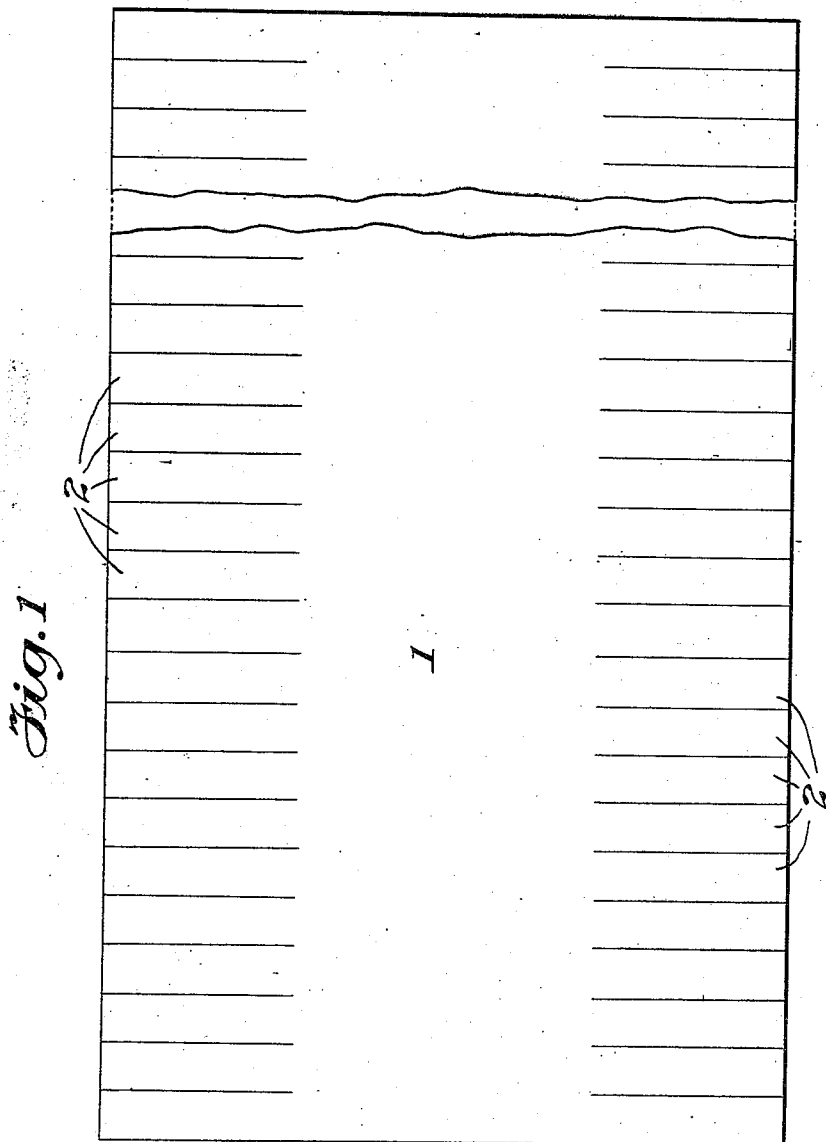


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PACKAGE FOR STRIP OR FILAMENTARY MATERIAL AND METHOD OF FORMING THE SAME.
APPLICATION FILED MAY 24, 1921.

1,437,954.

Patented Dec. 5, 1922.
2 SHEETS—SHEET 1.



INVENTOR
William H. Balke
BY
Charles F. Wane
HIS ATTORNEY

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Fig. 2

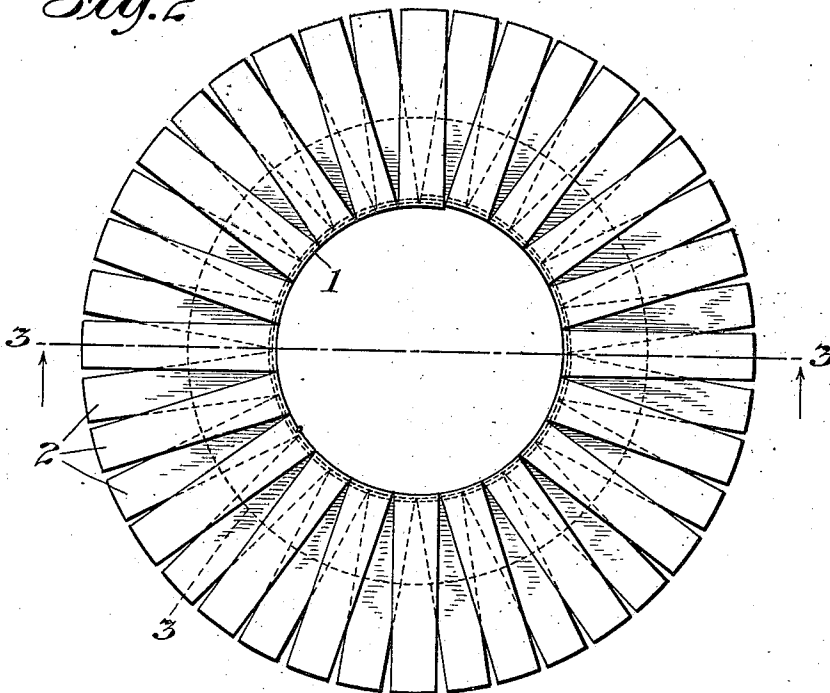


Fig. 3

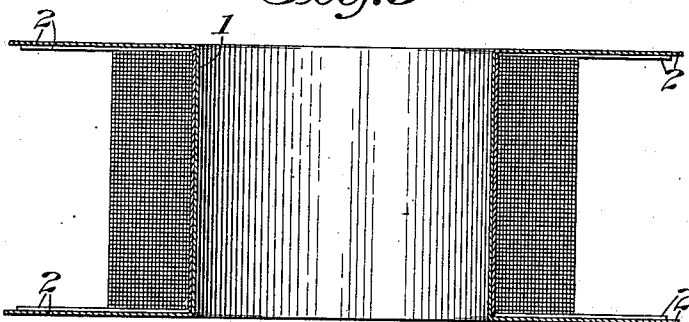
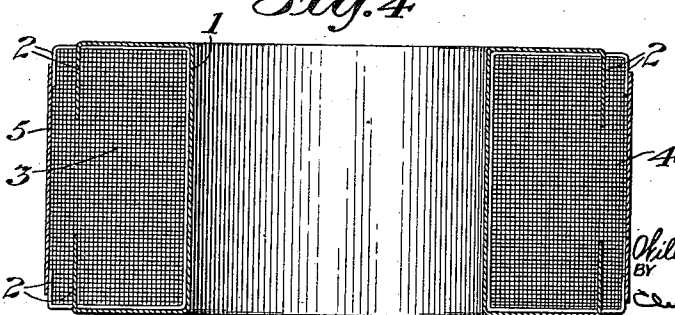


Fig. 4



INVENTOR

William H. Balke

BY

Charles F. Dene

HIS ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM H. BALKE, OF WHITNEYVILLE, CONNECTICUT, ASSIGNOR TO THE ACME WIRE COMPANY, OF NEW HAVEN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

PACKAGE FOR STRIP OR FILAMENTARY MATERIAL AND METHOD OF FORMING THE SAME.

Application filed May 24, 1921. Serial No. 472,056.

To all whom it may concern:

Be it known that I, WILLIAM H. BALKE, a citizen of the United States, and resident of Whitneyville, in the county of New Haven and State of Connecticut, have invented a certain new and useful Package for Strip or Filamentary Material and Method of Forming the Same, of which the following is a specification.

10 The invention relates to a new and useful form of package or container for strip or filamentary material wound in cop or coil form and to the method of forming the composite article comprising the coil of material and the container for the same. To this end the invention includes the formation of a tubular body, preferably of paper or similar flexible material, having its ends incised in a generally longitudinal direction to form a series of tabs or fingers, adapted first to be bent normal to the surface of the body portion to provide a generally spool-like element to receive the convolutions of the filamentary or strip material, and, second, to have the free ends of the tabs or fingers bent or folded over the peripheral surface of the coil to substantially enclose the latter. In the preferred application of the method certain of the tabs or fingers have their outer ends bent over the surface of the coil before the latter is completed and the ends of the remaining tabs or fingers folded over the outer surface of the coil when the latter has been practically completed, with the final convolutions of the coil, the number of which convolutions may vary according to the size and character of the package, being wound over the adjacent tab ends to lock the same into position, the whole constituting a package in which the tabs or fingers of the body portion or spool-like element are firmly interlocked between the layers of the coil to effectively maintain and preserve the form thereof, without, however, in any way interfering with the ready unwinding of the coil, either in whole or in part. The invention therefore involves, further, the production of the spool-like element or container including the central tubular body portion having the ends thereof split or incised longitudinally to form bendable or foldable tabs, and, second, the container aforesaid

having the filamentary or strip material wound in a coil thereon with the ends of the tabs disposed as described, the whole to constitute a novel and useful package including the container and the coil of material contained therein and substantially enveloped thereby.

The invention is illustrated in the accompanying drawings, in which:—

Fig. 1 is a blank from which the container is formed;

Fig. 2 is an end elevation of the container with the filamentary material wound thereon;

Fig. 3 is a vertical section on line 3—3 of Fig. 2; and

Fig. 4 is a view similar to Fig. 3 showing the completed package, in its preferred form.

Referring to the drawings, 1 indicates the body of the container, in the form of a sheet of paper, cardboard or other suitable flexible material, that is capable of being rolled or formed into tubular shape, having kerfs or incisions extending from its lateral edges toward the longitudinal axis of the sheet, leaving the middle portion thereof imperforate, said kerfs or incisions dividing the sections of the sheet on each side of the imperforate middle section into a series of tabs or fingers 2, which may be readily bent relatively to the plane of the sheet. The tabs or fingers 2 on each side are preferably bent along the lines where they join the middle portion of the sheet until they are normal to the plane of the sheet, so that when the latter is rolled into tubular form the series of tabs or fingers on each side will form what are, in effect, end flanges to the tubular body portion and the whole will constitute a spool-like element or device, as more particularly illustrated in Figs. 2 and 3, upon which filamentary or strip-like material 3 may be wound in successive convolutions, either by hand or by machinery, the width of the coil being determined by the longitudinal dimension of the tubular body portion 1, and the thickness of the coil being determined by the length of the tabs 2 and the extent to which the latter are to overlap the surface of the coil. After the spool-like element has been thus formed, the filamentary or strip-like material 3 is wound

in successive convolutions and layers on the tubular body portion and between the flanges formed by the fingers 2. Preferably before the winding of the coil has been completed, the ends of certain of the tabs 2 are bent or folded over the peripheral surface of the coil, as shown in Fig. 4, so that the ends of opposite tabs lie adjacent each other or may even overlap to a slight extent. Additional convolutions of the coil, as indicated at 4 in Fig. 4, are then wound over the folded tab ends and when the coil has been substantially completed the ends of the remaining tabs are similarly folded over the surface of the coil and secured in any convenient or preferred manner, as, for example, by the application of a circumferential strip of fabric secured by an adhesive. A convenient mode, however, of securing the outer ends of the tabs is that illustrated in Fig. 4, in which a final layer or partial layer of convolutions of the filamentary or strip material is wound over the inwardly bent tab ends, as at 5, to lock the same firmly in position. It will be understood that, instead of bending the ends of two sets of tabs on opposite sides of the container, three or more sets may be so bent, the ends of the tabs in each succeeding set overlying coil sections at varying distances from the axis of the coil, and by thus interlocking the tab ends between several layers of the coil, the inherent strength and durability of the finished package will be materially increased.

The completed package, if desired, may be suitably taped or encased in paper or other appropriate material, but in many instances the construction as hereinbefore described will be found to be sufficient for ordinary commercial usage. It will also be apparent that the invention is applicable to the packaging of various kinds of material in filamentary or tape form, such as threads, yarns, wires, flexible tubes, ribbons, and the like, with the assurance that the proper shape of the coil will be maintained and the material thereof be protected against injury, by the particular mode of associating the container with the coil.

What I claim is:

1. The method of packaging filamentary or strip material which comprises forming a tubular body of flexible material, slitting the ends thereof to form tabs, bending the tabs to constitute end flanges to the tubular body, winding the filamentary or strip material on

the body between the flanges, and bending the outer ends of the tabs to overlie the peripheral surface of the coil. 60

2. The method of packaging filamentary or strip material which comprises forming a tubular body of flexible material, slitting the ends thereof to form tabs, bending the tabs to constitute end flanges to the tubular body, winding the filamentary or strip material on the body between the flanges, bending the ends of certain of the tabs to overlie an intermediate layer of the coil before the latter is completed, and bending the remaining tabs over the final layer of the coil. 70

3. The method of packaging filamentary or strip material which comprises forming a tubular body of flexible material, slitting the ends thereof to form tabs, bending the tabs to constitute end flanges to the tubular body, winding the filamentary or strip material on the body between the flanges, bending the ends of certain of the tabs to overlie an intermediate layer of the coil before the latter is completed, bending the remaining tabs over the final layer of the coil, and winding several convolutions of the coil to overlie the adjacent ends of the last tabs. 80

4. A container for wound filamentary or strip material comprising a tubular body portion, and tabs extending from the ends thereof adapted to be folded or bent over the coil of material wound on the body portion. 85

5. A container for wound filamentary or strip material comprising a tube of paper or the like having its ends slit longitudinally to form tabs adapted to be folded or bent over the coil of material wound on the body portion. 90

6. An article of manufacture comprising a tubular body having longitudinally split ends forming tabs, and a coil of filamentary or strip material wound on the tubular body, said tabs being folded or bent over the sides and outer peripheral surface of the coil. 95

7. An article of manufacture comprising a tubular body having longitudinally split ends forming tabs, and a coil of filamentary or strip material wound on the tubular body, certain of said tabs being folded or bent over and interposed between successive intermediate layers of the coil, and other tabs having their ends bent over the outer peripheral surface of the coil. 100

Signed at New Haven in the county of New Haven and State of Connecticut this 22nd day of April A. D. 1921. 110

WILLIAM H. BALKE. [L. s.]