

(No Model.)

H. McPHERSON.  
SNAP HOOK.

No. 407,545.

Patented July 23, 1889.

FIG. 1.

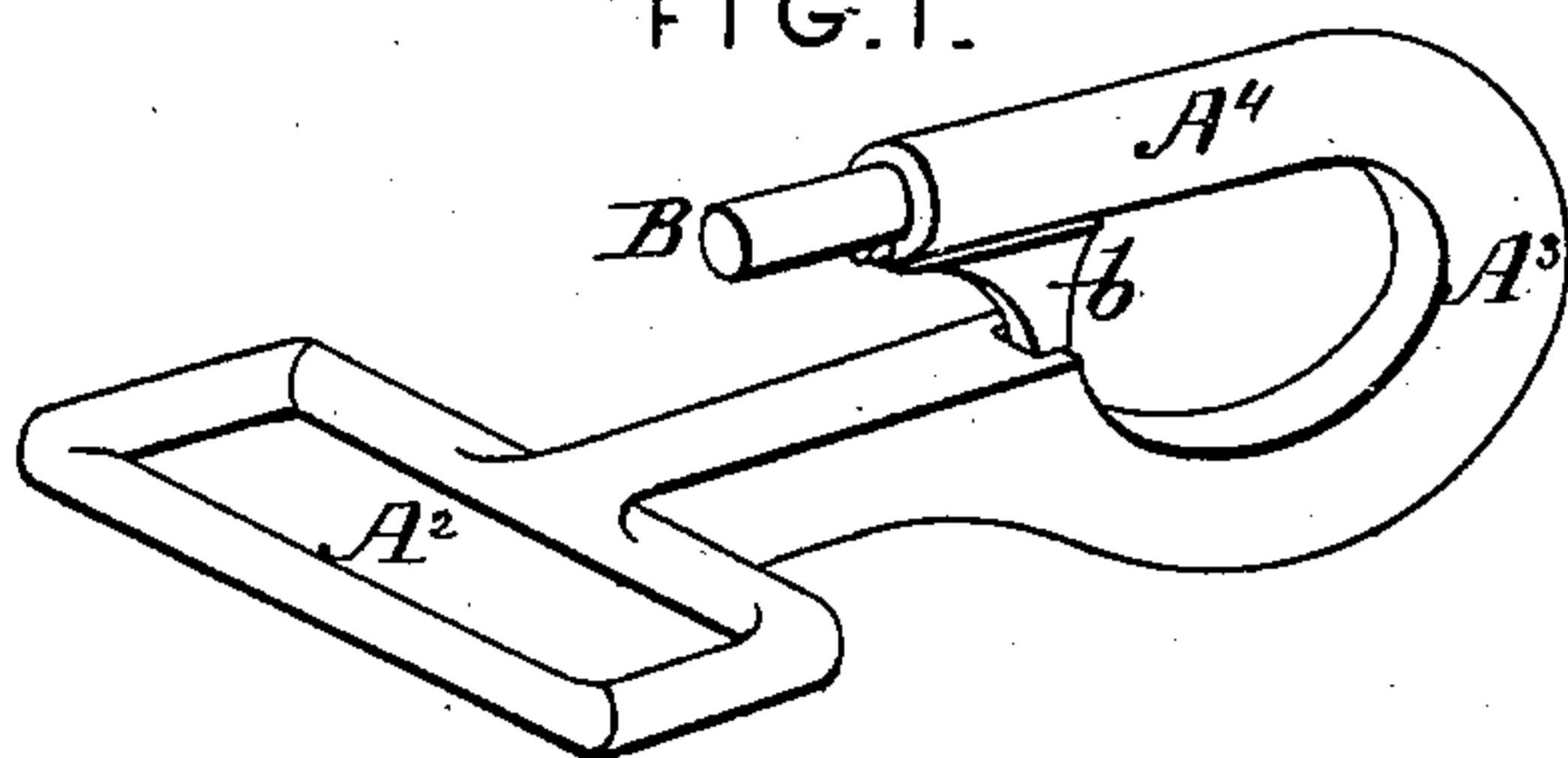


FIG. 2.

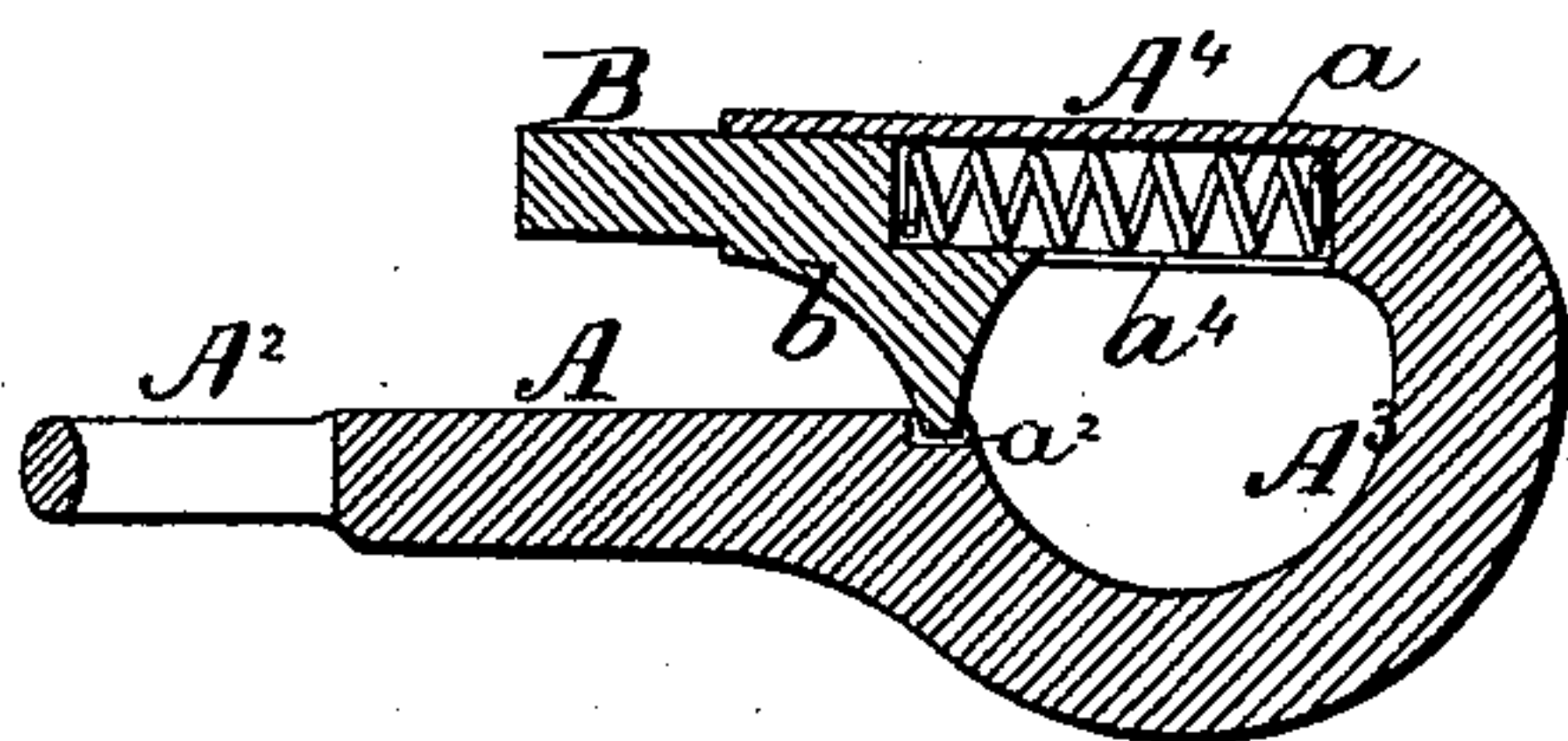


FIG. 3.

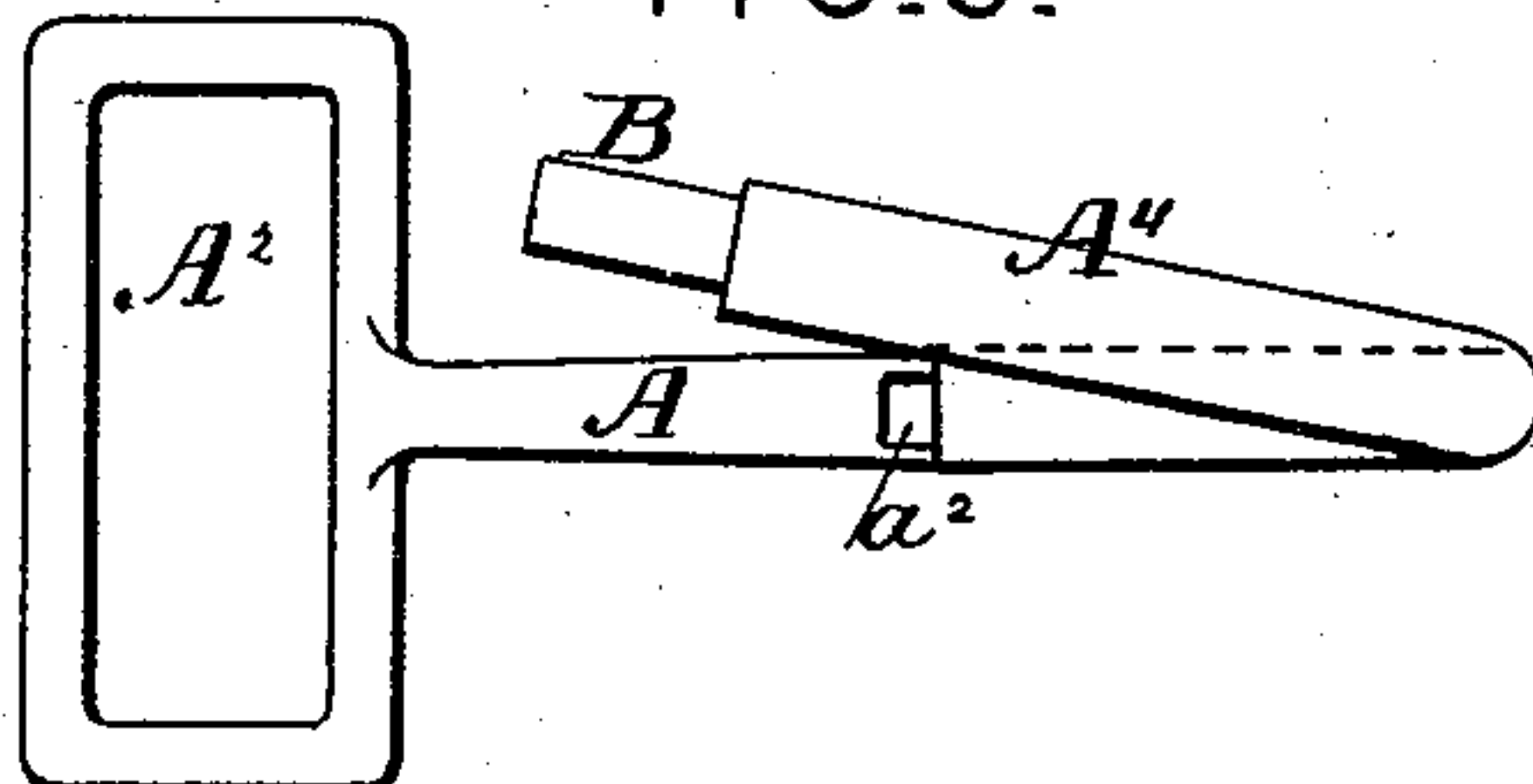


FIG. 4.

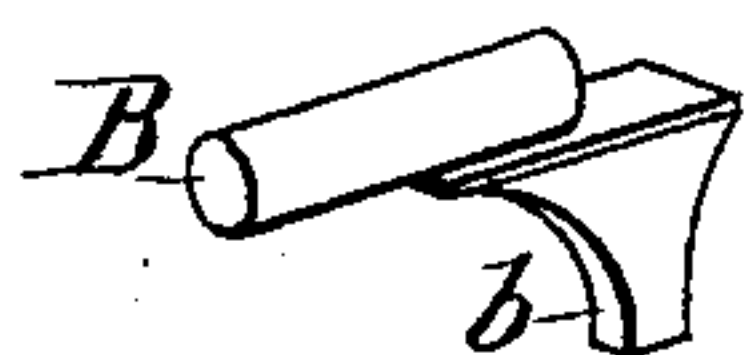
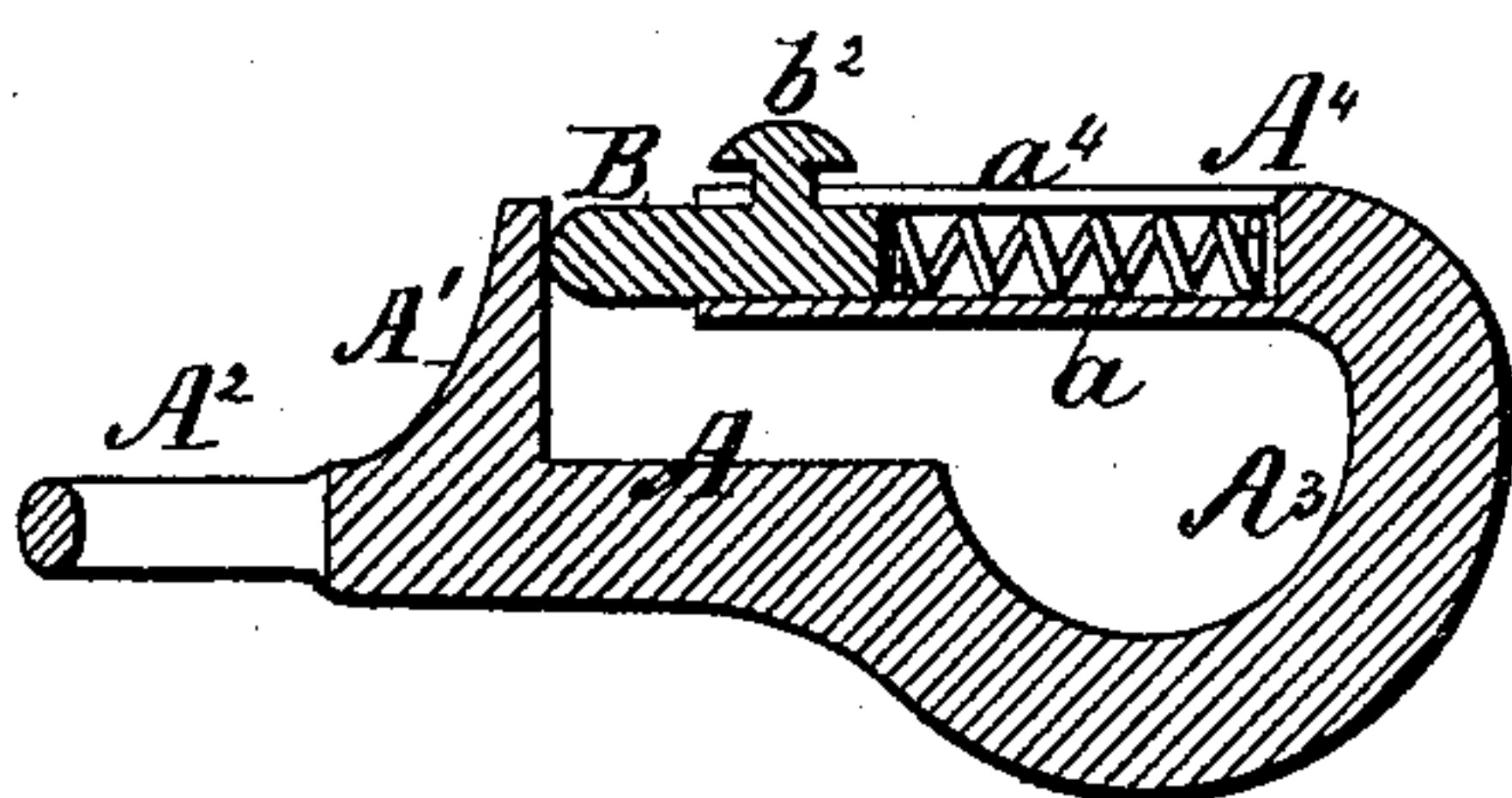


FIG. 5.



FIG. 6.



ATTEST-

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# UNITED STATES PATENT OFFICE.

HENRY MCPHERSON, OF TROY, NEW YORK, ASSIGNOR TO JAY WILLARD  
CLARK, OF SAME PLACE.

## SNAP-HOOK.

SPECIFICATION forming part of Letters Patent No. 407,545, dated July 23, 1889.

Application filed March 1, 1889. Serial No. 301,610. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY MCPHERSON, a citizen of the United States of America, residing at Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Snap-Hooks, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain improvements in snap-hooks, such as may be employed to connect various parts of a harness and for other purposes where it is necessary to have an easy means for connecting and disconnecting parts; and the objects of my improvements are to produce a simple and inexpensive snap-hook having a spring-bolt in the hooked or free-end portion thereof, to dispense with any grooving or weakening mutilation of the body and curved portion of the snap-hook. I attain these objects by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a snap-hook constructed in accordance with my invention. Fig. 2 is a longitudinal section of the same. Fig. 3 is a top view of the same with the hooked end bent to one side to facilitate the introduction of the bolt. Fig. 4 is a perspective view of the bolt shown in the above-described figures. Fig. 5 is a transverse section through the grooved hook portion as cast to dispense with coring said portion. Fig. 6 is a longitudinal section of a modification of the snap-hook.

In the accompanying drawings, A represents the body of the snap-hook, having at one end the loop  $A^2$ , either round, rectangular, or of any suitable form for the purpose intended, and at the other end the bent portion  $A^3$ , against which the main pressure is generally made to bear, said bent portion carrying the hooked or free-end portion  $A^4$  thereof. This free end is tubular and slotted longitudinally at  $a^4$ , and within said slotted

tube is placed a coiled spring  $a$  and a bolt B. Said bolt is cylindrical, and, under the impulse of the spring  $a$ , extends beyond the extremity of the free end  $A^4$ . The bolt B in Figs. 1, 2, 3, and 4 is provided with a lateral lug  $b$ , and is thereby made to bear against or engage with the body of the snap-hook. A small groove  $a^2$  is made in the body A to facilitate said engagement. To facilitate the introduction of the spring and bolt within the end  $A^4$ , said end is bent, as usual, to one side, as shown in Fig. 3, at the time it is cast; but said end is afterward straightened out parallel with the body, as shown in Fig. 1. To facilitate also the casting of the hollow part  $A^4$  without using any core, said part is first cast trough shape, as shown in Fig. 5, and afterward the lips of said trough are bent over until they nearly meet, but maintain the groove  $a^4$ . To open the snap-hook for the passage in or out of a ring or other part of a harness, the operator simply presses upon the end of the bolt.

In Fig. 6 the main feature of novelty—viz., the spring-bolt in the free end of the snap-hook—is retained; but it is the front end of the bolt that abuts against a lug  $A'$ , projecting from the inner side of the body of the hook, and said bolt B has a side button  $b^2$  to facilitate its retraction.

Having now fully described my invention, I claim—

A snap-hook having a solid body and bent portion and its free end tubular and longitudinally slotted, in combination with a solid bolt and a lug to arrest said bolt, and a spring within said free end, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY MCPHERSON.

Witnesses:

THOMAS GALVIN,

FREDERICK A. CHEW.