A. M. BATES.

PROCESS OF FORMING AND TAGGING WIRE TIES.

APPLICATION FILED JULY 16, 1914.

1,181,284. Patented May 2, 1916.

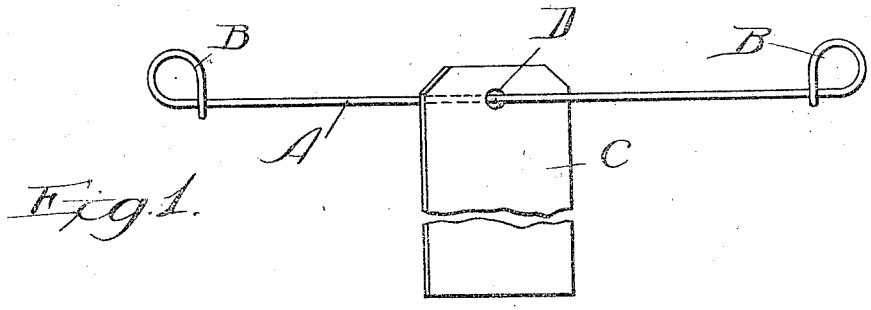


Fig. 1.

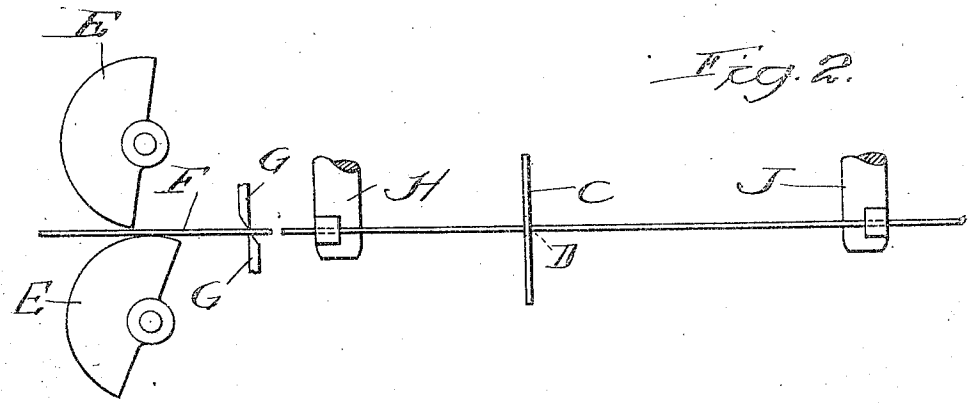


Fig. 2.

Witnesses:
C. L. Hunter
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Inventor:
Adelmer M. Bates.
by Parker & Carter
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UNITED STATES PATENT OFFICE.

ADELMER M. BATES, OF CHICAGO, ILLINOIS, ASSIGNOR TO BATES VALVE BAG COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF WEST VIRGINIA.

PROCESS OF FORMING AND TAGGING WIRE TIES.

1,181,284. Specification of Letters Patent. Patented May 2, 1916.

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To all whom it may concern:

Be it known that I, ADELMER M. BATES, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Processes of Forming and Tagging Wire Ties, of which the following is a specification.

A use to which my invention is applicable illustrates its character, and I wish, therefore, to explain the invention by referring to its use in connection with cement bags.

These bags are commonly secured at the open end by means of a wire tie twisted about the bag to tie the material. It is desirable to associate with such bag a tag, as, for instance, a tag setting forth the nature and quality and perhaps giving a guarantee in connection with the contents. It is a burdensome, expensive operation to attach such tags to the bag or to print the statement on the bag. If the latter is done, then the bag may be refilled with other than the proper material and, in short, is to an extent unfitted for further use. It is also an expensive and difficult process to attach the tag to the wire tie after the latter is manufactured. It will be understood, of course, that these things are done on a very large scale and the trifling cost or expense connected with any given operation runs into a large sum when dealing with thousands, hundreds of thousands, and even millions of packages.

The object of my invention, therefore, is to furnish to the trade a suitable wire tie with a tag attached thereto.

There are many reasons why it is not desirable to provide the tag with a hole sufficiently large to admit the looped end of the tie. Therefore, the tag and tie are united in the process of making the tie.

The product is illustrated in the accompanying drawings, wherein—

Figure 1 is an elevation of the tie with tag attached; Fig. 2 is an elevation of the same shown diagrammatically in the process of manufacturing.

Like parts are indicated by the same letter in all the figures.

A is the body of a wire tie having the loop ends B, B.

C is the tag having a small aperture D through which the body of the tie is inserted. The complete tie, of course, so arranged is, as it were, inseparable from the tag, for neither can be separated from the other. These will be made up in large quantities for a given manufacturer and his employees have no additional labor to perform. They simply apply the wire tie in the usual form and the tag attached thereto and printed with the matter required will thus be secured in place.

E, E are mutilated feeding rolls operating on the wire F which is passed between the cutting edges G, G through the loop forming device H, through the hole in the tag C, through the loop forming device J and slightly beyond the same. The mechanism is now operated to form the loops on the end of the tie and to sever it from the wire F, whereupon the product of the process will assume the form shown in Fig. 1. Obviously the whole operation could be carried on by any kind of a mechanism or even by hand.

I have shown the tag as perforate and the tie passed through the perforation. I have shown the tie with its body ends terminating in loops too large to admit the end of the tie. The tag may have an extension or other part so that the eye or aperture may not be just as shown in the drawing. The wire tie in any event is passed through the opening or the tag is threaded thereupon.

The operation can be carried on by any desired form of mechanism, or by hand. The result is in any case a tie ready to be applied to the bag and containing or carrying permanently attached thereto a tag.

Of course, these ties can be used for any desired purpose. I have simply suggested a cement bag as an illustration. They may be used for securing various substances. I do not wish, therefore, to be limited to the particular form or shape of the wire tie or tag or the particular mechanism or means by which they are united, nor to any particular kind of tie or one adapted to be secured in position or used by means of any particular form of tool.

I claim:

1. The process of forming and tagging wire ties, which consists in holding a perforate tag in fixed position, then passing a length of wire through the perforation, and cutting off a tie blank therefrom, and then upsetting the two ends of the blank and forming enlarged heads thereon each larger than the perforation in the tag.

2. The process of forming and tagging wire ties, which consists in holding a perforate tag in fixed position, then passing a length of wire through the perforation and cutting off a tie blank therefrom, and then upsetting the two ends of the blank and forming them into closed loops each larger than the perforation in the tag.

In testimony whereof, I affix my signature in the presence of two witnesses this 14th day of July 1914.

ADELMER M. BATES.

Witnesses:
BESSIE S. RICE,
GENEVA HIRTH.