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Patented Nov. 18, 1902.

R. A. DILTS.
WHIFFLETREE HOOK.

(Application filed Oct. 14, 1901.)

(No Model.)

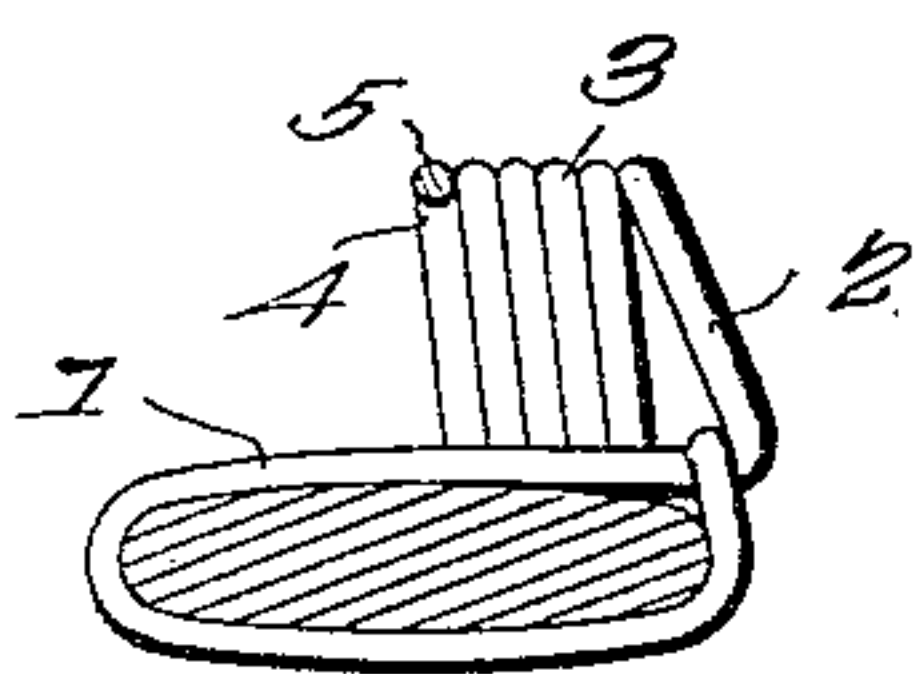
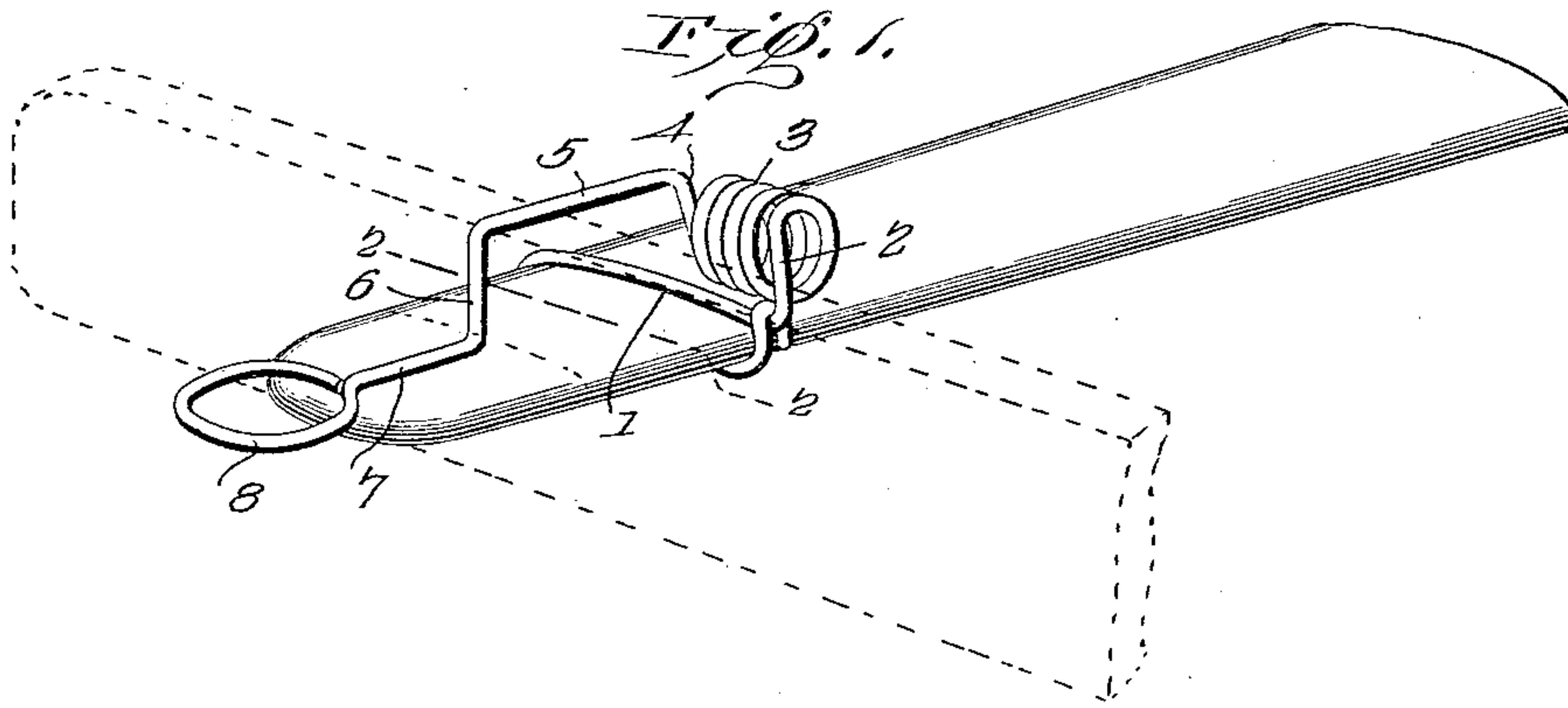


Fig. 2.

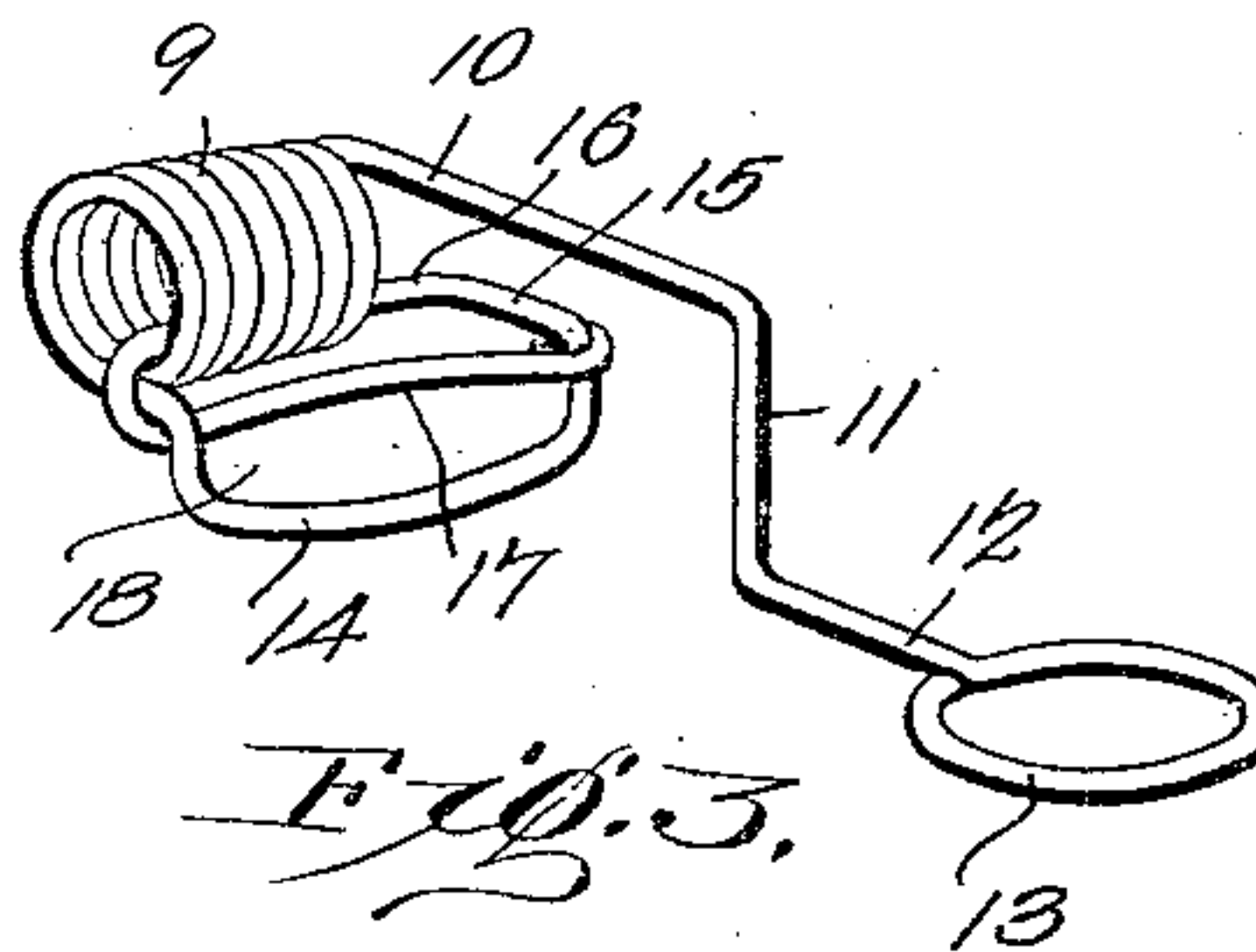


Fig. 3.

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UNITED STATES PATENT OFFICE.

ROBERT ANDERSON DILTS, OF GEORGEVILLE, PENNSYLVANIA.

WHIFFLETREE-HOOK.

SPECIFICATION forming part of Letters Patent No. 713,615, dated November 18, 1902.

Application filed October 14, 1901. Serial No. 78,612. (No model.)

To all whom it may concern:

Be it known that I, ROBERT ANDERSON DILTS, a citizen of the United States, residing at Georgeville, in the county of Indiana and State of Pennsylvania, have invented a new and useful Whiffletree-Hook, of which the following is a specification.

This invention relates to a whiffletree-hook or means for holding a trace; and the object of the same is to provide a simple and effective device of this class of a strong and durable nature and whereby a trace end may be expeditiously secured to or detached from a whiffletree or singletree end or extremity, the improved device being of such structural arrangement that it can be applied to the end of a whiffletree or singletree without the use of penetrating fastening means, and thereby prevent mutilation and weakening of the whiffletree or singletree end and also facilitate the application of the improved device.

The invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of a portion of a whiffletree or singletree end, showing the improved form of the holder applied thereto and also illustrating a portion of a trace in dotted lines. Fig. 2 is a transverse vertical section on the line 2 2, Fig. 1. Fig. 3 is a detail perspective view of a modified form of the holder.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

Both forms of the improved hook or holder are constructed of resilient wire of suitable gage, which may be nicked or otherwise plated, and the preferred form of the device (shown by Figs. 1 and 2) comprises a securing-loop 1, which is slipped over the end or extremity of the whiffletree or singletree and is firmly held in place by frictionally binding on the latter. From the upper member of the loop 1 the wire is projected to form a vertical arm 2, from which a transversely-extending coil 3 continues, the arm 2 connecting with the top portion of the coil. From the opposite end of the coil and starting from the bottom of the latter an arm 4 extends upwardly and outwardly and consti-

tutes the inner member of an upstruck offset or keeper 5, comprising also an outward angular drop 6, which occupies a vertical position in relation to the whiffletree or singletree end when the improved device is closed, a horizontal arm 7 continuing longitudinally outward from the lower terminal of the angular drop 6 and terminating in an eye or loop 8, by which the keeper may be raised in the operation of releasing or applying the trace end to the whiffletree or singletree. The keeper, comprising the arm 4, drop 6, and horizontal arm 7, terminating in the eye or loop 8, provides a catch, which is normally held closed in relation to the whiffletree or singletree extremity by the resilient action of the coil 3, the said coil having sufficient spring tension to forcefully retain the said catch in closed condition and prevent the trace end from becoming accidentally withdrawn from the whiffletree or singletree end. When the catch is in locking condition relatively to the trace end, the outer side of the latter above the plane of the whiffletree or singletree extremity lies close to or bears upon the inner portion of the angular drop 6 of the keeper 5, and the top portion of the said keeper is clear of the upper edge of the trace end. Moreover, the angular drop 6 is at such a distance from the coil 3 that the pressure of the trace end thereon will not have a tendency to pull upwardly on the catch as an entirety, and the horizontal arm 7 will thus always be firmly and reliably held in contact with the upper side of the outer extremity or end of the whiffletree or singletree, the eye or loop 8 being projected outwardly from the terminal of the whiffletree or singletree far enough to be always in convenient position for manual engagement and operation. It will also be seen that when the catch is raised to apply or release the trace end the coil 3 is operated in such manner that the members thereof will move in an inward direction, and through the arm 2 the loop 1 will have an indrawing pressure exerted thereon, which will tend to secure said loop more firmly to the whiffletree or singletree end, and thereby the said loop will be prevented from working loose by the operation of the catch.

The form of the device shown by Fig. 3 includes a coil 9, having an arm 10 extending

horizontally outward from the upper portion thereof and provided with a vertical drop 11 at a distance from the coil, and from the lower portion of the drop projects a short
5 horizontal arm 12, terminating in an outer eye or loop 13, the arm 10, drop 11, arm 12, and eye or loop 13 constituting the catch in this instance, and the drop 11 acting to retain the trace end in place on the whiffletree
10 or singletree in the same manner as the drop 6, heretofore explained. In this instance also the securing means for the improved device is varied and consists in projecting the wire from the lower portion of the coil at the end
15 opposite that from which the catch extends outwardly a short distance and then bending the same downwardly, as at 14, and at the opposite extremity upwardly and rearwardly, as at 15, and then passing the wire through
20 the coil, as at 16, and under the initially forwardly bent portion of the wire, and then returning the latter across to the rearward bend 15, as at 17, to form a loop 18, which is slipped over the end of the whiffletree or singletree in the same manner as the loop 1, heretofore described.

The improved device in its two forms is simple and effective in its construction and operation, and in applying the same it is unnecessary to prepare or mutilate the whiffletree or singletree end, as no penetrating fastenings are used. It will also be seen that
30 the improved device may be applied to any

whiffletree or singletree end, and a difference in the contour of the cross-sectional plane of the whiffletree or singletree may be accommodated by correspondingly changing the form of either of the loops of the two devices shown. It will also be observed that the improved device in its two forms is constructed
40 from a single piece of wire, thus not only producing a stronger article, but materially reducing the cost of manufacture.

It will be understood that the variation in the form of the device as shown by Fig. 3
45 will convey the intention to further change the form or shape, dimensions, proportions, and minor details without departing from the principle of the invention.

Having thus described the invention, what
50 is claimed as new is—

A trace-fastener made of a single piece of spring-wire, bent to form a loop to receive and frictionally engage a whiffletree, a spring-coil formed at one end of the loop, on the upper side thereof, and an outwardly-extending
55 arm, to bear on the whiffletree, said arm having an offset to clear and retain the trace on the whiffletree, substantially as described.

In testimony that I claim the foregoing as
60 my own I have hereto affixed my signature in the presence of two witnesses.

ROBERT ANDERSON DILTS.

Witnesses:

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B. SCHNEIDER.