

W. ADLER.
 LOCK FOR CONNECTING CHAIN ENDS.
 APPLICATION FILED JAN. 16, 1909.

953,731.

Patented Apr. 5, 1910.

Fig. 1

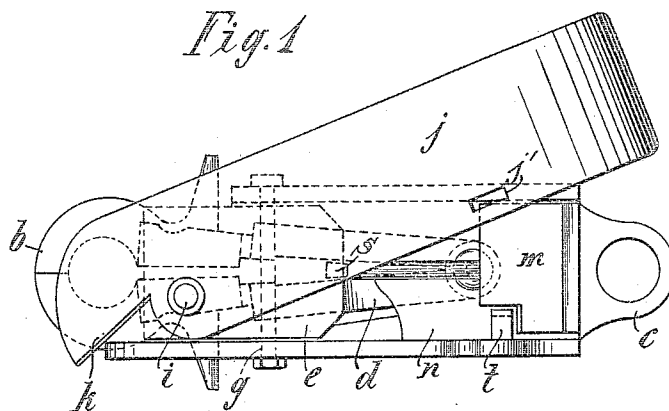


Fig. 2

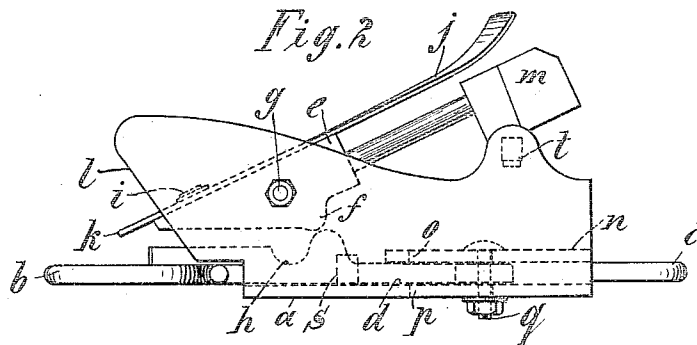


Fig. 3

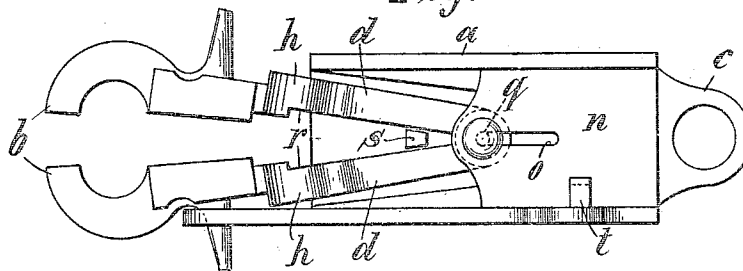
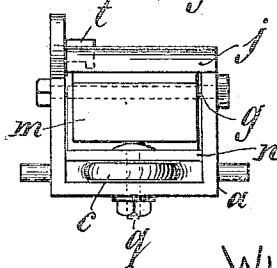


Fig. 4



Witnesses:
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UNITED STATES PATENT OFFICE.

WILHELM ADLER, OF COLOGNE, GERMANY.

LOCK FOR CONNECTING CHAIN ENDS.

953,731.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILHELM ADLER, a citizen of the German Empire, and resident of Cologne, German Empire, have invented certain new and useful Improvements in Locks for Connecting Chain Ends, of which the following is a description.

The present invention comprises a lock for connecting up the ends of chains for securing cattle in the stall or shed or for mooring boats or similar purposes. Its object is to provide a secure attachment, which can be easily and quickly detached.

In the accompanying drawings Figure 1 represents a view of the device seen from underneath, with the locking spring disengaged, but with the chain holding eye still in its closed position. Fig. 2 is a side elevation with the parts in the same position as in Fig. 1. Fig. 3 is a view seen from underneath with the locking spring and lever removed and Fig. 4 is an end view of the device seen from the right hand end of Fig. 3 with the parts locked in position.

The device consists of a housing *a* of U-shaped cross section and having a double top *n* between which and the top proper the two members *d d* of the split eye *b* are mounted on a pivot *g* connecting the same pivotally and adapted to slide in the slots *o* and *p* of the said double top. These members *d d* are provided at their adjacent edges with inclined recesses *r r* tapering toward the pivot *g* and embracing between them a conically shaped stud *s* extending downwardly from the top of the housing *a* and tapered to correspond substantially with the taper of the recesses *r r*.

The under surfaces of the members *d d* are provided with transverse grooves *h h*, which, when the members of the eye *b* are closed, are in alinement, and are adapted to be arrested in alinement and in their closed position by means of a cam *f* formed on the upper surface of an arresting lever *e*, pivotally mounted at *g* between the two side walls of the housing *a*. This lever carries at its under side the locking spring *j* of the device, which is pivotally attached to the said lever at *i* and is adapted to engage under a hook *t* fixed in one wall of the housing *a* when the device is locked. The lever *e* is further provided with an arm carrying a weight *m* adapted, when the locking spring has been released to disengage the cam *f* from the grooves *h h* by turning the lever *e* on its

pivot *g* by gravity. The end of the housing is provided with an eye *c* fast thereto, for the other end of the chain.

The device operates in the following manner:—One end of the chain is attached to the eye *c* and the other to the detachable eye *b*. When the ends of the chain are connected up the parts are in the position shown in Fig. 1, with the exception that the locking spring is turned inwardly and engages, with its orifice *j'* under the hook *t*. In order to disengage the parts, the free end of the locking spring *j* is depressed and disengaged from the hook *t*, and, as it is turned outwardly on its pivot *i* a nose *k* formed on the opposite end of the spring slides along a cam surface *l* formed on one of the side walls of the housing *a* (Fig. 2) and, as the weight *m* acts by gravity, the said spring is turned aside by the cooperation of the cam *l* and nose *k* and the cam *f* of the lever *e* is thereby brought out of engagement with the grooves *h h* of the members *d d*. Thus released, the pull on the chain end held by the split eye *b* pulls the pivot *g* along the slots *o p* and simultaneously the tapered pin or stud *s* forces the members *d d* apart and opens the eye *b* as clearly shown at Fig. 3. To lock the device the chain end is reinserted in the split eye *b* and the parts pushed back into the housing, when the locking spring is again closed under its hook *t*.

I claim as my invention:

1. A device for connecting chain ends together, consisting of a housing having an eye or link for one end of the chain, a split eye extending at the other end of the housing comprising two members pivotally connected and having the pivot adapted to slide in said housing, an arresting lever mounted beneath said members and adapted to arrest the same in their closed position, a locking member to retain the same locked and a weight on said arresting lever to disengage the parts by gravity when the said arresting member has been released.

2. A device for connecting chain ends together consisting of a housing having an eye or link for one end of the chain, a split eye extending at the other end of the housing comprising two members pivotally connected and having the pivot adapted to slide in said housing, a lever with cam movably mounted beneath said members and adapted to arrest the same in their closed position, a locking member to retain the same locked

and a weight on said arresting lever to disengage the parts by gravity when the said arresting member has been released, the said locking member being of a yielding nature and pivoted to the arresting lever to move in a plane at right angles to the plane of movement of said arresting lever and means for retaining the parts in the locked position.

3. A device for connecting chain ends together, consisting of a housing having an eye or link for one end of the chain, a split eye extending from the other end of the housing comprising two members pivotally connected and having the pivot adapted to slide in said housing, an arresting lever mounted beneath said members and adapted to arrest the same in their closed position a locking member to retain the same locked and a weight on said arresting lever to disengage the parts by gravity when the said arresting member has been released, the said locking member being of a yielding nature and pivoted to the arresting lever to move in the same plane and at right angles to the plane of movement of the said arresting lever, means for retaining the parts in the locked position a nose on the said yielding locking member and a cam on the housing with which the said nose coöperates to engage the arresting lever.

4. A device for connecting chain ends together, consisting of a housing having an

eye or link for one end of the chain, a split eye extending to the other end of the housing comprising two members pivotally connected and having the pivot adapted to slide in said housing, an arresting member mounted beneath said members and adapted to arrest the same in their closed position, a locking member to retain the same locked and a weight on said arresting lever to disengage the parts by gravity when the said arresting member has been released, the said locking member being of a yielding nature and pivoted to the arresting member to move in a plane at right angles to the plane of movement of the said arresting member, means for retaining the parts in the locked position, a nose on the said yielding locking member, a cam on the housing with which the said nose coöperates to engage the arresting member, tapered recesses on the adjacent edges of the members of the split eye, tapering toward the pivot connecting said members and a stationary stud mounted in the housing intermediate of said recesses, and adapted to contact with the same to spread the members.

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

WILHELM ADLER.

Witnesses:

BESSIE F. DUNLAP,
LOUIS VANDORY.