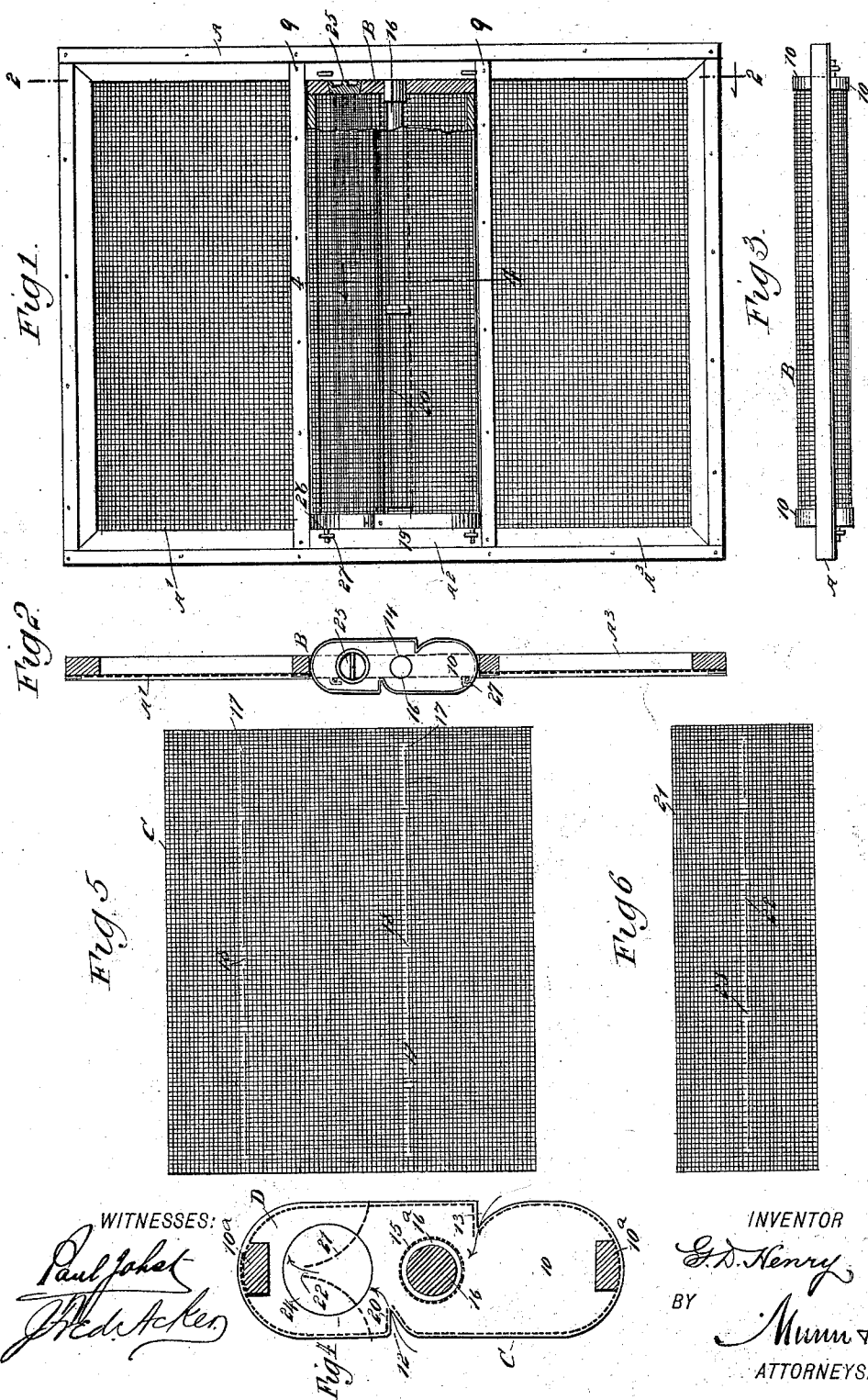


(No Model.)

G. D. HENRY.
SCREEN.

No. 554,122.

Patented Feb. 4, 1896.



UNITED STATES PATENT OFFICE.

GEORGE D. HENRY, OF WEST GROVE, IOWA.

SCREEN.

SPECIFICATION forming part of Letters Patent No. 554,122, dated February 4, 1896.

Application filed April 20, 1895. Serial No. 546,514. (No model.)

To all whom it may concern:

Be it known that I, GEORGE D. HENRY, of West Grove, in the county of Davis and State of Iowa, have invented a new and useful Improvement in Screens, of which the following is a full, clear, and exact description.

My invention relates to an improvement in screens, especially window and door screens, and it has for its object to construct the screen in such manner that the screen will contain a removable panel, the said panel being a fly-trap, and to provide means for the flies entering the trap-section of the screen, which will not interfere with the external appearance of the said section, and likewise to provide a bait-holder which will be inaccessible to flies, and furthermore to construct the screen-trap with a concentrating chamber into which the bulk of the flies caught will find their way, and means for readily emptying from the trap the flies caught.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation of the improved screen, a portion of the trap-section being broken away. Fig. 2 is a section taken longitudinally through the screen and practically on the line 2 2 of Fig. 1. Fig. 3 is a plan view of the screen. Fig. 4 is a slightly-enlarged transverse section through the trap-section of the screen. Fig. 5 is a plan view of the screening material laid out, showing the manner in which it is constructed; and Fig. 6 is a similar view of a screen-partition to be located within the screen-trap.

In carrying out the invention the frame A of the screen may be of any shape that occasion may demand, and the frame is provided at each side of its center with a cross-bar 9, dividing it into three panels, A', A² and A³, the ordinary straight screens being made to cover the upper and lower panels, A' and A³; but the intermediate panel, A², of the frame contains a removable screen-trap B, which is the principal feature of the invention.

The trap-section of the screen is provided with two end members 10, preferably constructed of wood, and each end member is provided in each side edge with a substantially angular recess, designated respectively as 12 and 13, the recess on one side of the end portion of the screen being lower than that upon the opposite side, the two recesses being placed one at each side of the transverse center of the screen, and in one of the end pieces 10 an opening 14 is made, and a correspondingly-located socket is formed in the inner face of the opposing end piece.

A cylindrical screen 15 is made to surround the opening and the opposing recess just referred to, the said cylindrical screen extending from one end of the trap-section to the other, and within this cylindrical screen a bait-stick 16 is located, being introduced through the opening 14 and made to enter the opposing recess in the frame of said trap, the said frame comprising in addition to the end pieces 10 top and bottom longitudinal strips 10^a, as shown in Fig. 4.

The frame between its ends is substantially entirely closed by a screen C, (shown straightened out in Fig. 5,) and may be of any material usually employed in the construction of a screen. The material of the screening-surface C is provided at each side of its center with a longitudinal slot 17; but the slot is not continuous, being broken by sundry of the strands 18 of wire running preferably in one direction, crossing the said openings, in order that the said screen-surface may be strengthened at these points and prevent spreading of the opening. The screen-surface C is made to entirely cover the frame, being secured to the longitudinal bars 10^a thereof, and to the ends at their side edges, any suitable binding-strip 19 being employed in effecting this attachment.

In securing the screen-surface C to the ends of the frame, the said surface is carried into the recesses 12 and 13, being made to conform thereto, whereby a longitudinal inward depression 20 is made in the screen-surface C at each side of the trap, extending practically from end to end; and since the slots 17 are so located in the screen-surface that when the said surface is applied to a frame said slots will be between the recesses 12 and 13 at

each side of the frame, therefore the depressions 20 will include the slotted portions of the screen-surface and will be virtually entrances for the flies.

5 In forming the recesses 12 and 13 in the frame, the upper walls are straight and the lower walls inclined upward, so as to produce a lower upwardly-inclined wall below each mouth or side opening in the screen-surface, and the flies enter the trap through the said openings.

It may here be remarked that the bait-stick 16 is provided with collars 16^a at intervals in its length to support the cylindrical interior screen 15 in the trap. Since flies when disturbed invariably move in an upward direction, a concentrating chamber D is formed in the upper portion of the said trap, and the partition by means of which the said chamber is separated from the remaining portion of the trap is made of the same material as the screen-surface C. The said partition 21 is shown flattened out in Fig. 6, it being provided with a longitudinal slot 22 at or near its center, crossed by strands 23 of the wire to strengthen the partition. This strip of screen material is bent at its center, bringing the slot at the top, and is curved downwardly and outwardly at opposite sides to meet the side surfaces of the main screen-surface C, as shown in Fig. 4. Thus it will be observed that the flies entering the trap, attracted by the bait and failing to gain access thereto, will fly upward and enter the concentrating chamber D through the opening 22 in the top thereof; and in order that the flies may be readily removed from the trap an opening 24 is made in one end, leading into the concentrating chamber and likewise a portion of the main chamber of the trap, as is also shown in Fig. 4, and this opening is normally closed by a plug 25.

The trap is suspended in the panel A² of the frame in any approved manner—as, for example, the trap may be provided with pins 26 at its ends to be engaged by hooks 27, or their equivalents, secured to the main frame of the screen.

When the trap has received its quota of flies it is removed from the screen and the flies are destroyed by hot water, or other convenient means, and then dropped from the trap through the aforesaid opening 24. It will be observed that a trap constructed as above set forth will serve to catch the flies, but will in no manner interfere with the functions of the screen.

It will be noticed that at the slots in the screen the ends of the wire extend more or

less into the slots, and when the screens are bent to shape these ends extend in and beyond the top of the cut, greatly facilitating the entrance of insects and serving as a barrier to their exit.

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

1. A window or door screen provided with a removable insect-trap comprising a frame having end members each provided at the front and rear edge with a substantially angular recess, a screen-surface secured to the said frame and having longitudinal inward depressions conforming to the recesses in the end members, the screen-surface being provided at the angle formed by the depressed portions with passages for the entrance of insects, as and for the purpose specified.

2. A window or door screen provided with a trap-section comprising a frame having end members each provided in its side edges at the front and rear with a substantially angular recess, a screen-surface secured to the said frame and virtually surrounding the same, the said screen-surface having longitudinal inward depressions formed therein conforming to the angular recesses in the end members of the frame, the screen-surface being provided in said depressed portions with passages for the entrance of insects, and a bait-holder located within the trap-section and connected with the end members of the frame, as and for the purpose set forth.

3. A trap for flies, the same consisting of a frame provided with a removable bait-holder, an interior screen surrounding the same, and an exterior screen-surface secured to and virtually surrounding the frame, the said outer screen-surface being provided with passages for the entrance of flies into the trap, as and for the purpose specified.

4. A screen-trap for flies, consisting of a frame, a bait-holder located within said frame, an inner screen surrounding the said bait-holder, an outer screen covering the frame and provided with openings through which the flies enter the trap, and a partition located above said entrance-openings, being inclined upward and provided with openings in the top through which the flies may enter, and a concentrating chamber formed by the location within the trap of the aforesaid partition, the partition being also of a screen material, as and for the purpose specified.

GEORGE D. HENRY.

Witnesses:

D. D. SMITH,
OLA HENRY.