

(No Model.)

J. F. SEARS & H. E. KELLY.
SWIVEL.

No. 404,659.

Patented June 4, 1889.

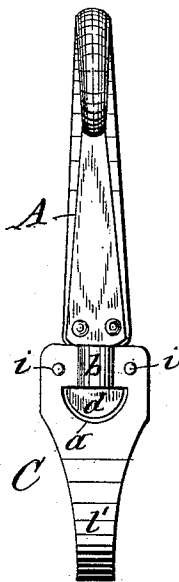


Fig. 1

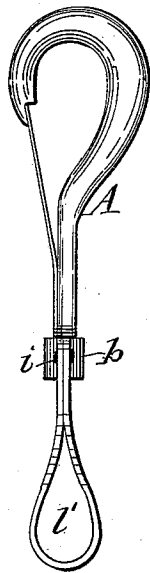


Fig. 2

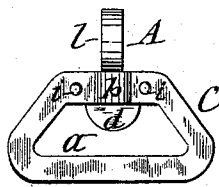


Fig. 3

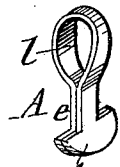


Fig. 5

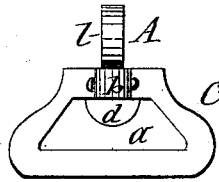


Fig. 7

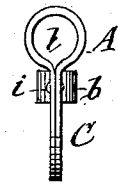


Fig. 4

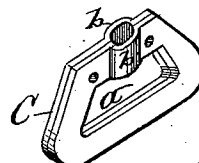


Fig. 6

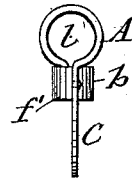


Fig. 8

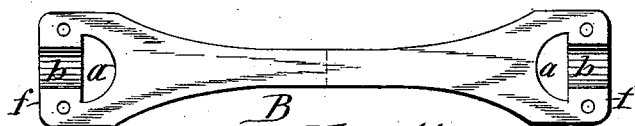


Fig. 11

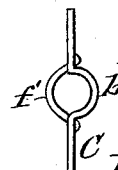


Fig. 9

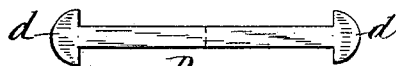


Fig. 12

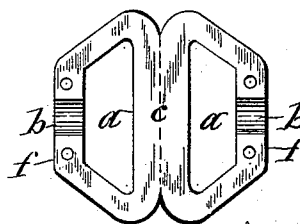


Fig. 10

WITNESSES:

A. F. Walz,
J. J. Laass.

INVENTORS:

John F. Sears
Harry E. Kelly

BY

Hull, Laass & Hull
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN FREEMAN SEARS, OF CLIFTON, ONTARIO, CANADA, AND HARRY EUGENE KELLEY, OF NIAGARA FALLS, NEW YORK, ASSIGNORS TO THE ONEIDA COMMUNITY, (LIMITED,) OF COMMUNITY, NEW YORK.

SWIVEL.

SPECIFICATION forming part of Letters Patent No. 404,659, dated June 4, 1889.

Application filed October 20, 1888. Serial No. 288,695. (No model.)

To all whom it may concern:

Be it known that we, JOHN FREEMAN SEARS and HARRY EUGENE KELLEY, citizens of the United States, and residents, respectively, of Clifton, Ontario, Canada, and of Niagara Falls, in the county of Niagara, in the State of New York, have invented new and useful Improvements in Swivels, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention consists in a novel construction of a swivel whose members may be stamped out of sheet metal and are readily united and form a swivel-joint of superior strength and at a comparatively small expense of manufacture.

In the annexed drawings, Figures 1 and 2 are front and side views of our improved swivel applied to a snap-hook. Figs. 3 and 4 are front and side views of the swivel applied to two loops or links. Figs. 5 and 6 are detached perspective views of the two members of the swivel of the form shown in Figs. 3 and 4. Figs. 7 and 8 are front and side views of a modification of our invention. Fig. 9 is a detached top view of the coupling end of one of the members of the said modification, and Figs. 10, 11, and 12 are plan views of blanks from which the members of the swivel are formed.

Similar letters of reference indicate corresponding parts.

A and C denote the two constituent members of our improved swivel. Said members may be of any suitable form for attaching the same to a chain or cable or other desired article.

The member A is provided with a neck *e* and a head *d* on its coupling end, and the member C is provided with a sleeve *b*, which embraces the aforesaid neck, and is also provided with an aperture *a* at the rear end of the sleeve for the reception of the head *d* of the member A. When the member A is of the form of a snap-hook, as represented in Figs. 1 and 2 of the drawings, the shank of said hook is formed with the neck *e* and head *d* in one piece; but when said member is of

the form of a link or loop *l*, as represented in Figs. 3, 4, 5, 7, and 8 of the drawings, we form the same from a blank stamped out of sheet metal and consisting of an elongated main or central portion, terminating with heads *d d* at opposite ends, as illustrated in Fig. 11 of the drawings. This blank or metal plate we bend at the center into the shape of a loop *l* and fold the end portions thereof flatwise one upon the other, so as to lie contiguous to each other and with the two heads *d d* coinciding with each other, as illustrated in Fig. 5 of the drawings.

The member C we form of a metal plate, preferably from a blank B, stamped out of sheet metal, and having at opposite sides of its center two apertures *a a* and the central portion of the end cross-bars *f f* each formed with a semi-cylindrical recess *b*. The central or main portion of the said blank may be either elongated, as represented in Fig. 11 of the drawings, and bent into the shape of a loop *l'*, as illustrated in Figs. 1 and 2 of the drawings, or the central portion of said blank may be enlarged in width, and the portion which is between the two apertures *a a* may be of the form of a cross-bar, as shown in Fig. 10 of the drawings. When of the last-described form, the blank is folded on the central line *c* and upon itself, so as to cause the folded portions to lie contiguously one upon the other. In both cases the end cross-bars *f f* of the blank B are contiguous to each other and with their recesses *b b* opposite each other and coinciding, so as to form the cylindrical sleeve *b* of the member C, which is retained in its described folded condition by rivets *i i*, passing through the twofold plate at opposite sides of the sleeve *b*. The neck *e* of the member A is introduced into the sleeve *b* before the end portions of the blank B are united, and when this is effected the head *d* of the member A is in the aperture *a* of the member C, in which it is allowed to turn. The two apertures *a a* of the blank B being also made to coincide with each other when the blank is folded, as aforesaid, forms in the member C the required loop for attaching said member to a strap or chain or other article.

Although we prefer to form the member C by folding the blank B in the manner aforesaid, on account of the superior strength imparted to the said member, yet we do not wish to be limited specifically to such construction, inasmuch as the blank B (shown in Fig. 10) may be cut on the line *c* into two parts, and one of said parts have riveted to the cross-bar *f* a similar bar *f'*, provided with a corresponding semi-cylindrical recess *b*, as illustrated in Figs. 7, 8, and 9 of the drawings.

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

1. A swivel consisting of a member formed with a neck and head on its coupling end, and a member formed of a metal plate folded upon itself with the end portions contiguous to each other and formed with semi-cylindrical recesses in the adjacent sides of said end portions embracing the aforesaid neck and provided with an aperture through the two thicknesses of metal between the integral end of folded plate and rear ends of the semi-cylindrical

recesses, substantially as described and shown. 25

2. A swivel consisting of a member composed of a metal plate folded upon itself with the ends contiguous to each other and formed with a coinciding neck and head on said ends, and a member having its coupling end composed of two thicknesses of metal firmly united and formed in the adjacent sides of said thicknesses with semi-cylindrical recesses embracing the aforesaid necks and provided with an aperture at the rear ends of said recesses for the reception of the aforesaid head, substantially as described and shown. 35

In testimony whereof we have hereunto signed our names, in the presence of two witnesses, at Niagara Falls, in the county of Niagara, in the State of New York, this 17th day of October, 1888. 40

JOHN FREEMAN SEARS. [L. S.]

HARRY EUGENE KELLEY. [L. S.]

Witnesses:

HENRY DURK,

MYRON H. KINSLEY.