No. 689,196. Patented Dec. 17, 1901.

C. A. KELLOGG & E. C. VALE.

SEPARABLE RING.

(Application filed Mar. 27, 1901.)

(No Model.)

Fig. 1.

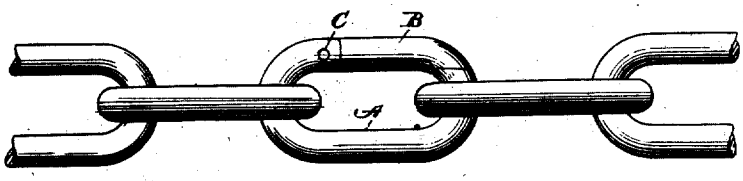


Fig. 2.

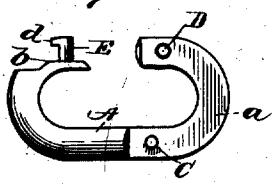


Fig. 3.

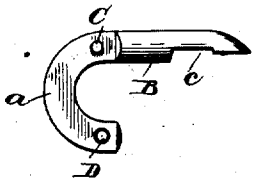


Fig. 4.

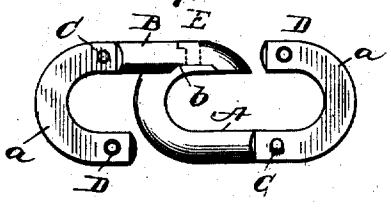


Fig. 5.

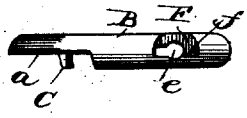
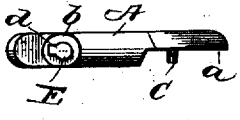


Fig. 6



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UNITED STATES PATENT OFFICE.

CLEMENT A. KELLOGG AND ELI C. VALE, OF EAST CARMEL, OHIO.

SEPARABLE RING.

SPECIFICATION forming part of Letters Patent No. 689,196, dated December 17, 1901.

Application filed March 27, 1901. Serial No. 53,107. (No model.)

To all whom it may concern:

Be it known that we, CLEMENT A. KELLOGG and ELI C. VALE, citizens of the United States, residing at East Carmel, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in Separable Rings; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to the manufacture of chains or links, and has particular reference to hinged rings or separable links from which chains of any description, including trace-chains and log-chains, may be speedily made or repaired. For its chief object, however, the present invention is designed and adapted for detachably, though quickly and effectively, securing in place whiffletrees and singletrees; also, for similarly fastening in position hames or traces and other parts of harness either temporarily or permanently.

The invention will be hereinafter described, and particularly pointed out in the claims following.

In the accompanying drawings, which form part of this specification, and whereon corresponding letters of reference indicate the same parts in the several views, Figure 1 represents two sections of chain in side elevation, the ends whereof are connected by a separable link embodying our invention. Figs. 2 and 3 are plan views of the two sections of our improved link detached. Fig. 4 is the same attached, but open; and Figs. 5 and 6 are edge views of the two link-sections also detached for uncoupling.

Reference being had to the drawings and letters thereon, A indicates the main body of the link, and B a separable section pivotally connected with said body A in such manner that it may be thrown back, as illustrated by Fig. 4, for the admission of another link, an eye, a staple, or other member to be coupled or fastened.

Body A and section B overlap when in closed relation and are mortised one into the other, so as to constitute a link of uniform thickness throughout.

Both members A and B are formed with hooked ends mortised at *a*, as stated, and each provided with a dowel-pin C, set at an angle to the longitudinal center of the link, and also with perforations D for the reception of the oppositely-arranged pins C aforesaid. For the purpose of pivotally connecting body A with section B the former is provided at one extremity with a shoulder *b*, having rounded ends fitting a corresponding recess *c* in the section B. Projecting from the center of said shoulder *b* is a pivot pin or key E, bearing a lateral lug *d* at its upper end, adapted to pass through a keyhole-slot *e* in the shank of section B, as indicated by dotted lines in Fig. 4. This slot *e* has its beginning in the recess *c* and terminates in a depressed key-seat F, having one flattened side wall *f*, serving as a stop for lug *d* of key E when section B, turning upon the key E, has reached the limit of its movement, as represented by Fig. 4.

In the employment of our invention for coupling singletrees to doubletrees, for securing doubletrees to vehicle-tongues, for uniting the ends of chain-sections, as indicated by Fig. 1, for the manufacture of chain, or for a variety of uses for which the invention is adapted, particularly the manufacture and repair of harness, members A B are separated by rotating the latter upon its pivot pin or key E until there is sufficient clearance to permit the introduction of a link or eye to be coupled. Thereupon said section B is replaced by a reverse movement, dowel-pins C again entering their respective apertures D for the purpose of interlocking the members.

If it is desired to entirely remove section B, the same is rotated upon pin E, as aforesaid, until it assumes the relative position illustrated by Fig. 4, where it is arrested by engagement of lug *d* with the side wall *f* of key-seat F, whereupon, being in register with slot *e*, the pin is unlocked and may be withdrawn. During this operation it will be observed that the separable member B moves in a plane at right angles to that of the body A.

This being a general description of our invention, it will be observed that tension applied to a ring or rings forged or otherwise made in substantial accord therewith is taken principally upon the curved base and hook ends of body A, thus materially relieving the pivotal connections of strain. Section B

when closed effectually prevents accidental dislodgment of link or chain sections inclosed by our separable ring and at same time, augmented by dowel-pins C and perforations D, coöperates with the body member A in sustaining a part of the strain when under tension. It will also be observed that pin E, owing to its peculiar construction and relative arrangement, positively prevents the removal of section B until it is deliberately placed in the position indicated by Fig. 4, and the head of said pin being countersunk in seat F, as shown, is protected from mutilation by the wall *f*, which also serves as a limit-stop for lug *d* on the key.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. A separable ring comprising two relatively movable members one bearing a projecting shoulder near its end and the other a corresponding seat for pivotally connecting said members so as to move in a plane at right angles to that of the complete ring, substantially as described.

2. A separable ring comprising two relatively movable members one bearing a projecting shoulder near its end surmounted by a pivot-pin and the other a corresponding seat for said shoulder perforated to receive the pin aforesaid, affording a pivotal connection for the ring members, substantially as described.

3. A separable ring comprising two relatively movable members one bearing a projecting shoulder surmounted by an interlocking pivot-pin and the other a corresponding seat for said shoulder perforated by a keyhole-slot for the reception of the pin aforesaid, a depressed seat for the head of the pin, and dowel-pins upon each member of the ring for interlocking them in closed relation, substantially as described.

4. In a separable ring the combination with relatively fixed and movable members one bearing an interlocking pivot-pin, and the other a keyhole-slot for the reception of said pin, a depressed seat for the head of the pin, and dowel-pins upon each member of the ring for interlocking them in closed relation, substantially as described.

In testimony whereof we subscribe our signatures in presence of two witnesses.

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ELI C. VALE.

Witnesses:
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