

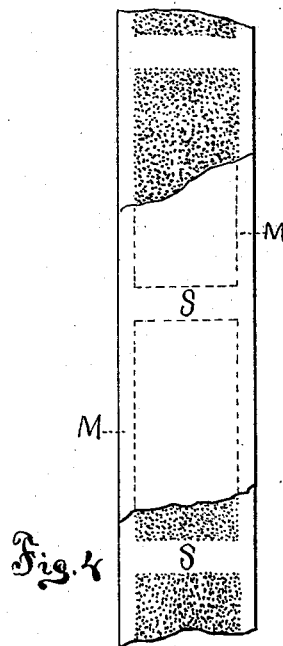
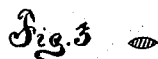
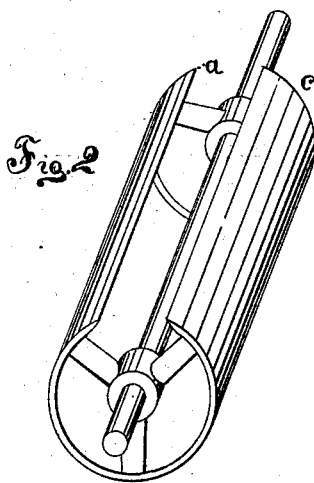
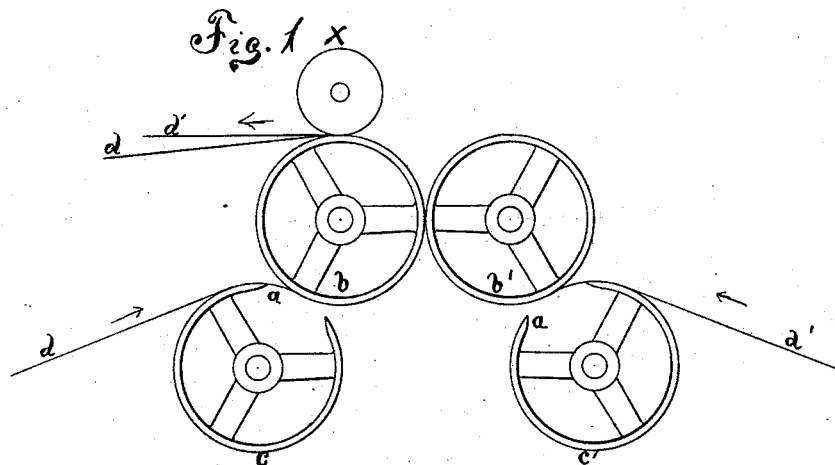
(No Model.)

O. THUM.

MANUFACTURE OF FLY PAPER.

No. 305,118.

Patented Sept. 16, 1884.



Witnesses:  
Fred W. Stevens.  
Arthur C. Senison

Inventor  
Otto Thum  
By Edward Taggart,  
his attorney.

# UNITED STATES PATENT OFFICE.

OTTO THUM, OF GRAND RAPIDS, MICHIGAN.

## MANUFACTURE OF FLY-PAPER.

SPECIFICATION forming part of Letters Patent No. 305,118, dated September 16, 1884.

Application filed June 14, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, OTTO THUM, of the city of Grand Rapids, in the county of Kent and State of Michigan, have invented a new and useful Improvement in the Manufacture of Fly-Paper, of which the following is a full, clear, and exact description.

My invention relates to the manufacture of what is known as "sticky fly-paper," and its objects are to produce a cheaper article of merchandise than is now in use, and to so apply the adhesive compound to strips of paper as to leave both margins and cross-sections at regular intervals free from the compound.

The invention consists in the method of applying the adhesive compound to the paper by means of rollers, and in the improved article of manufacture produced thereby.

In the drawings I have shown a convenient form of apparatus for carrying my invention into effect; but I do not limit myself in this respect, and the apparatus may be changed greatly without departing from the spirit of my invention.

Figure 1 is an end view of the cylinders and rollers which I use in applying the adhesive compound to the paper. Fig. 2 is one of the cylinders, which is used to apply the compound to the paper, detached and shown in perspective. Fig. 3 is a section of one of the spokes of the cylinder shown by Fig. 2, and Fig. 4 shows a double strip of paper after it has passed through the machine.

Similar letters refer to similar parts throughout the several views.

In Fig. 1, C and C' represent two cylinders, each having an opening or slot on one side extending of uniform width the entire length of the cylinders, as fully shown in Fig. 2 by *a*.

When the machine is in use, the lower part of the cylinders C and C' are immersed in the liquid adhesive material, composed of a mixture of resin and castor-oil. It is necessary that this compound be put on quite thick, and it must therefore be quite soft, it being kept in the required condition by the application of steam to the vessel containing the compound or other indirect heat in any of the well-known ways usually employed to fuse such compositions and keep them at a uniform consistency.

Above the cylinders C and C' are placed two rollers, *b* and *b'*, and also in the position shown the small roller X. The opening or slot *a* is preferably made by cutting out a narrow strip the entire length of the cylinder, as shown in the drawings; but a depression may be made to take its place.

Fig. 3 is designed to show the form of the spoke. It is made as small as consistent with strength, the object being to prevent it from carrying the adhesive compound.

In Fig. 4, S S show the spaces in the strips of paper that are not covered by the compound, and M M the margins.

The operation of my invention is as follows: The paper is in long and comparatively narrow strips, similar to wall-paper, and can be used to good advantage from rolls, and should be wide enough to extend a sufficient distance beyond the ends of the cylinders C and C' to leave a margin free of the adhesive compound. From one roll take one end of paper, pass it through between C and *b*, and up between *b* and *b'*, and over *b*, and under X, which strip of paper is shown by *d*. From the opposite pass the strip of paper *d'* between C' and *b'*, up between *b* and *b'*, and over *b*, and beneath X. Let the lower sides of C and C' be immersed in the adhesive compound, and set the cylinders and rollers in motion, and the paper will pass in the direction shown by the arrows, and the compound will be quickly and uniformly spread on the paper, leaving only the margins which project beyond the cylinders and the cross-sections S S free of the compound. The prepared sides of the paper as the strips come from beneath X will face each other and adhere or stick together, thus leaving it thoroughly prepared, and at the same time with no exposed sticky surface. After it is thus prepared, it can be cut apart at the cross-sections S and S and be readily packed.

Instead of preparing two strips of paper at once, one strip can be prepared by simply using two cylinders or rollers, as C and *b*, in which case the paper could be placed one strip upon the other by hand; but it will be obvious that, instead of taking two separate sheets and placing them together, as above described, one sheet with an equal number of coated

spaces may be folded in the center at one of the blank spaces S, and thus produce the same effect. The article produced thus consists of a strip or strips of paper having spaces at regular intervals filled with adhesive material surrounded by clear marginal spaces, the coated spaces being placed together, in which condition they are transported or stored. When it is desired to use two or more sheets, they are cut off at the blank spaces dividing the coated spaces, and the sheets may be readily separated by pulling them apart, the mixture not being of so adherent a nature as to prevent this.

Having thus described my invention, what I claim to have invented, and desire to secure by Letters Patent, is—

1. The method hereinbefore described of spreading the adhesive compound upon strips of paper, consisting in immersing rollers of a width less than the paper to be coated in an

adhesive compound kept in a uniform liquid state, and revolving said rollers over the surface of the paper to be coated, substantially as described.

2. The method hereinbefore described of spreading adhesive compound upon strips of paper, consisting in immersing rollers of a width less than the paper to be coated in the compound, revolving said rollers over the surface of the strips, and finally pressing the coated surfaces of two strips together, substantially as described.

3. As a new article of manufacture, the fly-paper with adhesive faces placed together, so as to be packed without folding, and adapted to be separated when ready for use, substantially as described.

OTTO THUM.

Witnesses:

HUGO THUM,

EDWARD TAGGART.