

(No Model.)

I. SHERCK & J. BATIG, Jr.

APPARATUS FOR WAXING PAPER.

No. 346,869.

Patented Aug. 3, 1886.

Fig. 2.

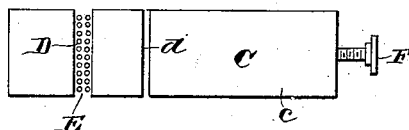


Fig. 1.

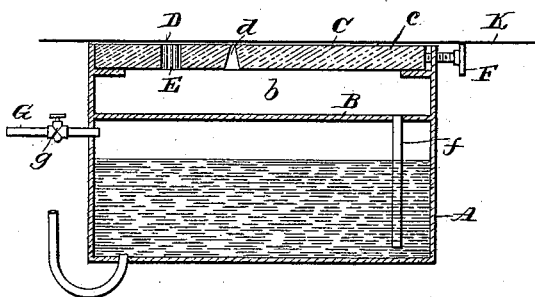
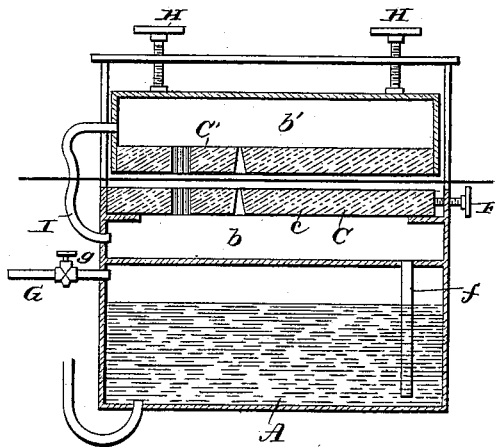


Fig. 3.



WITNESSES
G. Nottingham
M. E. Jones

INVENTORS
Isaac Sherck and Joseph Batig Jr.
By *H. A. Seymour*, Attorney

UNITED STATES PATENT OFFICE

ISAAC SHERCK AND JOSEPH BATIG, JR., OF FREMONT, OHIO.

APPARATUS FOR WAXING PAPER.

SPECIFICATION forming part of Letters Patent No. 346,869, dated August 3, 1886.

Application filed May 14, 1886. Serial No. 202,173. (No model.)

To all whom it may concern:

Be it known that we, ISAAC SHERCK and JOSEPH BATIG, Jr., of Fremont, in the county of Sandusky and State of Ohio, have invented certain new and useful Improvements in Apparatus for Waxing Paper; and we 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.

Our invention relates to an improvement in apparatus for waxing paper.

The object is to provide means for forcing wax, particularly paraffine, in a melted or soft state, into contact with one or both surfaces of paper or other material, whereby the paper or other material may be coated or partially or completely saturated with the wax, and an even glossy surface secured.

With these ends in view our invention consists in certain features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of the apparatus in side elevation, partly in section; and Fig. 2 is a top plan view. Fig. 3 shows the arrangement for coating both sides.

A represents a tank in which the melted wax is contained. It may be melted within the tank A by suitable heat-transmitting devices, or it may be reduced to a melted state elsewhere and conducted in a melted state to the tank A.

Across the tank A, near its top, is a rigid diaphragm or partition, B, and between the partition B and the bottom of the paper-support C is a chamber, *b*, into which the wax is forced from the tank A. The support C, over which the paper is made to travel, consists, preferably, of soapstone or other porous stone, or any substance which will furnish a smooth bed for the paper to travel upon. The support C is provided with one or more slots, preferably two, D and *d*, extending transversely across the path of the paper. The slots D *d* may be formed by cutting out the support C; or the latter may be formed in sections, and the slots formed by the separation of the ends of two adjacent sections. One of the slots, D, is provided with a nest of small tubes, E, or with a strainer or porous material of any de-

scription adapted to the purpose, and the other slot, *d*, is made narrow or broad, as desired, by the adjustment of the support-section toward and away from its adjacent section. This is conveniently accomplished by a hand-screw, F, working in the side of the frame and in engagement with the section. The wax is forced from the tank A into the chamber *b*, and thence through the slots D *d* by means of steam, hot air, weighted plunger or plungers working in a tube or in tubes by the weight of a column of the wax itself, or other pressure on the surface of the wax in the said tank. The communication between the chamber *b* and the tank A is through a pipe, *f*, leading from the floor of the chamber *b* to a point near the bottom of the tank A, and beneath the surface of the wax therein. The steam or hot air is introduced into the tank A through a pipe, G, provided with a stop-cock, *g*, to regulate the pressure, and hence the amount of wax which shall be deposited on the paper or other material, and the depth to which the said paper or other material shall be saturated, since the higher the pressure the deeper will the wax be forced into the pores of the paper, and the greater will be the quantity forced through the slots. This will hold good when the paper or material being waxed is fed at a uniform speed. Of course, the quantity of wax deposited upon the paper might also be regulated to a great extent by the change in the speed of the material. When it is desired to apply the wax to both sides of the paper, a second chamber, *b'*, Fig. 3, is provided above the support C, and a slotted bearing-face, C', is provided, similar to the support C, and adapted to be forced toward and away from the support C by adjusting-screws H, working in the frame and in engagement with the bottom of the chamber *b'*. The chamber *b'* is connected with the chamber *b* by a pipe, I, and the same pressure which forces the wax into the chamber *b*, and thence into contact with the paper, also forces the wax into the chamber *b'*, and thence through the face C' into contact with the paper. The material to be waxed (denoted by K) is drawn over the support C at the desired speed by means of a reel and suitable tension and draw rolls of

ordinary construction, or of any approved construction.

It is evident that slight changes might be resorted to in the manner of exerting pressure upon the wax and in the construction and arrangement of the parts described; hence we do not wish to limit ourselves strictly to the construction herein set forth; but,

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In apparatus for waxing paper or other material, the combination, with a slotted paper-support, of a body of wax under artificial pressure, adapted to pass through the slotted paper-support into contact with the paper, substantially as set forth.

2. In waxing apparatus, the combination, with a slotted support over which the material to be waxed is adapted to pass, of a wax-supply chamber located adjacent to the slotted support, a wax-reservoir communicating with the chamber, and means for applying pressure to the surface of the wax in the reservoir, substantially as set forth.

3. The combination, with the slotted paper-support provided with porous material in one or more of the slots, of a body of wax under artificial pressure, adapted to be forced through the porous material into contact with the paper, substantially as set forth.

4. The combination, with the support upon which the material to be waxed travels, of the wax-supply chamber connected with a wax-reservoir by a pipe leading beneath the surface of the wax in the reservoir, and means for applying pressure to the surface of the wax in the reservoir, substantially as set forth.

5. The combination, with a wax-supply reservoir, of a paper-support having an adjustable section for increasing or diminishing the feed, substantially as set forth.

6. The combination, with a wax-supply reservoir, of two slotted bearing-faces located one above and one below the paper, wax-supply chambers located adjacent thereto, and a supply-reservoir containing wax under pressure, substantially as set forth.

7. The combination, with the lower bearing-face or paper-support, of the upper bearing-face, adapted to be adjusted toward and away from the lower bearing-face, and wax-supply chambers communicating with the faces, substantially as set forth.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

ISAAC SHERCK.
JOSEPH BATIG, JR.

Witnesses:

MORRIS E. TYLER,
EDWARD C. GASTE.