

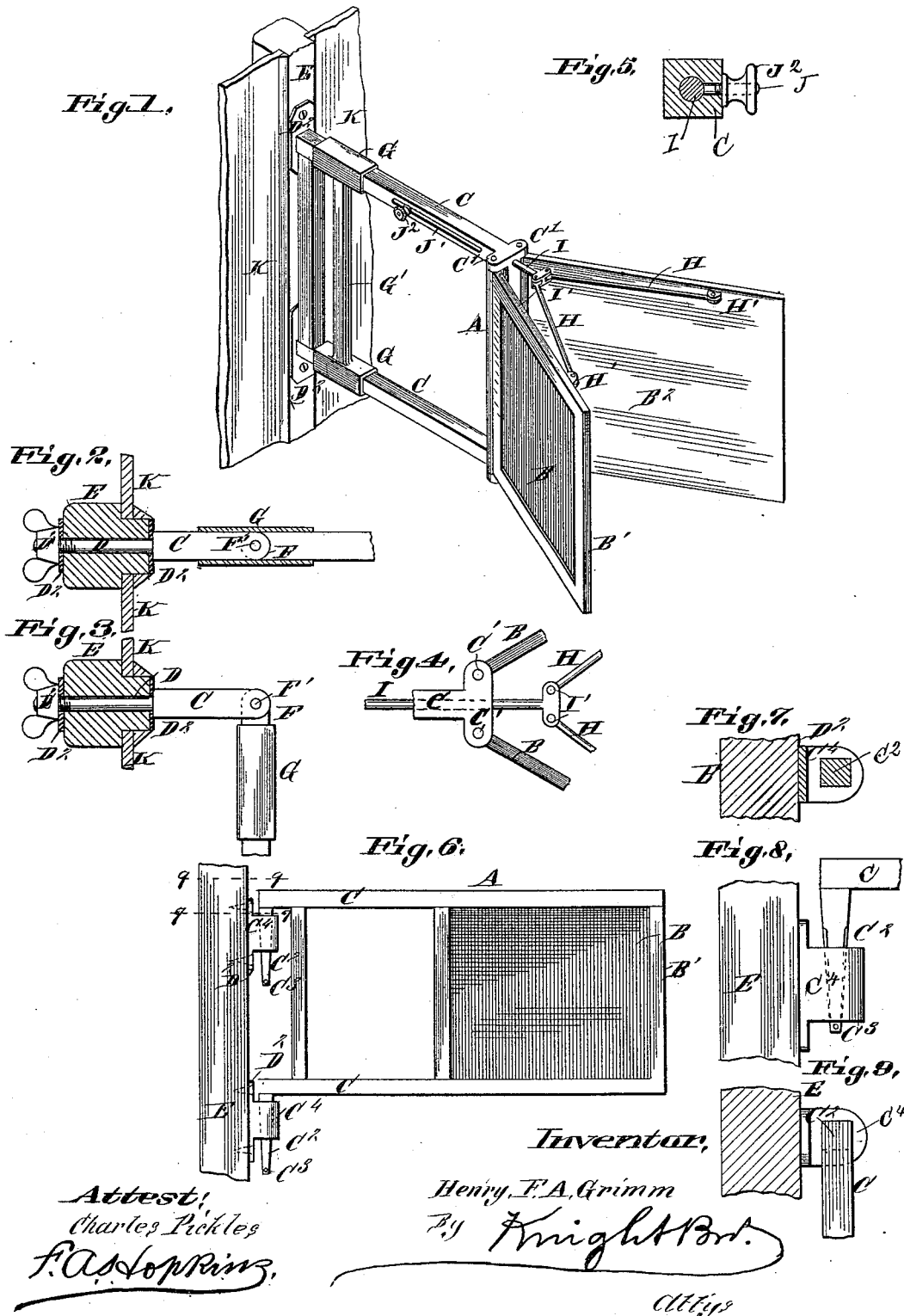
(No Model.)

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REFLECTING VIEW AND SPY GLASS.

No. 348,279.

Patented Aug. 31, 1886.



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# UNITED STATES PATENT OFFICE.

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## REFLECTING VIEW AND SPY GLASS.

SPECIFICATION forming part of Letters Patent No. 348,279, dated August 31, 1886.

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*To all whom it may concern:*

Be it known that I, HENRY F. A. GRIMM, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Reflecting View and Spy Glasses, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a perspective view of the device. Figs. 2 and 3 are detail horizontal sections showing the bracket-joint respectively in extended and folded position with its sleeve. Fig. 4 is an enlarged detail top view showing the pivoted bearings of the glass-frames and adjusting-braces. Fig. 5 is an enlarged transverse section of the upper bracket-arm, showing the means I employ for securing the brace-rod. Fig. 6 is a side elevation of a modification. Fig. 7 is an enlarged horizontal section at 7 7, Fig. 6, showing the socket in which the shoulder of the bracket-pivot is seated. Fig. 8 is an enlarged detail side view showing the rectangular shoulder of the pivot lifted from its socket to enable the change of position of the bracket-frame, and Fig. 9 is a section of the upright sash bar or frame at 9 9, Fig. 6, giving top view of bracket-connection in folded position.

My invention relates to adjustable mirrors or reflecting-glasses provided with means of adjustment of their frames to the requisite angles to reflect the figures of either stationary or passing objects that are on or pass the range of its optic view; and the invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Referring to the drawings, in which similar letters indicate like parts in all the figures, A represents my reflecting spy-glasses. (See Figs. 1 and 6.)

B are the twin mirrors or reflecting-glasses; B' the frame that incloses, and B<sup>2</sup> the back that strengthens the frame and preserves, the glass.

C represents the brackets that carry the frame, and C' C' the pivots on which the frames have their bearings and are turned.

C<sup>2</sup> are keys that lock the pivots C<sup>2</sup> from being unshipped, and C' the sockets in which they are seated and pivoted.

D is the tenon-bolt that passes through the sash-bar or its equivalent, E, and attaches the brackets C thereto, and which is secured by thumb-nuts D'.

D<sup>2</sup> are metal washers on each side of the sash-bar through which said bolt runs.

F represents pivoted joints in the horizontal bars of the bracket-frame, and F' the pivot on which they turn. These joints are provided with sleeves G G, that are slid over them to make the joints rigid, when desired, and the said sleeves are coupled by a rod, G'.

The twin reflecting-frames are operated by deflecting brace-rods H H, that are pivoted in lugs H' on the back of the frames and in twin lugs I' on the end of a rod, I. The said rod works within the top bracket-bar, and when the reflectors are adjusted as desired, it is fastened in its position by a nut, J<sup>2</sup>, and a set-screw, J, that is secured to rod I and slides in a lengthened slot, J', in the upper bracket-bar, in which it clamps the rod.

K represents the glass in the window-sash to which the bracket-frame is secured.

The operation of my device is as follows: The bracket-frame C in my preferred form may be secured outside and to the middle bar of the sash by tenon-bolts longitudinally extending from the horizontal bracket-bars, and which pierce the sash-bar and are securely clamped thereto by the thumb-screws D'. The twin mirror-frames are adjusted to the desired angle to be within the optic range of the view that it is desired to command by brace-rods pivoted to lugs at the back of the frames, and to twin lugs on a sliding bar that works longitudinally within the upper bracket-bar. A set-screw carried by said rod slides in an elongated slot in the bracket-bar, and is made to rigidly hold it in any desired position by the turn of the screw. The horizontal bracket-bars have pivoted joints F, that provide a means for swinging the frame round when it is desired to close the shutters, or for any other reason. Twin sleeves on the bars coupled by a rod are slid over the joints to make them rigid when the bracket is extended in its operative position. The metal washers D<sup>2</sup> give a firm seat for the shoulders of the bracket-bars and thumb-screws.

It will be seen that when the bracket-frame

is extended for operation the set-screw J by a backward turn may be loosened, and the deflecting-rods made to adjust the mirrors to the requisite angle to command the desired view, when, by a turn of the set-screw, the reflectors are made to retain their position until again readjusted. It will also be seen that by the use of the twin reflectors the view is commanded simultaneously from opposite directions, and can be viewed by different parties from both sides.

In Fig. 6 is shown a modification of my device, in which drop-pivots from the bracket-bars engage and work in lugs secured to the sash bar or frame or any other suitable object. In this modification a single reflecting-glass alone is shown, and the adjustment-rods are not required, as the angle at which the glass is set is adjusted by raising the drop-pivots C<sup>2</sup> (which are of a tapering form, rectangular above and octagonal beneath) until the taper point of the pivot can turn within its socket, and afterward the rectangular shoulder above is dropped into its seat and holds the bracket relatively either in the operative position for reflecting the view or in the folded one when out of use or when it is desired to close the shutters. (See Figs. 7, 8, and 9.) Spring or other keys near the points of the said pivots prevent their inadvertent disengagement from the sockets in which they are seated.

My invention may be used in many ways and for various purposes—for instance, by watchmen and detectives in the pursuit of their business, or, again, for a very different purpose, as a pleasant company for invalids to alleviate the tedium of their constrained position on the couch from which they cannot raise them-

selves, giving them an ever-varying view of the changing scenes in the street or country outside—in city life the busy travel on the street, in the country the birds amid the branches of the trees, and on the coast or riverside the passing vessels.

I have shown the bracket-frame secured to the outside of the central sash-bar (see Figs. 1, 2, and 3) and to the window-frame, as in the modification. (See Fig. 6.)

It will be seen that the whole apparatus is easily detached by unscrewing the thumb-screws and withdrawing the bracket-tenons from the sash-bar.

I claim as my invention—

1. The combination of a bracket, C, having a slot, J<sup>1</sup>, the twin frames B', having mirrors B, hinged to the bracket, twin rods H, hinged to the frames, the bar I, sliding in the bracket supporting the inner ends of the twin rods, and provided with a set-screw, J, working in the slot, and a nut, J<sup>2</sup>, by which the rod is locked to desired adjustment, substantially as described.

2. The combination of a bracket provided with reflectors and formed with hinged joints F F', twin sleeves G, and means for securing the bracket to its support, substantially as described.

3. The combination of a bracket provided with reflectors, and formed with tenon-bolts D and hinged joints, the thumb-nuts D', and a support, substantially as described.

HENRY F. A. GRIMM.

In presence of—

BENJAMIN A. KNIGHT,  
SAML. KNIGHT.