

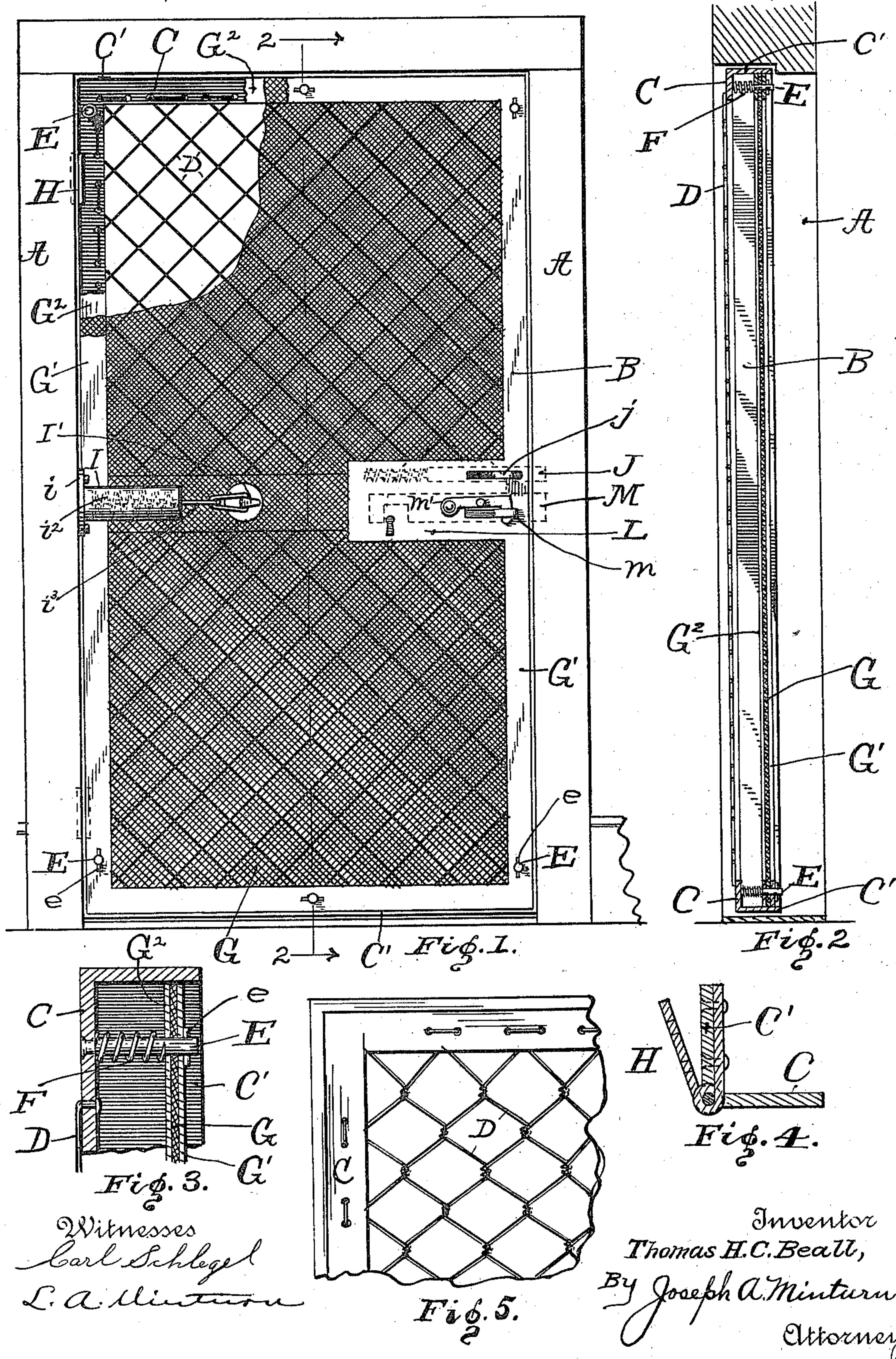
(No Model.)

T. H. C. BEALL.

COMBINATION FLY AND BURGLAR PROOF WINDOW OR DOOR SCREEN.

No. 600,904.

Patented Mar. 22, 1898.



UNITED STATES PATENT OFFICE.

THOMAS H. C. BEALL, OF CICERO, INDIANA.

COMBINATION FLY AND BURGLAR PROOF WINDOW OR DOOR SCREEN.

SPECIFICATION forming part of Letters Patent No. 600,904, dated March 22, 1898.

Application filed October 30, 1897. Serial No. 656,959. (No model.)

To all whom it may concern:

Be it known that I, THOMAS H. C. BEALL, a citizen of the United States, residing at Cicero, in the county of Hamilton and State of Indiana, have invented certain new and useful Improvements in a Combination Fly and Burglar Proof Window or Door Screen, of which the following is a specification.

The object of this invention is to provide screens for doors and windows which will exclude flies and which will also be efficient in preventing the entrance of burglars, whereby the necessary openings in a building for ventilation in warm weather may be had without the feeling of insecurity which accompanies the use of the usual wire-cloth screens.

The object of the invention also is to provide a door in which the noise resulting from the clashing together of the parts in opening and closing same will in a large measure be prevented and the door rendered practically noiseless.

I accomplish the objects of the invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view in elevation of a screen-door constructed in accordance with my invention, a part of the wire-cloth being broken away to show the underlying parts. Fig. 2 is a vertical section on the line 2 2 of Fig. 1, looking in the direction of the arrows. Fig. 3 is a detail showing the manner of securing the wire-cloth. Fig. 4 is a horizontal section through the hinge of my screen-door. Fig. 5 is an enlarged detail showing the twisting together of the heavy wires at their meeting-places.

Similar letters of reference indicate like parts throughout the several views of the drawings.

A represents the frame within which the door is hung, and B is the door.

C is a marginal frame of sheet metal, preferably sheet-steel, forming a rectangular frame parallel with the side of the door, which is bent at right angles to form the edges C', extending around the outside of the frame.

D are heavy steel wires or small rods placed diagonally of the frame in double series, which cross to form diamond pattern, the wires at their places of meeting being twisted together in the manner as clearly shown in Fig. 5.

These rods are woven through openings in the frame large enough to prevent the withdrawal of the end.

E are stud-pins arranged in series around the metal frame C and secured to the frame. These pins have radial holes through them near their outer ends, through which pins *e* are driven, and F are spiral springs which are mounted on the pins.

G is a wire-cloth of usual construction, and G' and G² are thin metal strips on each side of the wire-cloth next to the edges. The stud-pins E are projected through suitable openings in the wire-cloth and the marginal strips, and when the pins are driven into place in the ends of the pins the removal of the wire-cloth is prevented. The springs F press the cloth against the pins and afford a yielding resistance which prevents the noisy clash of the parts upon opening and closing of the door.

The wires or rods D are strong enough to keep burglars from cutting through them without making noise sufficient to disturb inmates, as is frequently done with the wire-cloth screens, and the stiff wires brace and strengthen the metal frame of the door, thereby enabling me to provide a frame which is light in weight and inexpensive as to cost. The wire-cloth serves to exclude the flies and other small intruders.

The door will be hung on hinges H, one of the straps of which will be inserted through a slot at the corner of the marginal frame and riveted to the inside of the flange, and the other strap will be screwed fast to the door-jamb on the inner side of the latter, whereby the screws will be inaccessible when the screen-door is closed. A hinge thus constructed will be extremely difficult of removal for the purpose of forcing an entrance through the door.

I is a cylinder with outside flange *i*, having holes through which bolts or screws are projected for fastening the cylinder to the door-jamb. The opposite end of the cylinder is closed, with the exception of a central opening of small diameter. A spiral spring *i*² is placed within the cylinder and is connected by the eyebolt *i*³ with the hook I' on the door. The action of this mechanism is to pull the door shut when released after it is opened.

J (shown by dotted lines in Fig. 1) is a

spring-actuated latch which is within the casing L. A lug *j* from the latch-bar projects out through a slot in the casing and affords means for moving the latch back out of engagement with its striking-plate on the door-jamb.

Below the latch J is a lock-bolt M of usual construction, except that the bolt has a slotted lug *m*, which projects outside of the case of the lock through a slot provided for that purpose. The bolt may be retained in its outside or locking position by the hook *m'*, which is pivoted to the outside of the case and is adapted to be caught into the slotted lug *m*. This will make the picking of the lock from the outside an impossibility.

The construction of a marginal frame made of angle-plates with heavy wire or small rods on one side and woven-wire cloth on the other, secured as described, will be used for making window-screens as well as door-screens.

It is not desired to limit this invention to screens when made with metal marginal frames because the heavy wires crossed and twisted together in a diamond pattern, as described, which prevents their being spread apart, and the wire-cloth on the other side

may be used on frames of wood instead of metal; but

What I do claim as new, and wish to secure by Letters Patent of the United States, is—

In a fly and burglar proof screen, a marginal frame, rods or heavy wires fastened to the frame by being passed in and out through openings in the frame said wires being crossed and twisted together in diamond patterns as shown to brace and strengthen the frame and form an impassable barrier for burglars, in combination with stud-pins secured to the marginal frame and having spiral springs mounted thereon and having transverse holes near their outer ends and pins in the holes, and wire-cloth with marginal metal strips on both sides of it, mounted on the stud-pins between the springs and the transverse pins, all substantially as described and for the purposes specified.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 29th day of September, A. D. 1897.

THOMAS H. C. BEALL. [L. S.]

Witnesses:

JOSEPH A. MINTURN,
CARL SCHLEGEL.