

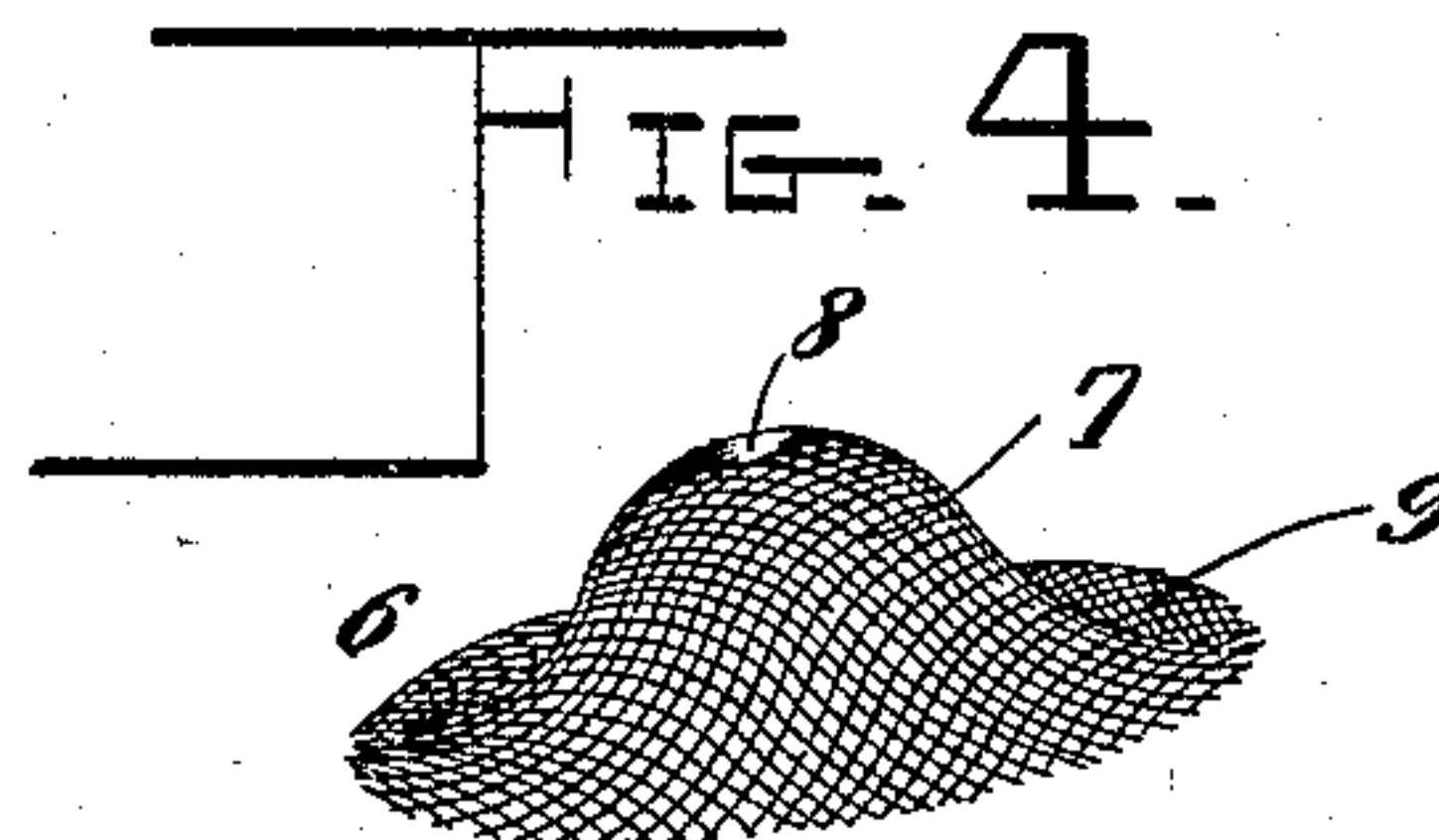
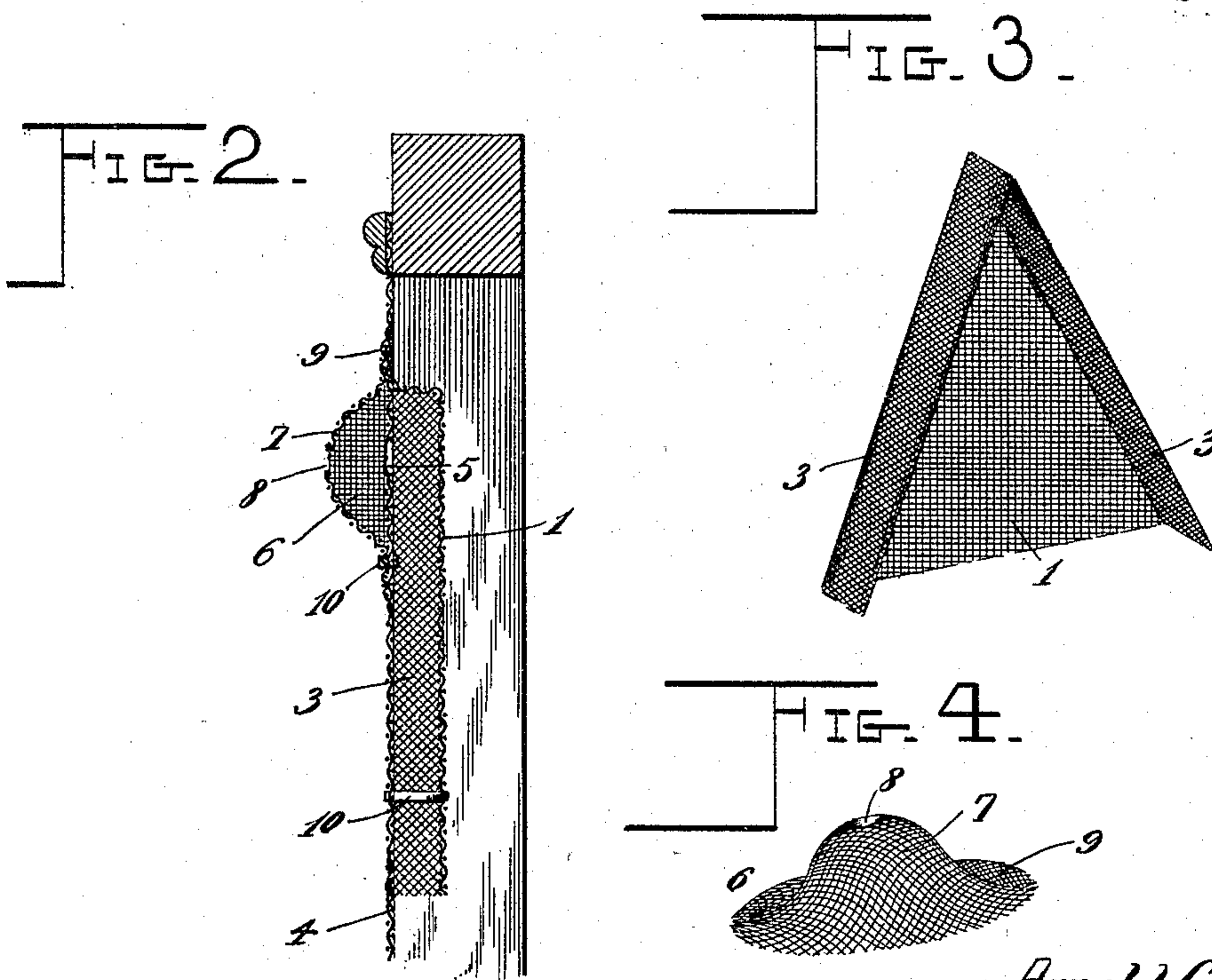
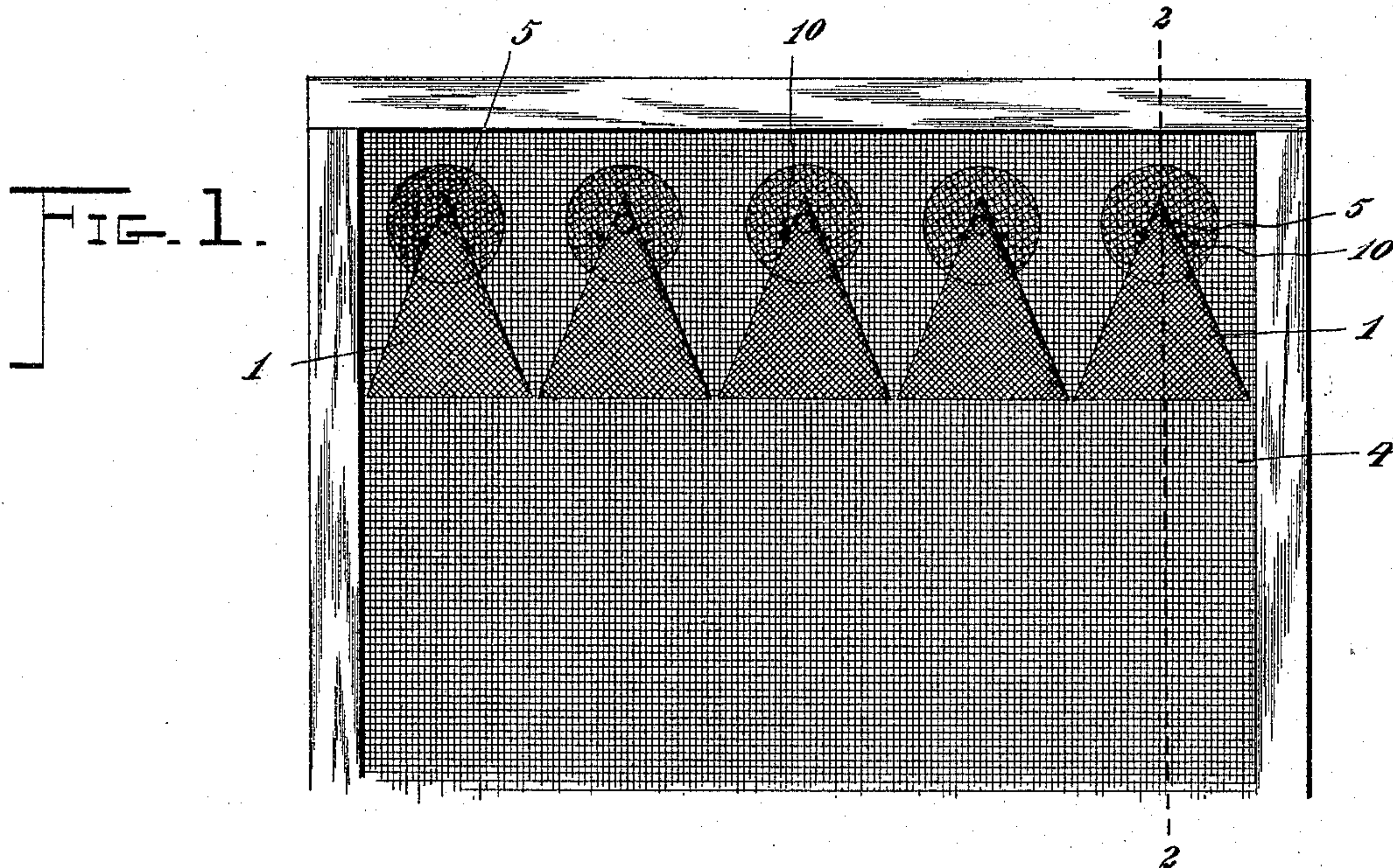
No. 638,395.

Patented Dec. 5, 1899.

A. G. KALL.
FLY SCREEN ATTACHMENT.

(Application filed Aug. 31, 1897.)

(No Model.)



Witnesses

John F. Deufferwiel - By his Attorneys,
H. J. Benshoof

Inventor

Arnold G. Kall.

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

ARNOLD G. KALL, OF WATERTOWN, WISCONSIN, ASSIGNOR OF TWO-THIRDS
TO HERMAN JAHR AND JOSEPH LESCHINGER, OF SAME PLACE.

FLY-SCREEN ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 638,395, dated December 5, 1899.

Application filed August 31, 1897. Serial No. 650,169. (No model.)

To all whom it may concern.

Be it known that I, ARNOLD G. KALL, a citizen of the United States, residing at Watertown, in the county of Jefferson and State of Wisconsin, have invented a new and useful Fly-Screen Attachment, of which the following is a specification.

My invention relates to improvements in attachments to the screens used on windows or doors for the purpose of excluding flies and other insects from a room or apartment; and the object that I have in view is to provide an attachment by which the exit of flies from a room is permitted and which also serves to prevent the flies from leaving the screen as they approach the exit-opening therein.

A further object of the invention is to provide means on the outside of a screen which will prevent the flies from passing through the screen to the interior of a room or apartment.

A further object of the invention is to provide an attachment which may be easily and readily applied to screens now in use without necessitating a special construction of the screen fabric, thus enabling the owner of the screen to use my improved attachment in connection with the screen to facilitate the escape of flies from the room.

With these ends in view the invention consists in the novel combination and construction of parts, which will be hereinafter fully described and claimed.

To enable others to understand my invention, I have illustrated the preferred embodiment thereof in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is an elevation of part of a fly-screen with my attachment applied thereto. Fig. 2 is a vertical longitudinal sectional view through the screen on the plane indicated by the dotted line 2 2 of Fig. 1. Fig. 3 is a detail perspective view of the triangular hood forming part of the attachment. Fig. 4 is a detail perspective view of the exterior excluding-cap to be used in connection with the screen for the purpose of preventing flies from passing from the outside through the opening in the screen.

Like numerals of reference denote corre-

sponding parts in all the figures of the drawings.

My attachment consists of a series of hoods 1 to be used in connection with any ordinary screen for a door, window, or other place from which it is desired to exclude flies and insects; and the attachment also contemplates the provision of one or more excluding-caps 6 to be applied to the outside of the screen for the purpose of preventing flies from passing through the exit-openings in the screen into the room or apartment. I design to apply a series of these hoods 1 to the screen for the purpose of directing the flies to the exit-openings and to prevent the flies when they approach said openings from flying off the screen back into the room. Each hood is triangular in form and is made from a single piece of screen or other foraminous material, which is cut to the proper shape and has its two sides bent to form the flanges 3, that operate to space the hood laterally with respect to the surface of the screen. These flanges 3 extend from the apex of the triangular hood to the base thereof, and the flanges thus serve to close the apex and sides of the hood, while the base of the hood is left open, thus forming a large space for the free entrance of the flies to the hood as they crawl up the screen toward the exit-opening over which the hood is placed.

In applying my attachment to a screen (indicated in a general way by the numeral 4 on the drawings) I first prepare a number of the flanged triangular hoods 1 and then proceed to form a horizontal row of exit-openings 5 in the screen fabric. These exit-openings 5 are punched or otherwise formed in the screen fabric at or near the upper edge of the screen, and said exit-openings may be spaced at any desired intervals apart. I prefer, however, to place the exit-openings in such relation to each other that the distance between them is equal almost to the length of the base of the triangular hoods, and when the hoods are applied to the screen the open bases thereof lie so close to each other that the flies cannot pass between the flanged sides of adjacent hoods, but must crawl into one or the other of the series of hoods extending continuously across the surface of the screen. Each hood is applied to the inner face of the screen fabric,

with its apex just over one of the exit-openings 5 therein, and the flanged sides of the hood thus converge from the broad open lower end of the hood toward the exit-opening 5 in order to direct the flies crawling along the screen and within the hood toward the exit-opening, through which the flies may pass to the outside of the room or other apartment.

From this description it will be observed that I have provided an attachment which may be used on any kind of a screen without reference to the width of the screen or the construction of the screen-frame. My attachment can thus be used on screens now in existence, or they can be applied to new screens without using a specially-constructed fabric for the screen, in which case must be exercised to have the attachment placed in the right position. I also provide the exterior caps (indicated at 6) to be applied to the outside of the screen fabric, over the exit-opening 5 thereof, for the purpose of preventing the flies from outside of the room passing through the openings 5 into the room or apartment. In this part of the invention each cap 6 is made from a single piece of wire fabric or other foraminous material of approximately disk shape and with a bulged central part 7, surrounded by a peripheral flange. In the center of the bulged cap is provided an opening 8, and the cap is designed to be applied to the screen fabric to have its flange 9 bear against the said fabric and its opening 8 in line with the opening 5 in the screen.

The interior hoods 1 and the exterior caps 6 are applied to the inside and the outside, respectively, of the screen fabric, and, if desired, said parts may be attached to the screen fabric by a fastener or fasteners, which may be common to both the hood and the cap, as indicated by the numeral 10 in the drawings.

My attachment can be easily and quickly applied to a screen by the owner at a trifling expense. The attachment is susceptible of use in connection with any kind of a screen, either for doors, windows, or other openings.

My attachments may also be used in con-

nection with traps which are designed to be suspended for the flies to light upon; but as the traps themselves are old I have not deemed it necessary to illustrate my attachment in connection with the trap.

It is evident that changes in the form and proportion of parts and in the details of construction may be made without departing from the spirit of the invention.

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

1. As a new article of manufacture, an attachment for fly-screens comprising a triangular hood made of a single piece of wire fabric which is bent at its edges to form the inwardly-extending flanges which meet each other at the apex of the hood, the space between the flanges being closed by a wall situated in the plane of the edges of the flanges and the lower broad end of the hood being open, substantially as described.

2. As an attachment for an insect-screen, a sheet of screen material having all edges except the lower one thereof provided with spacing-flanges throughout their length.

3. An insect-screen provided with a puncture of sufficient area for passage of insects, in combination with an attachment consisting of a sheet of screen material having all edges except the lower one thereof provided with spacing-flanges throughout their length and made fast to the inside of said screen in position to form a trap having said puncture as an outlet.

4. As an attachment for an insect-screen, a triangular sheet of screen material having those edges that converge from base to apex provided with spacing-flanges throughout their length.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ARNOLD G. KALL.

Witnesses:

JOSEPH WRIGHT,

JOHN A. WRIGHT.