(No Model.)

K. KUENZEL.

WINDOW BAR.

No. 377,624. Patented Feb. 7, 1888.

Fig. 4

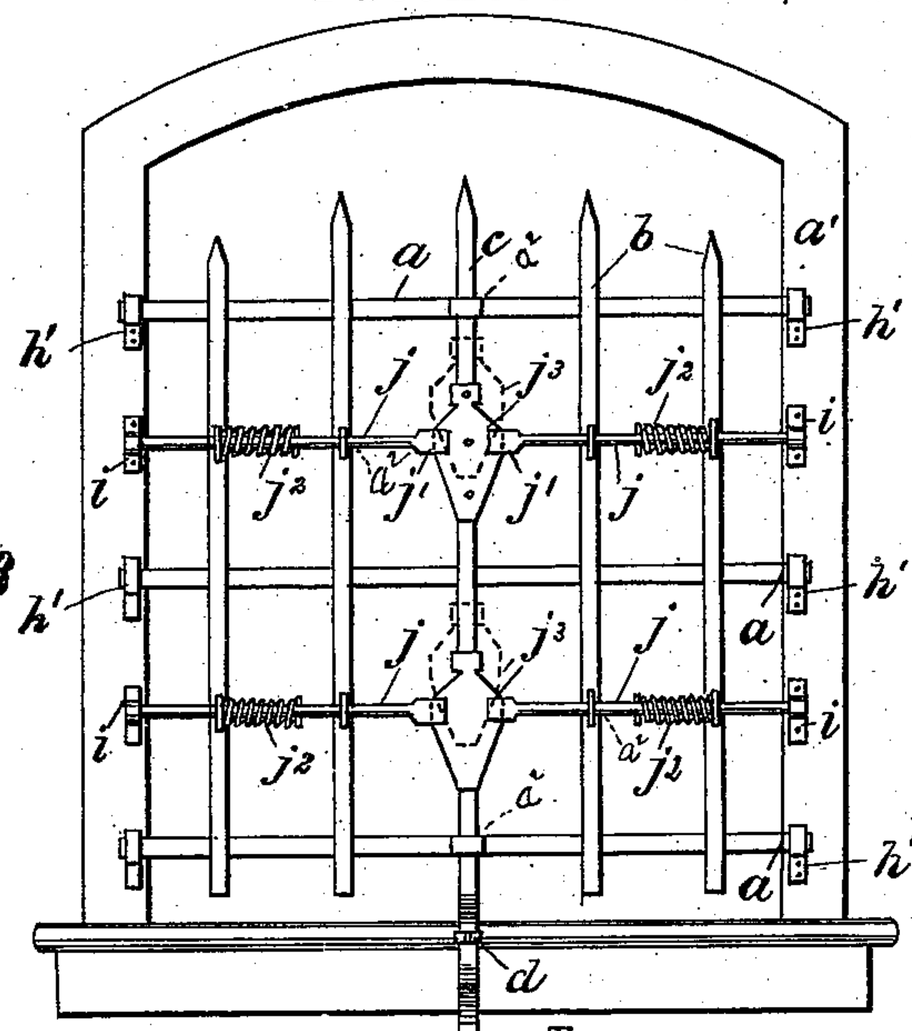
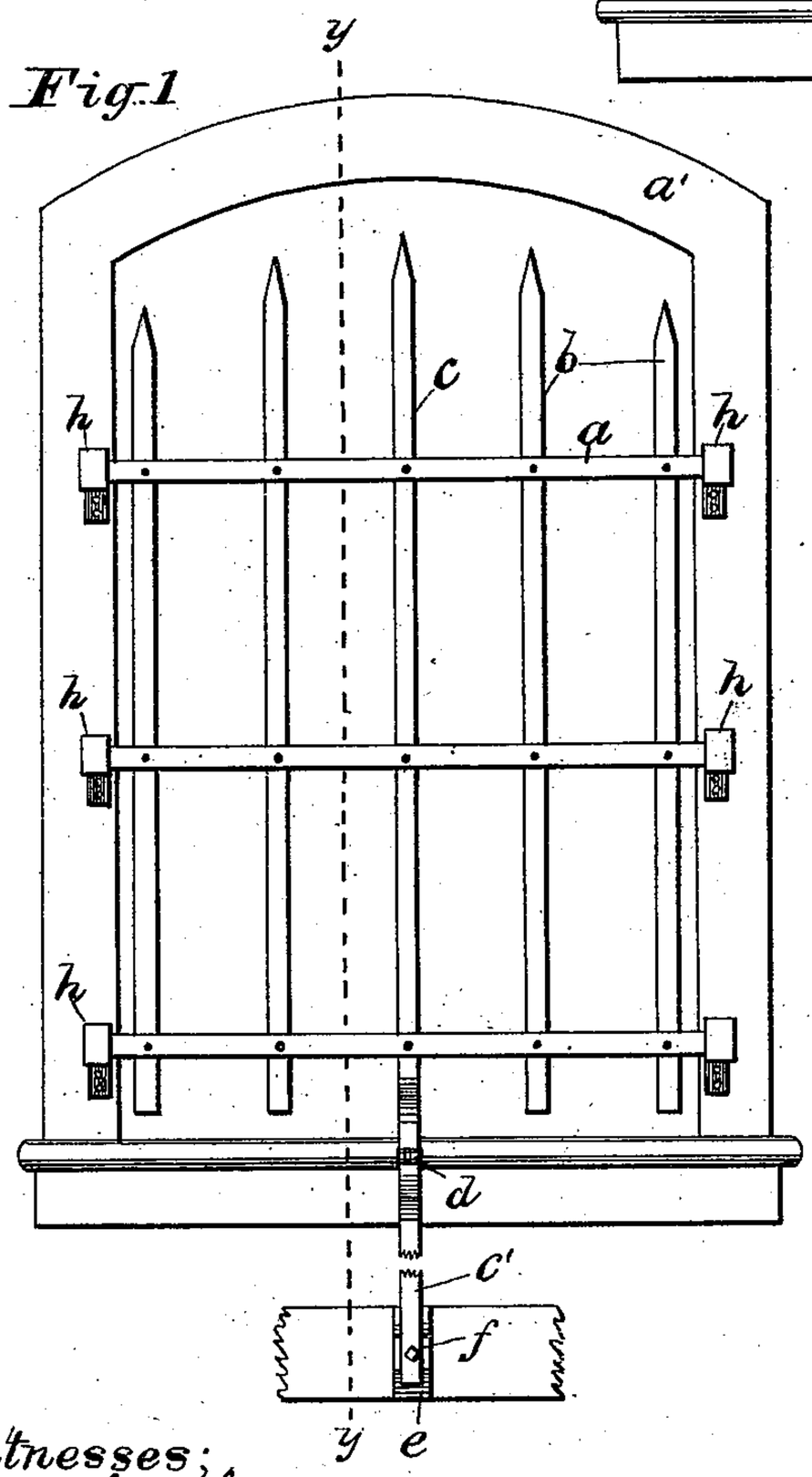


Fig. 3

Fig. 9

Fig. 5

Fig. 1



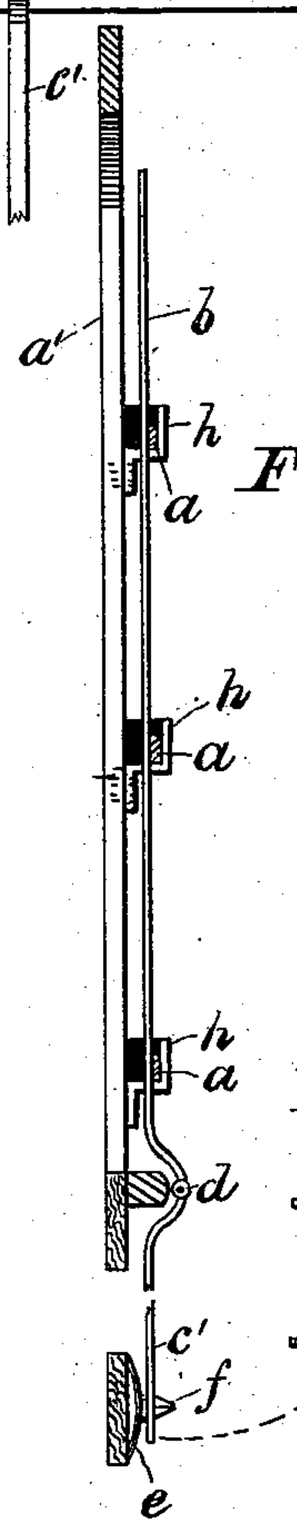


Fig. 2

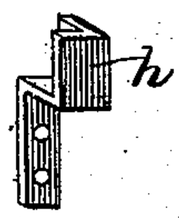


Fig. 6

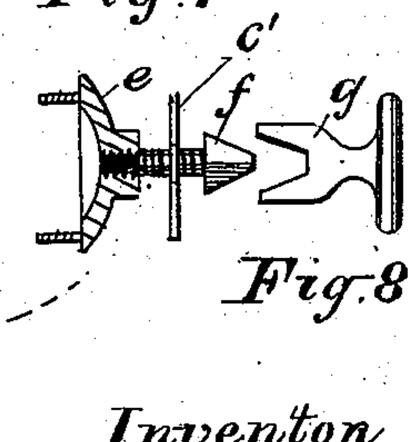


Fig. 7

Fig. 8

Witnesses;
I. D. Clark
Anton Fougner

Inventon
Karl Kuenzel.
per Wm. Zimmerman.
Attorney.

UNITED STATES PATENT OFFICE.

KARL KUENZEL, OF KENSINGTON, ILLINOIS.

WINDOW-BAR.

SPECIFICATION forming part of Letters Patent No. 377,624, dated February 7, 1888.

Application filed September 3, 1887. Serial No. 248,746. (No model.)

To all whom it may concern:

Be it known that I, KARL KUENZEL, a citizen of Prussia, residing at Kensington, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Window-Bars, which are fully set forth in the following specification, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 shows a front view of my improved window-bars, and Fig. 2 a side or edge view on the plane *y y* of Fig. 1. Fig. 3 shows a modification of Fig. 1. Fig. 4 shows an edge view of the hooks *h'* used in Fig. 3. Fig. 5 shows the bolt *j* of Fig. 3 in plan view, enlarged. Fig. 6 shows the hooks *h* of Fig. 1 in perspective, enlarged. Fig. 7 shows an enlarged view of the parts *e f* and part of *c'*. Fig. 8 shows a key in section to be applied to the head *f*. Fig. 9 shows an eye, *i*, of the bolt *j* in side view.

Like letters refer to like parts.

The object of my invention is to construct window bars or grating in such a manner as to be secure against thieves, and at the same time so as to be readily removable from the inside.

To accomplish my purpose I construct a lattice-work of steel or iron bars, *a b c*, securely fastened together and at suitable intervals, substantially as shown in drawings. The cross-bars *a* extend beyond the inner edge of the casing *a'* into hooks *h*, attached to said casing. Said hooks *h* have a guard or lip upon their outer side, as clearly shown in Figs. 2 and 6, which prevents any longitudinal motion of the cross-bars *a*. The vertical center bar, *c*, is extended so as to reach about to the center of the base-board of the room, and, when necessary, curved so as to pass over the projecting edge of the window-sill, as shown, and which at its lower end is secured to the nut *e* by means of a bolt passing through it provided with a head in the form of a truncated pyramid. Said bolt is turned by a specially-provided wrench or key, *g*, having a socket corresponding to the form of the head of said bolt.

The object of constructing the bolt-head in said manner is to cause a wrench to slip off when applied by hands reaching through the grating, pressure in the vertical direction of the bolt being necessary to keep the key at work.

The object of the hinge *d* is for the purpose of folding the hasp *c'* upon the grating, so that it may more readily be handled and set down on the floor.

The nut *e* is bolted or secured to the base-board or wall, as shown; or the bolt *f* may cut its thread into the wood of the wall, if desired.

In Fig. 3 the central vertical bar, *c*, slides loosely in eyes a^2, fastened to the cross-bars *a*, and to said vertical bar are attached a series of one or more sheet-metal plates, j^3, which expand on each side of the bar *c* in the form of an inclined plane or wedge, near the upper end of which the sides again become parallel. Opposite said plates j^3 are forked horizontal bolts *j*, working loosely in eyes a^2, attached to the bars *b*. Said plates j^3 work between the forked ends of the bolts *j*, and the outer ends of said bolts *j* extend into eyes *i*, attached to the window-casing, the holes in said eyes *i* not passing through, so as to prevent the bolts passing through them. A spiral spring, j^2, resting against the bar *b* or the eye through which the bolt slides at one end and against a nut or pin on the bolt at its other end, throws the bolt toward *c*, when the bar *c* is raised; but when the grating is in place and the bar *c* drawn down so as to lock the hasp *c'* the wedge-shaped pieces j^3 throw the bolts outward into the eyes *i*, and thus securely lock the grating into its place. The hooks *h h'* being open at the top permit the grating to be lifted up and out of the hooks whenever the hasp *c'* is released.

From the description already given the full operation of my device can readily be understood.

What I claim is—

1. A window-grating consisting of crossed bars united and supported on the face of the window-frame by means of hooks open at the top, in combination with a hasp at the lower end of said grating and hinged to said grating

and held in place by a bolt provided with a tapering head, substantially as specified.

2. A window-grating consisting of crossed bars united and supported on the face of the window-casing by means of hooks open at the top, in combination with eyes *i*, and a vertically-movable bar provided with locking-plates j^3, springs j^2, and bolts *j*, a hinged hasp, and a bolt provided with a tapering head, substantially as specified.

KARL KUENZEL.

Witnesses:
WM. ZIMMERMAN,
ANTON FONGNER.