No. 747,516. PATENTED DEC. 22, 1903.

H. J. VALENTINE.

BLIND ADJUSTER.

APPLICATION FILED JULY 28, 1903.

NO MODEL.

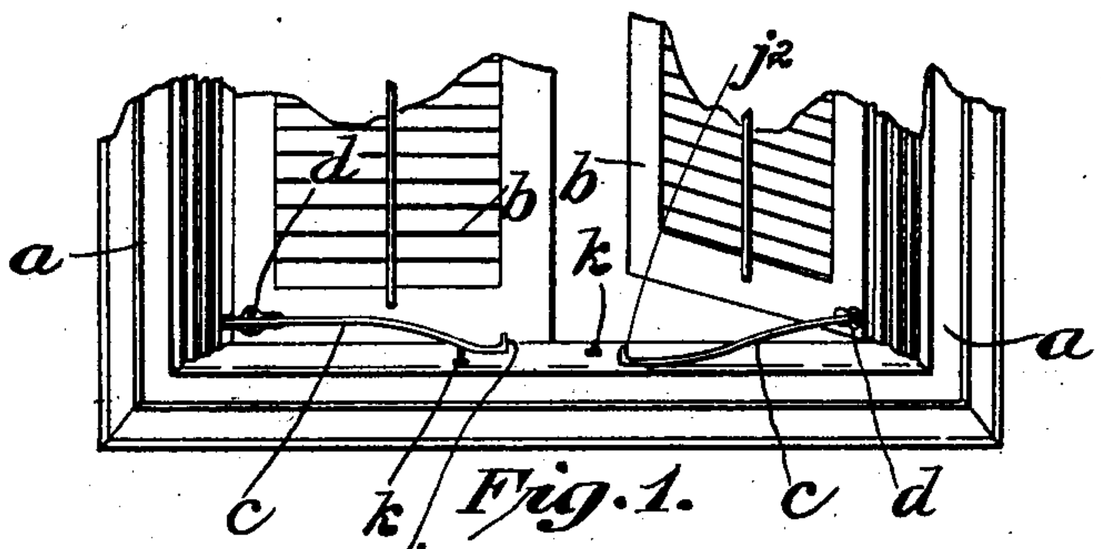

Fig. 1.

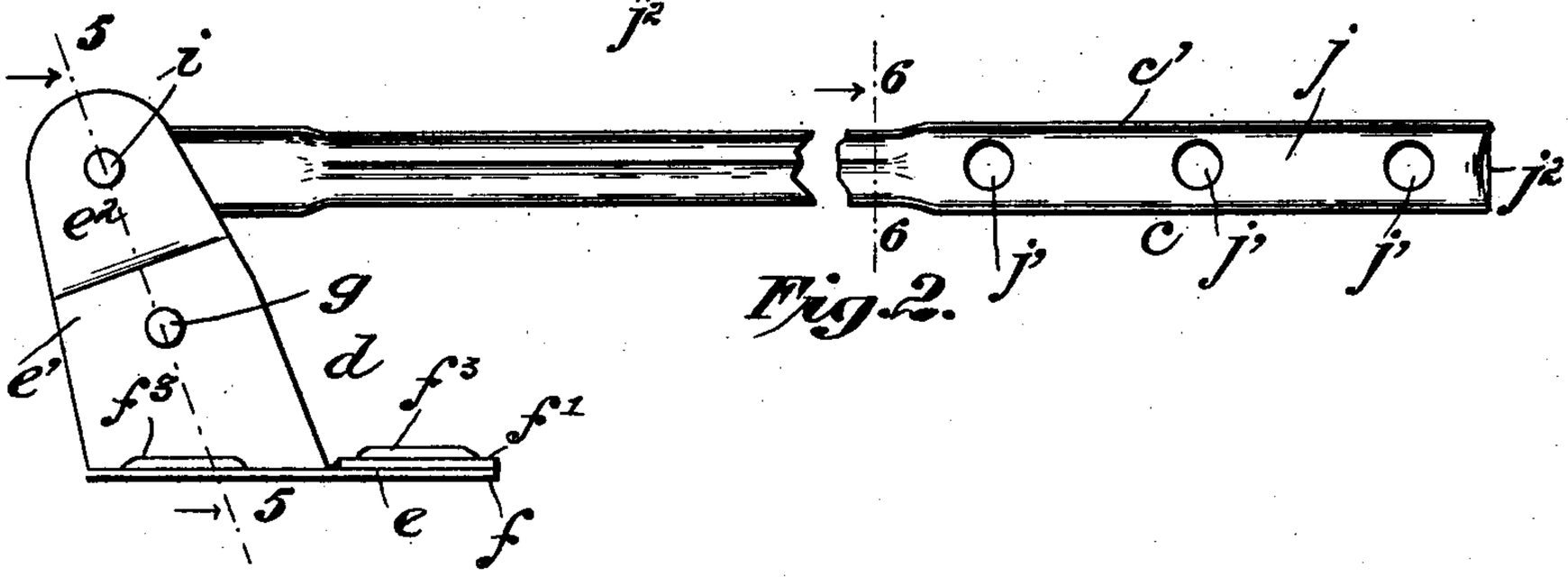

Fig. 2.

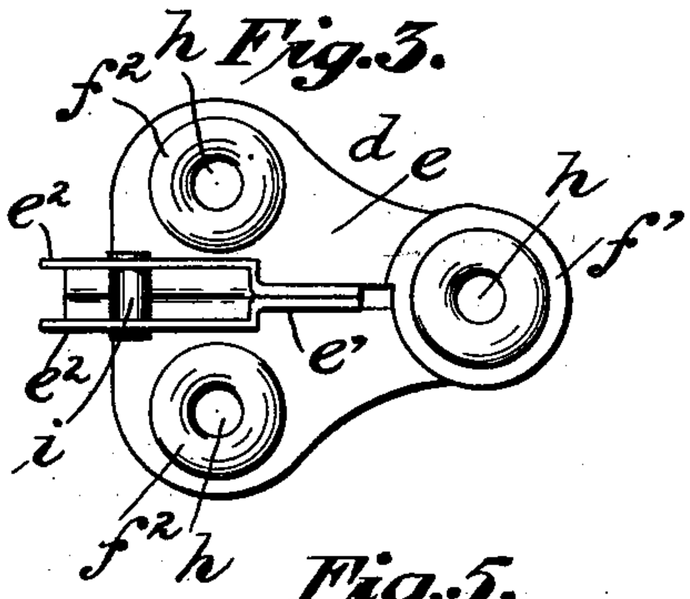

Fig. 3.

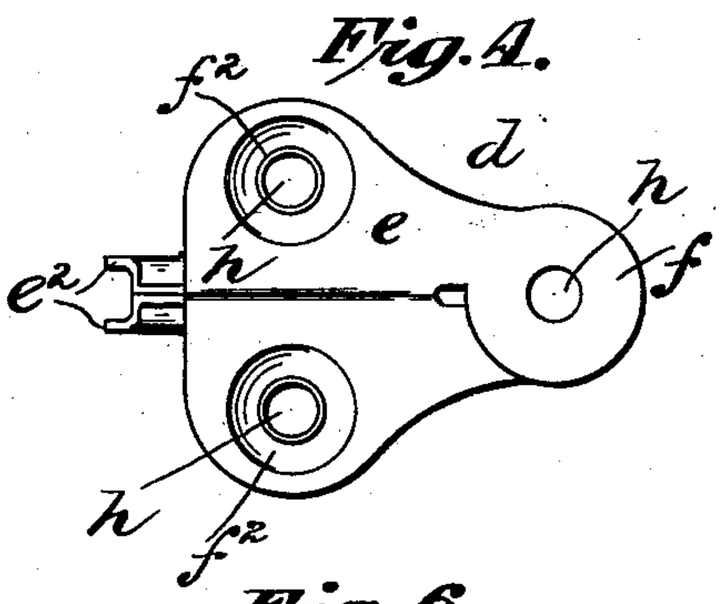

Fig. 4.

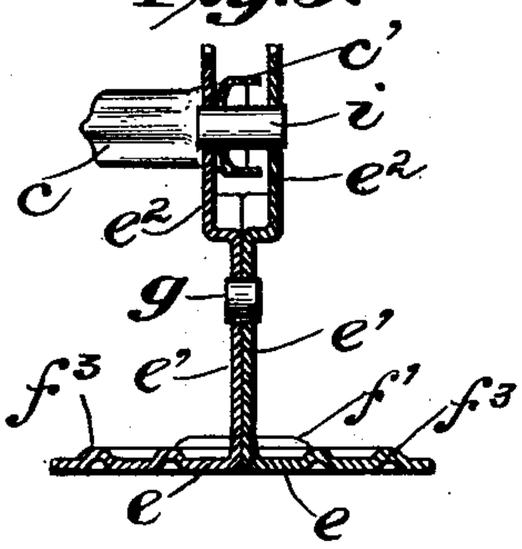

Fig. 5.

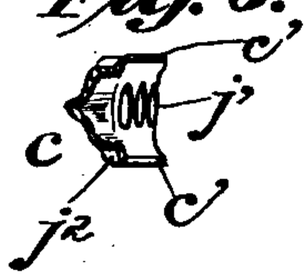

Fig. 6.

Witnesses
Comitchell
Geo. L. Wheelock.

Harry J. Valentine
Inventor
By Dickerson, Brown, Raegener & Binney
his Attorneys.

No. 747,516. Patented December 22, 1903.

UNITED STATES PATENT OFFICE.

HARRY J. VALENTINE, OF CLEVELAND, OHIO, ASSIGNOR TO THE COLUMBIAN HARDWARE CO., OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

BLIND-ADJUSTER.

SPECIFICATION forming part of Letters Patent No. 747,516, dated December 22, 1903.

Application filed July 28, 1903. Serial No. 167,310. (No model)

To all whom it may concern:

Be it known that I, HARRY J. VALENTINE, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Blind-Adjusters, of which the following is a specification.

The present invention relates to that class of devices which are used on buildings for the purpose of adjusting the blinds or shutters to set them at a greater or less angle or to secure them in entirely open or closed position. Blind-adjusters have been in use for a long time which have been made of malleable or cast iron and which consist of a knuckle or ear which is screwed to the inner side of the blind or shutter, at the lower inner corner thereof, and to which is pivoted an arm which is provided with a number of holes to receive a stud or pin mounted on the window-sill, so that by adjusting the arm by causing the said stud or pin to engage one or the other of the holes the shutter may be set and locked as desired. These blind-adjusters made of cast or malleable iron rust and corrode very rapidly, due to the action of the elements, and frequently break, due either to imperfect casting or to weakening by rust.

The objects of the present invention are to provide a durable, simple, and cheap blind-adjuster which is composed, with the exception of the necessary rivets, of wrought or sheet steel, the metal being so disposed in the parts and the parts being so constructed that great strength is imparted to the blind-adjuster.

My invention consists of certain features of construction and combinations of parts to be hereinafter described and then particularly claimed.

In the accompanying drawings, Figure 1 is a perspective view of the lower end of a window frame and shutters, showing my improved blind-adjusters applied thereto. Fig. 2 is a side view of the device on a larger scale. Fig. 3 is a plan view of the knuckle. Fig. 4 is an under side view thereof. Fig. 5 is a transverse section on the line 5 5 of Fig. 2, and Fig. 6 is a transverse section of the arm.

Referring to the drawings, which show that form of my improved blind-adjuster which is now most desirable, the window-frame is indicated by *a*, and the shutters by *b*. The knuckle *d* is screwed to the lower end of the inner side of the shoulder by suitable screws, and the arm *c* is pivoted thereto. The knuckle *d* is composed of mutually-supporting parts or members which are formed of sheet-steel, so that a composite knuckle is formed. Each member or part of the knuckle consists of a foot or base piece *e*, which is located at a right angle relatively to a shank *e'*, from which is laterally bent toward that side on which the foot or base piece is located a fork or ear e^2, which is arranged in a plane approximately parallel with that of the shank. The foot-piece *e* is longer than the width of the shank *e'*, so as to extend beyond the same at one side, the extension being in the form of an eye, (indicated by *f* for one of the members and *f'* for the other of the members.) Each foot-piece or base-piece *e* is provided at the side of the shank with an eye f^2. The eye *f'* of one of the members is raised out of the plane of the foot-piece *e* to the extent of the thickness of the sheet metal, so that the eye *f* of the other member may be located under the said eye *f'*, as shown. In constructing the knuckle of the two members they are placed together so that their foot-pieces will extend in opposite directions, with the eye *f'* located over the eye *f* and with the shanks of the two members placed flat against each other, so that the ears e^2 will form an open yoke or bifurcation. The shanks of the two members are riveted together, as by means of a rivet *g*. The knuckle thus constructed will be seen to consist of a shank consisting of at least two layers of sheet metal, a base longitudinally divided and having the overlapping parts consisting of the eyes *f f'*, besides the yoke or bifurcation. The overlapping of portions of the foot-pieces of the members and the riveting of them together, as at *g*, firmly secures the parts, as the overlap of the foot-pieces prevents the turning of one member on the rivet relatively to the other. Furthermore, to stiffen and strengthen the knuckle the eyes *f'* and f^2 f^2 are reinforced by an annular corrugation f^3, as seen clearly from the section shown in Fig. 5. The eyes

form screw-holes for the purpose of receiving the screws or other fastenings, such as *h*, for screwing the knuckle to the blind or shutter.

Not only is the knuckle composed of sheet metal, but the arm *c* is also composed of sheet or wrought metal longitudinally corrugated or hollowed, as shown in Fig. 6, so as to provide stiffening-flanges *c'*. The inner end of the arm is flattened, so that it may be inserted in the yoke or bifurcation of the knuckle and to pivot upon a pin *i*, which is secured in the yoke. The outer end of the arm *c* is flattened at *j*, and this flat portion is provided with a longitudinal series of holes *j'*, while the extremity of this flat end portion is bent out laterally in a direction opposite to the direction in which the side flanges *c'* of the arm extend, so as to form a finger-piece j^2. The holes *j'* receive the pin or stud *k*, mounted on the sill of the window, so that the arm may be adjusted in various positions on the sill to correspondingly adjust the blind or shutter. When the blind-adjuster is in proper position, it will be seen that the flanges *c'* of the arm are located on the under side of the arm, while the finger-piece j^2 projects upwardly, so that it may be conveniently taken hold of by simply raising the sash a few inches without having to reach out of the window. As will be seen from Fig. 1, the arm is arched or bent upwardly, so that there will be but slight contact of the same with the window-sill, the only contact being between the flanges of the perforated end portion of the arm and the sill. In consequence of this the sill is but slightly rubbed or scraped by the arm, and there will be no discoloration thereof, as by rust.

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

1. A blind-adjuster, composed of a knuckle, comprising two members of sheet metal formed into a base, a shank at an angle to the base, and eyes or forks bent out from the latter, and an arm pivoted to and between the said eyes or forks, substantially as set forth.

2. A blind-adjuster, composed of a knuckle, comprising two members of sheet metal riveted together and provided with means to prevent the members turning relatively to each other on the rivet, and an arm pivoted to the knuckle, substantially as set forth.

3. A blind-adjuster, composed of two members, each provided with an outturned foot-piece having an eye, also with shanks secured together and forks, and an arm pivoted between the forks, substantially as set forth.

4. A blind-adjuster, composed of a knuckle comprising mutually-supporting members overlapping each other and an arm pivoted to the knuckle, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

HARRY J. VALENTINE.

Witnesses:
C. T. STORK,
WM. A. GRECE.