

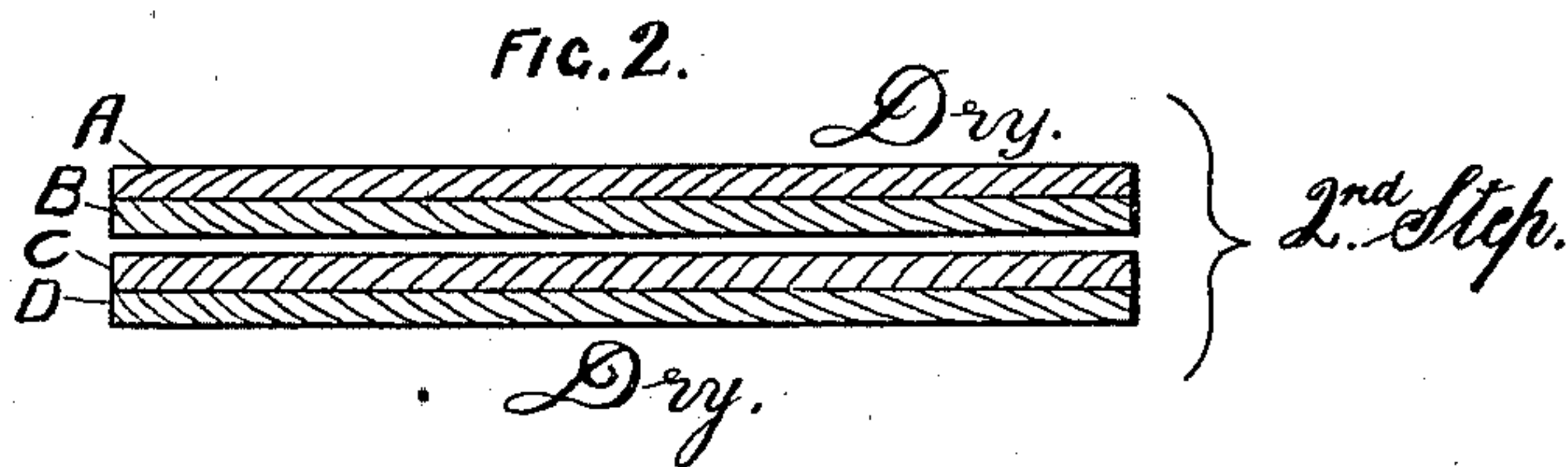
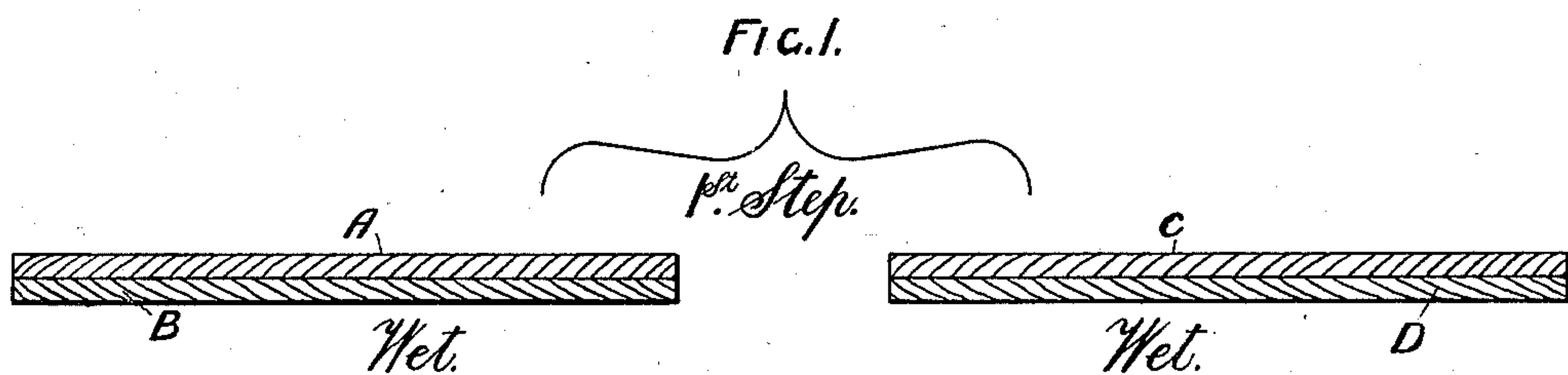
No. 671,467.

Patented Apr. 9, 1901.

P. S. BROWN.
MANUFACTURE OF BUILT-UP VENEER.

(Application filed Dec. 7, 1899.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

PETER STUART BROWN, OF BOTHWELL, SCOTLAND.

MANUFACTURE OF BUILT-UP VENEER.

SPECIFICATION forming part of Letters Patent No. 671,467, dated April 9, 1901.

Application filed December 7, 1900. Serial No. 739,460. (No model.)

To all whom it may concern:

Be it known that I, PETER STUART BROWN, a citizen of the United Kingdom of Great Britain and Ireland, residing at Bothwell Park, Bothwell, county of Lanark, Scotland, have invented certain new and useful Improvements in the Manufacture of Built-Up Veneer, (which was patented in Great Britain on the 6th day of September, 1899, No. 18,010,) of which the following is a specification.

This invention relates to the manufacture of built-up or multiple-ply veneer for the production therefrom of boxes or cases, as also roofing-plates and other articles capable of being dished up or similarly formed.

In the manufacture of built-up or multiple-ply veneer as ordinarily conducted the cut boards are dried in order that the glue or other material used in cementing them together may adhere to the surfaces of the boards. In this way the boards are liable to shrink, split, and warp in drying and are held together less firmly. I overcome these objections and lessen the time and labor involved in handling the material and save loss by shrinkage by dispensing with the drying of the single cut boards previous to cementing. I cut the single boards by any of the usual means, such as a machine in which a shaving is cut from a rotated wooden log in the wet state, by a stationary knife, and in order that the wet boards so cut may properly adhere when cemented together to form the multiple-ply veneer I unite them by means of a cement composed of casein or lactarine, lime and water, or any similar materials, such as curd made from separated milk, with lime and water, or casein with solution of borax or other antiseptic, or a mixture of magnesia and chlorid of magnesium, which will cement moist wood. The logs may be treated before cutting with an alkaline solution to neutralize the wood-acids and make them take the cement better. The wet cemented boards may then be dried in the flat form under pressure, or they may be exposed to a current of cold or slightly-heated air before they are put through the drying-presses, and they may be pressed into various forms, as boxes, cylinders for packing bot-

ties, corrugated roofing-sheets, and the like while in the wet state, and subsequently dried in presses or on hot mandrels, whereby the various shapes are permanently maintained.

The accompanying drawings illustrate the steps necessary to the manufacture of built-up veneer as described.

Figure 1 shows the first step, and Fig. 2 the second step, in the manufacture.

In order to obtain the maximum of strength from a given thickness of such multiple-ply veneer, I prefer to produce it from four layers or boards, which are first cemented together in pairs, as shown in Fig. 1—that is to say, two boards, such as A B, are cemented together with the grain of the wood in the one running at right angles or other inclination to that of the other board, and a like pair of boards C D are similarly cemented together, and either before or after each pair has been dried they are brought together, as in Fig. 2, and cemented to form a four-ply board. By this arrangement the built-up veneer is rendered equally strong against bending or breaking, either lengthwise or crosswise, instead of being weaker in one direction than in the other. The four-ply sheets are subsequently dried in any well-known manner. In making corrugated roofing-sheets the pairs of boards may be corrugated, two such corrugated boards being cemented together to form a finished sheet.

Having now described the invention, what I claim, and desire to secure by Letters Patent, is—

The process herein described of manufacturing built-up veneer, consisting in uniting together two or more plies of wooden veneer in the wet state by cement composed essentially of milk curd or casein, afterward drying the built-up board and then cementing it to another built-up board produced in the same manner.

In witness whereof I have hereunto set my hand in presence of two witnesses

PETER STUART BROWN.

Witnesses:

WALLACE FAIRWEATHER,
JNO. ARMSTRONG, Jr.