J. H. BERRY & C. M. RICKER.

PAIL.

APPLICATION FILED JULY 3, 1907.

904,924. Patented Nov. 24, 1908.

Fig. 1.

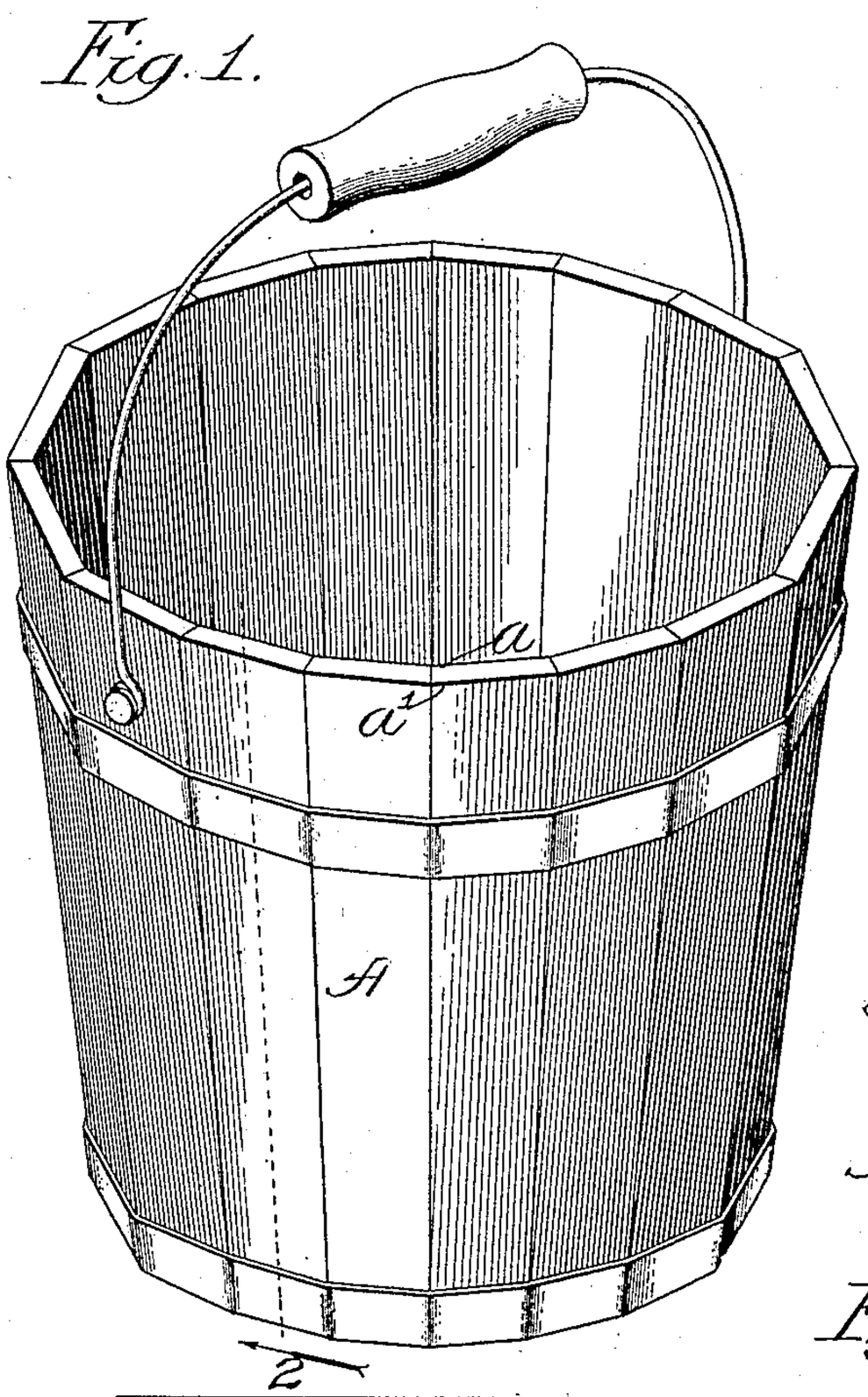
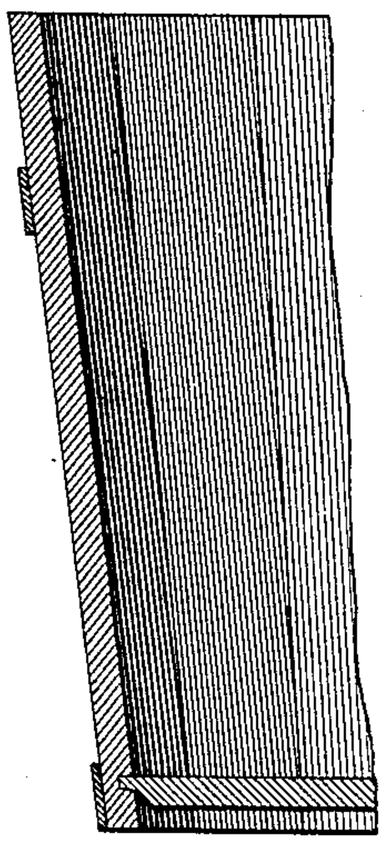


Fig. 2.



Witnesses:
Chas. E. Gaylord.
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Fig. 4.

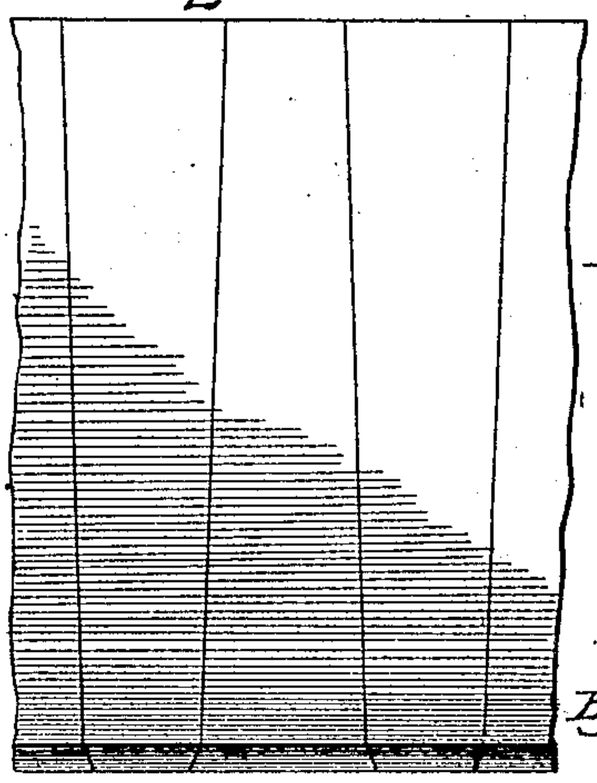
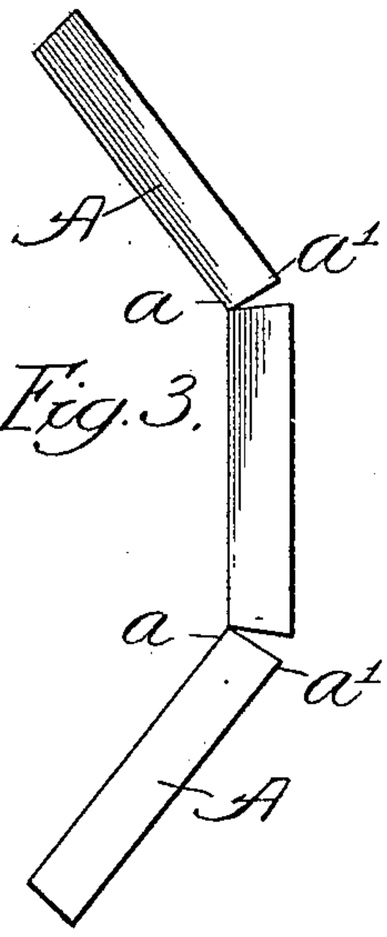


Fig. 3.



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UNITED STATES PATENT OFFICE.

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PAIL.

No. 904,924. Specification of Letters Patent. Patented Nov. 24, 1908.

Application filed July 3, 1907. Serial No. 381,986.

To all whom it may concern:

Be it known that we, JESSE H. BERRY and CHARLES M. RICKER, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Pails, of which the following is a specification.

Our invention relates to certain new and useful improvements in pails, and is fully described and explained in the specification and shown in the accompanying drawing, in which:

Figure 1 is a perspective of our completed pail; Fig. 2 is a section in the line 2 of Fig. 1; Fig. 3 is a top plan showing the manner in which the pail is assembled; and Fig. 4 is a perspective view showing the manner in which the staves are cut.

The object of our invention is to devise a pail which can be constructed from veneer without any waste whatever, which pail, when completed, will have certain advantages which will appear more fully and at large herein.

The first step in the manufacture of our pail consists in the manufacture of the staves, which are cut from a single sheet of veneer, as illustrated in Fig. 4. The sheet is cut into staves by a series of cuts inclined toward each other in two directions; in other words these cuts divide the sheet of veneer into a plurality of staves, each of which is narrower at one end than at the other when viewed at right angles to its general plan, and each of which also has one face narrower than other, so that its ends are symmetrical trapezoids, as are its faces. The grain of these staves will run in general longitudinally thereof, the veneer being cut across its length and consequently in general with its grain. It will be observed that by this method of cutting the staves there is no waste whatever and staves are very readily produced each similar to each other stave, and that furthermore the narrower or inside face of each stave comes from the opposite face of the veneer sheet from that of the stave adjacent to it on either side; in other words, to assemble a pail from these staves, it is necessary to invert the alternate staves, so that any completed pail has each alternate stave facing in the opposite direction with respect to its original facing in the veneer sheet, from the staves next to them.

The completed staves are indicated in the drawings by A, their inner or obtuse edges being indicated by a and their outer or acute edges being indicated by a^1. The staves are brought together for the construction of the pail as indicated in Fig. 3, that is to say, with their inner or obtuse edges a in contact and with their outer or acute edges spread slightly apart; in other words, the staves are cut with such angles on their sides as to make the proper number of staves to form the desired pail, form a smaller circle than would be obtained were the staves placed with their edges in tight contact with each other. After the staves are arranged in this position, the hoops are driven on, compressing the circle of the staves and causing great compression of the material of the inner corners of the staves a. This compression is carried on to such an extent as to cause the outer edges a^1 to come into contact, whereby a pail having a smooth outer surface is obtained, the material of the staves at the cracks between them being under very great compression, so as to make leakage impossible.

It will be readily understood that the bottom may be inserted in the pail in any usual manner and at any time desired during its construction, and I have therefore not described this portion of the operation particularly.

The pail is particularly advantageous for a number of reasons. In the first place it can be constructed of very cheap material and with no waste whatever, so that its cost will be extremely low. Furthermore, the compression of the inner edges produces a very strong pail and one having a sufficient margin of elasticity that no ordinary amount of shrinkage will permit the pail to fall apart, any shrinkage being taken up by expansion of the edges of the staves where they are compressed. A further advantage consists in the fact that the alternate staves face in opposite directions with respect to the manner in which they faced in the original piece. It is notorious that veneer, largely by reason of defects acquired during its manufacture, tends to warp to a very large extent. The disadvantage which might otherwise arise from this warping is entirely done away with in our improved pail, by reason of the fact that the alternate staves face in opposite directions and consequently the warping in the alternate staves

will be in opposite directions and will therefore be balanced in the entire pail and in each part thereof. It will further be seen that in making these staves from veneer one strip after another of veneer can be fed into a suitable machine for cutting the staves, as shown in Fig. 4, and there will still be no waste as it is entirely immaterial whether or not one of the staves is divided longitudinally. Thus, should a stave happen to overlap the end of a veneer piece, the remaining portion of the stave will be secured without waste from the next succeeding piece.

We realize that considerable variation is possible in the details of our construction without departing from the spirit of our invention, and we therefore do not intend to limit ourselves to the details of construction herein shown and described.

What we claim as new, and desire to secure by Letters Patent, is:

1. A pail comprising, in combination, a series of flat staves each having two trapezoidal faces and two trapezoidal ends, the narrower faces of the staves being inward.

2. A pail comprising, in combination, a series of flat staves each having two trapezoidal faces and two trapezoidal ends, said staves being cut from a single piece, the narrower faces of the staves being inward and the alternate staves facing in opposite directions with respect to their facing in the piece from which they were cut.

3. A pail comprising, in combination, a series of staves having longitudinal grain and each having two trapezoidal faces and two trapezoidal ends, said staves being cut from a single piece, the narrower faces being inward and the alternate staves facing in opposite directions with reference to their facing in the piece from which they were cut, whereby warping in the alternate staves is equal and opposite.

4. A pail comprising, in combination, a series of flat staves each having two trapezoidal faces and two trapezoidal ends, the narrower faces being inward and the obtuse longitudinal corners of the staves being compressed by inward pressure maintained upon the staves, whereby tight joints are produced and the acute longitudinal corners are brought into contact.

5. A pail comprising, in combination, a series of flat staves cut from sheets of flat material, each stave having two trapezoidal faces and two trapezoidal ends, whereby waste between the staves is eliminated.

6. A pail comprising, in combination, a series of flat staves cut from sheets of flat material, each stave having two trapezoidal faces and two trapezoidal ends, whereby no waste occurs between the staves in cutting them, the obtuse longitudinal corners of the staves being compressed by inward pressure maintained upon the staves, whereby the outer longitudinal corners are brought into contact.

7. A pail comprising, in combination, a series of similar staves cut from a sheet of material without waste between the staves, each stave being similar to each other stave and each having two trapezoidal faces and two trapezoidal ends.

8. A pail comprising, in combination, a series of staves cut transversely from a sheet of wood with transverse grain and without waste between the staves, each stave having two trapezoidal faces and two trapezoidal ends.

9. A pail comprising, in combination, a series of similar flat staves with longitudinal grain and each having two trapezoidal faces and two trapezoidal ends.

10. A pail comprising, in combination, a series of similar flat staves with longitudinal grain, each having two trapezoidal faces and two trapezoidal ends, the inner longitudinal corners of the staves being compressed by forcible inward pressure exerted and maintained upon the staves.

JESSE H. BERRY.
CHARLES M. RICKER.

In presence of—
AGNES R. MCINTYRE,
RALPH A. SCHAEFER.