

UNITED STATES PATENT OFFICE.

HERMAN RUDOLPH MEILICKE, OF DUNDURN, CANADA.

SNAP-HOOK.

SPECIFICATION forming part of Letters Patent No. 747,745, dated December 22, 1903.

Application filed September 5, 1903. Serial No. 172,088. (No model.)

To all whom it may concern:

Be it known that I, HERMAN RUDOLPH MEILICKE, a citizen of the United States, and a resident of Dundurn, in the Province of Assiniboia, North-West Territories, Dominion of Canada, have invented a new and Improved Snap-Hook, of which the following is a full, clear, and exact description.

This invention relates to snap-hooks used for connecting parts of harness, and more particularly for the connection of a halter-strap with the bridle-bit or with a ring on a hitching-post or the like, and has for its object to provide novel details of construction for a snap-hook which afford a neat, simple, convenient, and perfectly safe device that may be employed for connection of bridles, reins, or halters to the driving-bit or for any other purpose where it may be availably used as a detachable connecting-hook.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the improved snap-hook, showing the closing-block in opened adjustment. Fig. 2 is a partly-sectional side view of the same, showing the closing-block in closed condition. Fig. 3 is a reversed plan view of the device having a portion of the body removed exposing working parts; and Fig. 4 is a view similar to that shown in Fig. 3, with the exception that the operative details are differently adjusted.

The body portion 5 of the improved snap-hook is preferably in the form of an elongated rectangular piece of suitable metal having a loop 5^a formed or secured on one end, which affords means for connecting a strap end therewith in a secure manner.

At the opposite end of the body 5 is formed a hook member 6, preferably shaped as shown in Fig. 1, so as to dispose the bow *a* of the hook essentially in the same plane with the longitudinal center line of the hook-body. The hook-nose 6^a has proper clearance from the opposed side of the hook, and in the latter, which may be laterally thickened some-

what to afford necessary strength, a slot *b* is formed longitudinally, said slot extending from the junction of the hook 6 with the body 5 to a point near the bow *a*. A hook-closer 7 is provided that consists of a flat block loosely fitted into the slot *b*. The edge *c* of the closing-block 7 nearest to the bow and nose of the hook when the parts are assembled for service is concaved a proper degree, and the opposite edge *c'* of the block is rendered convex.

The concave and convex edges of the closing-block 7 are converged toward one end of the same, thus producing an ear 7^a, that is reduced in thickness one-half from its free end inwardly at one side thereof, and near the extremity of said ear a transverse perforation is formed therethrough which is adapted to loosely receive the body of a pivot *d*, that passes through and is fixed in a transverse perforation in the thinned wall of the ear.

Upon the pivot *d* a coiled spring 8 is mounted, one end of said spring having contact with the forward end of the slot *b*, its remaining spring member, that projects away from the one first mentioned, having a bearing on the sloped wall *e*, that terminates the thinned ear 7^a and affords a shoulder where said ear merges into the closing-block body.

The engagement of the ends of the spring 8 with the end of the slot *b* and the wall or shoulder *e* below the pivot *d* causes the closing-block 7 to rock toward the end of the hook-nose 6^a and contact therewith, and on said end a thinned toe *g* is formed that enters a corresponding socket or cavity *g'*, formed in the concave edge of the block 7 near its normal upper edge, thus closing the opening of the hook 6.

The convex edge *c'* of the closing-block 7 extends toward and near the rear end wall of the slot *b*, and, as shown in Fig. 2, the divergence of the edges *c c'* toward the upper end of the closing-block affords considerable width, and the defining edge *c''* of said upper end is convexed, forming the arc of a circle that has its center in the pivot *d*, so that the closing-block may be rocked downward against the stress of the spring 8 when the hook is to be opened.

A longitudinal slot *h* is formed in the body 5 of the snap-hook at right angles to the slot

6 and extending therefrom toward the loop 5^a, cutting through the rear end wall of the slot *b* and through the opposite sides of the body 5. In the slot *h* two locking-arms 9 of like form are inserted, these arms being lapped together between their ends and pivoted where they lap upon each other, and their pivot *i*, passing through the upper and lower walls of the slot *h*, is secured therein, so that the arms are held free to rock in the slot *h* toward and from each other. The ends 9^a of the arms 9, which project toward the closing-block 7, are preferably reduced on their adjacent sides, as shown in Figs. 3 and 4, thus providing jaws that may be spread apart and applied upon the sides of the closing-block 7 near the convex edge *c'* by compressing toward each other the opposite ends 9^b of the arms, as shown in Fig. 4.

Between the members 9^b a spring 10 is introduced, which may be essentially U-shaped, as shown, the normal expansion of the spring causing the jaws to nearly close and the members 9^a of the locking-arms 9 to have contact with each other, as shown in Fig. 3. To enable the compression of the members 9^b toward each other, cupped cavities *n* may be formed at the rear end of the slot *h* on each side of the body 5, so that finger-and-thumb pressure may be conveniently applied in said cavities for closure of the arms at their rear ends. The forward ends 9^a of the locking-arms 9 approach closely to the convex edge *c'* of the closing-block 7, and when said members are in contact they are adapted to prevent the closing-block from receiving downward rocking movement, as the portion of said block that is disposed above the arm members 9^a will impinge thereon.

It will be evident from the illustration and description of details that the closing-block 7 will be rocked upward so as to normally close the gap between the hook-nose 6^a and the opposite edge of the hook 6, the toe *g*, that enters the socket *g'*, serving to prevent a lateral displacement of the closing-block.

When the snap-hook is to be engaged with a ring, staple, or the like, the members 9^b of the locking-arms 9 are pressed toward each other, which will spread apart the forward ends 9^a of said arms, so that their jaws may engage the sides of the closing-block near its convex edge *c'*, which will remove said jaws from the path of the closing-block and permit it to receive downward rocking movement.

It will be seen in Fig. 2 that the corner *o* on the closing-block 7 projects somewhat above the hook-nose 6^a when the closing-block is in engagement therewith, and thus affords an offset whereon the edge of a ring or a staple may be impinged, so as to conveniently depress the block 7 when the snap-hook is to be engaged with such an object, it being under-

stood that in this case the members 9^b of the locking-arms 9 are compressed together, so as to permit the closing-block to rock downward.

When the closing-block 7 has been depressed sufficiently to permit an entrance of a ring or the like within the bow of the snap-hook, pressure on the members 9^b of the arms 9 may be relaxed, which will permit the closing-block to be rocked upward by stress of the spring 8 into interlocking engagement with the hook-nose 6^a, and as the members 9^a of the arms 9 will instantly rock into closed condition their free ends will be disposed in the path of the closing-block, so as to prevent its downward rocking movement until the arms are again compressed at their ends 9^b.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A snap-hook comprising an elongated body, a loop at one end of the body, a hook on the other end of said body and having a thin nose, said hook also having vertical longitudinal slot therein and the body a lateral longitudinal slot that intersects the vertical slot at one end, a spring-pressed closing-block occupying the slot in the hook, said block having a concave edge near the hook, and also having a socket in said edge near its upper end and adapted to receive the hook-nose, an opposite convex edge on the closing-block, said edges converging from a wide upper end toward the opposite end, said narrow end being pivoted in the slot of the hook, and a locking device pivoted in the slot in the body, said device being adapted to hold the closing-block in contact with the hook-nose when disposed in its path.

2. In a snap-hook, the combination with an elongated body, a loop on one end of the body, a hook on the other end of the body, said hook having a vertical longitudinal slot, a closing-block pivoted in the slot so as to rock toward and from the hook-nose, and a coiled spring mounted on the pivot of the block and adapted to press said closing-block toward the hook, of duplicate spring-pressed locking-arms pivoted in a longitudinal slot formed in the hook-body, said arms normally crossing the path of the closing-block, so as to hold it in contact with the hook-nose, until the arms and spring are compressed so as to spread their ends which have contact with said closing-block.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HERMAN RUDOLPH MEILICKE.

Witnesses:

H. E. MEILICKE,
F. A. BLAIN.