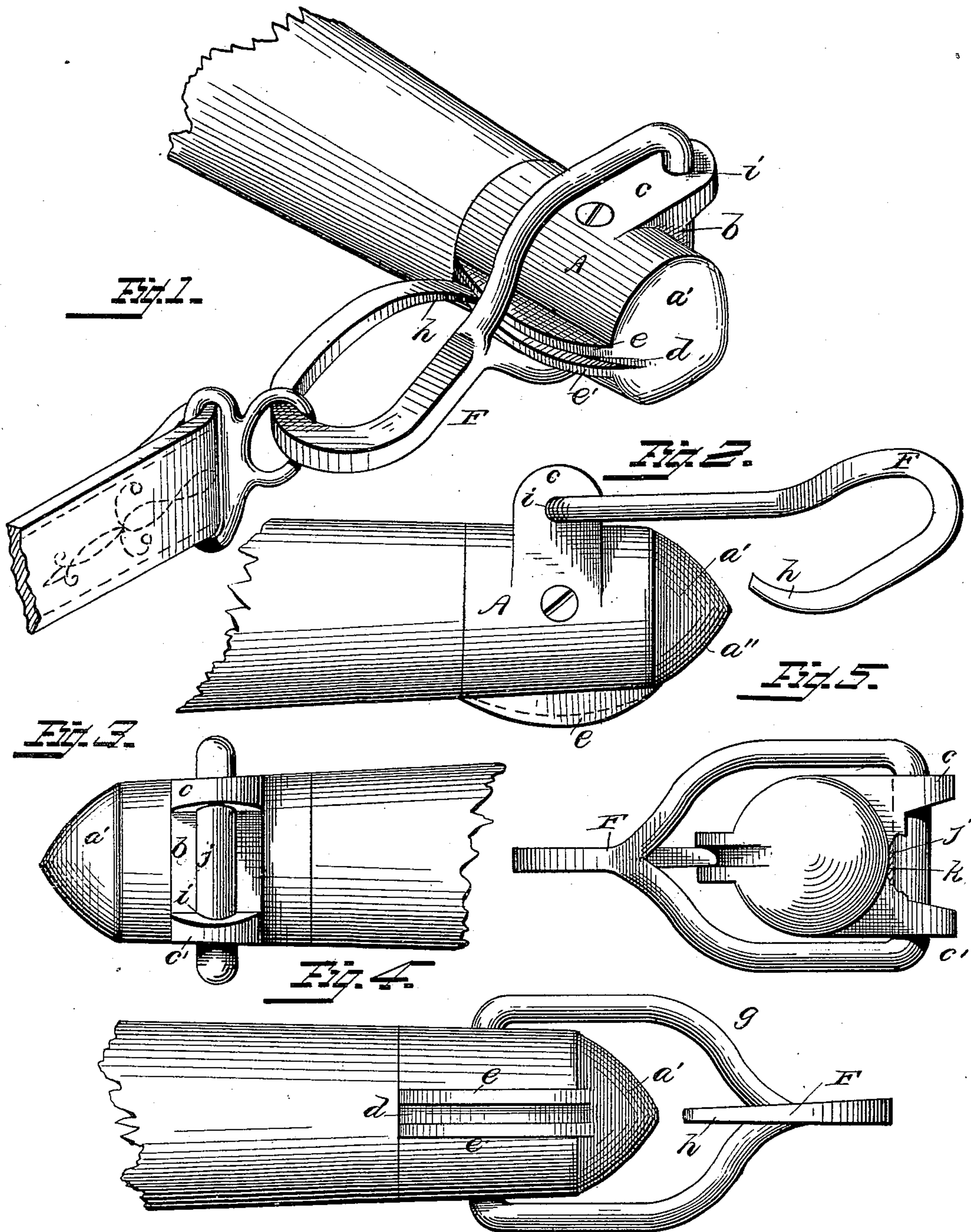


(Model.)

H. & A. T. HATCH.  
WHIFFLETREE HOOK.

No. 271,632.

Patented Feb. 6, 1883.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

HYMAN HATCH AND ALBERT T. HATCH, OF SOUTH ELGIN, ILLINOIS.

## WHIFFLETREE-HOOK.

SPECIFICATION forming part of Letters Patent No. 271,632, dated February 6, 1883.

Application filed November 6, 1882. (Model.)

*To all whom it may concern:*

Be it known that we, HYMAN HATCH and ALBERT T. HATCH, both of South Elgin, in the county of Kane and State of Illinois, have  
5 invented certain new and useful Improvements in Whiffletree-Hooks; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it ap-  
10 pertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to furnish a  
15 whiffletree-hook of great strength, simple in construction, devoid of all springs and locking appliances, bolts, or nuts, which could get loose or out of order, and which cannot under any conditions let the trace become accident-  
20 ally detached from it; and its construction and advantages will readily appear from the following description.

Figure 1 is a perspective view of our improved device, the hook being in the position it occupies when in use with the trace con-  
25 nected to it; Fig. 2, a plan of the device applied to one end of a whiffletree, and showing the swinging hook swung out to the proper position for connecting or disconnecting the trace; Fig. 3, a top view; Fig. 4, a bottom  
30 view, and Fig. 5 an end view.

A is a metallic sleeve or cap, having at its back and integral therewith a grooved rib or bed, *b*, and two lugs or ears, *c c'*, and having  
35 also integral with it on the side opposite these lugs an arched groove, *d*, between two ribs, *e e'*. This sleeve or band A should preferably be made integral, with an arched, tapering, or conical end, *a'*, and this end will then cover,  
40 house, and protect the end of the whiffletree, and the curvature or arc of the front *a''* of this end *a'* should, in conjunction with the arch of groove *d*, constitute substantially an arc of a circle described from the axis of the swinging  
45 hook F. If the sleeve be made without this end *a'*, then the whiffletree should project through the sleeve and have its end shaped substantially like such end *a'*.

F is the hook, composed of a journaled yoke,

*g*, terminating in a hooked end, *h*. It is made 50 of a single piece or bar of iron, and one end being first put through the holes or journal-bearings *i i*, made in the ears *c c'*, the shorter end is forged or bent up into close contact with the other end, thus closing the yoke part 55 of the hook. The entire hook F is thus free to be swung in its bearings *i i*, and its journal portion *j* lies in the groove *k* of the bed or rib *b*. The tip of the hooked end *h* curves inward toward the yoke *g*, as shown, and this tip 60 comes in very close proximity to the whole of the above-named arc of the sleeve when swung around it, and when the hook is in position for the pull of the traces the tip is within the groove *d*, and remains within it during any 65 sweep or range of its motion of, say, sixty degrees.

To attach a trace to or to detach it from the hook, it will be seen that the hook must be swung out about ninety degrees (90°) or more 70 before space enough is given between the tip of the hook and the outer extremity of the tree or cap to release or to hook on the trace, and that when the tip is in the groove the hooked end *h* is practically a closed one, and that the 75 direction of the strain or draft tends always to preserve this condition, and the bend of the tip turns or curves inward and into this groove when the hook has reached the limit of its inward movement. Should the hook, 80 by any accident, be swung out of the groove, or even to the position shown in Fig. 2, it would not be easy for the trace to become detached from it, because the tip curves so far toward the converging or narrow part of the 85 yoke.

The lugs *c c'* and their connecting-rib *b* give great strength to the structure, and, being at the back of the whiffletree, receive and distribute all the strain of the draft, so that even if 90 there were a weak or defective place in the sleeve or lugs the pull or strain would not tend to increase, but, on the contrary, to counteract it. A single screw will serve to hold the sleeve or cap to the whiffletree. 95

We claim—

1. The sleeve or cap A, as made with the lugs *c c'* at its back and with the ribs *e e'* at

its front, in combination with the swinging hook, journaled in these lugs, and arranged to have its tip ride in the groove between the ribs, as and for the purposes set forth.

- 5 2. The cap A, made integral with the lugs and with the grooved bed *b*, arched groove *d*, and tapering or arched end *a''*, in combination

with the swinging hook *F g h*, applied thereto and operating therewith as set forth.

HYMAN HATCH.

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Witnesses:

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