Jan. 21, 1930. E. P. BECKER 1,744,203

REENFORCED VENEER AND METHOD OF PREVENTING SAME FROM SPLITTING

Filed Dec. 12, 1928

Fig. 1

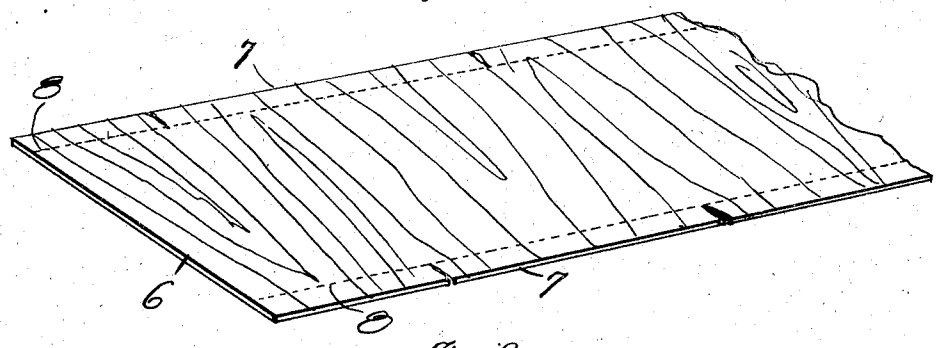


Fig. 2

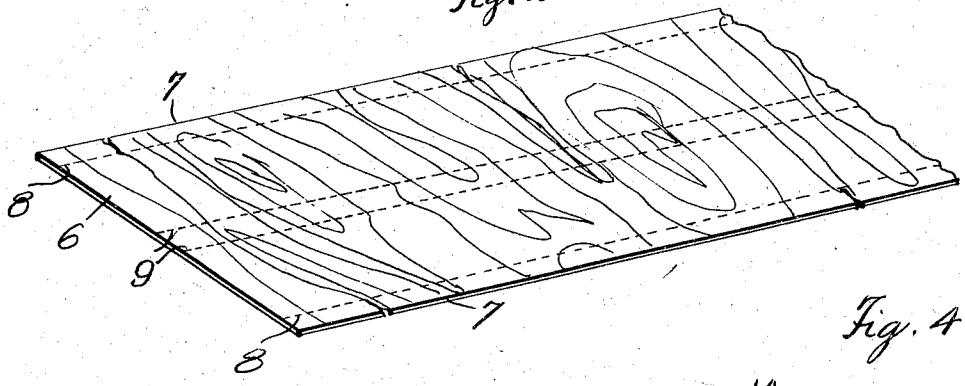


Fig. 4

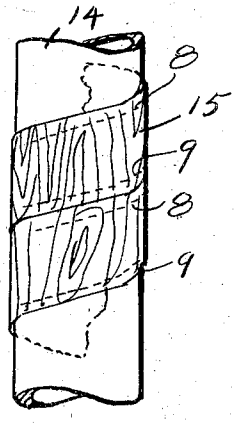


Fig. 3

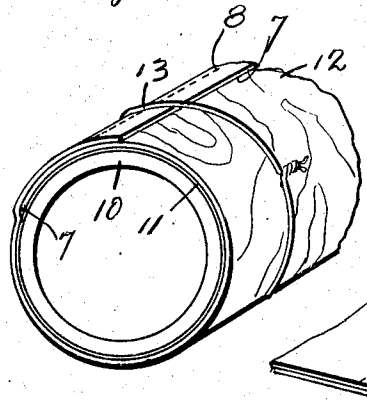
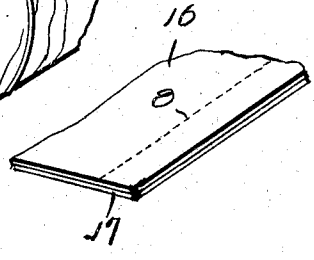


Fig. 5



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UNITED STATES PATENT OFFICE

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REENFORCED VENEER AND METHOD OF PREVENTING SAME FROM SPLITTING

Application filed December 12, 1928. Serial No. 325,475.

My invention relates to improvements in reenforced veneer and method of preventing same from splitting, and has for its primary object a wood veneer which is reenforced by means of parallel lines of stitching of any kind of thread, twine or wire so as to prevent the veneer from pulling apart or breaking after it has dried.

A further object is to make a reenforced wood veneer, such as is suitable for covering or protecting the steel pipes of pipe lines from oil or other corrosive mediums. It has been found that pipes, such as are used in pipe lines, are either plain or enameled, the enameled type being especially used in alkali soils so as to protect the steel from the corrosive action of the soil but it has been found that frequently while filling in the trench after the pipes are laid that rocks in the soil chip off some of the enamel thus exposing the pipe to the corrosive action of the soil, but by placing a protective covering about the pipe, the danger of chipping off the enamel is prevented.

A further object is to prevent the veneer from splitting while drying since it is a well known fact that the veneer when it is cut is wet and as it dries, it checks or cracks, in some instances completely across, but by reenforcing the same with stitches, the cracking is confined to the space between the edge of the veneer and the stitching. This makes my veneer especially useful for furniture and other high class interior finish veneer as by limiting the cracking of the veneer while drying a great amount of waste is saved.

My veneer may be made in various thicknesses up to approximately one-half inch and may be either single or multi-ply. In this way I can make a multi-ply veneer which is extremely flexible since all of the grain therein runs in the same direction. Therefore, veneer as reenforced by my method can be made up in practically any length and shipped in rolls instead of flat sheets.

My veneer can also be used for all kinds of fruit and vegetable packages and containers since it not only prevents the veneer from splitting but also prevents expansion and contraction of the veneer.

In the drawings:

Fig. 1 is a perspective view of a piece of veneer showing the stitching adjacent the side edges only.

Fig. 2 is a similar view showing the veneer as made with a plurality of stitches.

Fig. 3 is a fragmental perspective view of a pipe with my veneer around the same acting as a protective covering.

Fig. 4 is a fragmental view of a pipe with my veneer wound therearound in spiral form and acting as a protective covering; and

Fig. 5 is a fragmental perspective view of multi-ply veneer as reenforced by my method.

My veneer consists of one or more sheets of wood 6 which is cut on a veneer cutting machine and of any desired thickness.

Parallel to the side edges 7 of the sheet of veneer I run a line of stitching 8. This line of stitching is placed at some distance toward the center from the edges and may be either of thread, twine, wire or any other suitable flexible stranded material, such as can be handled on a sewing machine. The type of stitch used is not essential although preferably a lock stitch is used so that the veneer can be cut in any length and still the stitching not ravel out.

In Fig. 2 I have shown the sheet of material 6 as provided with additional rows of stitching 9, this stitching located between the rows of stitching 8. When the veneer is thus made, it is possible to ship a wide roll of veneer and, by cutting the veneer between the rows of stitching 9, have two narrow strips of veneer. I may still further reenforce the veneer by running additional rows of stitching between the stitches 8 and 9 and I, therefore, do not wish to limit myself to any particular number of rows of stitching.

The stitching is, of course, done while the veneer is still wet or green, as it is commercially termed and before the same has dried. It has been found that the veneer during drying develops checks or cracks, which almost invariably start from the outer edges and follow the grain across the sheet and I have found that by running the rows of stitching parallel to the sides of the sheet and at right angles to the grain of the wood, such checking

or cracking only extends up to the stitching but does not pass beyond and into the center of the strip. Of course after the veneer has thoroughly dried, there is no more danger of it checking. Then, if the veneer is used for cabinet work or interior finish, the edges together with the stitching are cut off leaving a clear sheet of veneer ready to be applied, which sheet has no cracks or checks in it. It is essential that the stitching extends substantially at right angles to the grain of the wood because if the stitching extended parallel to the grain, the needle would act as a knife and split the wood.

In Fig. 3 10 represents a steel pipe of any diameter, especially such as is used for pipe lines, 11 the enamel coating surrounding the same so as to protect it from acid or alkali reactions of the soil, and 12 represents the veneer protecting cover. This cover as will be noted is wrapped around the pipe with its edges overlapping and is then secured in position thereon by means of any kind of a tie 13. This may be of wire, cord or other flexible material and is needed only to hold the veneer in place until the earth has been filled back into the ditch in which the pipe is laid.

In Fig. 4 14 represents a pipe similar to the pipe 10 but in this instance, I have used a veneer covering as illustrated in Fig. 2, which has been divided between the stitches 8 and 9 so as to form a narrow strip 15. This strip is then wound spirally around the pipe. In this way I can use a much longer strip and eliminate the necessity of using a number of ties since it is only requisite that each end of the strip 15 be secured.

In Fig. 5 I have shown a veneer composed of layers 16 and 17 although, if desired, three or more layers may be used.

It will be noted from the foregoing that veneer provided with stitching is greatly reenforced, in that it is prevented from being pulled apart under strains while being applied to different uses. Also by reason of the stitching, expansion is practically eliminated and, consequently, of course, contraction.

Furthermore by my method of preparing the veneer, the checking or cracking of the veneer during the drying process is localized between the outer edge of the veneer and the row of stitching adjacent these edges so that the major portion of the veneer is free from cracks and checks, and consequently a great amount of waste of material is eliminated by preventing these checks or cracks from reaching the center of the veneer where they would have to be cut away and that portion of the veneer lost.

I have also discovered that by stitching the veneer that its contraction while drying is practically nil. Ordinarily veneer will shrink about one-sixteenth of an inch to the foot while drying, but I have discovered that the veneer after it has been stitched or reenforced by my method does not shrink to any appreciable extent. I have also discovered that veneer, as reenforced by my method, that is stitching, will not separate into small pieces, that is it cannot come apart even though the veneer should split entirely across during the drying operation. Therefore, I can use a sheet of veneer which is split, as aforementioned, for wrapping pipes, etc. whereas otherwise the sheet would be useless.

Having fully described my invention, what I claim is:—

1. The method of reenforcing wood veneer of a single thickness which consists in passing through the same a plurality of stitches of thread at substantially right angles to its grain while the same is in moistened condition and then drying said veneer whereby splitting commencing at the edge of the veneer during its drying is prevented from extending completely across said sheet.

2. The method of making reenforced wood veneer which consists in cutting a sheet of veneer from a log, stitching said sheet of veneer with a thread while still in moistened condition in a line parallel to its longitudinal edges and at right angles to the grain of the veneer, and then drying said veneer.

3. The method of making reenforced veneer which consists in first shaving off a sheet of veneer of a predetermined thickness from a billet while under a moistened condition, passing through said sheet of veneer a series of stitches extending at substantially right angles to the grain of the veneer with flexible material so that said veneer when dried will be flexible, said stitching preventing the veneer from coming apart in the event the same splits with the grain while drying.

In testimony whereof I have affixed my signature.

EDWARD P. BECKER.