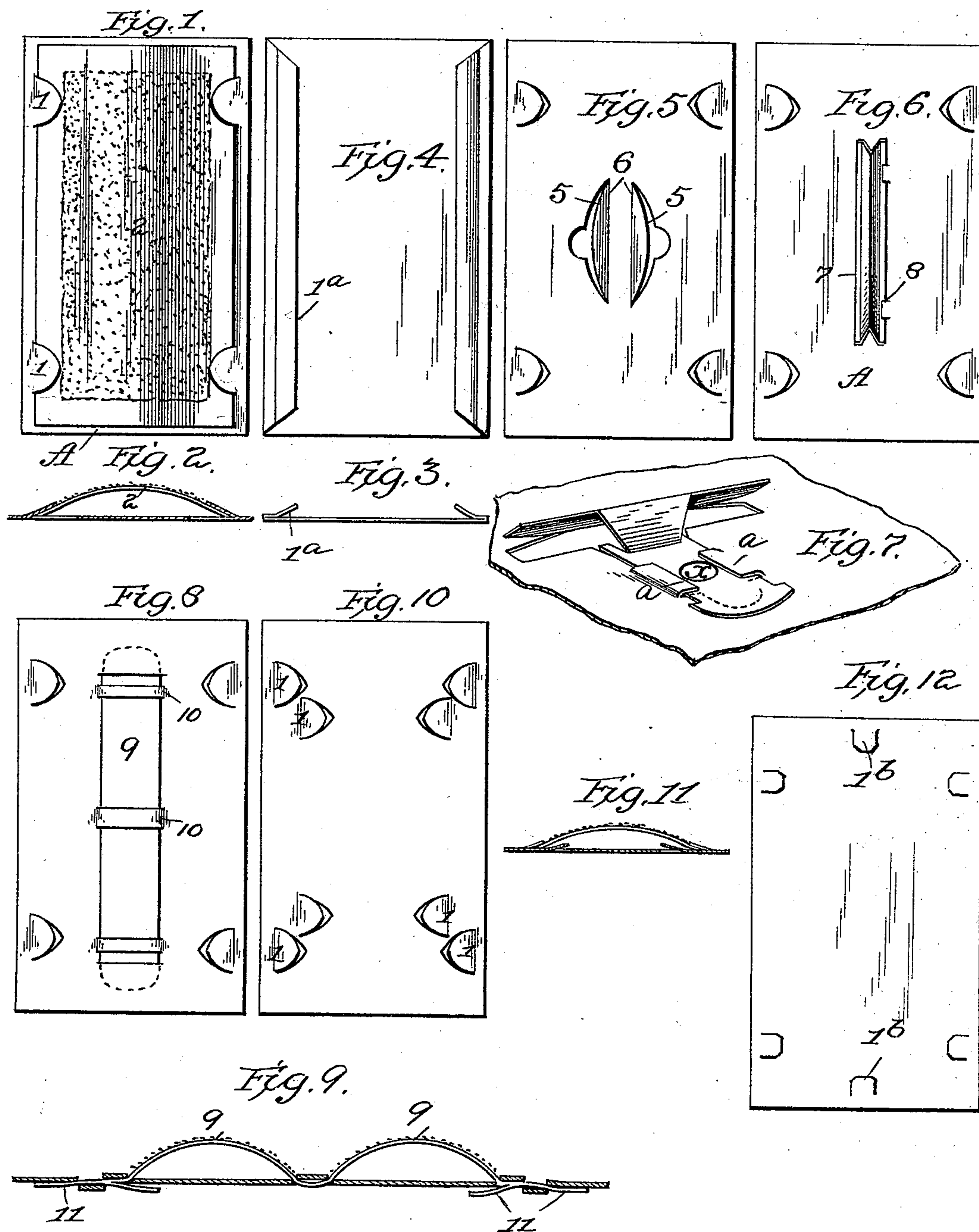


(No Model.)

O. & H. THUM.
FLY PAPER HOLDER.

No. 528,573.

Patented Nov. 6, 1894.



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FLY-PAPER HOLDER.

SPECIFICATION forming part of Letters Patent No. 528,573, dated November 6, 1894.

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To all whom it may concern:

Be it known that we, OTTO THUM and HUGO THUM, citizens of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Fly-Paper Holders, of which the following is a specification.

Our invention is an improved holder for sticky fly paper.

The object of the invention is to provide means for supporting the sheet of sticky fly paper when in use, in such position that it will present an uneven sticky surface, that is to say, to present a surface, portions of which are raised above other portions thereof. Preferably the holder is formed to support the sheet in a curved position, the upper surface being convex approximately.

We have found that when newly opened sheets of fly paper are laid altogether flat or level the shining catching material is at first avoided by the flies apparently on account of its resemblance to liquids, which they instinctively keep out of, and it is only after a few flies have been accidentally caught and have seemingly a dry footing, that the other flies will alight freely thereon. We have found also that if the surface be curved or raised, to remove the liquid appearance flies will alight freely upon it at the outset, and the delay is avoided during which, the unavoidable, though gradual drying and hardening of the sticky surface takes place. The raised portion is more or less prominent from all sides and is more liable to be struck or perched upon by flies in their movements to and fro than if the sheet were flat, and has besides other advantages not necessary to specify.

Our said invention is illustrated in the accompanying drawings, in which—

Figure 1, is a plan view of a holder containing a sheet of fly paper. Fig. 2, is a section thereof. Figs. 3 and 4 show a sectional and plan view of a modification. Figs. 5, 6, 7, 8, 9, 10, 11 and 12 are views of other modifications.

The holder herein shown is designed to act as a tray for the paper while it is carried about and to prevent it from being blown about by gusts of wind.

The general principle of construction of our

improved holder consists substantially of the ordinary or any suitable holding tray in combination with stops or supports for holding parts of the sheet in a raised position, or with its surface uneven. A simple form of stop or support is illustrated in Fig. 1, in which A is a holder of ordinary construction, consisting preferably of a base or tray formed of a sheet of card board or equivalent material. In this form are stops 1, on each side of the base, arranged to support the edges of the sheet. Preferably the stops are in pairs, but the space between the stops from side to side is less than the width of the sheet, so that when the sheet is placed as shown in Fig. 2, with the opposite edges of the sheet of fly paper under or against the stops, the center of the sheet is raised as shown at 2, in that figure. The same sheet is shown in plan view at 2, in Fig. 1. The sheet being raised as shown in Fig. 2, the surface is curved or ridged and it is more exposed to contact with the flies moving to and fro across the exposed ridge. The stops may be cut out from the base, or may be separate pieces fixed thereon.

In Figs. 3 and 4 we have shown in cross section and plan a base having opposite stops formed of strips 1^a made continuous from end to end and fixed to the base piece or the strips may be formed by turning over the edges of the base and securing them at the ends or in any suitable way.

We do not limit ourselves in respect to the special construction of the stops or support. If the fly paper be very thin and applied to a holder with the side supports as above described, it is apt to collapse and fail to present a good fly catching surface, and to obviate this difficulty, we have provided a central support as shown in Figs. 5, 6, 7 and 8. These figures serve rather to illustrate the invention than to indicate any necessary form of the central support, which may be varied almost indefinitely.

In Fig. 5, we have shown two tongues or flaps 5, which are cut out of the paper on curved lines, but integral with the paper on the straight lines 6—6. The flaps are bent up on these lines and form the central support.

In Fig. 6, we have shown a modified form in which the support consists of a piece of paste board or equivalent material bent in

the shape of the letter V inverted with flanges on the edges, one of which is fixed to the base A at 7, while the other edge is supported by the tongue 8, cut out from the base. This support may, like the one shown in Fig. 5, be laid down flat upon the base in packing.

Fig. 7, shows a very desirable form of support. The inverted V forming the support is cut from the base of the holder and is attached on its free end to the slide X, held between guides *a a*. By moving the slide X the V flap is raised or lowered and it may be held at any desired elevation.

We have shown another form of support in Fig. 8. This consists of a strip of paper board or equivalent material shown at 9. It is held to the center of the base or along the center line of the base by means of straps 10, cut from the base. This form may have these straps at the ends only, or it may be provided with a middle strap. In the one case, the strip 9, may be lifted up in two places, and in the other in one place, that is to say, in the center.

The form shown in Fig. 8, is a very desirable one. It may be easily and cheaply made and it allows the paper to be supported at either end and at any desired height, the strip 9 being pulled up as far as may be desired and being held by frictional contact with the straps. In Fig. 9, we have shown this form in longitudinal section, the strip 9, being raised in two places. On the under side at the ends, this strip is provided with small flaps 11, projecting downward through the openings under the straps, and by means of these flaps, the strip can be drawn conveniently in order to raise the fly paper.

In Fig. 10, we have shown the holder with two rows of stops 1, one row being within the other, and by these the paper may be given the shorter curve at first, by placing it within the inner rows and afterward, when a number of flies have been caught on the steep slope, the paper may be lowered by placing the edges against the outer rows.

We have found that in practice, better results are realized, if the paper is first exposed with the shorter and higher curve and afterward lowered as above explained.

Where the central supports are not used and reliance is placed on the marginal stops, or supports, for the edges of the paper, it is essential that the opposite stops should be a less distance apart than the width of the paper.

Where the central supports are used it is preferable to have the base of the marginal stops as far apart as the paper is wide in order that the fly paper may spread out its full

width and lie flat on the base of the holder when the central support is lowered. It is found to be a convenience to have the fly paper lie flat on the base when storing a number of holders away temporarily as is sometimes done. The marginal stops in this case serve only to prevent accidental removal of the paper from the holder, and do not serve to bulge up the central portion of sheet.

We have represented holders as having the stops on the longer sides only. The sheets of sticky fly paper are usually made rectangular with unequal sides and for this reason we have shown the holder of the same shape. The same kinds of stops and supports, however, which we have shown on the longer sides are serviceable on the shorter sides of the holder also. It sometimes happens that the lower edges of the curved sheets next to the stops are not entirely covered with flies, and in such case, it is desirable to curve the sheet in the opposite direction. This is done by placing the ends of the sheet under the stops ^{1^b} shown in Fig. 12.

The form of marginal stops which have been shown, all are made overhanging toward the center and therefore not only hold the edges of the sheet of fly paper against lateral extension but they also hold said sheets down and thus secure the sheets from displacement by gusts of wind.

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

1. A fly catching device comprising a curved sheet having the sticky field thereon presented in convex form and means for holding the said sheet in curved position, substantially as described.

2. A holder for sticky fly paper provided with marginal stops for holding the edges of the sheet and an adjustable central support, substantially as described.

3. A holder for sticky fly paper provided with marginal stops for holding the edges of the paper and a central support formed of a separate piece and secured to the base, substantially as described.

4. A holder for sticky fly paper provided with marginal stops for holding the edges of the sheet and a flexible central support, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

OTTO THUM.
HUGO THUM.

Witnesses:

FREDERICK LOETTERT,
FERD. DUNNEBACKE.