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CABLE BINDING CLIP

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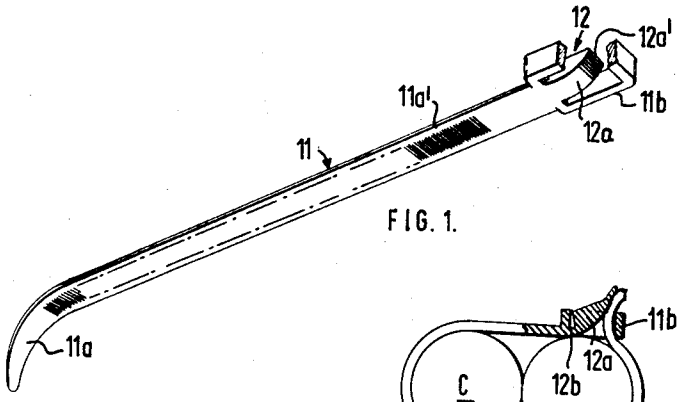

FIG. 1.

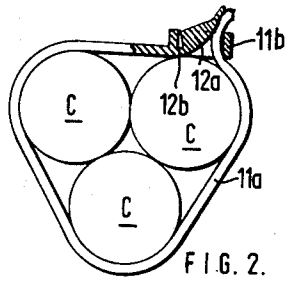

FIG. 2.

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CABLE BINDING CLIP

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The invention concerns cable or like binding clips.

There has been a need in the trade for a simple, inexpensive, yet effective cable binding clip and it is among the objects of the present invention to provide a clip possessing, at least in part, all of these features.

According to the present invention a cable or like binding clip comprises an elongated tongue portion, a head portion integral with one end of said tongue portion and adapted to receive into engagement therewith the other end of said tongue portion, at least one ratchet element mounted relative to said head portion and adapted to co-operate therewith to allow passage thereby of said tongue portion in one direction, such direction corresponding to the direction of engagement of the tongue portion with the head portion, but to prevent withdrawal of such tongue portion in the reverse direction.

The term "ratchet means" is to be construed in this specification and appended claims as referring to an arrangement such as will allow of a relative motion between parts in one direction but which will prevent relative motion in the reverse direction.

In a preferred form of embodiment the ratchet means comprises an element or elements of such form and so pivotally mounted within or adjacent said head portion as to be displaceable from a normal position to allow passage thereby of said tongue portion in one direction, such direction corresponding to the direction of engagement of the tongue portion with the head portion, but being adapted to return to said normal position upon movement of said tongue portion in the reverse direction and thereupon to abut and grip said tongue portion and thus prevent movement thereof in said reverse direction.

More particularly according to the present invention transverse bars or serrations are provided on said tongue portion with sensibly complementary serrations on said element or elements.

The invention will now be described further, by way of example only, with reference to the accompanying drawings illustrating two embodiments thereof and in which:

FIG. 1 shows a perspective view, partly cut away, of a preferred embodiment of the present invention; and

FIG. 2 is a side elevation partly in section of the binding clip shown in FIG. 1 when in use.

Referring now to the drawings a cable or like binding clip **11** comprises an elongated tongue portion **11***a*, a head portion **11***b* integral with said tongue portion and ratchet means **12** associated with said head portion **11***b*.

The clip is moulded in a single operation from nylon.

The tongue portion **11***a* is approximately four and one quarter inches long, three sixteenths of an inch wide, one thirty-second of an inch thick and has transverse serrations **11***a'* on one surface thereof.

The head portion **11***b* is integral with the tongue portion and is in the form of a rectangular frame five sixteenths of an inch wide and three eighths of an inch long and one eighth of an inch deep.

The ratchet means **12** comprises a pawl **12***a* disposed within the head portion **11***b* and secured thereto by a thin web or extension **12***b*, the pawl **12***a* having an inclined serrated end face **12***a'* and a ratchet constituted by the serrated surface **11***a'* of the tongue portion **11**. The position of the extension **12***b* in relation to the framework and the direction of inclination of the end face **12***a'* are such as to allow of the introduction of the tongue **11***a* into the head portion **11***b* in the appropriate direction to effect engagement between the pawl **12***a* and the surface **11***a'*.

In use the tongue portion **11***a* is introduced into the head portion **11***b*, such tongue portion being disposed about the cables C to be bound, and drawn through sufficiently to tighten about said cables, the pawl **12***a* being displaced to allow the engagement. Upon effecting tightening and releasing of the tongue portion **11***a*, the tension in the tongue portion causes the pawl **12***a* to pivot and thus the serrated end face **12***a'* to engage the serrated surface **11***a'* of the tongue portion **11***a*, the tongue being gripped between the pawl **12***a* and the adjacent side of the head portion **11***b* thereby preventing return motion of the tongue portion.

The invention is not restricted to the particular features of the embodiment hereinbefore described since alternatives and modifications will readily present themselves to one skilled in the art.

For example it might be thought necessary to provide means whereby the clip might be applied to such as a mounting board and in such a case an extension to the head portion of the clip in the form of a lug will be provided, such lug being adapted to receive a fixing screw or the like.

Whilst the use of nylon as a material for the binding clip is proposed, alternative materials such as high density polythene or polypropylene might be used with equal advantage.

Furthermore the actual necessity for provision of serrations on the tongue portion and/or on one or both sides of the jaws will be determined by materials used since the gripping effect may be attained either by the engagement of complementary or sensibly complementary surfaces or by arranging that a hard element bites into the tongue portion. If the pawl member is of a harder material than the tongue portion then the provision of serrations on the tongue portion might not be strictly necessary.

The binding clip according to the present invention possesses the distinct advantage that a given clip may be applied to a bundle of cables of a range of overall diameters, the clip being drawn tight and the excess tongue portion being cut off. If a clip of greater length than any individual clip available is required then a requisite number of clips may be joined together in end to end disposition.

I claim:

1. A binding clip for cables and the like comprising an elongated flexible tongue, a substantially rectangular frame of a thickness greater than that of said tongue and constituting a head, one end of said tongue being integral with outer face of one element of said frame, a pawl in said frame, one end of said pawl being integrally connected to the inner face of said one element, said connection constituting a pivot, said pawl extending to about the end of said frame opposite to said one element, the free end of said pawl being tapered, the free end of said pawl being displaceable from within said frame by the passage of the free end of said tongue through said frame between said pawl and said opposite end, said pawl being adapted to return into said frame upon removal of said tongue end from said frame.

2. A binding clip according to claim 1 characterized in that the thickness of said pawl at said connection is substantially greater than the thickness of said connection.

3. A binding clip according to claim 2 characterized in that said pawl tapers from said connection to the free end of said pawl.

4. A binding clip according to claim 1 characterized in that said inclined face is serrated and the corresponding face of said tongue is serrated.

5. A binding clip according to claim 1 characterized in that one face of said frame is coplanar with one face of said tongue and the thickness of the base of said pawl is about the thickness of said frame.

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