

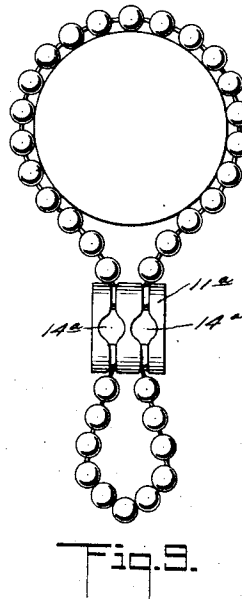
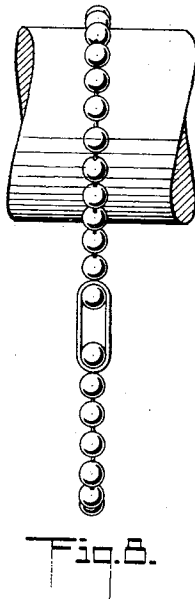
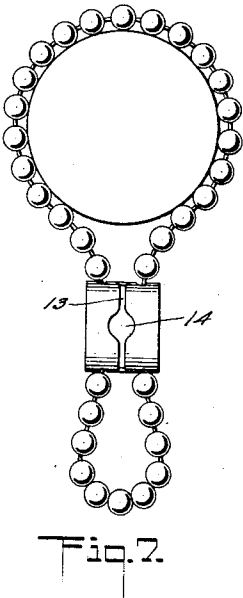
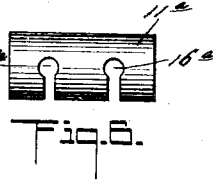
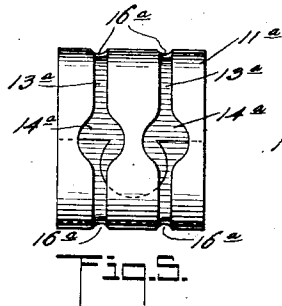
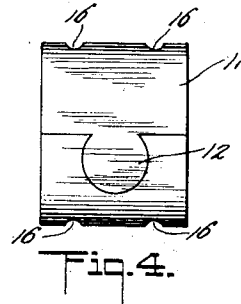
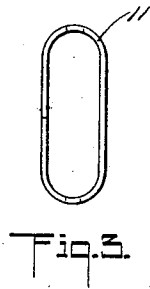
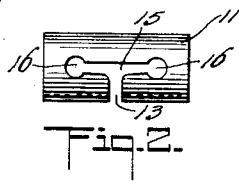
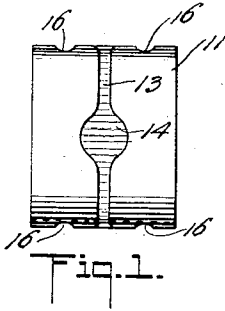
Aug. 13, 1929.

G. W. GOODRIDGE

1,724,835

CHAIN COUPLING

Filed March 29, 1928



INVENTOR
GILBERT W. GOODRIDGE
by his attorneys

Howson and Howson

UNITED STATES PATENT OFFICE.

GILBERT W. GOODRIDGE, OF FAIRFIELD, CONNECTICUT, ASSIGNOR TO THE BEAD CHAIN MANUFACTURING COMPANY, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

CHAIN COUPLING.

Application filed March 29, 1928. Serial No. 265,647.

My invention relates to chain couplings, and more particularly a chain coupling adapted to connect two chain ends together, and at the same time to connect a second part to the loop so formed. The invention is particularly useful in connecting together two loops of chain, and may be employed for attaching a curtain to a rod. Other uses will be apparent upon consideration of the following description:

In the past it has been customary to attach a curtain to a curtain pole by means of rings which surround and slide on the pole, connection between the curtain top and the ring being effected by means of safety pins or the like. Such constructions have been open to two objections. First, connection by means of a safety pin or the like, if detachable, is not strong and rugged, and the curtain top easily pulls loose from the ring. Second, there is appreciable friction between the surface of the ring and the surface of the pole which results in a severe strain upon the means connecting the curtain top to the ring when the curtain is moved in the direction of the pole; and, as is well-known, the curtain is easily pulled loose.

By means of the present invention it is possible to replace the ring by a loop of ball chain, with the result that when the curtain is moved, each element of the chain turns upon the pole, thus reducing the friction upon the pole and making movement easier. Also a coupling constructed in accordance with the present invention is considerably stronger than known means for connecting a curtain and a ring and the curtain will not pull loose. Finally, a second loop of ball chain attached to the curtain may be conveniently used to pass through the usual eye at the curtain top and connect the latter with the coupling.

The invention is illustrated by way of example in the accompanying drawings, wherein—

Figure 1 is an elevation of a coupling constructed in accordance with the invention,

Fig. 2 shows the same coupling when viewed from above,

Fig. 3 is a view of the coupling from the left as seen in Figure 1,

Fig. 4 is a rear elevation of the coupling,

Fig. 5 illustrates in elevation an alternative form of the invention,

Fig. 6 is a view of the modification shown in Fig. 5, as seen from above,

Fig. 7 illustrates an application of the construction shown in Figure 1,

Fig. 8 is a side view corresponding to Fig. 7, and

Fig. 9 illustrates how the construction shown in Fig. 5 may be applied in an assembly, such as that illustrated in Fig. 7.

Briefly the invention comprises a strip of sheet material bent into a loop with its ends connected and two opposite sides flattened. Suitable slots are provided in the coupling to accommodate chain ends.

Referring now more particularly to the drawings, a coupling 11 is formed by bending a strip of sheet material until its ends meet and then connecting the ends together. This may be accomplished by means of a dovetail connection or a connection like that shown at 12, or in any other suitable manner. Two opposite sides of the coupling are flattened and the above-mentioned connection 12 is located in one of the flattened sides. In the opposite side a slot 13 is provided running from top to bottom of the coupling. The slot 13 is provided with an expanded part 14 intermediate its two ends, of sufficient size to admit the end link or ball of a chain; but the rest of the slot is too narrow to permit passage therethrough of the end link or ball. In each end of the coupling I may provide a transverse slot 15, in which the longitudinal slot 13 terminates, extending part way across the coupling and having slightly expanded ends 16 whose size is not sufficient to permit passage therethrough of a chain link or ball. This construction is best illustrated in Figure 1.

It is thus seen that by passing the end ball of a length of ball chain through the expanded part 14 within the coupling and pulling it to the end of the coupling (the end ball being within the coupling and its adjacent ball being without the coupling) the chain end may be attached to the coupling. Further, if the chain end upon reaching the end of the slot of 13 be moved to one side or the other in the slot 15 until the expanded end 16 is reached, it will be possible to insert the other end of the chain into the expanded part 14 and similarly to move it into the corresponding opposite expanded end 16, whereby both ends of the

chain section may be attached to the coupling. Further, if these slots 13 and 15 be so constricted that a dumbbell connecting two adjacent balls must be forced through them with difficulty, this connection will not be easily displaced.

Instead of the construction which has just been described I may form in one of the long sides of the coupling two slots 13^a, instead of one slot 13, extending directly to expanded ends 16^a in each end of the coupling. Two expanded parts 14^a are provided in the slots 13^a exactly as the expanded part 14 is formed in the slot 13.

It is thus seen that in this alternative form the end ball of the length of ball chain may be inserted in the expanded part 14^a and passed through a slot 13^a to an expanded end 16^a. The other end ball of the length of ball chain may then be inserted in the other expanded part 14^a and passed through the other slot 13^a into the other expanded end 16^a, thus completing the loop.

A second loop of ball chain may be attached to the other end of either form of coupling, as is illustrated in Figs. 7 and 9. Connection is made exactly as in the case of the first loop.

As has been stated, the invention is particularly useful in connecting a curtain to a curtain pole in Figs. 7, 8 and 9 illustrate how connection with the pole may be made. Connection with the curtain (not shown) may be effected by means of the second loop to which reference has already been made. It will be realized that a closed loop of strip material having its ends connected as has been described will form a very much stronger means of attachment than those heretofore used. The tendency for the curtain to be pulled loose is therefore minimized and a most useful form of curtain connection is provided.

Other uses to which this invention may be put and other forms which do not depart from the proper scope of this invention will readily occur to those dealing with the problem. The invention is not limited to the

specific application and details herein described by way of illustration.

I claim:

1. A chain coupling comprising a flattened loop of sheet material having an opening in its flattened side, two openings in one end, a slot connecting the two end openings, and a second slot joining the side opening and the first slot.

2. A chain coupling comprising a flattened loop of sheet material having an opening in its flattened side, two openings in one end, a slot connecting the two end openings, and a second slot joining the side opening and the first slot between the two end openings.

3. A chain coupling comprising a closed flattened loop of sheet material having an opening in one of its flattened sides adapted to receive the end ball of a ball chain, two openings in one end of insufficient size to permit passage of a ball chain ball, a slot connecting the two end openings, and a second slot joining the first opening and the first slot.

4. A chain coupling comprising a closed flattened loop of sheet material having an opening in one of its flattened sides adapted to receive the end ball of a ball chain, two openings in its end of insufficient size to permit passage of a ball chain ball, a constricted slot connecting the two end openings, and a second slot joining the first opening and the first slot, substantially as described.

5. A chain coupling for connecting both ends of each of two lengths of ball chain, comprising a closed flattened loop of sheet material having an opening in one of its flattened sides of sufficient size to receive the end ball of a ball chain, openings in each end of insufficient size to permit passage of a ball chain ball, and slots connecting said first named with said second named openings.

In testimony whereof I have signed my name to this specification.

GILBERT W. GOODRIDGE.