J. A. HORNE.

MEANS FOR WRAPPING UP TIN CANS OR OTHER ARTICLES.

APPLICATION FILED JUNE 22, 1906.

929,434. Patented July 27, 1909.

Fig 4

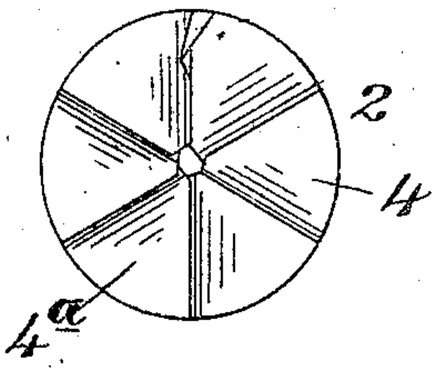


Fig. 1.

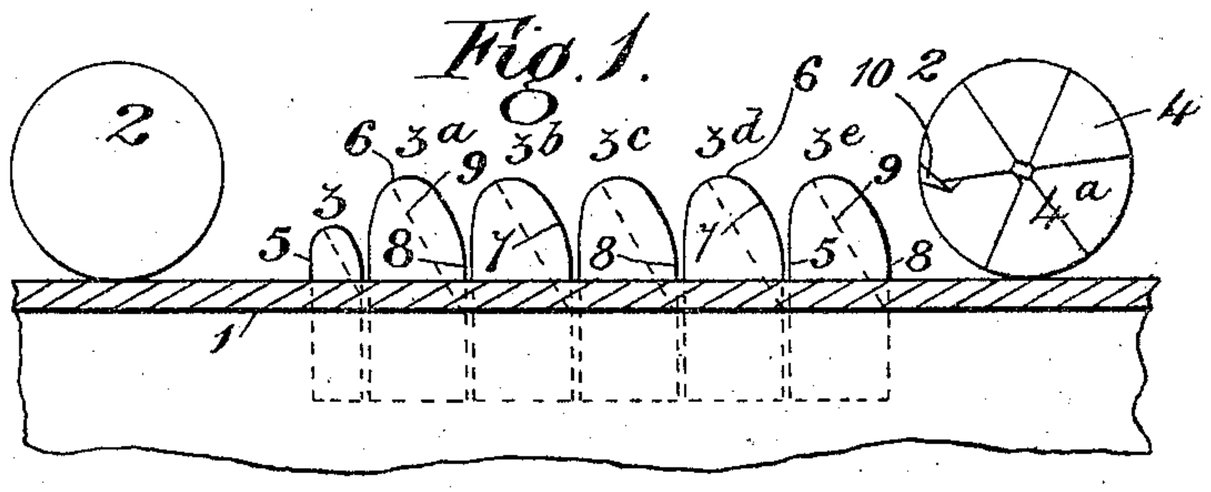


Fig. 2.

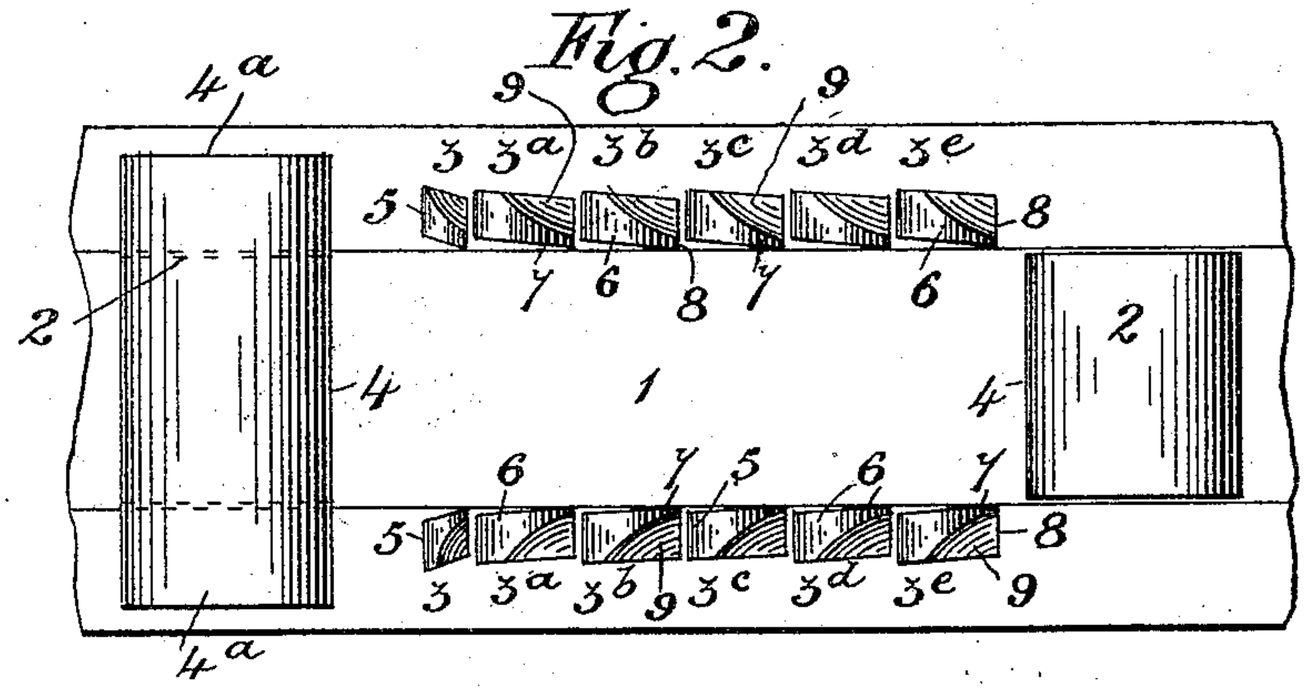
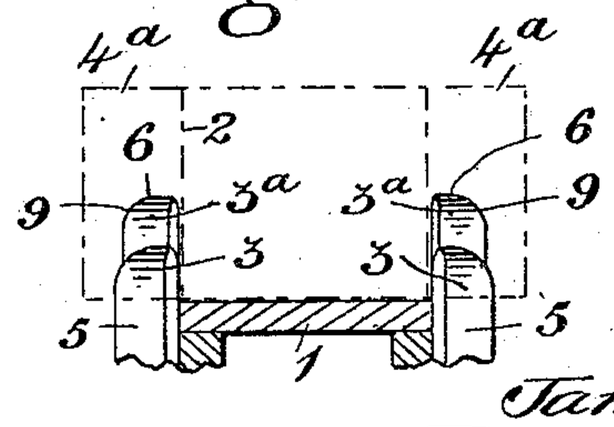


Fig. 3.



Witnesses,

W. B. Kelly

C. J. Kesler

Inventor

James A. Horne

By

James L. Norris.

Atty.

UNITED STATES PATENT OFFICE.

JAMES AUSTIN HORNE, OF LONDON, ENGLAND.

MEANS FOR WRAPPING UP TIN CANS OR OTHER ARTICLES.

No. 929,434. Specification of Letters Patent. Patented July 27, 1909.

Application filed June 22, 1906. Serial No. 322,924.

To all whom it may concern:

Be it known that I, JAMES AUSTIN HORNE, a subject of the King of Great Britain, residing at 7 Beatrice road, Stroud Green, London, England, have invented certain new and useful Improvements in Means for Wrapping Up Tin Cans or other Articles, of which the following is a specification.

This invention relates to a means for folding or tucking in the overlapping ends of a paper wrapper that has previously been placed around a tin or other article.

In practice it has been found that by making the folding fingers of uniform height and width, and setting same at the same angle to the line of travel of the object to which the wrapper to be folded has been applied, it is impossible for all the folds imparted by such fingers to the projecting ends of said wrapper to be formed so that they lie one on top of each other, and said folds have a tendency to spring away from the ends of the object instead of remaining closely applied thereto when such object leaves the machine, and so subjects said wrapper to the liability of becoming torn, or even stripped or pulled off the object during the necessary handling for packing transporting and vending same.

The object of my improvement is to obviate the liability of these disadvantages occurring, and to produce finished wrapped articles of neater and more uniform appearance.

My improvement is illustrated in the accompanying drawing, in which:—

Figure 1 is a longitudinal section through the machine. Fig. 2 is a plan view thereof. Fig. 3 is a transverse section through the bed or plate of the machine showing the folding fingers in elevation, and Fig. 4 an end view on a larger scale of the finished object showing the form of folds made by the folding fingers.

The apparatus comprises a bed or plate 1 of approximately the same width as the tin or object 2 to which the wrapper has been applied, and along which it is caused to travel either by inclining such bed toward the point of delivery, so that said object rolls down same by gravitation, or over which it may be propelled by suitable means such as an endless traveling band bearing on the upper surface thereof but to which I lay no claim as such means of propulsion are already known. On either side of said bed or plate 1 a series of folding fingers 3, 3^a, 3^b etc., etc., one behind the other are arranged. The first of such fingers 3 (in the line of travel of the object 2) is of less width and height than the succeeding fingers 3^a, 3^b, 3^c, etc., etc., same being approximately one half the height of the latter (preferably slightly more) and also about one half or slightly more than half of the width thereof, these differences in dimensions being for the purpose of producing the result to be hereinafter explained.

The number of the fingers employed will depend upon the number of folds it is desired to impart to the ends of the wrapper 4 in folding same against the ends of the object to which it is applied. The circumference of the tin gives the length of plate on which the folders or projecting pieces are fixed; the number of folds required gives the number of folders or projecting pieces—the number of folders are divided equally into the length of the plate and therefore gives their width, except that the first small folder on each side, being about half the with of the others, takes up about half the space allowed to it. The arrangement illustrated in the drawing shows the employment of five large fingers 3^a, 3^b, etc., and the forward smaller fingers 3 in the front thereof, and if the large fingers are $1\frac{1}{2}$ in. in width, and the smaller forward one about 1 in., such an arrangement would produce six equal folds, one overlapping the other in succession, on a tin of 9 in. circumference.

The fingers 3, 3^a, etc., may be made of metal, wood, or any suitable material.

In cases where a wrapper is applied to an object so that it only requires to be turned or folded down against one end thereof, only a single set of fingers 3, 3^a, etc., on one side of the bed or plate 1 will be required, the opposite edge of the bed or plate 1 being in this case provided with a flange or cheek to confine the object 2 in its proper course over same during the folding operation. When the wrapper 4 has to be folded over both ends of the object 2 to which it has been applied, the set of fingers 3, 3^a, etc., has to be duplicated, those on the opposite sides being set at reverse angles, as shown in the drawings.

It will be seen that the front edge 5 of each of the fingers 3, 3^a, etc., is vertical, the top 6 being rounded off and merging by the curved surface 7 into the rear edge 8 of the finger. The outer surface 9 of each finger also is

chamfered or beveled off from the near front edge to the back edge thereof, as shown especially in plan in Fig. 2. The first or smaller and narrower finger 3 is preferably, as shown, set at a greater angle to the line of travel of the tin or other object 2, than the succeeding fingers 3ª, etc. The effect of the employment of the first narrow and smaller finger 3 is that the first fold is not such a sharp fold as the others and it is left wide open or away from the tin so that the last folder will be able to make its fold under same, and the whole of the folds produced by the fingers will in consequence lie compactly one over the other with as little tendency as possible to spring or open outward even when the object 2 has left the machine.

In order to insure good folding and make a perfect tuck-in of the loose projecting ends 4ª of the wrapper, it is advisable to apply the wrapper 4 to the tin 1 so that the forward edge of such wrapper arrives either in close contact with the first or smaller finger 3, or at the same distance as the width of one of the larger folders therefrom.

What I claim and desire to secure by Letters Patent is:—

1. A wrapper folding device comprising the combination with a bed over which the article inclosed by the wrapper travels, of a set of folding fingers arranged at each side of the bed and at an angle with the line of travel of the article, all of the fingers having their front and rear ends respectively extending outwardly and inwardly regularly and similarly in sequence and the first finger of each set of fingers being positioned at a greater angle than the succeeding fingers of each set and the first finger of each set of fingers being approximately half the width and height of the remaining fingers of the set.

2. A wrapper folding device comprising the combination with a bed over which the article inclosed by the wrapper travels, of a set of folding fingers arranged at one side of said bed, having their ends projecting above the bed and arranged at an angle with the line of travel of the article, all of the fingers having their front and rear ends respectively extending outwardly and inwardly regularly and similarly in sequence and the first finger of said set being arranged at a greater angle than the other fingers of the set, said first finger of the set being approximately half the width and height of the remaining fingers of the set and said remaining fingers of the set being of uniform width and height.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAMES AUSTIN HORNE.

Witnesses:
RICHARD LOVE GARDNER,
CHARLES ALFRED GROSSETETE.