E. R. Shepard,

Shutter Worker.

No. 30,281. Patented Oct. 2, 1860.

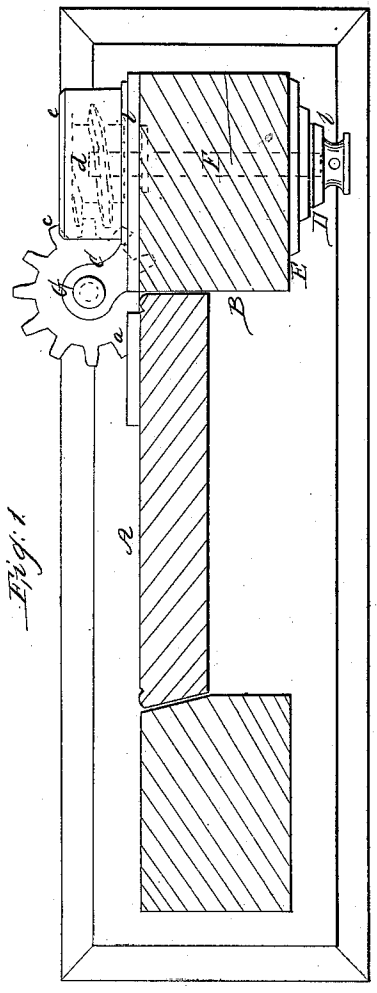


Fig. 1.

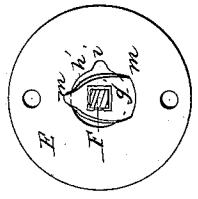


Fig. 4.

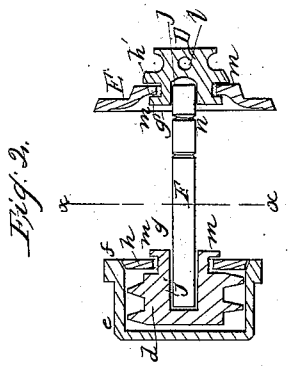


Fig. 2.

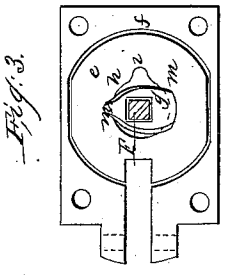


Fig. 3.

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UNITED STATES PATENT OFFICE.

E. R. SHEPARD, OF SCRANTON, PENNSYLVANIA, ASSIGNOR TO ABEL BARKER, OF CARBONDALE, PENNSYLVANIA.

BLIND-HINGE.

Specification of Letters Patent No. 30,281, dated October 2, 1860.

To all whom it may concern:

Be it known that I, E. R. SHEPARD, of Scranton, in the county of Luzerne and State of Pennsylvania, have invented a new and Improved Blind-Hinge; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 represents a horizontal section of a blind being suspended from a hinge constructed according to my invention. Fig. 2, is a longitudinal vertical section of my invention. Fig. 3, is a transverse vertical section of the same, the line *x*, *x*, Fig. 2, indicating the plane of section and looking in the direction of arrow 1. Fig. 4, is a similar section taken in the plane indicated by the line *x*, *x*, Fig. 2, and looking in the direction of arrow 2.

Similar letters of reference in all the figures indicate corresponding parts.

The principal object of this invention is to produce a cheap and effective hinge which allows of operating the blind without raising the window, and though I am aware that such devices have already been used, I have adopted the cog wheel and endless screw which from long observation and trial appears to me the best, simplest, strongest and only device that has sufficient power to operate the blind against strong winds and that will clear itself from ice and snow.

My invention consists in a particular manner of attaching the endless screw and the head which serves for operating the hinge to their respective guideplates by means of double nosed flanges whereby I am enabled to use a connection rod which is placed quite loosely into the sockets in the screw, and in the head, the length of which can therefore be easily adjusted according to the thickness of the casing through which it passes.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation with reference to the drawing.

The blind A, is secured to the casing B, by means of an ordinary hinge above and a hinge C, below, both hinges being made so that they can be used either right or left handed as may be desirable.

The hinge C, consists of two parts *a*, *b*, and the part *a*, which is secured to the blind, is provided with a cog wheel *c*, that gears into a cap *e*, which is firmly attached to the plate *f*, that serves to retain the part *b*, of the hinge to the casing B, and which also serves as a guide plate to the screw *d*. The hub of the screw is provided with a double nosed flange *g*, and an aperture *h*, in the guide plate is so shaped that it allows of forcing said flange through if turned at an angle of 45 degrees toward the flange, and that it retains the same firmly after the flange has been entered, as long as both are kept in parallel planes or nearly so.

The head D, which serves for turning or operating the screw *d*, is secured in the face plate or escutcheon E, in a similar manner, a double nosed flange *g'* being passed through an aperture *h'*, in said face plate, and it will be noticed by referring to Figs. 3 and 4, that the apertures *h*, and *h'*, in the guide plate *f*, of the screw and in the face plate E, are provided with notches *i i'*, on one side for the purpose of facilitating the entrance of the double nosed flanges *g*, and *g'*.

I am aware that a method of fastening door knobs similar to mine is already in existence, but in this old method the flange of the door knob is provided with a single nose only and whenever this nose comes opposite the notch in the face plate, the knob is liable to catch or to come out all together. With my arrangement this is different; the two noses, *m*, of my flanges *g*, *g'*, retain the screw *d*, or the head D, permanently and said screw or head can be taken out only if turned to an angle of about 45 degrees, and if the connection rod F, is in its place neither the screw nor the head can be turned and even if one of the noses comes opposite to the notch in the aperture of the guide plate *f*, or of the face plate E, the other nose retains the flange and prevents it catching in said aperture. The screw *d*, and the head D, therefore will work just as well as they would if permanently attached to the connection rod, and under no circumstances are they liable to catch or to come off as soon as the connection rod is properly adjusted.

Both the screw *d*, and the head D, are provided with sockets *j*, (see Fig. 2,) which receive the ends of the connection rod and it will be noticed that this connection rod is

placed loosely in both these sockets. By doing this I am enabled to adjust the length of the connection rod to the thickness of the casing or wall, through which it is intended to pass, with the utmost facility. After the cap *e*, which covers the screw is secured to the outside of the casing in the proper position, I insert the connection rod, and I am now enabled to mark its length and by filing a small notch in it, I can break it off by the blow of a hammer without difficulty. The operation of adjusting the length of the connection rod may be facilitated by filing small notches *k*, at certain intervals in its surface. By these means the carpenter is enabled to break off said connection rod to the desired length without being obliged to use a file. Furthermore by having the connection rod quite loose I am enabled to replace either of the parts by a new one independently of the rest and without being obliged to throw away such parts which are in good order and it enables me also to pack up my hinge into a smaller and handier package than I could if the connection rod would be firmly secured either to the screw *d*, or to the head D.

The pin G, on which the hinge C, turns is put in quite loose whereby the operation of hanging the blind and of taking the same off, is considerably facilitated. It is also desirable for the sake of convenience and of cheapness, to have the crank, which serves to operate the hinge put in loose and I have therefore provided the head D, with one or more holes *l*, to receive a bent piece of wire, which serves as the crank. A crank of this kind is certainly much cheaper than a permanent crank, which for appearance sake has to be provided with a suitable knob or handle, and which as a general thing costs just as much as my whole hinge; and by having the crank loose, it can be taken off when not needed and hung up out of the way so that children are prevented from playing with the blind. A crank of this kind may also be so arranged, that it works clear of the moldings of the casing whereas with stationary cranks a portion of the moldings has to be removed in most cases, in order to allow the crank to make its revolutions.

My hinge can be sold at one third the price of ordinary hinges for the same purpose, it is easily packed up, and it can be attached with little trouble.

What I claim as new and desire to secure by Letters Patent, is:

1. Arranging the flanges *g*, *g'*, in the head D, or on the screw *d*, with two noses *m*, in the manner and for the purpose herein set forth.

2. Arranging the head and the screw *d*, in such a manner that the connection rod F, can be placed quite loosely into the sockets *j*, *j'*, as and for the purpose specified.

E. R. SHEPARD.

Witnesses:
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