C. F. Knauer,

Hinge.

No. 48,075. Patented June 6, 1865.

Fig: 1.

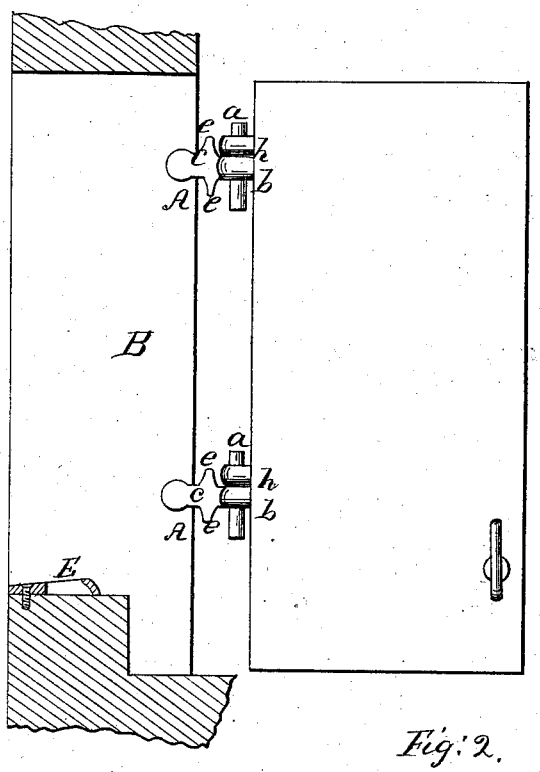

Fig: 2.

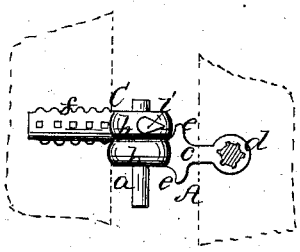

Fig: 3.

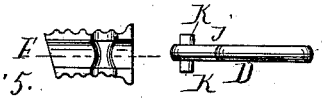

Fig: 4.

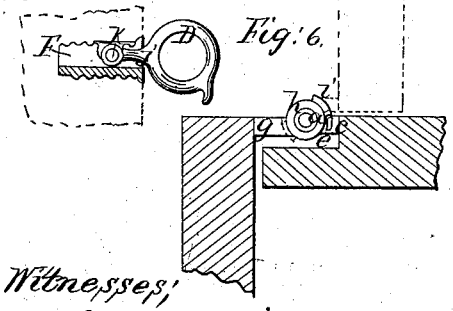

Fig: 5.

Fig: 6.

Witnesses,
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UNITED STATES PATENT OFFICE.

CHRISTIAN F. KNAUER, OF PITTSBURG, PENNSYLVANIA.

IMPROVED SHUTTER-HINGE.

Specification forming part of Letters Patent No. **48,075**, dated June 6, 1865.

To all whom it may concern:

Be it known that I, CHRISTIAN F. KNAUER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and Improved Shutter Hinge and Fastening; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—.

Figure 1 is a view of a shutter partially open and hung with my improvement; Fig. 2, a section of a shutter and a portion of a window on hinges; Figs. 3, 4, and 5, views pertaining to the fastening for the shutter; Fig. 6, a detached plan or top view of my improved hinge.

Similar letters of reference indicate corresponding parts.

The object of this invention is to obtain a simple hinge and fastening for window shutters, blinds, &c., whereby the use of screws in applying the invention is entirely dispensed with and a very economical and durable hinge and fastening obtained.

A represents what may be termed the "pintle portion" of the hinge, *a* being the pintle, which projects at equal distances from the upper and lower surfaces of a knob, *b*, the latter being at the outer end of a shank, *c*, of rectangular form, and having a cylindrical tang, *d*, projecting at right angles from it. This tang *d* is provided with teeth at its periphery, the latter being formed by longitudinal and circumferential grooves in its exterior surface, as shown clearly in Figs. 2 and 6. This toothed tang *d* is driven into the window-frame B, the sides of the latter being grooved to receive the shanks *c*, so that their outer surfaces will be flush with the sides of the frame, the knobs *b* being in front of the shoulder formed by the portion of the frame in which the tangs *d* are driven. The tangs *d* of the parts A of the hinge are driven in holes made in the frame by an auger, the diameter of the holes being equal to the diameter of the tangs, not including the teeth, and consequently when the tangs are driven in the holes the wood will close around the teeth and effectually prevent the casual withdrawing of the tangs, while in consequence of the shanks *c* being fitted in grooves or recesses in the sides of the frame the tangs are prevented from turning under the weight of the shutter. The shanks *c*, just back of the knobs *b*, are provided with projections *e*, one at top and the other at the bottom, said projections being of slightly taper form. (See more particularly Fig. 1.) The other portion, C, of the hinge is also provided with a tang, *f*, toothed precisely like the tang of part A, and it has a rectangular shank, *g*, provided with an eye, *h*, at its end, to fit over the upper part of the pintle *a* of the part A. The tang *f* of the portion C of the hinge is driven into the shutter, the shank *g* fitting in a groove or recess therein. The eye *h* of the part C has a V-shaped projection, *i*, upon it, (shown clearly in Fig. 2,) and this projection is at such a point that in opening the shutter it will pass up and over the upper projection, *e*, of the shank *c* of the part A of the hinge, the projection *i* being behind *e* when the shutter is open, and holding it in an open state, it being necessary to raise the shutter a trifle in order to close it.

Thus by this simple arrangement it will be seen that the shutter is secured or locked in an open state, and the hinge very readily applied without the aid of screws, and in consequence of having the pintle *a* project from two opposite sides of the knob *b* and the projection *e* at two opposite sides of the shank *c*, and having the projection *i* of the eye *h* of V form, the hinge may be applied to either a right or left hand shutter.

The shutters are secured in a closed state by means of a hook, D, at the lower part of the shutter, fitting in a plate, E, attached to the sill. This hook D has a shank, *j*, provided with a journal, *k*, at each side of it, (see Fig. 4,) and these journals have their bearings in a tube, F, or rather in a longitudinal section of a tube. (See Figs. 3 and 4.) This tube F has a corrugated exterior formed by circumferential grooves, and it is driven in a hole bored in the lower part of the shutter, the journals *k* being fitted in the tube previous to its being driven in the shutter. By this means the hook is very readily applied to the shutter, and firmly connected thereto when applied, and allowed all necessary room to play or work, in order that it may be engaged with and disconnected from plate E.

I would remark that the circumferential grooves in the tangs of the parts A C of the

hinge, as well as those in the tubes F, are formed with an inclined side to give them a hook shape, in order that the fibers of the wood may not be broken in drawing said tangs and tubes into the wood, and at the same time serve to prevent them being easily withdrawn.

I claim as new and desire to secure by Letters Patent—

1. A hinge for window shutters, blinds, &c., composed of tangs and shanks at right angles to each other, and provided, respectively, with pintles and eyes, substantially as herein shown and described.

2. In combination with a hinge so made, the corrugating or roughening of the tangs, substantially as and for the purpose specified.

3. The double pintle *a* and two projections, *e e*, of the part A of the hinge, in connection with the V-shaped projection *i* of part C, all arranged, substantially as shown, to admit of the hinges being applied indiscriminately to either right or left hand shutters or blinds.

CHRISTIAN F. KNAUER.

Witnesses:

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