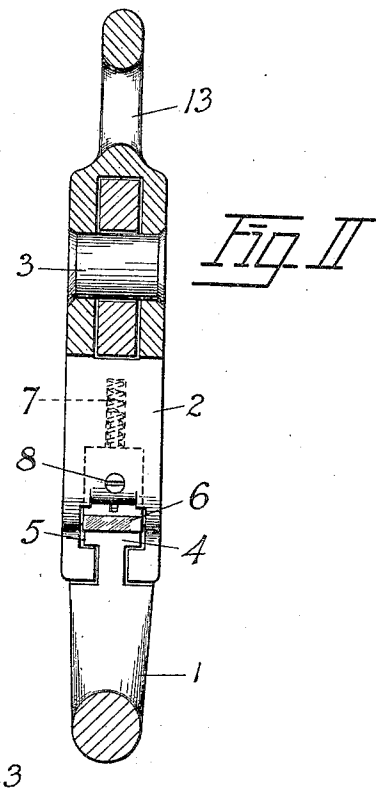


Fig. II

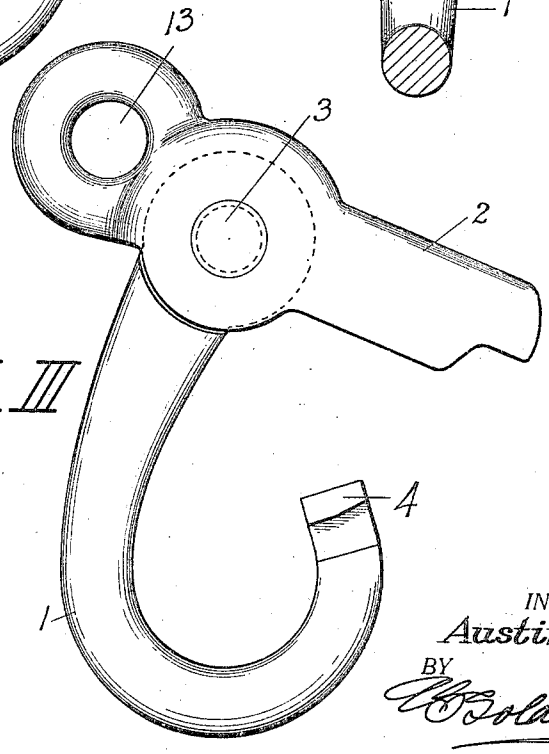


Fig. III

WITNESS

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SAFETY-HOOK.

1,390,023. Specification of Letters Patent. Patented Sept. 6, 1921.

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To all whom it may concern:

Be it known that I, AUSTIN L. COON, a citizen of the United States, residing at Aurora, in the county of Marion and State of Oregon, have invented a new and useful Safety-Hook, of which the following is a specification.

My invention relates to improvements in safety hooks in which the ordinarily open space between the eye and the point of the hook is closed by a locking block and the hoisting chain or cable attached to said locking block.

The objects of my invention are:

To produce a hoisting hook which makes involuntary disengagement of the load impossible; which enables the use of a very small section in the curved part; which possesses when closed the strength of a solid ring; which locks automatically as soon as tension is applied; which will not straighten out under a heavy load and which possesses no sharp protruding corners to catch in any obstacles.

I attain these objects with the mechanism illustrated in the accompanying drawing, in which—

Figure I is a side elevation of my hook, the locking block being shown in section.

Fig. II is a section through Fig. I along the line A—A.

Fig. III is a side elevation of the hook to show the latter in open position.

Similar numerals refer to similar parts throughout the several views.

The entire safety hook consists of the hook 1 itself and the locking block 2, connected by a pivotal rivet 3. The point of the hook is blunt and provided with a T-shaped tenon 4 which slips into a corresponding mortise 5 at the end of the locking block. A flat bolt 6 slidably inserted within a longitudinal recess in the locking block projects with its edge over the edge of the T-shaped tenon and prevents involuntary disengagement. A compression spring 7, at the end of the flat bolt within the locking block, insures a positive lock as soon as the tenon has come to a full seat in the mortise. A screw 8 in the locking block, projecting into a groove in the flat bolt, limits the travel of the bolt and prevents loss of the latter. To facilitate a withdrawal of the bolt the locking block is slotted at 9 and a thumb button 10, working with its stem 11 in the slot, is screwed into the flat bolt. Since the thumb button slides in a recess 12 of the locking block, the entire hook presents a smooth appearance and can be dragged through obstacles without catching anywhere. A hoisting chain or cable is permanently attached to the eye 13 at the upper end of the locking block. To insert the load the locking block must be swung to the position indicated in Fig. III; tension at the hoisting chain or cable will lock the hook automatically, and, by virtue of the leverage on the locking block, the tendency of the hook to straighten out will be opposed by an equally great tendency on the part of the locking block to assume a vertical position. Since the hook itself can be figured as a beam supported on both ends a much smaller section may be employed than would be possible with an open hook, and the range of usefulness is consequently materially increased.

Having thus described my invention it will be seen that my objects have been accomplished, and, though I have shown the preferred form of construction, I reserve to myself the right to make minor changes provided I do not violate the spirit and principle of my invention.

I claim—

1. In a device of the character described, the combination of a hook, an eye at one end of the hook and a T-shaped tenon at the point of the hook, with a locking block fulcrumed in the eye of the hook, means in the locking block to firmly engage said T-shaped tenon and an eye at the opposite end of the locking block adapted to be attached to a hoisting chain.

2. In a device of the character described, the combination of a hook, an eye at one end of the hook and a T-shaped tenon at the point of the hook, with a locking block fulcrumed in the eye of the hook, a mortise-like recess adapted to engage the tenon, a spring bolt sliding longitudinally within the locking block to engage the tenon within the recess and an eye at the opposite end of the locking block, the upward pressure in the eye having a tendency to press the point of the hook toward the shank.

3. In a device of the character described,

the combination of a hook, an eye at one end of the hook, a T-shaped tenon at the point of the hook with a locking block having a T-shaped mortise adapted to engage the tenon, a spring bolt capable of locking the tenon within the mortise, a countersink in the locking block and a thumb button moving within the countersink and attached to the spring bolt to facilitate the withdrawal of said spring bolt.

Signed by me at Portland, Oregon, this 6th day of June, 1921.

AUSTIN L. COON.