June 11, 1929. C. A. LATIMER 1,716,783

METHOD OF PACKING SHINGLES

Filed July 7, 1928

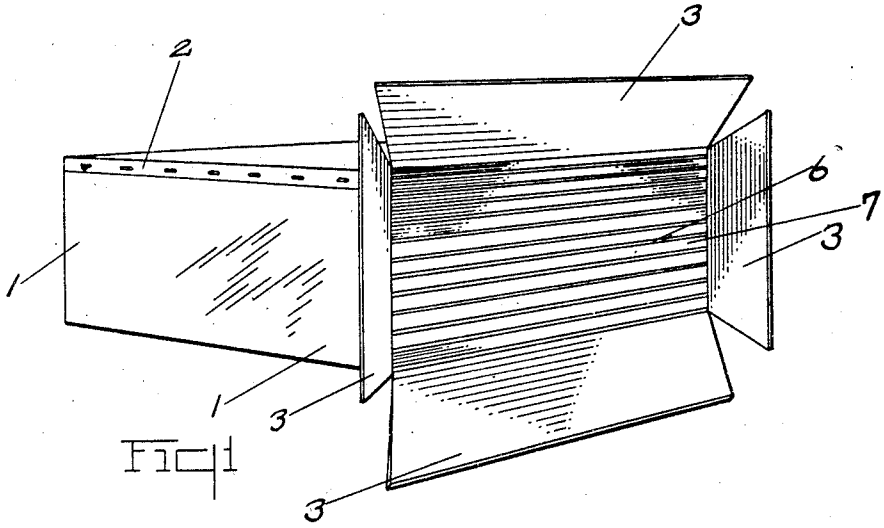


Fig 1

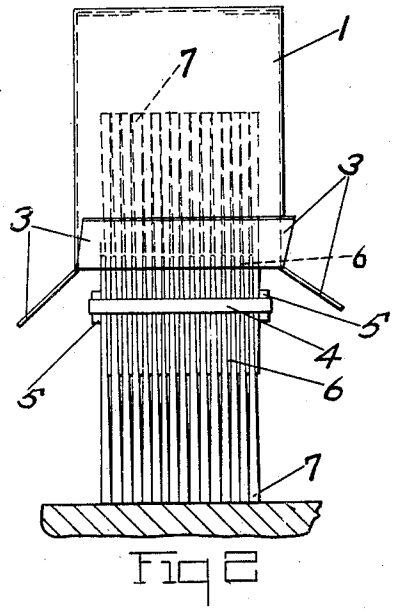


Fig 2

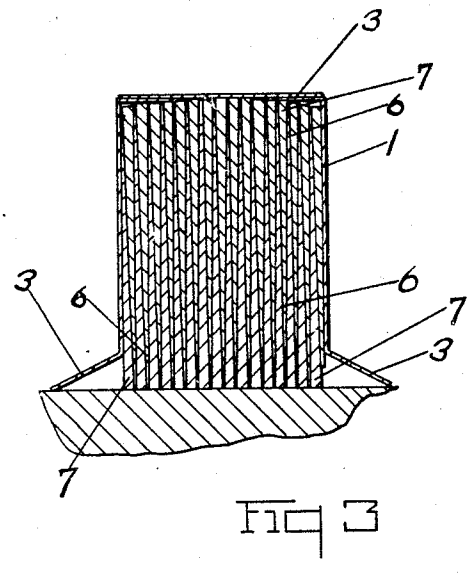


Fig 3

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UNITED STATES PATENT OFFICE.

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METHOD OF PACKING SHINGLES.

Application filed July 7, 1928. Serial No. 291,022.

My invention has for its object to provide a method and means for tightly packing ordinary wooden shingles in paper cartons for packing boxes of the type commonly used for shipping merchandise. As is well known, in connection with wooden shingles, particularly stained shingles, exposure to the air and light causes discoloration due to the effect of light and to the collection of dust from the atmosphere. Inasmuch as, when shingles are shipped in quantities, they are usually stored in open though covered places, parts of the shingles invariably become discolored. This results in objectionable variations in color throughout the shingle-covered roof or wall. Thus, it often happens that shingles that have been stored for a time are often rendered useless by the exposure to which they are subjected. Also, as shingles are usually bought at various times, according to the quantity of stock on hand, the degree of discoloration varies according to the length of time that the shingles have been in storage. Thus shingles that were originally stained the same color but were stored for different lengths of time and under different conditions will produce the objectionable variations in color. It has, therefore, been found very desirable to ship shingles in closed containers wherein they may also be stored, thus protecting them from the light, dust, and dirt. Thus, the shingles will maintain their color notwithstanding the lapse of long periods of time between the date of the staining and the date of the laying of the shingles.

It has, however, been found difficult to pack, at a cost that is not prohibitive, shingles in suitable containers that will withstand the rough handling that such merchandise is subject to. If the shingles are not tightly packed within the containers, the play between the shingles and the container invariably splits a large number of the shingles and, when dropped, the wall of the container is invariably punctured. However, if the container is tightly packed with the shingles there is no lateral or endwise play and, if the container is dropped or otherwise roughly handled, the wall of the container is only compressed or crushed and not punctured. Furthermore, in storage, the bundles or containers are usually piled one on top of the other, which, if the shingles are loosely packed, crushes the containers. Quite often the containers are crushed so badly as to expose the shingles to light, air, dust, and dirt, which causes the objectionable discoloration of the shingles. Also, piling invariably results in distortion of the shape of loose packed shingle packages and necessitates the shipping of the shingles in packages which are objectionable in their appearance. By my invention, I provide a method of packing shingles in paper board receptacles so that they will be tightly packed therein and withstand any crushing or rough handling or piling that they may be subjected to and, moreover, will present an attractive package when delivered to the customer.

The method by which I pack shingles in cartons or paper boxes may be modified in the details of procedure without departing from the spirit of the invention and, to illustrate and to aid in the description of the method, I have shown in the accompanying drawings a package of shingles and the positions of the shingles relative to the container at different points in the method involving my invention.

Fig. 1 of the drawings illustrates a perspective view of a container of shingles, one end of the container being open to show the ends of the shingles. Fig. 2 illustrates the relative position of the shingles to the container in the particular method of packing hereinafter described. Fig. 3 illustrates a subsequent relative position of the shingles to the container during the process of tightly packing the shingles.

The container 1 is of the type commonly used for containing heavy merchandise and for shipping, it being formed, as a rule, of heavy corrugated paper or cardboard. The end edges of the container are secured together, as at 2, by means of stitching or stapling or by means of a cementitious strip. The corners are scored or creased to render them flexible. The containers are also provided with end flaps 3 that are adapted to fold over the top and bottom of the receptacle to close the ends of the receptacle in the manner well known in the art. Usually the flaps are secured in their folded positions by means of cementitious strips. The paper from which the boxes are formed is tough and is creased so that the boxes are delivered to manufacturers in their closed or collapsed condition. When the merchandise

is to be packed, the bottom flaps are usually folded, closed and sealed and the merchandise inserted, after which the top flaps are likewise folded, closed, and sealed.

As is well known, shingles are received from the saw mill bound together in bundles by means of two cross bars 5 and sheet metal strips 4 connecting the ends of the cross bars 5, the butt ends 7 being located at the ends of the bundles and the tip ends overlapping and bound together by the strips 4 and the bars 5. Staining machines are also so formed as to stain bundles of shingles by dipping the bundles in the coloring material. The invention provides a method of tightly packing the shingles contained in each bundle in a container.

In packing the bundle of shingles, either before or after they are stained, in the container 2, I first locate the bundle within the container 2. This may be done by locating the end of the bundle within the container or extending the bundle through the container, after which pressure is applied to pack the shingles in the container 2. The bundle has a length considerably greater than the length of the container 2 and has a cross sectional area that is smaller than the cross sectional area of the container. In packing the bundle of shingles in the container 2, the end of the bundle may be set upon a supporting surface and the container located over and so as to surround the upper end of the bundle of shingles and so as to enclose the tip ends 6 of the lower shingles of the bundle. One of the metal strips 4 of the bundle may then be served. The open end of the container 2 being located below the tips 6 of the lower shingles, they cannot escape from within the container 2. As the sheet metal strip 4 is severed, the binder 5 snaps loose from the bundle and at the same time the container 2 is pushed down over the bundle, which pushes the upper shingles of the bundle down between the lower shingles of the bundle. This operates to spread both the upper and lower shingles of the bundle by reason of the surface of each shingle being inclined, one relative to the other. The container 2 has a length substantially the same as the length of the shingles. It is, moreover, formed of tough cardboard or corrugated paper, having inner and outer layers of tough paper, which renders the container 2 elastic and strong, as is well known in the art. Also, the container 2 has a width substantially the same as the width of the bundle of shingles. Its remaining dimension is substantially the same as that of the bundle when the tips 6 of the upper shingles are located a short distance from the butts 7 of the lower shingles and the lateral surfaces of the shingles are located in contact with each other. Further movement of the upper shingles and the container towards the butts 7 of the lower shingles, tightly compresses the shingles and elastically stretches the container until the butts 7 of the lower shingles lie within the end of the container. The container may then be turned over and the flaps 3 may be closed and sealed. This will tightly pack the shingles in the container and so that the packed containers may be piled without danger of compression of the package and, moreover, the shingles will be sealed as against the admission of light and dust, which will maintain the color of the shingles, notwithstanding long periods of storage.

I claim:

1. The method of packing shingles in a container which consists in arranging the shingles in two sets, the shingles of each set having their butts located substantially in a plane and the tip end portions of one set overlapping the tip end portions of the other set and locating the container about the shingles, the cross sectional area of the container having dimensions substantially the same as the cross sectional area of the arranged shingles when the tips of one set are located a short distance from the butts of the other set and then forcing the butts of the two sets towards each other until the entire length of the shingles overlie each other and the butts are located within the container.

2. The method of packing a bonded bundle of shingles in a container which consists in locating the container over the end of the bundle and so as to surround the portion of the bundle located at one side of the binder, severing the binder and at the same time pushing the container and the bundle, one relative to the other, to push the butts of the shingles into the container, the dimension of the cross section of the container being such that the container is filled when the tips of the shingles of one end of the bundle is spaced from the butts of the other end of the bundle a short distance and then tightly packing the shingles in the container by pushing the butts of the shingles so as to locate all of the butts of the shingles within the container.

In witness whereof I have hereunto signed my name to this specification.

CHARLES A. LATIMER.