A. C. GRUNWALD.

HOOK STRUCTURE.

APPLICATION FILED MAY 20, 1914.

1,201,175. Patented Oct. 10, 1916.

Fig. 1.

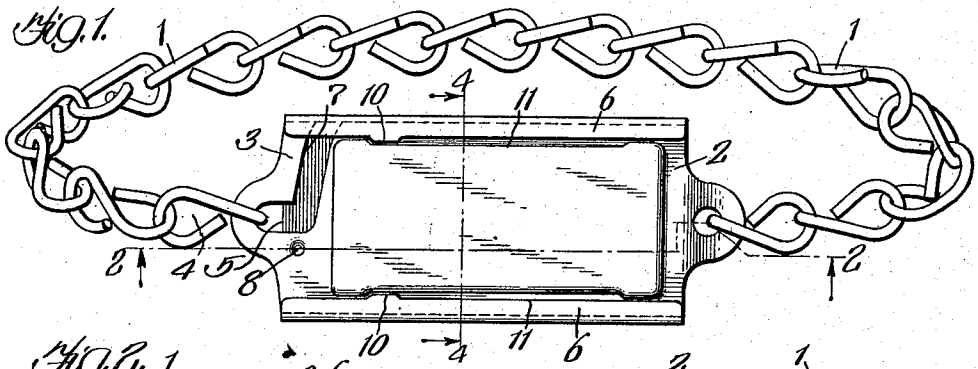


Fig. 2.

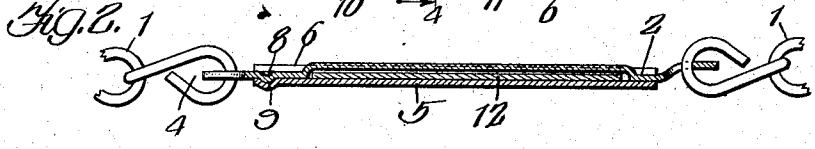


Fig. 4.

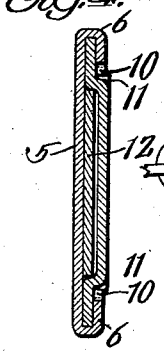


Fig. 3.

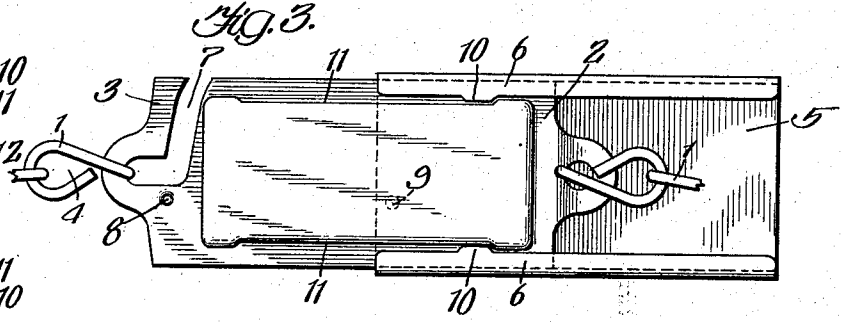


Fig. 5.

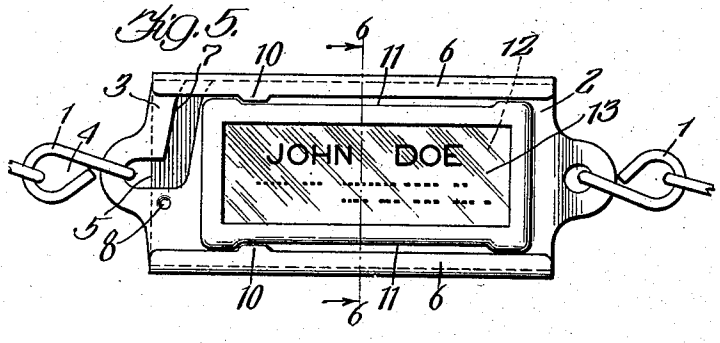
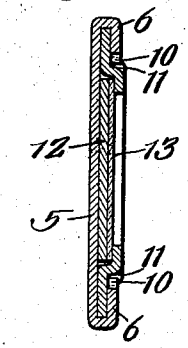


Fig. 6.



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UNITED STATES PATENT OFFICE.

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HOOK STRUCTURE.

1,201,175. Specification of Letters Patent. Patented Oct. 10, 1916.

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To all whom it may concern:

Be it known that I, ALBERT C. GRUNWALD, citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Hook Structures, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to hook structures and comprises a plate which carries a hook and a second plate with which the former plate is in sliding engagement, the second plate carrying a closure for the hook opening which is brought into and out of hook closing position by suitable relative sliding movement of the plate.

In the preferred embodiment of the invention the hook opening is at one side of the hook carrying plate, the other plate carrying a closure which is opposite and closely adjacent to the side of the first plate where the hook opening is located.

The invention finds a very useful embodiment in a key retainer or other loop structure and when thus embodied the hook carrying plate constitutes one end of the loop, the other end of the loop having an opening through which the hook may pass whereby the loop is closed, the loop being locked closed when the hook closure is brought into position to close the hook opening.

I will explain my invention more fully by reference to the accompanying drawing showing the preferred embodiment thereof on a scale larger than actual size and in which—

Figure 1 is a view illustrating the invention as embodied in a key retainer, the key retaining loop being closed; Fig. 2 is a sectional view on line 2 2 of Fig. 1; Fig. 3 shows the relative positions of the plates which permit the loop to be closed or opened; Fig. 4 is a sectional view on line 4 4 of Fig. 1; Fig. 5 is a view illustrating a modification; and Fig. 6 is a sectional view on line 6 6 of Fig. 5.

Like parts are indicated by similar characters of reference throughout the different figures.

The loop illustrated includes a flexible member 1 that is desirably in the form of a chain, this loop also including a plate 2 that is in permanent connection at one end with one end of the chain. The other end of the plate 2 is provided with a hook 3 adapted to pass through the link 4 at the other end of the chain and from which link the hook may be withdrawn whereby the loop may be opened and closed. The plate 2 is in sliding relation with a second plate 5, one of these plates—preferably the plate 5—having its longitudinal margins overturned as indicated at 6 to constitute longitudinal guideways for receiving the longitudinal marginal portions of the plate 2 whereby the plates 2 and 5 are limited to sliding movement longitudinally of each other. As the invention is embodied one of the overturned marginal portions 6 of the plate 5 also constitutes a closure for the opening 7 of the hook 3, the hook opening being closed when the plate 2 is almost entirely superimposed upon the plate 5 and when the plates occupy this relative position (indicated in Fig. 1) the loop is closed.

The accidental opening of the loop is guarded against by a slight protuberance 8 formed in the plate 2 that is received in a corresponding cavity 9 in the plate 5 when the plates are in the relative positions illustrated in Fig. 1, the plates 2 and 5 permitting of the separation of the portions 8 and 9 owing to the resilience of these plates which are made of springy metal. The plates are maintained in assembly throughout their range of relative movement by insetting lugs 10 upon the longitudinal marginal portions of plate 5 and recesses 11 formed in the plate 2 and which receive said lugs. It will be observed that the plate 5 does not have to withstand any of the strain that may be imposed upon the loop, its function as far as the device has been specifically described in connection with the accompanying drawing being merely that of opening and closing the hook opening.

In the preferred embodiment of the invention one of the plates, preferably the plate 2, is of dish formation to receive a card 12, which may be an identification card, and in the preferred embodiment of the invention the dish cavity in the plate 2 bulges away from the plate 5 whereby the plate 5 constitutes a cover for the dish to insure the retention of the card 12 therein. The broad exposed surfaces afforded by the plates 2 and 5 may also support suitable advertis-

ing matter, though it is to be understood that the device of my invention is not to be restricted to use as an advertising device.

The form of the invention illustrated in Figs. 5 and 6 is generally similar to the form of the invention illustrated in Figs. 1 to 4 inclusive and like parts are given similar characters of reference. In the form of the invention illustrated in Fig. 5 however the plate 2 includes a transparent section 13, such as celluloid, attached to the balance of the plate and through which the card 12 may be read whereas in the form of the invention illustrated in Figs. 1 to 4 inclusive, the card 12 is normally concealed.

While I have herein shown and particularly described the preferred embodiment of my invention I do not wish to be limited to the precise details of construction shown as changes may readily be made without departing from the spirit of my invention, but

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

The combination with a plate carrying a hook whose entrance is at an end of the plate; of a second plate with which the former plate is in sliding engagement, the second plate carrying a closure for the hook opening which is brought into and out of hook closing position by suitable relative sliding movement of the plates, the second plate terminating in longitudinal marginal portions that overlie longitudinal marginal portions of the first plate and permitting the exposure of the first plate between the marginal portions of the second plate, the longitudinal marginal portions of both plates having interengaging formations, two upon one longitudinal marginal portion of one plate and one upon the adjacent longitudinal marginal portion of the other plate and located between the former formations for limiting the relative movement of the plates in both directions.

In witness whereof, I hereunto subscribe my name this twenty-fourth day of April, A. D. 1914.

ALBERT C. GRUNWALD.

Witnesses:

G. L. CRAGG,

ETTA L. WHITE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."