

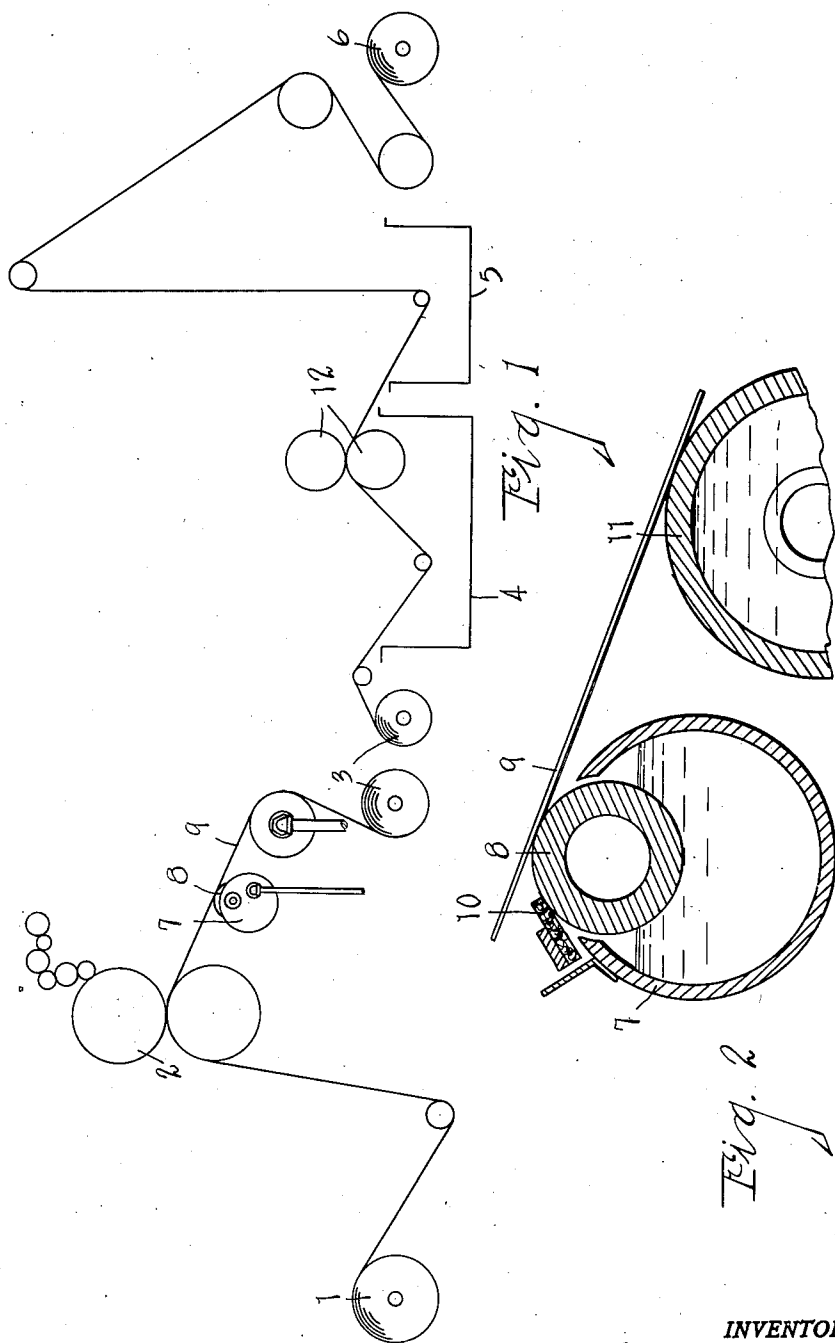
Feb. 16, 1932.

E. C. FRANCOISE

1,845,260

METHOD OF PRINTING AND WAXING PAPER

Filed July 29, 1929



INVENTOR
BY *Edward C. Francoise*
Chappell & Carl
ATTORNEYS

UNITED STATES PATENT OFFICE

EDWARD C. FRANCOISE, OF KALAMAZOO, MICHIGAN, ASSIGNOR TO KALAMAZOO
VEGETABLE PARCHMENT COMPANY, OF KALAMAZOO, MICHIGAN

METHOD OF PRINTING AND WAXING PAPER

Application filed July 29, 1929. Serial No. 382,046.

The main objects of this invention are:

First, to provide an improved method for preventing offset and waxing printed papers which permits of very large production.

Second, to provide an improved method of preventing offsetting and waxing papers which permits winding very quickly after printing, thereby avoiding the necessity for long drying reaches between the printing and winding points.

Objects pertaining to details and economies of my improved method will definitely appear from the description to follow. The invention is defined in the claims.

The manner of carrying out my improved method is clearly illustrated in the accompanying drawings in which:

Fig. 1 is a diagrammatic view of a printing and waxing apparatus employed by me and illustrating the steps of my process.

Fig. 2 is an enlarged fragmentary section through the offset wax applying and chilling means.

In Fig. 1 I illustrate diagrammatically the various steps of my improved method. 1 represents the roll of paper to be printed, 2 a printing machine, 3 the printed roll, 4 the paraffin or liquid wax applying apparatus, 5 the wax chilling apparatus and 6 the printed and coated roll of paper.

In close proximity to the printing cylinders I mount a trough 7 for liquid paraffin or other suitable wax. The coating roller 8 is rotatably supported with its lower portion dipping into the liquid paraffin so that a coating of the liquid paraffin is applied to the reverse or unprinted side of the web of paper 9 as it leaves the printing cylinders. A wiper 10 is provided for uniformly distributing the paraffin on the roller 8 and removing excess.

At the rear of the paraffin applying roller is a chilling roller 11 contacting with the coated side of the paper, this roller being mounted to permit the circulation of a cooling medium therethrough.

After passing the chilling roller the paper is wound into the roll 3 and permitted to dry, any offset which occurs being upon the paraffined side of the paper. After the ink is dry the paper is passed through the coating

apparatus 4 which consists of a tank for liquid paraffin and a pair of rollers 12. The liquid paraffin as the web is passed through the tank melts and removes the offset preventing paraffin and at the same time coats the web on both side.

From the coating apparatus the web is preferably passed immediately into a chilling apparatus 5 consisting of a tank filled with cold water, and thence to a suitable moisture removing apparatus not illustrated.

My improved method results in very substantial economy. It results in a great saving in the "make-ready", that is, it is not necessary to exercise great care in the "make-ready" to avoid conditions which in ordinary practice would result in objectionable offset. Further, my improved method renders it practical to satisfactorily use lower grades of ink than is possible under the old methods. The speed of the printing may be very substantially increased and space economized, as it is not necessary to provide long reaches for drying the ink.

A further advantage is that less skill is required on the part of the printers and workmen.

I have illustrated my method mainly in conventional form and have not attempted to set forth various modifications and adaptations which might be desirable for particular installations. It is believed, however, that this disclosure will enable those skilled in the art to embody or adapt my improvements as may be desired.

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

1. The method of printing and waxing paper consisting of printing a web of paper, applying a coating of liquid paraffin to the reverse side of the web, passing the paraffined side over a cooling roller, winding and permitting the ink to dry, unwinding and passing the printed web through a bath of hot paraffin whereby paraffin previously applied is dissolved and a coating of paraffin applied to both sides of the web, and subjecting to a chilling medium.

2. The method of printing and waxing pa-

- per consisting of printing a web of paper, applying a coating of liquid paraffin to the reverse side of the web, passing the paraffined side over a cooling roller, winding and permitting the ink to dry, and unwinding and passing the printed web through a bath of hot paraffin whereby paraffin previously applied is dissolved and a coating of paraffin applied to both sides of the web.
3. The method of printing and waxing paper consisting of printing a web of paper on one side, applying a coating of paraffin to the other side, subjecting the paraffin to a cooling medium and rolling the paper upon itself whereby the printed surface is brought into contact with the paraffined surface, and after the ink is dry unwinding and passing the paper through a molten paraffin bath whereby the offset preventing paraffin is removed and the paper coated on both sides, and subjecting to a water bath to chill the paraffin.
4. The method of printing and waxing paper consisting of printing a web of paper on one side, applying a coating of paraffin to the other side, subjecting the paraffin to a cooling medium and rolling the paper upon itself whereby the printed surface is brought into contact with the paraffined surface, and after the ink is dry unwinding and passing the paper through a molten paraffin bath whereby the offset preventing paraffin is removed and the paper coated on both sides.
5. The method of printing and waxing paper consisting of printing one side, applying a coating of liquid wax to the opposite side, passing the waxed side over a cooling medium, winding and permitting the ink to dry, and unwinding and passing through a bath of liquid wax whereby the wax previously applied is liquefied and another coating of wax applied.
6. The method of printing and waxing paper consisting of printing one side, applying a coating of liquid wax to the other side, rolling the paper upon itself and permitting the ink to dry, and thereafter removing the offset preventing wax by a liquefying medium.
7. The method of printing and waxing paper consisting of printing, applying a coating of liquid wax to the opposite side, winding, and after the ink is dry unwinding and passing through a bath of hot liquid wax whereby the wax previously applied is liquefied and a coating of wax applied.
8. The method of printing and waxing paper consisting of printing one side, applying a film of liquid wax to the other side, chilling, winding, and after the ink is dry unwinding and passing through a bath of hot liquid wax whereby the wax previously applied is liquefied and a coating of wax applied.
9. The method of printing and waxing paper consisting of printing one side, applying a film of liquid wax to the other side, wind-
- ing, and after the ink is dry unwinding and passing through a bath of hot liquid wax.
- In witness whereof I have hereunto set my hand.
- EDWARD C. FRANCOISE.