July 23, 1940. W. C. HUNT 2,209,162

IDENTIFICATION TAG

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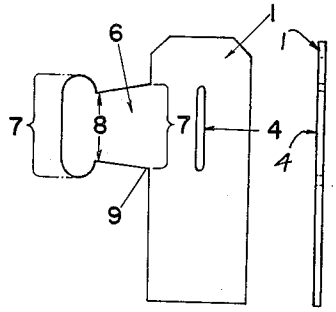


FIG.-1 FIG.-2

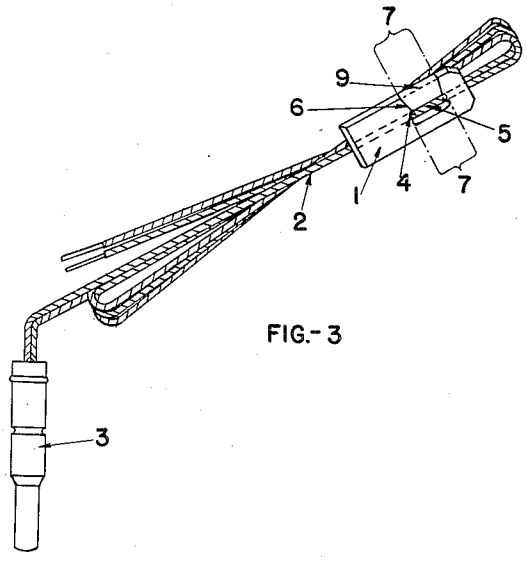


FIG.-3

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IDENTIFICATION TAG

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2 Claims. (Cl. 40—20)

This invention relates to an improved identification device and more particularly to an identification tag suitable for use in combination with an electric firing device.

There are various types and designs of identification tags known to the art, the large majority of which have a hole located near one end of the tag through which a strand is threaded to effect attachment of the tag to the article which is to be identified. There are also tags which contain a slit extending from the hole to the outside edge of the tag thus allowing the tag to be placed on a strand without threading the end of the strand through the hole. Further it is known that to include string or a metal clip in combination with the tag provides an effective means of attaching the tag to a given article. Each of the various types of tags mentioned above may be used to identify practically any article, but the tags having a hole located at one end or having a hole with a slit extending to the outside edge of the tag are the ones usually employed in labeling electric firing devices.

It is well known that electric firing devices include an explosive container from which extend a pair of insulated leg wires. Further it has been the custom in the art to identify the period of all delay firing devices by attaching a tag to one of the insulated leg wires. The art has experienced difficulties in obtaining tags that are economical, that are easy to attach to the leg wire, that may be positively placed at a definite point on the leg wire, that have sufficient strength to withstand rough usage, and that will after being attached to the leg wire lie flatly along the bundle of leg wires.

The object of this invention is to produce a tag that is easily attached to one leg wire of the firing device. A further object of this invention is to produce a tag that will not be torn from the leg wire by accidental stress. A still further object of this invention is to provide a tag that will remain positioned on the leg wire at the point of application. Further objects will appear hereinafter.

The identification tag in accordance with this invention includes a means of easily applying the tag to a wire without the necessity of threading the wire through a hole. Thus the tag contains a central slot through which a loop or bight of one leg wire is passed, after which a tab on the side of the tag is folded through the bight and the bight pulled tight against the tab. This method positions the tag on the wire firmly and positively. Further the tag may be placed at any point on a wire without reference to the ends.

Having now indicated in a general way the nature and purpose of this invention, there follows a more detailed description of a preferred embodiment thereof with reference to the accompanying drawing in which:

Figure 1 is a plan view of the tag; Figure 2 is a side view of the tag shown in Figure 1; and Figure 3 shows the tag of Figure 1 attached to a leg wire of a firing device.

The tag will be described by reference to Figure 3 which shows it in combination with a firing device. The details of construction of the tag will be readily apparent by reference to Figures 1, 2, and 3 wherein like reference numbers refer to the same parts of the device.

The tag 1 attached to a leg wire 2 of firing device contains a slot 4 which is of sufficient length and breadth to allow a bight 5 of leg wire 2 to be easily passed through. The tab section 6 is folded across the face of the tag 1 and inserted under the bight 5 after which the bight 5 is pulled flat against the tab section 6 as shown in the drawing. It will be noted that tab 6 is flared, to a degree that provides a width 7 at least equal to the length of the slot 4, on both sides of a neck portion 8, which neck portion 8 coincides with the said slot 4 when the tab 6 is folded back across the face of the tag 1. The flared design of the tab 6 prevents the removal of the tab 6 if the tab 6 is accidentally torn along the line of the fold 9.

From the design of the tab 6 and slot 4 it is apparent that the bight 5 so clamps the tag 1 to the leg wire 2 that there is no possibility of the tag 1 moving along the wire 2 and further that since the leg wire 2 is acting against the flat surface of the tab 6 there is no chance of the tag 1 being torn from the assembly.

The tag in accordance with this invention presents many advantages over the tags that are now used by the art for labeling electric delay firing devices. Thus the tag of this invention is made from a single thickness of material which is advantageous as the manufacture of the device may be economically carried out on a punch press with one operation. Further such a tag needs no reinforcement as the design in accordance with this invention causes all stresses to be applied against a flat surface instead of against one edge of the tag material. Since the tag is manufactured on a punch press from single thickness material, the design may be altered easily and with a minimum of expense as the only re-

quirement is the use of a new punch, whereas in tags that are necessarily reinforced change in design often causes the alteration of the design of the reinforcing member with the consequent need of multiple alterations which are expensive.

A further advantage of the tag of this invention is the ease with which it is applied at any point of a strand. The design allows the tag to be quickly and easily attached to a leg wire of a firing device. Further this tag may be attached after the leg wires have been bundled and shunted as all that is necessary to effect attachment is to pass a bight of wire through the central slot and fold the tab of the tag under the bight. The application of the tag positions it securely at any desirable point, and due to the design, the tag cannot be moved without directed effort. This tag, therefore, may be placed very close to the end of a leg wire without danger of the tag slipping off the end of the wire. This possibility of placing the tag close to the end of the leg wire is advantageous as the tag is at a ready reference point. The tag so placed is available for reference even after the firing device has been loaded into a bore hole.

The design of the tag also causes the tag to lie flat against the wire to which it is attached which is an advantage as this position does not allow the tag to be accidentally torn from the wire. The tag of this invention further is extremely hard to accidentally tear from the leg wire since the leg wire stress is exerted against the flat surface of the tab whereas the tags of the prior art are designed so that the stress of the leg wire is applied against an edge of the tag, it is therefore obvious that the tag of this invention will be much more difficult to remove than those of the prior art.

The tag of this invention may be manufactured from any sheet material of suitable strength such as, for example, paper, aluminum, copper, etc., but the preferable material in accordance with this invention is rope paper of about .015 inch thickness. Paper of this type and thickness gives a product which is easily applied and is of sufficient strength to withstand the abuse encountered in explosive operations.

While the use of the described tags has been hereinbefore directed to the identification of a delay firing device such a tag may be used in conjunction with any article which provides a strand to which the tag may be attached. Thus, it is to be understood that these tags may be altered in design to adapt their attachment to strands such as thread, string, wire, or heavy cord, and it will be possible therefore to use those tags to identify practically any article. Further, it is to be understood that the use of these tags with all electric firing devices such as delay electric blasting caps, delay electric squibs, delay electric igniters, and electric blasting caps is contemplated.

It will be understood that the details and examples given hereinbefore are illustrative only, and in no way limiting on my invention as broadly described hereinbefore and in the appended claims.

What I claim and desire to protect by Letters Patent is:

1. An identification tag designed to be attached to a strand, said tag comprising a flat sheet having a slot designed to receive a bight of the said strand and a tab located on one side and being an integral part of said tag; which tab is flared to a degree that provides a width at least equal to the length of the said slot on both sides of a neck portion that will coincide with the said slot when the said tab is folded along its line of attachment to the main body of the said tag back across the face of the tag; the said tab when folded being adapted to be inserted under the said bight of strand inserted through the said slot, thus positively joining the said identification tag to the said strand.

2. In combination with a strand an identification tag attached thereto, the said identification tag comprising a flat sheet having a slot designed to receive a bight of the said strand and a tab located on one side and being an integral part of said tag; which tab is flared to a degree that provides a width at least equal to the length of the said slot on both sides of a neck portion that will coincide with the said slot when the said tab is folded along its line of attachment to the main body of the said tag back across the face of the tag; the said tab when folded being inserted under the said bight inserted through the said slot, thus positively joining the said identification tag to the said strand.

WILLIAM C. HUNT.