W. R. RITTENHOUSE.

LINK.

APPLICATION FILED JUNE 6, 1914.

1,114,289. Patented Oct. 20, 1914.

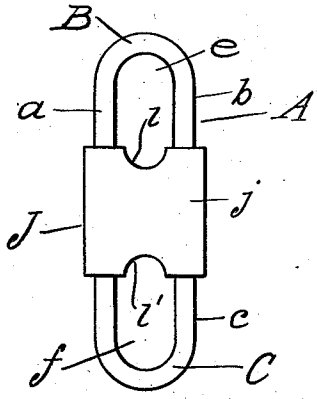


Fig. 1.

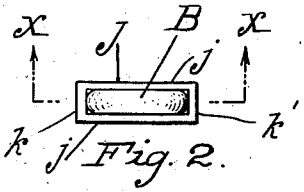


Fig. 2.

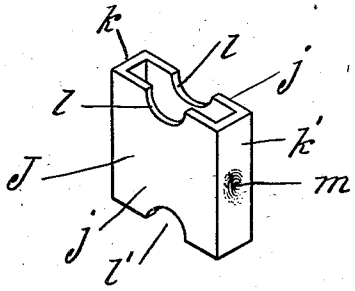


Fig. 3.

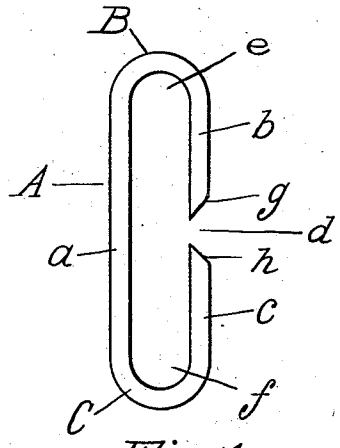


Fig. 4.

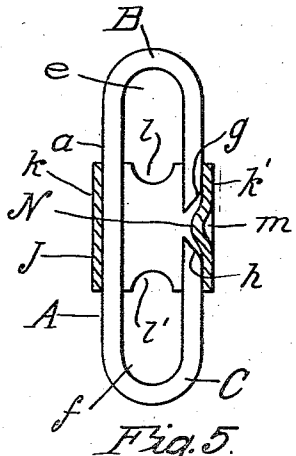


Fig. 5.

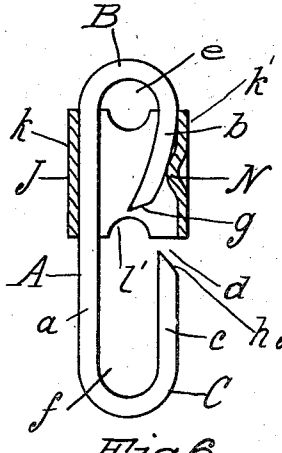


Fig. 6.

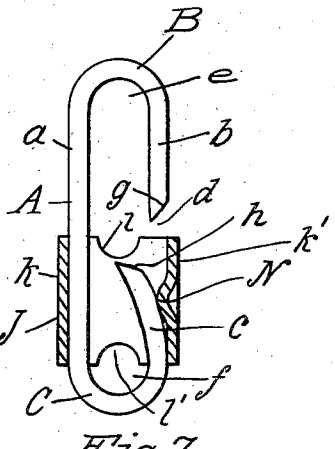


Fig. 7.

Witnesses.

Albert G. Pingenkowski.

Fred C. Anderson

Inventor.

William R. Rittenhouse

By Horatio E. Bellows

Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM R. RITTENHOUSE, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR OF ONE-HALF TO IRVING H. CRANSTON, OF PROVIDENCE, RHODE ISLAND.

LINK.

1,114,289. Specification of Letters Patent. Patented Oct. 20, 1914.

Application filed June 6, 1914. Serial No. 843,564.

To all whom it may concern:

Be it known that I, WILLIAM R. RITTENHOUSE, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Links, of which the following is a specification.

My invention relates to a locking link adapted for fastening or connecting other links, or a watch bow and link, a locket ring and link, or any other two articles.

The essential objects of my invention are to provide in a locking link means adapted for the engagement and disengagement of two articles at opposite ends of the link without the necessity of the complete withdrawal of the locking element from the link body; to make the escape of the locking element from the link body impossible; to afford a selectively varying size of engagement opening at each end of the body, so that articles of varying magnitude may be engaged in each end; and to attain these enumerated results in a structure which is inexpensive, strong, and simple to operate.

To the above ends my invention consists in such parts and combinations of parts as fall within the scope of the appended claims.

In the accompanying drawings which form a part of this specification, Figures 1 and 2 are side and plan elevations respectively of my novel link, Fig. 3, a perspective view of the sleeve member, Fig. 4, a side elevation of the body member, and Fig. 5, a section on line x, x, of Fig. 2 showing the sleeve in locked position, Fig. 6, a similar section showing the sleeve engaging one end of the body, and Fig. 7, a similar section showing the sleeve engaging the opposite end of the body.

Like reference characters indicate like parts throughout the views.

In detail my device comprises a body member A formed preferably from a length of wire comprising a rod a, having at its ends oppositely disposed semi-circular bends B and C, terminating in resilient arms b and c in alinement with each other and parallel with the rod a. The ends of the arms which are preferably of equal length are spaced from each other as at d. It will be observed that resultant loops e and f are formed at each end of the body by the bends B and C. The extremities of the arms b and c are provided with inwardly disposed bevels or inclined surfaces g and h extending from their outer portions.

A sleeve J is provided, having in the present instance parallel side walls j, and end walls k, k'. The sleeve J embraces the member A and is a sliding fit thereon, one of the sleeve portions k bearing against the rod a, and the other portion k' bearing upon the free ends of the arms b and c. The length of the member J is in excess of the space d. The side walls j of the member J are provided at opposite points in each end with semi-circular cavities l, l'.

The member J is slid in position upon the body A in assembling, and thereafter the center of the portion k' is indented as at m, producing an inwardly directed preferably conical projection N extending into the space d intermediate the ends of the arms. Since the inner diameter of the sleeve between the portions k and k' is substantially the same as the greatest or exterior breadth of the member A, it results that after the indentation at m is made the sleeve is slidable on, but cannot be removed from said member. The movement of the sleeve from this position toward the bend B brings the inclined side of the projection N in contact with the inclined face g of the resilient arm b; and as the sleeve continues its movement the projection rides over and inwardly presses the arm until the sleeve is checked by the gradually increasing frictional pressure exerted between the sleeve, projection, and arm. The distance traversed by the sleeve is sufficient, as shown in Fig. 6, to permit the insertion or removal of an article intermediate the sleeve and the arm c, into or out of the loop f. At the same time the loop e is not covered, so that an article may remain engaged therein during the described manipulation. After the article has been inserted in the loop f the sleeve is returned to its original locked position, shown in Fig. 5.

If after inserting an article in the loop f, as described, it is desired to insert one in the loop e, the sleeve is slid toward the loop C, over the surface h, and the arm e, as shown in Fig. 7.

It will be noted that the complete removal of the sleeve J from the member A is not only unnecessary for the insertion or

removal of articles in both or either loop, but its removal or loss is impossible; further, that the presence of an article in one loop does not interfere with the contemporaneous insertion or removal of an article into or out of the other loop. It will be further noted that this structure is adapted to be operated either by the right or left hand.

What I claim is,—

1. A lock link comprising a rod having loops at the ends and resilient oppositely-directed arms upon the loops, the ends thereof being spaced apart, and a slidable sleeve embracing the rod and adjacent ends of said arms and having a projection upon its inner face adapted to engage said arms.

2. In a lock link, a rod having loops upon its ends and resilient arms upon the loops having their adjacent ends spaced apart and provided with inclined faces, and a sleeve slidably mounted on said rod and overlapping the adjacent ends of said arms and of greater length than the space between the separated ends of said arms, said sleeve being provided with a projection extending into the space between said arms.

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

WILLIAM R. RITTENHOUSE.

Witnesses:
HORATIO E. BELLOWS,
CHARLES S. JENCKES.