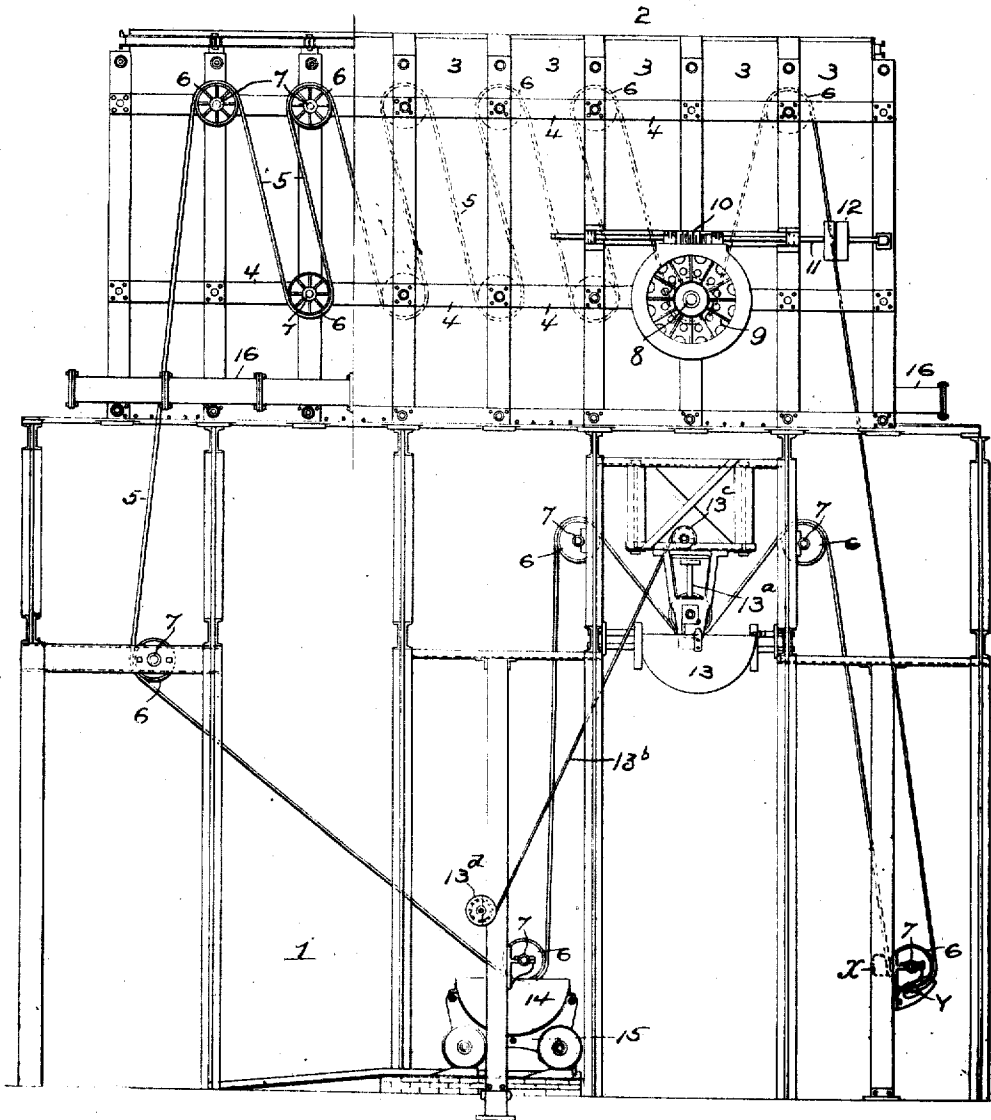


D. F. BRODERICK.
 AUTOMATIC JAPANING APPARATUS.
 APPLICATION FILED AUG. 13, 1906.

1,010,720.

Patented Dec. 5, 1911
 2 SHEETS—SHEET 1.

Fig. 1.



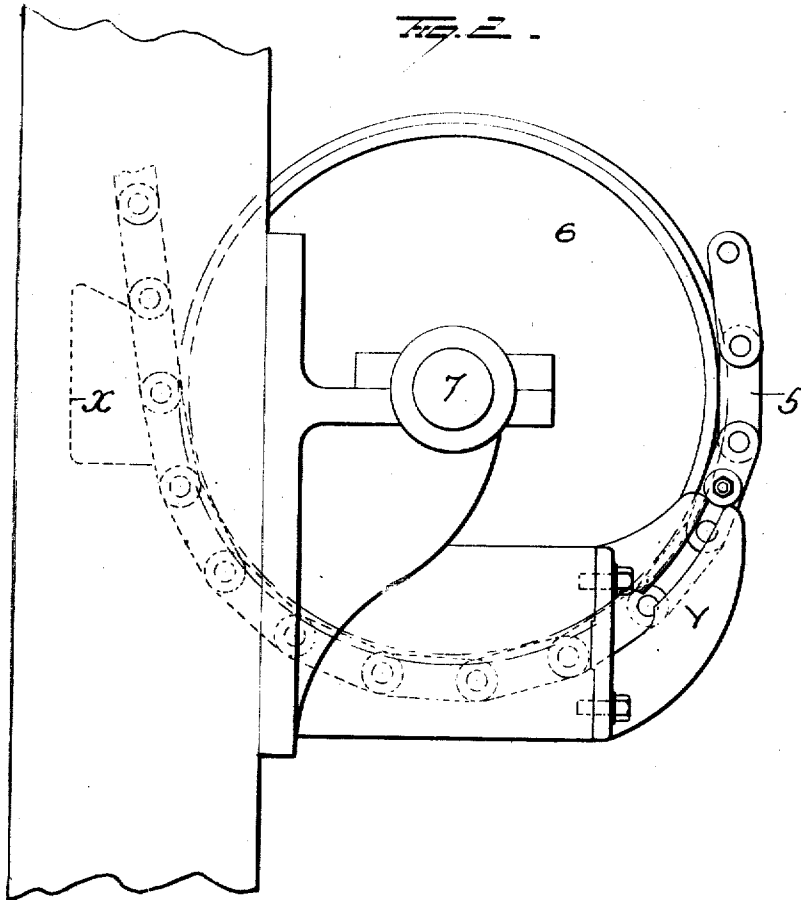
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UNITED STATES PATENT OFFICE.

DAVID F. BRODERICK, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO SARGENT & COMPANY, OF NEW HAVEN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

AUTOMATIC JAPANING APPARATUS.

1,010,720.

Specification of Letters Patent.

Patented Dec. 5, 1911.

Application filed August 13, 1906. Serial No. 330,497.

To all whom it may concern:

Be it known that I, DAVID FELIX BRODERICK, a resident of New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Automatic Japaning Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved automatic japaning apparatus, the object of the invention being to provide an improved oven located above the workroom or building, in which latter work is taken off and placed on a conveyer, dipped in cleansing and japaning liquids, and then carried up and through the oven and back down into the workroom or building proper.

With these and other objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claim.

In the accompanying drawings, Figure 1 is a view in vertical longitudinal section illustrating my improvements, and Fig. 2 is an enlarged detail view.

1 represents the main building or workroom and 2 the oven above the same. The building and oven are both made up of structural ironwork, the building being open and the oven inclosed by means of hollow slides 3 between the vertical and cross beams, tie plates 4 being employed to secure the several standards or beams together.

5 represents an endless conveyer, composed of parallel chains passed over idle pulleys 6 having roller bearing mounting on inwardly projecting studs 7 secured to the standards or vertical beams of the framework, and the conveyer is driven by sprocket wheels on a shaft 8 projecting outside the oven wall and having a worm wheel 9 secured thereon. A worm 10 on a drive shaft 11, meshes with the worm wheel 9 to drive the latter, and the shaft 11 is provided with a pulley 12, driven by a belt from any source of power. The tank 13 for cleansing liquid, is connected with an elevator 13^a

and the latter operated by a cable 13^b mounted on drums 13^c and 13^d to draw the tank up to an elevated position, as shown, and secure it in such position. Any suitable means may be employed for applying power to the drum 13^d for controlling the raising and lowering of the elevator 13^a. The tank 14 for japaning liquid, is supported on a wheeled cradle 15 movable on a trackway, and the conveyer 5 is adapted to dip the articles in the liquid of both tanks 13 and 14 and convey them through the oven, as will now be explained.

Mechanism is provided at point marked X, to compel the conveyer to automatically take hold of article holders and convey them through the apparatus. The articles are first carried up over pulleys 6, thence down around other pulleys 6 and through the cleansing liquid in tank 13, thence up over other pulleys and down below other pulleys and through the japaning liquid in tank 14. The conveyer then passes around another pair of pulleys 6 and then up through the bottom of the oven and passes around pulleys 6 in the oven taking an up and down path to keep the articles in the oven a sufficient length of time to thoroughly dry them, and then passes down through the bottom of the oven into the work room to the point marked Y, where the article holders are automatically dropped and conveyed away in any desired manner.

Heating tubes 16 are shown in the bottom of the oven to give the necessary heat thereto and these tubes may be heated by liquid fuel burners or in any other manner desired.

A great many slight changes might be made in the general form and arrangement of the parts described without departing from my invention, and hence, I do not restrict myself to the precise details set forth but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

Automatic japaning apparatus, comprising framework, an oven superimposed on said framework, a traveling tank for japaning fluid, an elevator, a tank for cleansing

fluid, carried by said elevator, an endless
conveyer passing through the framework
and through the oven and adapted to carry
articles to be dipped, means for causing the
5 conveyer to dip the articles into the tanks,
and means for removing finished articles
from the conveyer.

In testimony whereof, I have signed this
specification in the presence of two subscrib-
ing witnesses.

DAVID F. BRODERICK.

Witnesses:

HARRY W. REYNOLDS,
W. B. JOHNSON.