

May 30, 1939.

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2,160,235

PACKAGED ARTICLE

Filed Aug. 20, 1936

Fig. 1.

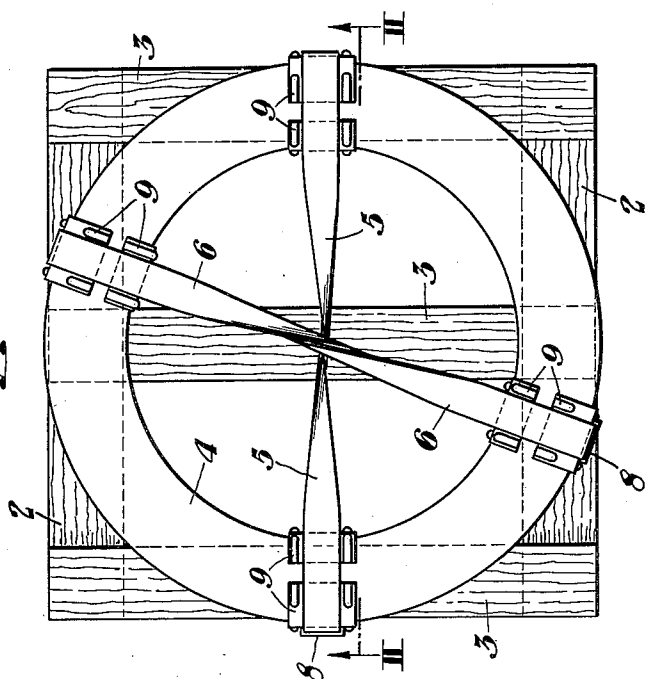
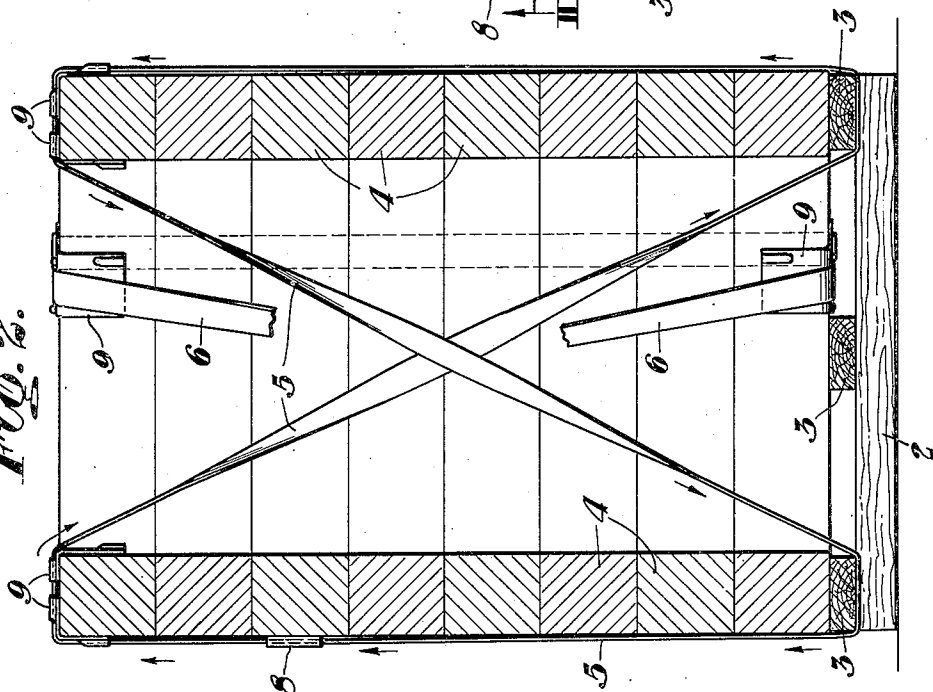


Fig. 2.



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UNITED STATES PATENT OFFICE

2,160,235

PACKAGED ARTICLE

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Application August 20, 1936, Serial No. 97,058

7 Claims. (Cl. 206—65)

This invention relates to banding relatively tall, hollow articles and, more particularly, to the banding of a plurality of coils of metal strip preparatory to shipping the same.

Hitherto, in preparing coils of strip for shipment, it has been common to use four separate bands at about 90 degrees apart each with a separate seal. Considerable space was required for the banding operation, the operation was slow and the bound stack had a tendency to get out of alignment, sway and be generally unstable in shipment.

The present invention seeks to overcome the objections enumerated above by providing an improved packaged article including a stack of coils, and other hollow articles, secured by an endless band to skids, resulting in stable and secure stacks of coils being had; and which may be effected in one-quarter the time required in conventional banding operations; and wherein the number of seals required for each stack is reduced by one-half.

It is another object of the present invention to provide an improved packaged article which may be carried out in a relatively small space and with a minimum amount of labor being expended.

Other objects and advantages will become apparent as the description proceeds, in which,

Figure 1 represents a plan view of a stack of coils banded in accordance with the present invention, and

Figure 2 represents a sectional elevational view taken along line II—II of Figure 1.

In the drawing, a skid or support of the usual type is provided, consisting of two or more runners 2, and two or more cross-pieces 3 positioned to secure the runners together and to provide a platform upon which a stack of coils 4 may rest. When the coils 4 are in position upon the skid, as illustrated, two bands 5 and 6 are passed thereabout in the following manner:

Referring to Figure 2, the band 5 is applied to the stack of coils by placing one of its ends to an exterior portion of the stack, passing the band upwardly and over the topmost coil thereof, then downwardly through the stack in diagonal fashion beneath the opposite cross-piece 3 of the skid and then upwardly along the outer periphery of the stack to the topmost coil thereof. From here the band 5 is directed downwardly to the opposite cross-piece of the skid, in diagonal fashion, so as to form a cross adjacent the middle of the stack with the initially positioned diagonal portion thereof. From beneath the opposite cross-piece of the skid, the band is conducted upwardly

upon the outer periphery of the stack until its end is reached at the starting point, at which point a box banding tool is employed to draw the two ends firmly together and to apply the seal 8, in the usual manner, to connect the two.

The band 6 is applied in precisely the same manner with the exception that it passes only about the stack of coils without engaging any portions of the skid. As shown in Figure 1, a seal is applied to secure the free ends of band 6 together upon the outer periphery of the stack of coils, and within a segment of arc less than 90 degrees from the point of application of the seal of the band 5.

It will be seen that when the bands are applied in this manner, the stack of coils is reinforced with diagonal bracing within its interior, which precludes the possibility of the coils getting out of alignment, since it holds them securely together irrespective of any rough handling to which they may be subjected.

To prevent the edges of the strip from cutting into the bands 5 and 6, formed corner protectors 9 are positioned between the bands and the coils for this purpose.

The "criss-cross" or "figure-8" method of applying bands, as is taught herein, insures that the stacks of coils be subjected to uniform tension at each side of the bundle, by virtue of the continuity of a single band securing opposed sides of the stack together. This differs from the old methods wherein four separate bands were applied each to one side of a stack and each tightened separately, rendering uniform tension practically impossible. Furthermore, in the method of the present invention, only one-quarter of the time and working area is required, as against the old methods. As has already been indicated, the stability of the skid load is greatly increased by the bracing effect derived from the "criss-cross" bands.

While I have shown and described one specific embodiment of the invention, it will be understood that I do not wish to be limited exactly thereto, since various modifications may be made without departing from the scope of the invention as defined by the following claims.

I claim:

1. An improved packaged-article which comprises a stack of annular elements of substantially the same size, said elements being arranged with their respective centers in co-axial alignment and an endless tying member served about all of said annular elements so as to provide opposed diagonals in crossed relation inte-

riorly of said stack of annular elements to secure them together.

2. An improved packaged-article which comprises a stack of annular elements of substantially the same size, said elements arranged with their respective centers in co-axial alignment, a skid adapted to support said stack, and an endless tying member served about all of said annular elements and said skid to provide opposed diagonals in crossed relation interiorly of said stack of annular elements to securely anchor said stack and skid together.

3. An improved packaged-article comprising, in combination, a stack of hollow articles, a continuous band of metal passed around opposed peripheral portions of said stack, said band of metal having certain of its portions in crossed relation interiorly of said stack, with the free ends thereof connected together whereby the latter is retained under substantial tension.

4. An improved packaged-article comprising, in combination, a support, a plurality of hollow articles having the same external diameter stacked upon said support, an endless band passed from one side of said stack adjacent the end thereof remote from said support down through the hollow portion thereof to the opposite side adjacent said support, and extending upwardly on the same outer side of said stack to the end thereof remote from said support, said band extending downwardly in this position to the opposite side of said stack adjacent said support to form a cross within the stack.

5. An improved packaged-article comprising, in combination, a support, a plurality of like annular members upon said support with their axes arranged coaxially to fall substantially normal to the plane of said support, a tying band passed from one side of said stack adjacent the end thereof remote from said support down through the hollow portion thereof to the oppo-

site side of said stack adjacent the support, said band extending upwardly on the same outer side of the stack to the end thereof remote from said support, and subsequently downward to the opposite side of said stack adjacent the support to form a cross within the stack with the portions of said band inclosed thereby, and the free ends thereof in registration and secured together upon an exterior portion of said stack.

6. An improved packaged-article comprising a support, a stack composed of a plurality of hollow articles resting upon said support with the central axis of the stack falling substantially normal to the latter, a band passed from one side of said stack adjacent the end thereof remote from the support down through the hollow portion of the stack to the opposite side thereof adjacent said support, said band passing beneath a portion of said support and extending upwardly on the same outer side of the stack to the end thereof remote from the support, and thence downwardly interiorly of the stack to the opposite side thereof adjacent the support to define a cross within said stack formed by the portions of its length falling interiorly thereof, said band passing beneath a portion of said support, and extending outwardly and upwardly along the exterior portions of said stack to a point of registration with its initial end, the ends of said band being secured together whereby it is maintained under proper tension to securely anchor said stack to said support.

7. An improved packaged-article comprising, in combination, a stack of coils arranged to form a hollow cylinder, a continuous tying member disposed in "figure-8" formation about said cylinder so as to provide a plurality of diagonally-crossing braces within the hollow portion thereof to securely bind said coils together.

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