

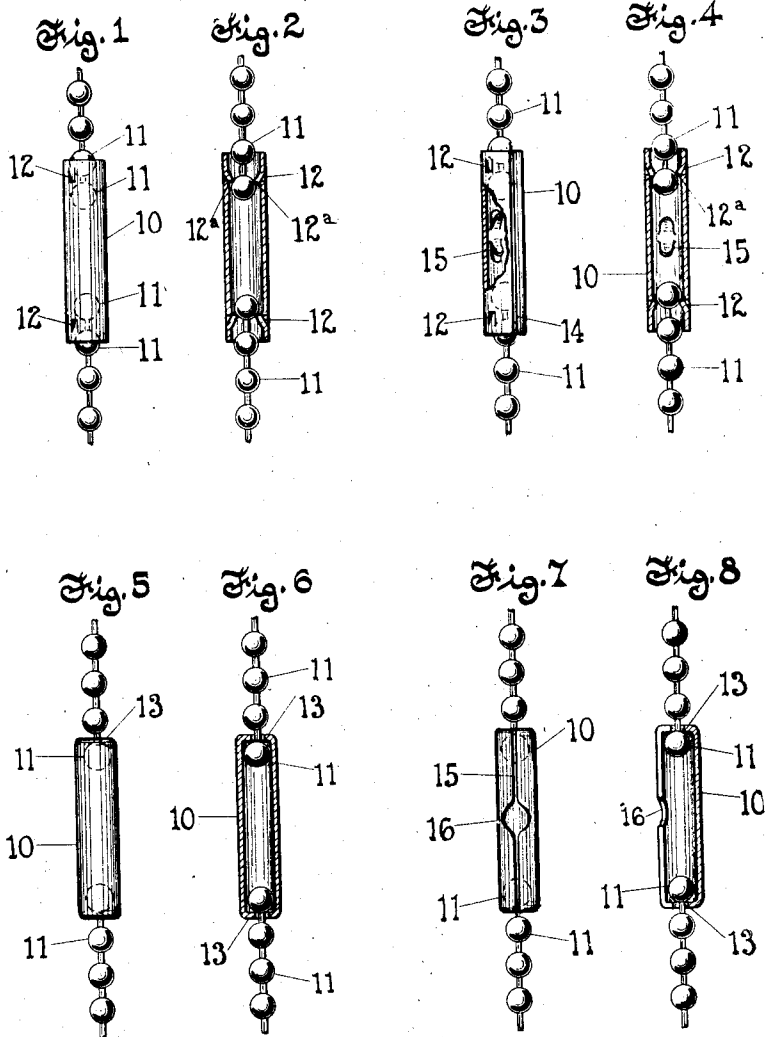
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INSULATING LINK FOR PULL CHAINS

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INSULATING LINK FOR PULL CHAINS

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This invention relates to improvements in insulating links for switch pull chains.

An object of the invention is to provide an insulating link of the above character which is of improved and simplified construction, embodying but one piece of material.

Another object is to provide for engagement and retention of the metallic links of the chain by the insulating link itself, whereby the necessity for the usual metallic attachments for the latter is obviated.

Another object is to provide insulating links of similar character which are respectively adaptable for either permanent or manual attachment to a pull chain.

Another object is to provide an insulating link which may be readily and economically manufactured.

Other objects and advantages of the invention will hereinafter appear.

The accompanying drawing illustrates certain embodiments of my invention which will now be described, it being understood that the invention is susceptible of embodiment in other forms without departing from the spirit and scope of the appended claims.

In the drawing, Figures 1 and 2 are enlarged views in front elevation and longitudinal section, respectively, of one form of insulating link constructed in accordance with my invention, and showing the same applied to a well known type of bead chain.

Figs. 3 and 4 are front elevational and longitudinal sectional views, respectively, of a modified form of the device illustrated in Figs. 1 and 2.

Figs. 5 and 6 are front elevational and longitudinal sectional views of another form of insulating link constructed in accordance with my invention, and

Figs. 7 and 8 are front elevational and longitudinal sectional views, respectively, of a modified form of the device illustrated in Figs. 5 and 6.

Referring to the drawing, wherein like parts have been given like characters of reference, the numeral 10 designates a tubular member formed of tough and relatively stiff insulating material which is capable of

being deformed or bent under pressure and of retaining therein such deformations. Thus, as shown in Figs. 1 and 2 the tubular member 10 has an inside diameter sufficiently large to permit insertion into its opposite ends of one or more beads or balls 11 of a pull chain. After insertion of the respective terminal or end beads 11, as shown in dotted lines in Fig. 1, the wall of member 10 is indented or pressed inwardly as shown at 12 to provide internal shoulders or abutments 12^a, which prevent withdrawal of said beads 11 from the insulating member or link 10. While I have shown such abutments as formed by two circumferentially spaced indentations in the wall of member 10 at each end thereof, it is obvious that the number of indentations may be varied; whereas if desired such retaining means may take the form of a complete annular indentation adjacent to or at the respective ends of member 10.

Thus as shown in Figs. 5 and 6 the terminal beads 11 of the two portions of the pull chain to be insulated from each other are inserted into the respective ends of tubular member 10, whereupon the ends of the latter are spun or pressed inwardly to provide annular retaining shoulders 13.

As will be apparent the insulating links shown in Figs. 1, 2, 5 and 6 are especially adapted for application to a pull chain during manufacture or assembly of the latter. On the other hand, the insulating link illustrated in Figs. 3 and 4 is particularly adapted for application to a pull chain after complete assembly of the latter; that is to say, as an attachment to be applied by the user. The tubular member 10 in Figs. 3 and 4 is in many respects like that shown in Figs. 1 and 2, being provided with the indentations 12 forming shoulders or abutments 12^a for retaining the beads 11 within the ends thereof. However, in order to provide for manual insertion of the terminal beads 11 within the respective ends of tubular member 10 the latter is slit longitudinally, as indicated at 14, whereby pressure manually exerted upon said terminal beads 11 will cause expansion of member 10 to a degree

sufficient to permit passage of said beads over and into interlocking engagement with the internal shoulders or abutments 12^a. While I have shown a single slit 14 extending throughout the length of member 10, it will be apparent that the latter may alternatively be provided with one or more relatively shorter slits extending inwardly from each end thereof for the purpose aforementioned. Moreover, in order to prevent accidental insertion of such a number of beads within the respective ends of the tubular member 10 as to result in too close proximity of the respective chain ends, I preferably provide a pair of longitudinally spaced indentations forming abutments or shoulders as indicated at 15.

In witness whereof, I have hereunto subscribed my name.

WILLIAM C. TREGONING.

The insulating link shown in Figs. 7 and 8 is likewise adapted for manual attachment to the ends of separated portions of a pull chain. This device is in general like that shown in Figs. 5 and 6, in that the respective ends of the tubular member 10 are spun or pressed inwardly to provide the annular retaining shoulders 13. Moreover, the member 10 is slit or slotted longitudinally thereof as indicated at 15, and as described in connection with Figs. 3 and 4. The slit 15 is provided with an intermediate enlargement 16, of a size sufficient to permit insertion of the respective terminal beads 11 whereby the latter may be moved longitudinally and internally of the member 10 to its opposite ends.

The insulating material of which the tubular members 10 are formed may comprise bakelite or any other insulating substance having the characteristics aforementioned, whereas the substance employed may preferably include a fibrous filler to increase the toughness and resiliency thereof.

In the foregoing manner I have provided a pull chain insulating link which is neat and attractive in appearance, and which may be readily and cheaply manufactured from a single piece of tubular insulating stock.

What I claim as new and desire to secure by Letters Patent is:

1. An insulator for bead chains comprising a tubular insulating member, said member being slit longitudinally to permit expansion of the walls thereof, integral internal projections adjacent to the respective ends of said member, said projections having surfaces converging toward each other inwardly of said ends to facilitate passage of chain beads therebeyond, and said projections also having transverse shoulders to resist removal of the chain beads from said member.

2. An insulator for bead chains comprising a tubular insulating member, said member being slit longitudinally to permit expansion of the walls thereof, integral inter-

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