June 19, 1928. 1,674,311

P. WRIGHT

BUNDLE OF TIE WIRES

Original Filed Dec. 30, 1921

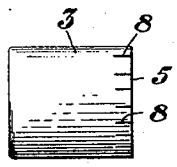


Fig. 1

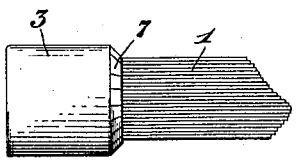


Fig. 2

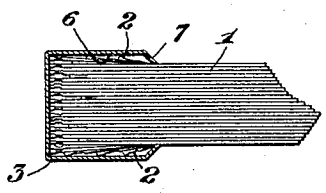


Fig. 3

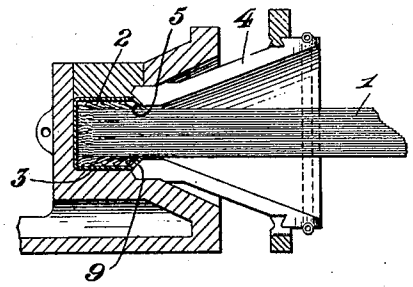


Fig. 4

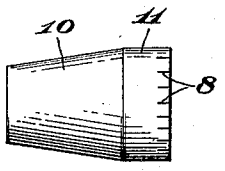


Fig. 5

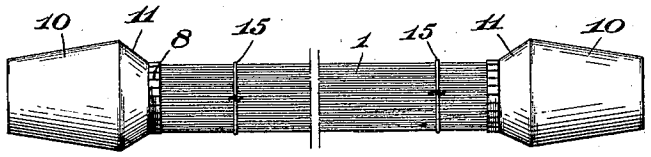


Fig. 6

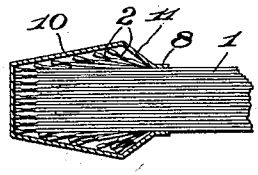


Fig. 7

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Patented June 19, 1928. 1,674,311

UNITED STATES PATENT OFFICE.

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BUNDLE OF TIE WIRES.

Original application filed December 30, 1921, Serial No. 526,046. Divided and this application filed December 7, 1922. Serial No. 605,408.

This invention relates to an article of manufacture consisting of a bundle of tie wires, ready for shipment, and has for its object to provide an article of this kind which will be simple in construction, comparatively inexpensive to manufacture, and better adapted for shipment than those which have been heretofore proposed.

With these and other objects in view, the invention consists in the novel details of construction and combinations of parts constituting the article, all as will be more fully hereinafter disclosed and particularly pointed out in the claims.

This invention is a division of my prior application #526,046, filed December 30, 1921, allowed November 17, 1922, and entitled "Machine for capping bundles of tie wires."

Referring to the accompanying drawings forming a part of this specification, in which like numerals designate like parts in all the views:

Figure 1 represents a metallic cap detached from the bundle which is used in protecting its ends;

Figure 2 shows one end of the bundle of tie wires with the cap in place;

Figure 3 shows a sectional view of the parts shown in Figure 2;

Figure 4 is a diagrammatic sectional view of a portion of the mechanism employed in securing the cap in place on the bundle of wires;

Figure 5 is a view of a modified form of cap;

Figure 6 shows a bundle of tie wires with the caps illustrated in Figure 5 in place on each end thereof; and

Figure 7 is a sectional view of one end of the bundle of wires shown in Figure 6.

1 indicates a bundle of steel tie wires used in certain well known machines for banding boxes, and in this particular instance the tie wires have what is known in the art as "deformed ends." Said ends are diagrammatically illustrated at 2, and have the effect of enlarging the end of the bundle proper, owing to the larger space they require. These bundles 1 frequently contain from say 200 to 300 wires; the wires are frequently from 8 to 12 feet long, and are of a substantial size, so that the bundles themselves are rather heavy, and being composed of steel wires, they are difficult to ship to the place of use, unless their ends are well protected. Prior to this invention, it was customary to tie fabric material around the ends of these bundles, and to ship the same in this condition. But owing to the steel material out of which the wires are made, the ends of the bundles would readily cut through any fabric that could be supplied, with the result that the individual ends 2 of the wires formed veritable chisel points, which became more or less bent and would cut almost anything that came into violent contact therewith. In the machine disclosed, in my said original application, however, these said bundles 1 of wire were supplied with metallic caps 3, and said caps were caused to enclose the ends of the bundles 1, whereupon a cone shaped member 4, see Figure 4, was by suitable mechanism brought into contact with the extreme ends 5 of the caps and crimped said ends down tightly against the body of the bundles 1, so that the finished end of the bundle was securely enclosed in a metal cap and presented the appearance shown in Figure 2. On the other hand, the enlarged ends 2 of the individual wires were afforded ample room on the inside 6 of the caps 3, while the crimped down portions 7 of said caps were located behind said enlarged ends 2, and thus were the metallic caps 3 held firmly in place on the bundles 1 during shipment, and the ends of the bundles prevented from injuring other objects, as well as saved from being injured themselves. To facilitate the crimping action, the caps 3 were preferably provided with the slitted rims indicated at 8, so that when the metal was once firmly crimped into place through the action of the beveled edge 9 of the crimping members 4 they were firmly held in place until forcibly removed at the place of use.

In the somewhat modified form of the invention shown in Figure 5, the caps 10 are made cone shaped as illustrated and are provided with the cylindrical portions 11 which are slit as in the previous case, to facilitate the crimping action. These caps are crimped into place by a machine, the same as, or similar to, that shown in my said original application, and by a mechanism substantially the same as that illustrated in Figure 4.

In both the forms of the invention, it will

be clear that there is provided a bundle of steel tie wires having both of its ends securely protected with metal caps and having a considerable weight, and whose ends when uncapped are liable to be injured and to cause injury during shipment. It will also be clear that by securing the body portions of these bundles together, as by the wire bands 15, the wires are all so firmly bound together that the bundle in shipment takes on the nature of a solid bar with its ends protected, and therefore, all the troubles encountered in transit prior to this invention are eliminated.

It is obvious that those skilled in the art may vary the details of construction, as well as the arrangement of parts, without departing from the spirit of the invention, and therefore it is not desired to be limited to the above disclosure except as may be required by the claims.

What is claimed is:

1. A commercial bundle composed of a multiplicity of package-binding elements all of which are usable as such, and means encasing the ends of the elements forming said bundle and fixedly retained thereon by certain of said elements to prevent endwise movement of said elements relatively to each other.

2. A commercial bundle composed of a multiplicity of package-binding wires all of which are usable as such, substantially all the wires composing said bundle being uniform as to length, and means encasing the ends of said wires forming the bundle and in abutting contact with the individual wires thereof, said end-encasing means being fixedly retained by certain of said elements on the end portion of the bundle to prevent endwise movement of the individual wires relatively to each other.

3. A commercial package formed of bundled wire composed of preformed straightened pieces uniform as to length forming an enlargement near the end, a cap encasing the preformed portions of said individual pieces, and means for fixedly retaining the cap in contacting relation to said pieces composing the bundle.

4. Bundled wire comprising individual pieces of deformed wire assembled into parallel relation, and compressible encasing means upon an end portion of said bundle, said encasing means being compressed into frictional contact with the bundle below the deformed portions of the individual wires.

5. Bundled wire comprising individual pieces substantially uniform as to length, and encasing means positioned upon an end portion of the bundle, that portion of the encasing means remote to the extreme end of said bundle being contracted upon the bundle and into frictional contact therewith.

6. As a new article of manufacture, a bundle composed of a plurality of binder tie wires of substantially equal length and having their end portions deformed, whereby the end portion of the bundle is of larger circumference than the body portion, and a protecting cap member engaging over the enlarged end portion of the bundle, said cap having a portion thereof crimped about the smaller body portion of the bundle adjacent the enlarged end portion thereof to thereby retain said cap member in place on the end of the bundle.

7. As a new article of manufacture, a bundle of tie wires, said bundle having an enlarged end portion, and a protecting cap telescoped over the enlarged end portion of the bundle and crimped around the bundle closely adjacent the enlarged end portion to be thereby retained in place.

In testimony whereof I affix my signature.

PARVIN WRIGHT.