(No Model.)

H. C. SMITH.

SAFETY HOOK.

No. 307,597. Patented Nov. 4, 1884.

Fig. 1.

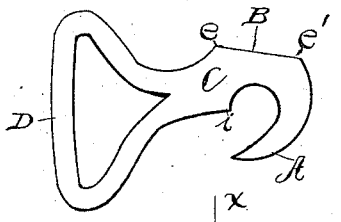


Fig 2.

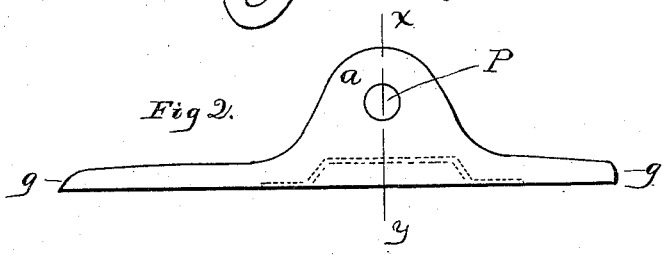


Fig. 3.

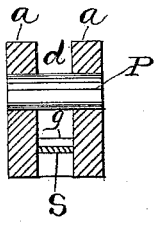


Fig. 4.

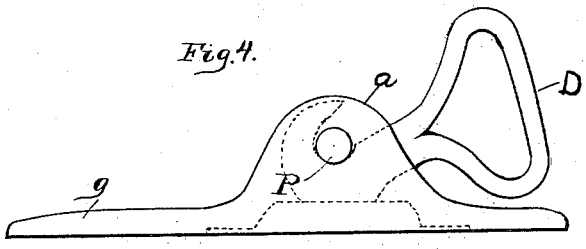


Fig. 5.

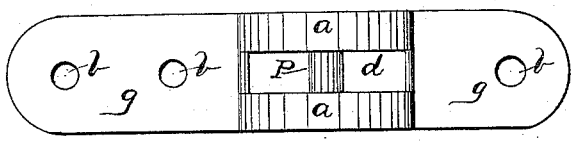
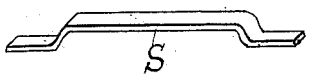


Fig. 6.



Witnesses:

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UNITED STATES PATENT OFFICE.

HENRY COLBORNE SMITH, OF WEST TROY, NEW YORK.

SAFETY-HOOK.

SPECIFICATION forming part of Letters Patent No. 307,597, dated November 4, 1884.

Application filed August 19, 1884. (No model.)

To all whom it may concern:

Be it known that I, HENRY COLBORNE SMITH, a resident of West Troy, in the county of Albany and State of New York, have invented certain new and useful Improvements in Safety-Hooks; and I do hereby declare that the following is a full, clear, and exact description of the invention, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Similar letters refer to similar parts in the several figures therein.

My invention relates to improvements in safety-hooks, and more particularly to improvements in the safety-hook described by me in a previous application for a patent which was filed in the United States Patent Office June 11, 1884.

The object of my invention is to provide additional safety and prevent any rattling noise when in use.

My invention consists in providing a spring to act upon the back of the hook, and in giving the latter a plane or flat surface to receive the spring when in use, whereby the hook is firmly held in a hooked position and prevented from rattling.

Figure 1 of the drawings is a side elevation of the improved hook detached from its pivot. Fig. 2 is a side elevation of the pivot and supporting-plate. Fig. 3 is a vertical cross-section taken at broken line *x y* in Fig. 2. Fig. 4 is a side elevation of the hook attached to its pivot, as in use. Fig. 5 is a plan view of the plate and pivot without the hook. Fig. 6 is a view in perspective of the spring.

The plate *g* is provided with apertures *b*, by means of which it can be secured to wagon-thills, poles, or other implements by means of screws or bolts passing through the same, and with the projecting ears or pivot-supports *a a*, supporting a pivot, P. The slot *d* passes down through the plate, and is adapted to receive a spring-plate, S, which may be secured at one end to the plate *g*. The spring occupies the position shown by the dotted lines in Fig. 2. The hook is provided with a link, D, adapted to receive a strap forming part of a harness-holdback or another link or swivel attached to a wagon-pole; also, with a wedge-shaped hook, A, having an inner circular surface adapted to fit the pivot P and engage therewith, thereby securing the harness to the thills or pole; also, with the circular segment flattened back B, with which the spring engages to keep the hook in close contact with the pivot.

Figs. 1 and 2 show the relative positions of the hook and pivot when the former is about to be placed in engagement with the latter. The hook is inserted between the supports *a a*, and beneath the pivot, entering from the right-hand side, as shown. The shank and link D of the hook is then turned over to the right to the position shown in Fig. 4, the edge or point of the hook passing around to the upper side of the pivot, as shown by dotted lines. As the hook is turned from the position shown in Fig. 1 to that shown in Fig. 4 the flattened segment of back B comes in contact with the spring, which forces the hook up firmly against the pivot and retains it in the position shown in Fig. 4. The hook is prevented from turning upon the pivot by the ends *e e'* of the flattened segment B, which are farther from the center of the pivot than the central portion of the flattened surface of the segment. The hook cannot therefore be changed from the position shown in Fig. 4 without overcoming the resistance of the spring, which is sufficiently strong to overcome the tendency of the hook to change its position by reason of its weight and that of its connecting attachments. The shoulder *i* on the hook prevents the hook from being forced from the pivot in one direction, and the hook A resists the working force operating in the opposite direction.

By applying sufficient rotary force through the link of the hook to overcome the resistance of the spring, which can be easily done by the hand of the operator, the hook is revolved on the pivot and released therefrom or

secured thereto, thus providing an easily-operated safety-hook that will not rattle nor accidentally disengage itself.

What I claim as new, and desire to secure by Letters Patent, is—

A hook provided with a curved beak, a straight or flattened back portion, and a shank and attaching-loop, in combination with a plate having lugs supporting a pivot adapted to engage the hook, and a spring to bear against the flattened portion of the hook to retain it in position, substantially as described.

In testimony whereof I have hereunto set my hand this 16th day of August, 1884.

HENRY COLBORNE SMITH.

Witnesses:

GEO. A. MOSHER,

THEO. E. HASLEHURST.