

No. 819,007.

PATENTED APR. 24, 1906.

G. A. H. DRESLER.
CHAIN LINK SHACKLE.
APPLICATION FILED DEC. 10, 1903.

Fig. 1.

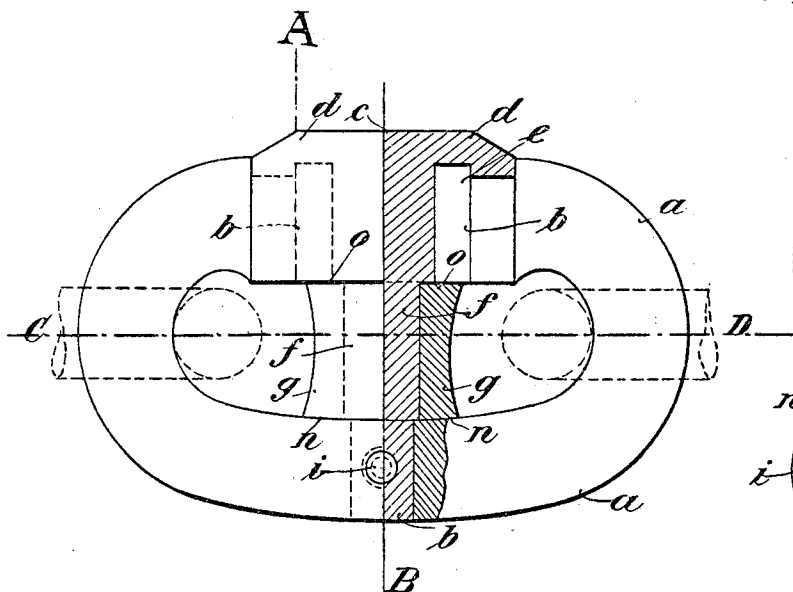


Fig. 2.

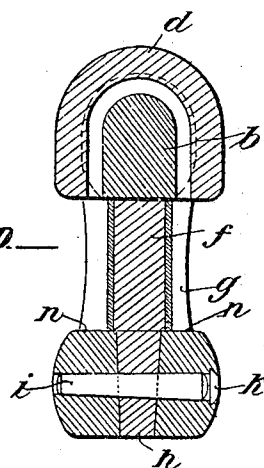


Fig. 3.

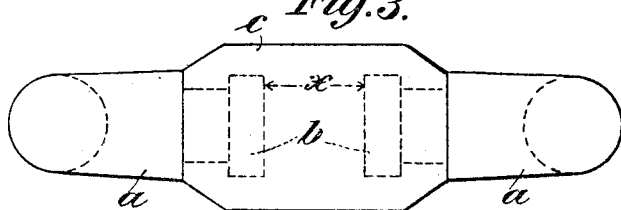
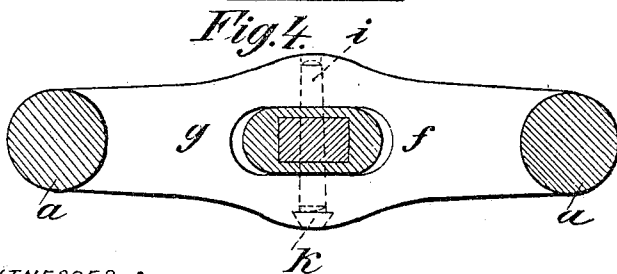


Fig. 4.



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CHAIN-LINK SHACKLE.

No. 819,007.

Specification of Letters Patent.

Patented April 24, 1906.

Application filed December 10, 1903. Serial No. 184,584.

To all whom it may concern:

Be it known that I, GUSTAV ADOLF HEINRICH DRESLER, draftsman, a subject of the King of Prussia, German Emperor, residing at Kiel, Germany, Province of Schleswig-Holstein, Karlstrasse 25^H, have invented certain new and useful Improvements in Chain-Link Shackles, of which the following is a specification.

10 This invention has for its object a connecting-shackle for chain-links in which the ends of the open link are held together by means of a closing member. The arrangement is such that this closing member is provided with recesses directed toward the interior of the chain-link and covers the connecting-studs of the link in the manner of a cap. The web or shank portion of the closing member is surrounded by a box or sleeve, which serves to reinforce the pin of the link by taking the strain.

Various advantages are attained by means of this invention. The studs of the chain-link are secured in position in such a manner that they cannot be displaced or move on any side. The traction strains on the chain-link are taken by this reinforcing-sleeve and are not transmitted to the closing member. As a result of this the means for fastening the closing part to the link are subjected to but little strain, so that a comparatively weak pin is sufficient fastening means.

30 A further important feature is that with this novel shackle speedy release and opening is possible.

Another point is that shocks exerted upon the closing member from outside are kept from the stud ends by the sleeve—that is to say, they are uniformly distributed throughout all parts of the shackle-link.

40 In the accompanying drawings, Figure 1 shows the shackle partly in side elevation and partly in section. Fig. 2 is a section on the line A B of Fig. 1. Fig. 3 is a plan view, and Fig. 4 is a section on the line C D of Fig. 1.

45 The open chain-link *a* is provided in the known manner with connecting-studs *b b*. Over the studs *b b* engages the closing member *c*. In this latter recesses *e e* are provided, so that cap-like portions *d d* are formed, the recesses opening toward the interior of the chain-link *a*. In the constructional form here represented in cross-section, Fig. 2, these recesses present a bow shape corresponding

with the studs *b b*. Obviously the studs *b b* are inclosed on three sides by the cap-like covering.

The closing member *c* is provided on its web portion *f* with a conical pin *h*, which engages in an opening in the chain-link *a*. This pin *h* is secured in the link by means of a pin *i*. This pin *i* may advantageously be secured from falling out by means of a lead filling in a recess *k*, by a plug, or the like. The thickness of the web portion *f* is dependent upon the interval *x*, Fig. 3, separating the studs *b b* of the link *a*. In order to permit of the introduction of the closing member *c*, the thickness of this part *f* must be smaller, although not much smaller, than this interval *x*.

In order that a sufficiently wide chain-stay of the usual dimensions may be obtained, however, the part *f* of the closing member *c* is surrounded by the reinforcing-sleeve *g*. One end *n* of this sleeve bears against the inner side of the link *a*. Its other end *o* serves to support the studs *b b* of the link *a*. By means of this sleeve, therefore, the side of the connecting-studs *b b*, directed toward the interior of the link, which are left exposed by the cap-like cover, are wholly or at least partially covered. The sleeve *g* serves to support the studs *b b*, and thereby prevents any contraction of the shackle-link in the transverse direction. The shackle-link is therefore stiffened by the sleeve *g*. This sleeve *g* also relieves the connecting pin or bolt *i*, which consequently may be readily and speedily withdrawn.

An important feature insuring the strength of the shackle-link is that shocks or pressures exerted on the outer side of the cap-like part *c* of the closing member may be directly taken by the reinforcing-sleeve *g*, as this part *c* of the closing member may likewise be supported on this sleeve, as shown in Fig. 1. Consequently all strains exerted on the shackle-link, whether tractive strains in the longitudinal direction of the chain or shocks coming from outside, are distributed by means of the reinforcing-sleeve to all parts of the shackle-link, thereby obviating excessive strains on any particular part. In this way the strength of the shackle-link is greatly increased.

As a result of its special construction great resistance is obtained in this novel shackle because it is possible to use the most suitable material both for the closing member *c* and

for the sleeve *g* for supporting the strains to which these parts are liable. The independent interchangeability of the two parts must also not be underrated from the practical

5 point of view.

The various details of the invention may be varied. Thus, for example, the connecting-studs *b b* may be made four-sided. They may also be provided with several fillets. The recesses *e* in the cap-like portion *d* will of course be made so as to correspond with the form of the studs *b*. The stay or web portion *f* may be of elliptical or circular cross-section. The pin *h* instead of being angular may, for example, be circular or oval. The essential features in all cases are the cap-like covering of the studs *b* by the closing member *c* and the support of the studs *b* by the sleeve *g*.

20 What I claim, and desire to secure by Letters Patent of the United States, is—

1. A chain-connecting shackle comprising a link having an open section at one side, studs on the ends of the link at opposite sides
25 of said open section, a closing member extending transversely across the link and at one end having a cap-like portion engaging said opposing studs and at its other end in engagement with the opposite side of the
30 link, and a collar surrounding said connecting member and projecting outwardly in engagement with the sides of said studs and extending from said studs into engagement with the opposite side of the link.

35 2. A chain-connecting shackle comprising a link having an open section at one side and an opening in its opposite side, studs on the link at opposite sides of said open section, a closing member extending transversely across
40 the link and at one end having a cap-like portion engaging said opposing studs, and at its other end received into the opening in the opposite side of the link, a collar surrounding said connecting member and projecting outwardly in engagement with the sides of said
45 studs and extending from said studs into en-

gagement with the opposite side of the link, said latter side of the link and the end of the closing member received therein having a registering transverse opening, and a pin re-
50 ceived into said transverse opening to hold the closing member in operative position in the link.

3. A chain-connecting shackle comprising a link open at one side, studs on the ends of
55 the link at opposite sides of the said opening, a closing member having a cap-like portion provided with recesses opening on its inner sides for engaging said opposing studs and a shank portion extending from the cap-like
60 portion and terminating in a pin engaging a corresponding opening in the link, a sleeve surrounding the shank portion of the closing member between the cap-like portion and the
65 said pin and bearing at one end against the inner side of the link and at its opposite end against the inner sides of the said studs and the cap-like portion of the closing member, and means for fastening the closing member
70 in position on the link.

4. A chain-connecting shackle comprising a link having an open section at one side and an opening in its opposite side, studs on the
75 link at opposite sides of said open section, a closing member extending transversely across the link, and at one end having a cap-like portion engaging said opposing studs, and at its other end having an integral portion re-
80 ceived into the opening in the opposite side of the link, means engaging said latter portion to hold the transverse member in operative position, and means connected with the transverse member and engaging the inner
85 sides of said studs to form a support for the same.

In testimony whereof I have hereunto set my hand, in presence of two subscribing witnesses, this 27th day of November, 1903.

GUSTAV ADOLF HEINRICH DRESLER.

Witnesses:

JULIUS ROJSKE,
BERNHARD MÖLLER.