

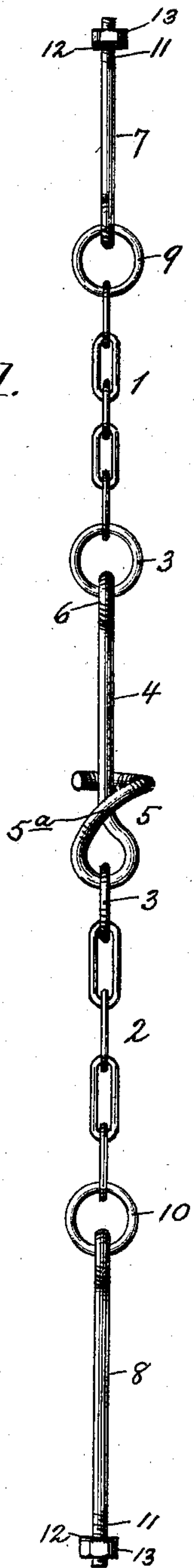
(No Model.)

C. S. HIGGINS.  
COUPLING HOOK.

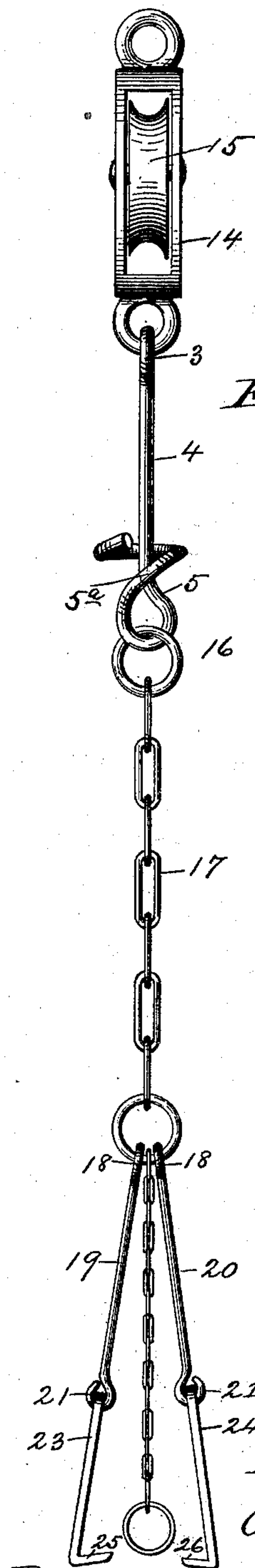
No. 476,013.

Patented May 31, 1892.

*Fig. 1.*



*Fig. 2.*



Witnesses:  
T. R. Stuart.  
H. Y. Davis.

Inventor.  
C. S. Higgins.  
By Marble, Mason & Canfield,  
Attorneys.

# UNITED STATES PATENT OFFICE.

CHARLES S. HIGGINS, OF BROOKLYN, NEW YORK, ASSIGNOR TO MARY FRANCIS B. HIGGINS, OF SAME PLACE.

## COUPLING-HOOK.

SPECIFICATION forming part of Letters Patent No. 476,013, dated May 31, 1892.

Application filed June 30, 1891. Serial No. 398,003. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES S. HIGGINS, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Coupling-Links for Chain-Sections, &c.; 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 generally to coupling-links for chains, and particularly to a link of that class whereby sections of chains may be readily connected and disconnected.

It has for its objects, among others, to form a coupling-link for a chain or the like, such as is employed in hoisting machinery, the coupling or uncoupling of cars, on whiffletrees, and other devices where frequent connections and disconnections have to be made, by which such connection and disconnection may be quickly and easily made, and which will securely hold the part connected, said coupling being made sufficiently rigid to prevent its being distorted or pulled out by sudden or heavy strain thereon.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claim, and are clearly shown in the accompanying drawings, which form part of this specification, in which the same reference-numerals indicate the same or corresponding parts, and in which—

Figure 1 represents a side elevation of sections of two chains connected by my improved link; and Fig. 2, a similar view showing a hoisting apparatus provided with a sheave and pulley, my improved connecting-link, a ring attached to the lower end thereof, two links having grappling devices at their lower ends, and an intermediate chain having a ring at its lower end.

Referring to the drawings, the numerals 1 and 2 indicate sections of two chains constructed of links as usual, the section 1 having the ring 3 at its end, to which one end of the coupling-link 4 is attached, the other end of the latter being bent backwardly or to-

ward its opposite end, forming an eye, and then turned and twisted one or more times around its body portion, as at 5. This is the most important feature of my invention, since when connected to the ring 3 it is an impossibility for it to become loosened or disconnected. Besides, it permits of quick and easy removal for any purpose desired. At the other end of this coupling-link is formed the eye 6, to which is fastened the ring 3 at the end of the chain-section 1. Similar eyes are formed in the ends of the straight bars 7 and 8, which are secured in the rings 9 and 10 at the sections of the two chains 1 and 2. One of the straight bars 7 and 8 is screw-threaded, as at 11, and provided with the washers 12 and nuts 13 for the attachment of said bars to any suitable objects, all as shown in Fig. 1 of the drawings.

In Fig. 2 of the drawings, showing the invention applied to hoisting apparatus, the eye 3 of the straight bar 4 is attached to the lower end of the block 14, in which the sheave 15 is mounted for receiving an elevating-rope. At the other end of this straight bar is formed the turned or twisted portion 5, which removably receives the ring 16, to which is attached the end link of the chain 17 and the hooked or eyed ends 18 of the straight rods 19 and 20, which are respectively arranged at the opposite sides of said chain and provided at their other ends with similar eyes or hooks 21 and 22, within which are loosely secured the upper ends of the grasping-hooks 23 and 24, which are formed with the oppositely-projecting and upturned toes 25 and 26 for catching and firmly holding the objects to be hoisted.

The operation of my invention will be readily understood in connection with the drawings and the above description; but it may be further added, that to couple the chain-sections 1 and 2 the ring 3 is passed around the twisted end of the coupling-link 4 until it is entered into the same, where they are held against any possible accidental removal. By twisting this end around the body portion of said coupling-link the ring 3 cannot possibly be accidentally disconnected therefrom; also, the twisted ends of said coupling-links are not only spirally formed, but extend one



or more times around the body thereof, of which they form parts.

It is deemed of special importance that the coupling-link be formed of sufficiently rigid material to prevent its being distorted or pulled out of use, and that the end of the turn or twist be arranged in a plane substantially at right angles to the body of the coupling and form substantially a complete ring or loop thereabout, the part forming the eye being crossed, as seen at 5<sup>a</sup>, so that the passage between the body and end portion is tortuous, which tends to prevent the part connected or held by the eye from passing therethrough without both a movement in the direction of the length of the body of the coupling and spirally following the direction of the material from the point of crossing to the free end.

Having thus fully described the construction and arrangement or combination of the several parts of my invention, its advantages,

manner of use, and operation, what I claim as new is—

A coupling link or hook having a straight cylindrical shank formed with a loop or eye at one end and having its opposite end bent in substantially a semicircle on one side of the shank to a point in line with the axis of said shank and from thence bent spirally toward the opposite end, so as to leave an open tortuous passage for the introduction of a connecting link or ring, said spiral being continued, encircling the shank, and forming an unbroken or continuous spiral hook, substantially as described.

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

CHARLES S. HIGGINS.

Witnesses:

ISAAC LUBLIN,  
W. H. CORNELL.