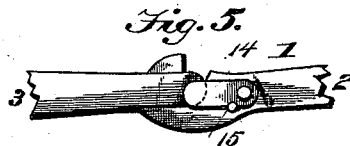
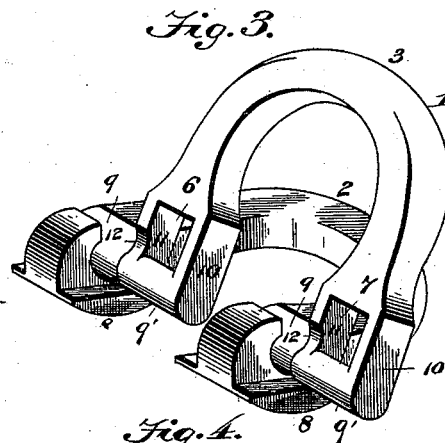
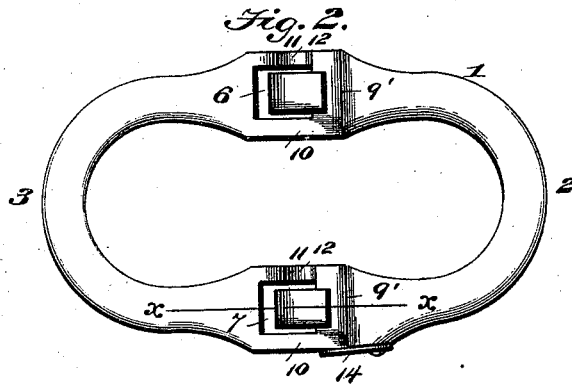
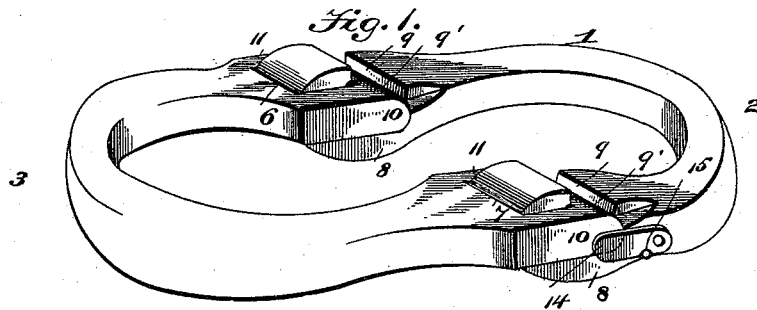


(No Model.)

J. H. McINTIRE.
RING.

No. 418,812.

Patented Jan. 7, 1890.



WITNESSES

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RING.

SPECIFICATION forming part of Letters Patent No. 418,812, dated January 7, 1890.

Application filed May 7, 1889. Serial No. 309,915. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH H. MCINTIRE, a citizen of the United States, residing at Galion, in the county of Crawford and State of Ohio, have invented certain new and useful Improvements in Separable Middle Rings; and I 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.

My invention relates to an improved separable middle ring; and it consists of the peculiar construction and arrangement of parts, as will be hereinafter fully described and claimed.

The object of my invention is to provide a ring or link of that class known as "middle rings," used for the purpose of readily connecting two parts of a chain, or a chain to an object, or for other purposes, which can be quickly and easily separated or taken apart to disengage itself from an object, and which is so constructed that it is effectually prevented from becoming separated accidentally no matter what positions its members or sections may assume when in use with relation to each other or the object on which the device is applied.

As an understanding of my invention can be had to better advantage by a detailed description thereof, I will now proceed to describe the same in connection with the accompanying drawings, in which—

Figure 1 is a perspective view of my improved link or ring. Fig. 2 is a plan view thereof. Fig. 3 is a perspective view of the parts or members detached and in position to be moved laterally to couple them together. Fig. 4 is a sectional view on the line *xx* of Fig. 2. Fig. 5 is a side view of the latch.

Like numerals of reference denote corresponding parts in all the figures of the drawings.

Referring to the drawings, 1 designates my improved separable link or ring, which consists of two members or sections 2 3, one of which has two hooks 4 5 at its divided ends, and the other is provided with transverse slots or apertures 6 7, into which the hooks are adapted to fit to detachably connect the

two members together. The member 2 is provided at its divided ends, on one face or side, with broad flat projections 8, on which are erected the hooks, each of which is curved upwardly from said projection and toward the terminal wall or face of the link member, so as to leave an intermediate space 9 between the end of the member and the hook, through which spaces the slotted end of the other member 3 of the link is adapted to be passed, in the manner presently described. The projection 8 and hooks are made or cast integral with the member 2 of the link, and the projections correspond in width and configuration to the ends of the member 2, so as to present a neat appearance; but the hooks are not quite as wide as the projections or terminal ends or faces of the link member 2, in order to avoid undue enlargement of the slotted ends of the member 3 to properly receive the hooks, as will be readily understood. The member 3 has its terminal bars 9, which form one side of each slot therein, rounded or circular in cross-section to adapt the member 3 to readily turn on the member 2 when the hooks on one member fit around the rounded bars on the other members. One side or wall 10 of each slot in the member 3 is rectangular, but the other side 11 of said slot is provided in its lateral exposed faces with transverse grooves or channels 12, that are located in close proximity to the rounded terminal bars 9. The width of the side or wall 10 of each slot in the link member 3 is slightly greater than the space between the extreme end of the hook and the terminal wall or face of the end of the link member 2, in order to prevent the link member 3 from sliding laterally on the member 2 after the latter has been properly adjusted to receive in its slots the hooks. To one of the sides or edges of one of the members of the link, preferably the member 2, is pivoted a latch 14, which is adapted when the sections or members are properly connected together to bear against the adjacent end of the other member, and thereby prevent lateral or edgewise play of the two members when they are connected and aligned, as shown in Fig. 1. This latch is provided with a notch or recess 15 in one of its edges, which receives a stop-pin or stud

16, fixed on the member 2 below the latch, which pin serves to limit the movement of the latch and thus prevent it from moving beyond its position for preventing lateral or edgewise play of the members upon each other.

The operation of my invention is as follows: To connect the two members or sections, the latch is raised and the member 3 arranged at right angles or in a vertical position with relation to the member 2, with its slotted grooved ends adjacent to and at one side of the hooks, and the member 3 is then moved laterally, so that the grooved side 10 and round bar 9 of each end of the member 3 slide between the end of the member 2 and hook until the side 11 of the member 2 abuts against the ends of the hooks, after which the member 3 is turned on its bars 9 in line with the member 2, and the latch 14 adjusted to bear against one end of the member 3 to prevent edgewise play in one direction of the two members on each other. The hooks fit snugly in the slots and prevent the members from lateral play or movement when they are in their normal positions and in line with each other, as indicated in Figs. 1 and 2; but should the members accidentally turn at right angles to each other while the link is in use the sides 11 of the slots abut against the extremities of the hooks, and thus prevent edgewise play in one direction of the members on each other, while the latch prevents play of the members in the other direction, whereby the members are effectually prevented from becoming separated under ordinary conditions when the link is in use. To separate the sections the latch is raised and the members first turned at right angles and then moved edgewise in the direction to permit the grooved sides of the slotted ends of the member 3 to ride between the ends of the hooks and the terminal walls or faces of the member 2, as is obvious.

In general outline the link is oblong with rounded ends; but I would have it understood that I do not confine myself to the pecu-

liar configuration of the link herein shown and described as an embodiment of my invention, nor to the details of construction and proportion of parts, as I am aware that changes and alterations therein can be made without departing from the spirit or sacrificing the advantages of my invention.

My improved link is especially adapted for connecting a singletree to a whiffletree, in lieu of the unsafe split link known as the "gapping" middle or connecting ring; but it can be used with equal advantage for farmers' purposes generally and in many other arts and relations where it is desirable to connect two parts together.

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

1. A separable link consisting of two substantially semicircular members or sections pivoted together and adapted to be coupled and uncoupled by a lateral sliding movement, one member having hooks at its ends and the other member being provided with transverse grooves near its ends and at one side of the slots therein to receive the points of the hooks in the act of coupling, and slots or apertures for receiving the hooks, substantially as and for the purpose described.

2. A separable link consisting of two members or sections 2 3, one member having the hooks 4 5 at its ends and the other member provided with the slots to receive said hooks, one side of each slot of the member 3 being reduced in width less than the space between the extremity of the hook and face or end of the other member, for the purpose described, and a latch for preventing edgewise play of the member in one direction, substantially as described.

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

JOSEPH H. MCINTIRE.

Witnesses:

R. W. JOHNSTON,
W. I. GOSHORN.