

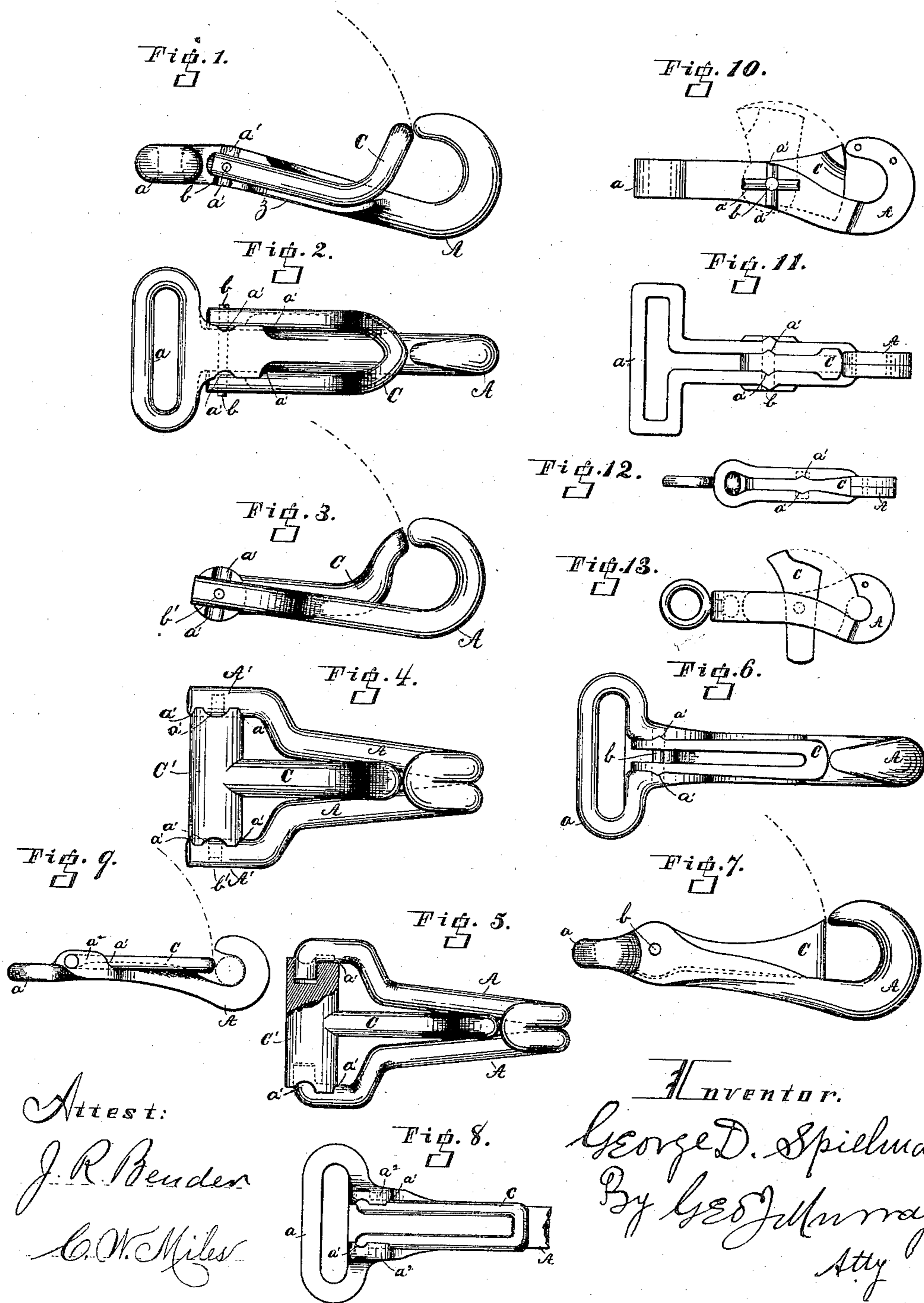
(No Model.)

G. D. SPIELMAN.

SNAP HOOK.

No. 330,437.

Patented Nov. 17, 1885.



UNITED STATES PATENT OFFICE.

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SNAP-HOOK.

SPECIFICATION forming part of Letters Patent No. 330,437, dated November 17, 1885.

Application filed June 1, 1885. Serial No. 167,178. (No model.)

To all whom it may concern:

Be it known that I, GEORGE D. SPIELMAN, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Snap-Hooks, of which the following is a specification.

My invention relates to snap hooks. Its object is to provide a hook with an outwardly-opening spring-snap that requires but little fitting and is not liable to get out of order.

The invention consists in providing the adjacent edges of the pivoted parts with radial grooves upon one and radial projections upon the other to match into said grooves, one of the parts, either the hook or latch, being made of metal having sufficient spring to permit the latch to be turned around upon its journal.

It consists, also, in certain details of construction and combination of parts, all of which will be fully described in connection with the accompanying drawings, in which—

Figure 1 is a side, and Fig. 2 a front, elevation of one form of my invention. Fig. 3 is a side, and Fig. 4 a front, elevation of another form; and Fig. 5 is a front elevation, partly in section, of another form. Fig. 6 is a front, and Fig. 7 a side, elevation of another modification. Fig. 8 is a front elevation, with the hook portion broken away, of the preferred form of my invention. Fig. 9 is a side elevation of the same. Fig. 10 is a side elevation, and Fig. 11 a front elevation, of a form of hook in which the body is stamped out of a flat metal plate, and afterward bent around to the form desired and the opposite sides riveted together. Fig. 12 is a front, and Fig. 13 a side, elevation similarly constructed.

In Figs. 1 and 2 the hooked part A is preferably made of cast metal. The part just above the loop *a* is transversely perforated to receive a journal-pin, *b*. From this opening each side has radial grooves *a'*, of which there are four in the shape of a cross. The latch C is a piece of spring-wire bent around to the shape shown. The legs of the latch are perforated near the ends to receive the pivot-pin *b*, which passes through both of them and through the body of the hooked part. The feet of the latch are brought rather closer together than shown, so that a little force is required to

separate them sufficient to receive between them the shoulder of the hooked part A. The pivot-pin may be rigidly fastened in the part A, or the ends may be left projecting beyond the latch and headed over, leaving play sufficient to permit the legs to spread when the latch is thrown around, and to snap into the vertical groove *a'* and pass back to the horizontal grooves in the closed position, as shown in the drawings.

In Figs. 3 and 4 the hooked part A is made of spring-wire and the latch C of cast metal. This latch projects centrally from a shaft, C'. The ends of this shaft have journal-pins *b'* projecting axially from its ends, and the grooves *a'* radiating from these pins to the periphery. The legs A' of this form of hook are perforated to receive the journal-pins on the ends of the part C', and the parts are united by springing the legs apart and inserting the latch-piece in place, as shown.

The form shown in Fig. 5 differs from the form shown in Figs. 3 and 4, in that the end of the part C' is bored and the legs of the part A are bent in at a right angle to form the journals or pivots upon which the latch turns. In this form there are but two grooves in the end of the piece C', and for strength the bore for the pivots is nearer to the side opposite the latch.

In Figs. 6 and 7 the hooked part above the loop *a* is slotted longitudinally, leaving upwardly-projecting lugs or bosses to form the pivot-bearing for the latch. This latch is first stamped out from a straight piece of steel, its ends being rounded and perforated. It has also around the perforations radial V-shaped projections which are stamped or forged up, after which the piece is doubled around, as shown in Fig. 6. The pin *b* passes through the boss and joins the parts together. The inside of the bosses have radial V-shaped grooves, which are counter to the radial projections of the latch.

In the preferred form shown in Fig. 8 the hooked part A is preferably made of cast malleable metal. It has upwardly-projecting lugs *a'* upon opposite sides of the center. These have on the inside two circular grooves radiating from transverse perforations in the lugs. The latch in this case is a piece of spring-wire bent to the shape shown in Fig. 8, and the legs

bent outwardly at right angles to form pivots for the latch. In this case it will be seen that there is no fitting of the parts, except to force the spring-legs together, slip the latch in between the lugs a^2 , and release the legs. In the position shown the legs, resting in the longitudinal grooves of the lugs a^2 , retain the latch closed, and when the latch is thrown out at right angles to the body of the hook the lower portions of the legs will snap into the grooves, passing from the front of the hook down to the pivot-bearing and retaining it in the open position.

In the modifications shown in Figs. 10 to 13, inclusive, which are intended for personal wear—such as satchel-hooks, watch-guards, &c.—the body of the hook is stamped out of sheet metal by suitable dies. The projections and grooves, which lock the latch in either the open or closed position, are struck in the dies, which cut the parts to the proper outline. The latches are inserted after the body of the hook has been bent around, either before or after the hook end has been soldered or riveted together, the opposite sides being sprung apart for this purpose. In the form shown in Figs. 10 and 11 the latch is pivoted on a pin passed through the hook part and latch, as shown in dotted line, Fig. 11. In Figs. 12 and 13 the pivot-pin is in the latch, and does not extend to the outside of the body, as shown in dotted line, Fig. 12.

It will be observed that when the latch or

body is made of spring-wire the wire itself forms the projections which lock in the radial grooves that hold the latch in position, while in the flat forms of latch or body the projections and grooves are formed on or in the abutting surfaces.

It is evident that the groove or grooves which lock the latch in the open position may be omitted and the inclined sides of the grooves which hold the latch closed extended. In this case the latch would so soon as released snap into the closed position.

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

1. The combination, substantially as specified, in a snap-hook, of the body A and latch C, united by pivot b , one of the said parts—either the body or latch—having grooves radial to the pivot-bearing, said grooves being the counterpart of the abutting surfaces of the other part, for the purpose set forth.

2. The combination, substantially as specified, of the body having the radial grooved lugs a^2 , and the latch formed of spring-wire and having its ends bent at a right angle to the shaft of the latch to enter perforations or depressions in said lugs, thereby pivoting the latch to the body.

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Attest:

W. C. SPIELMAN,
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