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DECALCOMANIA AND DRYING MACHINE FOR POTTERY.

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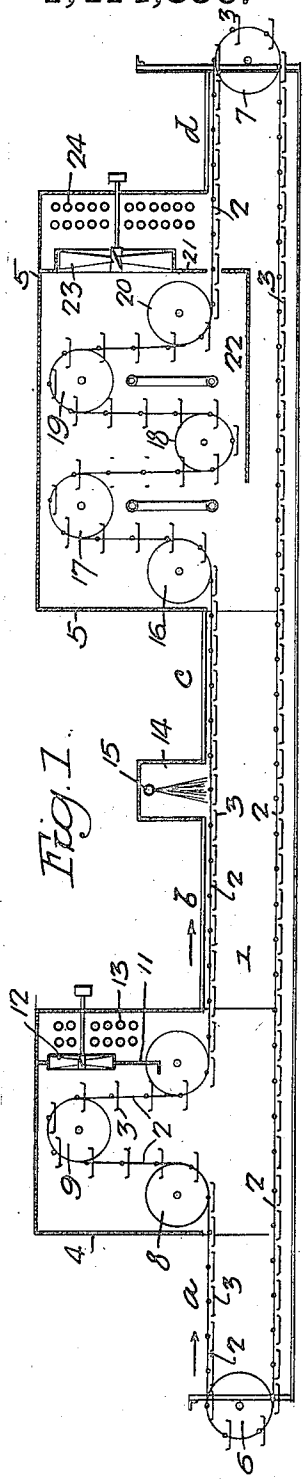


Fig. 1.

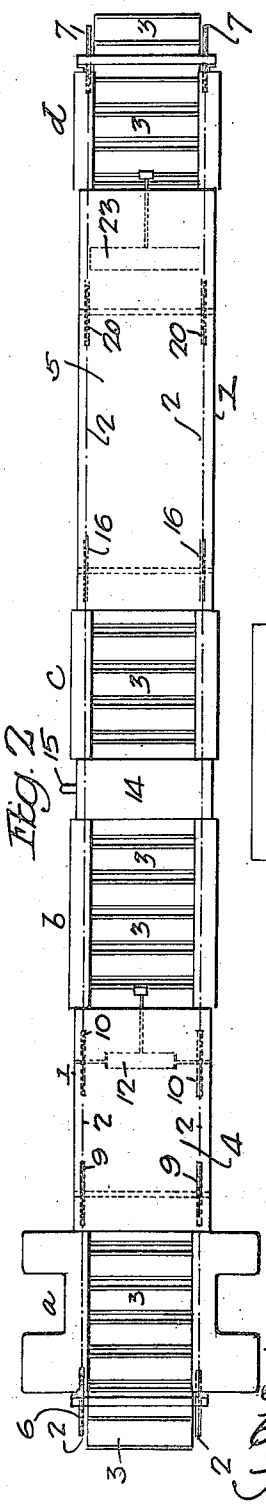


Fig. 2.

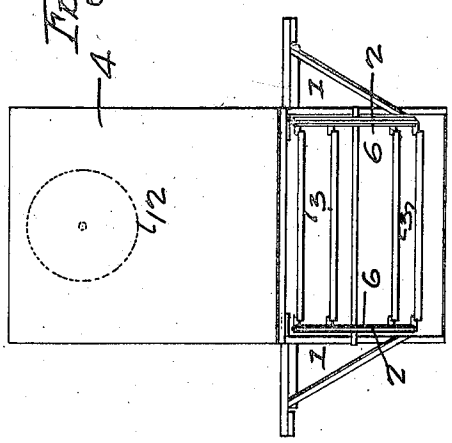


Fig. 3.

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DECALCOMANIA AND DRYING MACHINE FOR POTTERY.

1,414,856. Specification of Letters Patent. Patented May 2, 1922.

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To all whom it may concern:

Be it known that we, HERMANN BOGATY and JOSEPH L. BUCKLEY, citizens of the United States, residing, respectively, in Philadelphia, Pennsylvania, and Pittsburgh, Pennsylvania, have invented certain Improvements in Decalcomania and Drying Machines for Pottery, of which the following is a specification.

Our invention relates to certain improvements in apparatus for applying decalcomanias to pottery. The decalcomania is placed on the pottery after the pottery has been baked and the glaze placed upon it. This is usually done by hand. An adhesive is first applied to the pottery and allowed to stand until it becomes sticky. A decalcomania is then placed over this adhesive and water is applied to moisten the paper backing, which is removed and the surplus adhesive is washed off. The pottery is then placed in racks, or boxes, and placed in a drier.

The object of our invention is to provide an apparatus for carrying out the process so that decalcomanias may be placed more accurately and rapidly on the pottery and the paper and surplus adhesive can be more thoroughly removed than heretofore, the pottery being dried as it travels through the apparatus.

In the accompanying drawings:

Fig. 1 is a longitudinal sectional view of our improved apparatus for applying decalcomanias to pottery;

Fig. 2 is a plan view; and

Fig. 3 is an end view at the front end of the machine.

1 is the casing. 2 is an endless belt conveyer having trays 3, pivotally mounted thereon to receive the pottery to which the decalcomania is to be applied. These trays may be of any length and width desired and the conveyer chain may be of any type common to this class of machine. 4 is a comparatively small drier and 5 is a large drier. The conveyer passes around guide wheels at 6 and 7 at each end of the apparatus. The upper run of the conveyer passes around guide wheels 8, 9 and 10 in the drier 4.

11 is a vertical partition, in the present instance, having an opening in which is a circulating fan 12 driven in any suitable manner. 13 are heating pipes, which may be placed at any convenient point to heat the air in circulation. The conveyer then passes through a horizontal section *b* and then under a spray chamber 14 in which is a spray pipe 15 for spraying water to the pottery after a decalcomania has been applied. The conveyer passes through another horizontal section *c*, around a guide wheel 16 and over a guide wheel 17, down under a guide wheel 18 to another wheel 19 and then under a wheel 20. These several wheels are located in the large drying chamber 5. The conveyer then passes from the drying chamber and the pottery is cooled to such an extent that it can be removed at the end of *d* of the apparatus.

In the drying chamber 5 is a vertical partition 21. Connected to this partition is a horizontal partition 22 extending under the conveyer a given distance so as to confine the heated air in the drying compartment 5. In the partition 21 is an opening for the circulating fan 23, driven in any suitable manner.

24 are heating pipes, in the present instance, located back of the partition 21, but these heating pipes may be placed at any convenient point and other means for heating the air in circulation may be used without departing from the essential features of the invention.

Pottery is placed on the trays at the forward end of the machine and adhesive is applied to the pottery while traveling in the space *a*. Then the trays pass into the small drier 4 so as to dry the adhesive to such a consistency that a decalcomania may be applied. Then as the trays, with the pottery thereon, pass through the space *b*, a decalcomania is applied to each article at the proper point and as each decalcomania has a paper backing, this backing must be removed before the final drying. Therefore, the conveyer, with the pottery thereon, passes under a spray chamber 14 in which water is sprayed onto the pottery so as to moisten the paper backing. While passing through the space *c* the paper is removed and the surplus adhesive is washed off. Then the conveyer carries the pottery through the drier 5, where it is completely dried. The pottery is discharged at the extreme end of the apparatus and is removed from the trays, or, in some instances, the trays, with the pottery

thereon, are removed from the conveyer. The pottery then passes through the necessary finishing steps.

By the use of the above apparatus, it will be seen that a decalcomania can be placed accurately and rapidly on the pottery and the adhesive can be properly dried before a decalcomania is applied so as to insure a perfect transfer of the decalcomania to the pottery. By immediately spraying water on the paper backing of the decalcomania, this backing can be easily removed without distorting the pattern transferred. On continuing the movement of the conveyer the pottery is dried without the necessity of manually handling and stacking the articles in racks, as heretofore.

We claim:

1. The combination in apparatus for applying decalcomanias to pottery, of a frame; an endless belt conveyer; a series of trays on the conveyer to carry the pottery; and two drying chambers spaced apart, one chamber being arranged to dry the adhesive, which is first applied to the pottery, the other chamber being arranged to dry the decalcomanias after they have been secured to the pottery by the adhesive.

2. The combination in apparatus for applying decalcomanias to pottery, of a casing; an endless belt conveyer; a series of trays pivotally mounted on the conveyer, said casing having a space over which the conveyer travels in a horizontal path and at which point the adhesive is applied; a drying chamber into which the conveyer carries the pottery so as to dry the adhesive to the proper consistency; a second horizontal space at which the decalcomanias are applied to the adhesive on the pottery; means for moistening the paper backing of the decalcomanias; and a drying chamber spaced from the moistening means so as to allow time for the removal of the paper and the excess adhesive, the drier being of such a capacity that the pottery, with the decalcomanias thereon, is dried before removal from the end of the apparatus.

3. The combination of an endless belt conveyer; two drying chambers, the first drying chamber being of small capacity and the second drying chamber being of greater capacity; a spray chamber located between the two drying chambers so that pottery placed on the conveyer can have adhesive applied to it, which can be dried to the proper consistency, after which decalcomanias can be applied to the pottery, the paper backing being moistened and removed, the pottery being finally dried in the drying chamber of the greater capacity.

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