

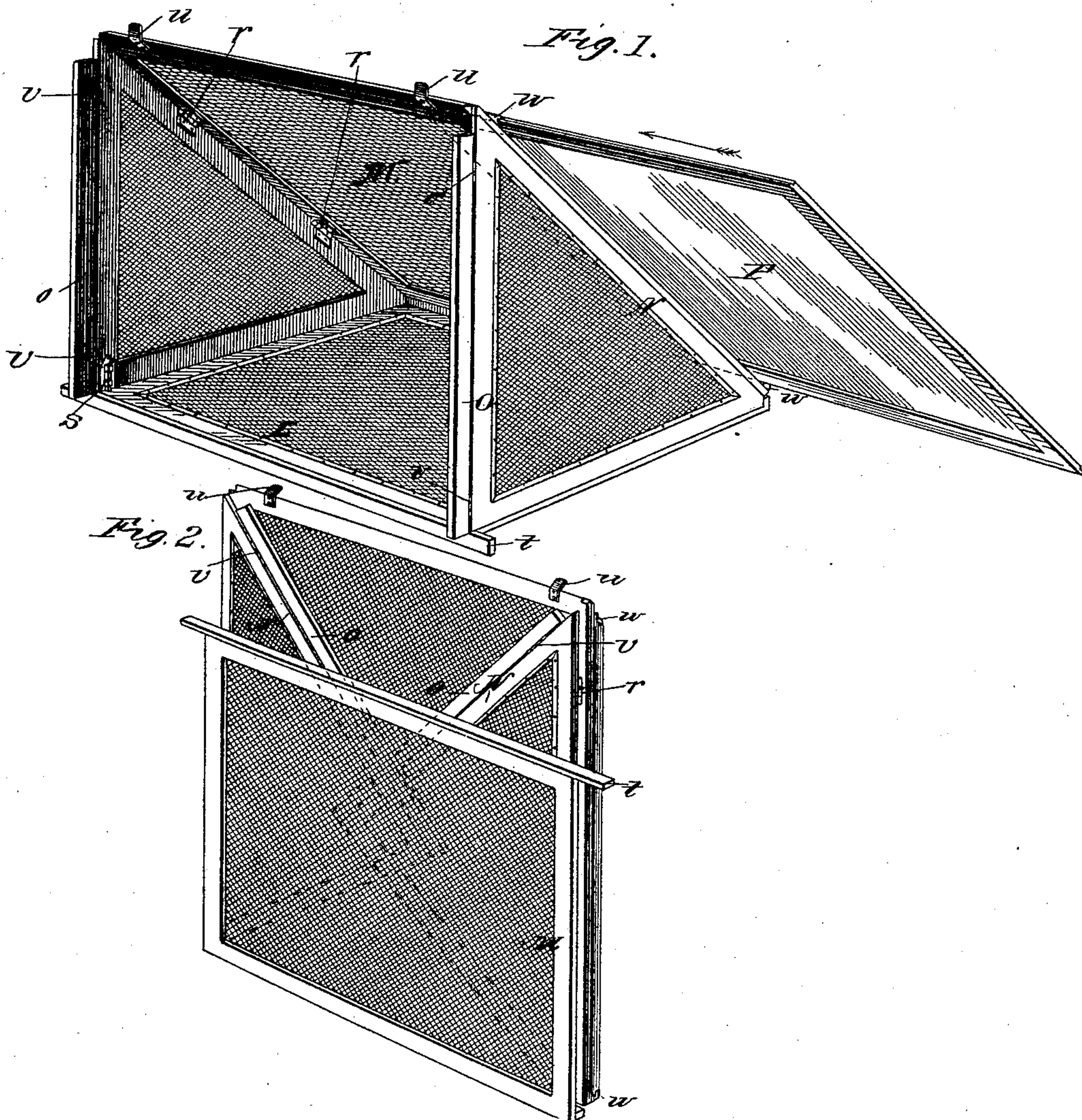
(No Model.)

2 Sheets—Sheet 1.

L. W. BRAUN.
WINDOW SCREEN.

No. 411,008.

Patented Sept. 17, 1889.



Witnesses

H. Foster
Otto Leber

Inventor

Ludwig W. Braun
By *Wm H. Lotz*
Atty.

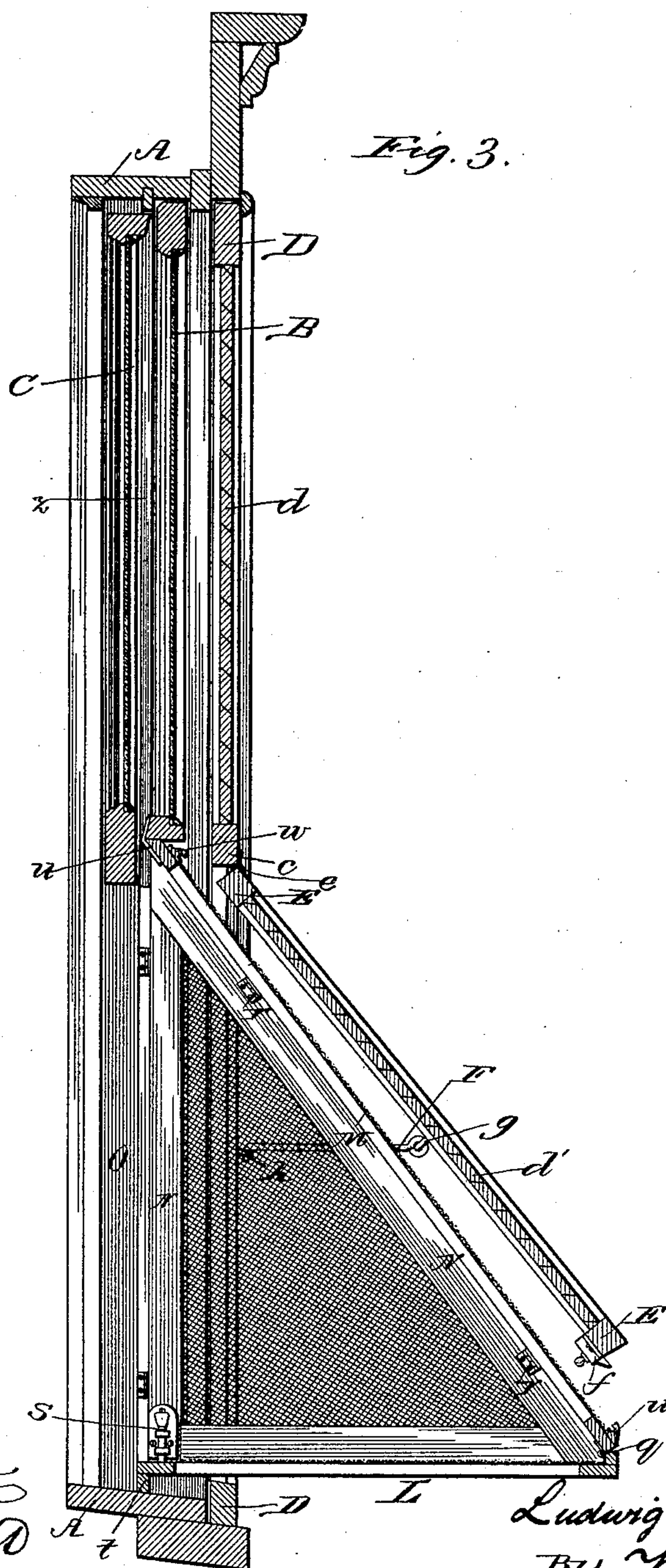
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UNITED STATES PATENT OFFICE.

LUDWIG W. BRAUN, OF CHICAGO, ILLINOIS.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 411,008, dated September 17, 1889.

Application filed June 11, 1888. Serial No. 276,695. (No model.)

To all whom it may concern:

Be it known that I, LUDWIG W. BRAUN, a subject of the Emperor of Germany, residing in the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Screens, of which the following is a specification.

This invention relates to improvements in window-screens heretofore substantially corresponding with the inner dimensions of a window-frame and arranged in a plane parallel therewith.

The object of this invention is to provide a window-screen that will not only prevent insects, &c., entering a room through the window to which the screen is attached, but to permit the head of the occupant of the room to be protruded out of the window without opening or otherwise disturbing the screen.

Another object is to have the screen of such a character that the sections thereof may be folded upon each other, whereby the screen is rendered more convenient to handle in setting up and taking down for storage and shipment.

A further object is to combine with such a screen a removable shade or cover for excluding sun-rays and rain from the window, between which and the screen there is an air-space promoting a circulation of air through the covered surface of the screen; and, finally, to provide certain features of construction in the carrying out of my invention, all as hereinafter described, claimed, and fully illustrated in the accompanying drawings, in which—

Figure 1 represents a perspective view of a screen embodying my invention, with the parts in position as when inserted in a window, illustrating the manner of attaching the removable cover or shade; Fig. 2, a perspective view of the screen folded for storage or shipment; and Fig. 3, a central vertical section through a window-frame, showing my screen attached thereto in connection with a window-shutter or blind of peculiar form, which forms the subject-matter of a separate application filed by me.

Similar letters of reference indicate the same parts in the several figures of the drawings.

The general contour of my screen is trian-

gular, projecting out of the window-frame at an angle instead of parallel therewith, as in the ordinary screen, in connection with which a shutter of peculiar form must be employed, as the ordinary straight shutter could not be closed while the screen is in position.

Referring now more particularly to Fig. 3, in which the screen is shown as applied to a window-frame, A indicates the window-frame; B C, the upper and lower sashes thereof, the latter of which is shown elevated; and D, a window-shutter hinged to the frame in the usual manner, but divided horizontally near its center of length, so as to form a swinging panel, consisting of the rectangular frame E, hinged at *e* to a cross-bar *c* of the shutter-frame, so as to swing outwardly, and provided at the lower edge thereof with a suitable spring-latch *f* for locking the swinging panel in position parallel with the shutter when the screen is not in use. When employed in connection with the screen, however, the lower edge thereof is swung outwardly, as indicated in the drawings, so as to lie parallel with the upper surface of the screen, and is held in that position by means of a hook-rod F, hinged at one end to an eye *g* attached to the swinging panel and having its opposite hook end engaging an eye *h* upon the main frame of the shutter. This swinging panel, as well as the main portion of the shutter, is provided with the usual slats *d d'*, which may be pivoted so as to admit or exclude the light, as desired.

Referring now more particularly to my triangular screen, L indicates the bottom rectangular frame of my screen, and M the top inclined rectangular frame thereof corresponding in length to the bottom frame and united thereto at the outer edges thereof by means of hinges *q*, which permits the elevation and lowering of said frame relative to and independent of the bottom frame. When elevated to a proper position, the top frame M is held in that position by means of two triangular end frames N, hinged to the lower side of the said frame at the ends thereof, as shown at *r*, which triangular frames swing down to a right angle with said frame until the lower edges thereof rest upon the bottom frame, in which position they are rigidly se-

cured by means of bolts *s* at the forward ends thereof engaging suitable sockets provided in the lower frame, thus forming a hollow wedge-shaped screen open at the base or inner end thereof, which end is designed to be secured in the frame of the window.

The frames L, M, and N are each covered with wire-netting, as usual in window-screens, and when the screen is not extended in position for use, as illustrated in Fig. 1, it may be folded into a compact form for storage or shipment by withdrawing the bolt *s*, folding the triangular end frame N up against the top frame M, and then folding the whole down upon the bottom frame L, as illustrated in Fig. 2.

In order that the lower sash of the window may be raised and lowered at will without interference from the screen, the lower frame L is provided at its forward end with a strip *t*, of slightly greater length than said frame, which is designed to rest upon the window-sill, between the stiles *z*, forming the guide-strips between the upper and lower sash, the protruding ends of which strip *t* prevent the accidental dislodgement of the screen, while the upper frame N has attached thereto two cleats *u*, abutting against the lower bar of the upper sash, as clearly illustrated in Fig. 3 of the drawings.

A close and perfect joint between the screen and window-frame at the side edges thereof may be formed by means of wing-strips O, hinged at *v* to the forward vertical ends of the triangular end frames N, which strips will fold out against the stiles *z* and form close joints therewith, and at the same time, if desirable, constitute supports for the lower sash of the window; but obviously these wing-strips might be dispensed with, if desired.

In the act of setting up or placing this screen in position, it is passed through the window-frame in the folded position shown in Fig. 2, until the strip *t* is in proper position between the stiles of the window-frame, after which the inner edge of the top frame M is elevated until the cleats *u* thereon abut against the lower rail of the top sash, when the triangular end frames N are swung down to a vertical position and secured by the bolts *s*, thereby locking the screen in the extended and operative form shown in Fig. 1.

For the purpose of excluding rain and sun, the screen may be provided with a removable shade or cover P, of substantially the shape and dimensions of the top frame M, to the outside of which it may be attached by sliding between guide-strips *w*, attached to said frame at the upper and lower edges thereof, thus being readily attachable and removable from the screen-frame, and when in position constituting a shade for excluding both the sun and rain.

A screen constructed in accordance with my invention obviously possesses numerous advantages not common to the ordinary form of screen, which lies vertical and parallel

with the window-sashes within the frame, for not only is the occupant of the room enabled to protrude his or her head through the window without raising or otherwise disturbing the screen, but when the shade is employed the window may be left open and ventilation be secured, even during a storm, for the shade will effectually exclude the rain without the necessity for closing the window; besides which the screen will constitute a shelf for receiving plants, fruit, and other articles which it may be desirable to subject either to the action of the sun or air.

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

1. A wedge-shaped window-screen comprising a lower horizontal rectangular frame, an upper inclined rectangular frame, the outer edge of which rests upon the outer edge of the lower frame, and a pair of triangular end frames connecting said upper and lower frames at the ends thereof, all of said frames being covered with wire-gauze, substantially as and for the purpose described.

2. A hollow wedge-shaped window-screen comprising a lower horizontal rectangular frame, an upper inclined rectangular frame hinged thereto at the outer edge thereof, and a pair of triangular end frames hinged to said upper frame and connecting and supporting the same upon the lower frame, all of said frames being covered with wire-gauze, substantially as described.

3. A hollow wedge-shaped window-screen comprising a lower horizontal rectangular frame provided with a strip to rest upon the window-sill between the stiles of the frame thereof, an upper inclined rectangular frame hinged to the lower frame at the outer edge thereof and provided with cleats adapted and arranged to abut against the upper sash of the window, and triangular end frames hinged to said upper frame at the ends thereof, connecting the same with and supporting it upon the lower frame, all of said frames being covered with wire-gauze, and lock-bolts upon said triangular frames adapted and arranged to engage corresponding sockets in the bottom frame, whereby the frame may be locked in position, substantially as described.

4. In a hollow wedge-shaped window-screen, the combination, with the lower horizontal rectangular frame, the upper inclined rectangular frame connected therewith at the outer edge thereof, and a pair of triangular end frames connecting said upper and lower frames at the ends thereof, all of said frames being covered with wire-gauze, of a removable cover for said upper frame, having a sliding connection therewith, substantially as and for the purpose described.

5. In a hollow wedge-shaped window-screen, the combination, with the lower horizontal rectangular frame, the upper inclined rectangular frame hinged thereto at the outer edge thereof, and a pair of triangular end

frames hinged to said upper frame at the ends thereof, connecting the same with and supporting it upon the lower frame, all of said frames being covered with wire-gauze, of
5 guide-strips along the upper and lower edges of said upper frame, and a removable shade guided and working between said strips, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

LUDWIG W. BRAUN.

Witnesses:

WILLIAM H. LOTZ,
OTTO LUBKERS.