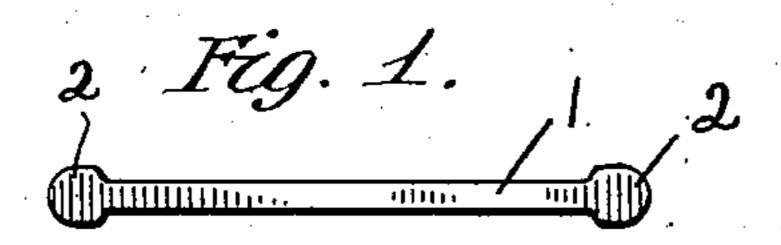
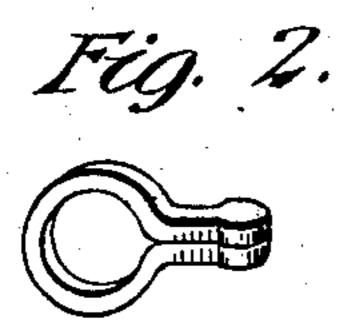
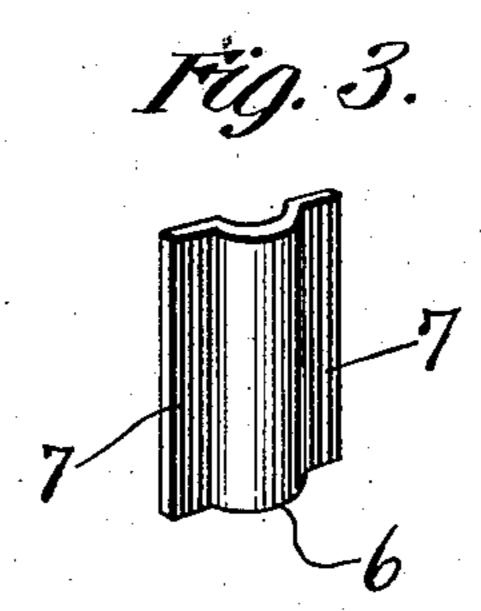
S. M. WELLS, Jr. SWIVEL.

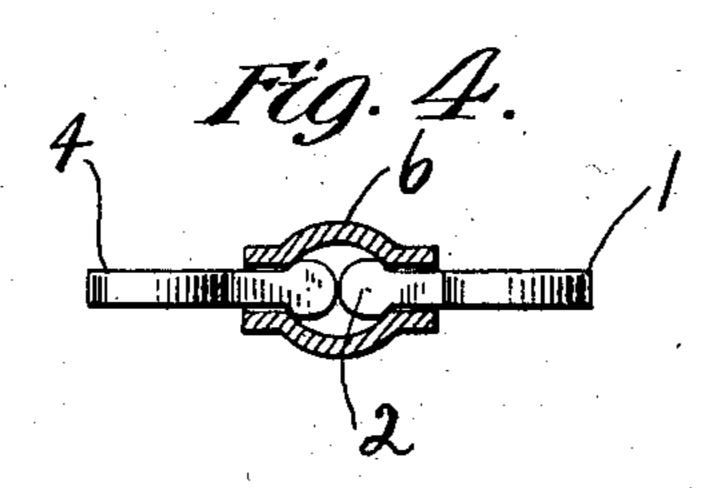
APPLICATION FILED JUNE 13, 1902.

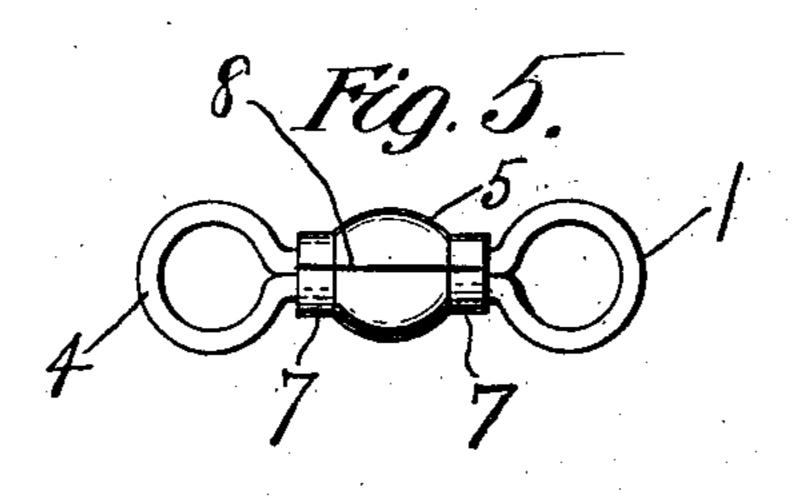
NO MODEL.











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## United States Patent Office.

STEPHEN M. WELLS, JR., OF BRISTOL, CONNECTICUT.

## SWIVEL.

SPECIFICATION forming part of Letters Patent No. 721,483, dated February 24, 1903.

Application filed June 13, 1902. Serial No. 111,524. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN M. WELLS, Jr., a citizen of the United States, residing at Bristol, Connecticut, have invented certain new and useful Improvements in Swivels, of which the following is a clear, full, and exact description.

My invention relates to a swivel; and my object is to simplify and improve the con-

to struction of the same.

My invention will be defined in the claims. In the preferred embodiment shown in the drawings, Figure 1 is a plan view of one of the eye-forming bars; Fig. 2, a perspective view of a detail; Fig. 3, a perspective view of the coupling-piece before it is bent around the eye-forming bars. Fig. 4 is a side elevation of the completed swivel, the coupling being shown in central vertical section; and Fig. 5 is a plan view of the complete swivel.

In the above preferred embodiment, 1 is a bar of metal having one or more heads 2. I prefer to cut this out of a flat sheet of metal, forming the heads by enlargements of the die, 25 which avoids the necessity of spreading out the metal of the bar by a separate operation to form the head. This bar is bent around to form an eye. By "eye" I do not mean that the ends of the bar must be necessarily closed 30 together. If the bar has a head at each end, it may be bent around till the heads lie together, as shown in Fig. 2. I prefer to form a similar eye 4 from a similar bar of metal, to which a chain or other device (not shown) may be attached; but this is not essential.

The coupling 5 may be formed of a single piece of sheet metal, in which a depression may be rolled or stamped, preferably at a short distance from each side edge, as shown 40 in Fig. 3, so as to leave a flange 7 at each side of the depression. This piece of metal may then be bent loosely around the ends of the two eyes 1 and 4, as shown in Fig. 5, the line 8 indicating the juncture of the two end edges 45 of the coupling-piece. The bead will then form a circular internal depression loosely surrounding the heads, and each flange 7 will form a contracted portion between the head and eye which is smaller than the head and 50 will retain the heads in place, while allowing each eye to be rotated in the coupling. The heads are preferably formed with a rounded edge to avoid unnecessary friction.

The parts may all be stamped out of the same flat sheet of metal, and as the coupling- 55 piece may be bent around the heads it avoids the necessity of forming the head after the eye-forming bar has been inserted in the coupling, and no rivets need be provided for fastening the parts. My swivel is therefore 60 very simple in construction and cheap in manufacture, and yet is strong and attractive in appearance.

I am aware that many variations from the above construction may be made without de-65 parting from the spirit of my invention as claimed, and I therefore do not limit myself to the embodiment herein illustrated and de-

scribed.

What I claim is—

1. In a swivel in combination a plurality of bars of metal each having a head at one end and an eye beyond said heads, and a coupling consisting of a single piece of metal having a depression therein between its edges and 75 loosely surrounding said heads, said heads lying in said depression and the portions of said coupling at the sides of said depression forming retaining-pieces for said heads.

2. In a swivel in combination, a plurality of 80 bars of metal each having a head at each end thereof and forming an eye between said heads, and a coupling consisting of a single piece of metal having a depression therein between its edges and loosely surrounding 85 said heads, said heads lying in said depression and the portions of said coupling at the sides of said depression forming retaining-pieces for said heads.

3. In a swivel in combination a plurality of 90 flattened bars of metal, each of said bars having a flat head at each end and of the same thickness as said bar and rounded at the outer edge thereof, said bars each forming an eye with the flat faces of the heads of each bar 95 lying together, and a coupling consisting of a single piece of metal having a depression therein a short distance from each edge to form a flange at each side of said depression, said coupling-piece loosely surrounding said 100 heads and forming a circular internal depression, said heads lying in said depression, the

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flanges at each side of said depression forming contracted portions between the heads and the eyes for retaining said heads in place.

4. In a swivel in combination, a bar of 5 metal having a flat head at each end thereof and an eye beyond said heads, the flat faces of said heads lying together, and a coupling having a depression therein and loosely surrounding said heads, said heads lying in said 10 depression, said coupling forming an internal depression for said heads and a contracted portion between said heads and eye and smaller than said heads.

5. In a swivel in combination, a bar of 15 metal having a round-edged flat head at each | GEO. D. CASTLE.

end thereof and an eye between said heads, the flat faces of said heads lying together, and an integral coupling having a depression therein and loosely surrounding said heads, said heads lying in said depression, said coup- 20 ling forming an internal depression for said heads and a contracted portion between said heads and eye and smaller than said heads.

Signed at Bristol, Connecticut, this 22d day

of May, 1902.

STEPHEN M. WELLS, JR.

Witnesses: MARIE C. ANTER,