

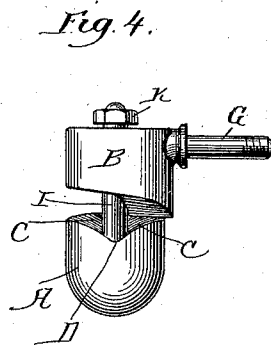
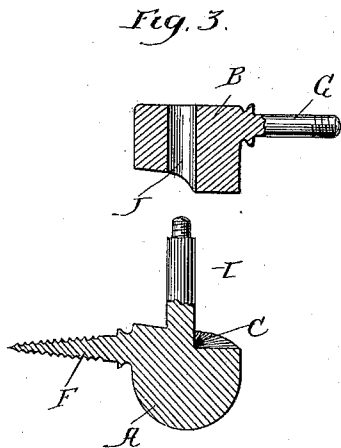
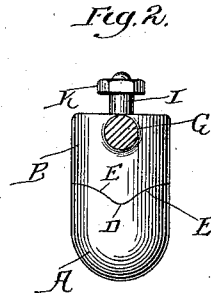
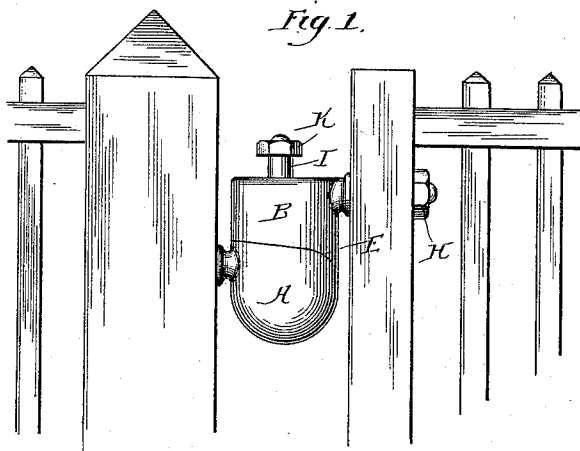
No. 612,471.

J. WOOD.
HINGE.

Patented Oct. 18, 1898.

(Application filed Feb. 3, 1898.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

JAMES WOOD, OF LOGAN, UTAH.

HINGE.

SPECIFICATION forming part of Letters Patent No. 612,471, dated October 18, 1898.

Application filed February 3, 1898. Serial No. 669,004. (No model.)

To all whom it may concern:

Be it known that I, JAMES WOOD, a citizen of the United States, residing at Logan, in the county of Cache and State of Utah, have invented a certain new and useful Improvement in Hinges, of which the following is a specification.

My invention relates to a new and useful improvement in hinges for gates, doors, screens, and the like, and has for its object to provide an exceedingly simple, cheap, and effective device of this description which will not only close a door or gate from either direction, but will center and hold it closed against ordinary pressures, yet permit it to be swung open in either direction when desired.

With these ends in view this invention consists of the details of construction and combination of elements hereinafter set forth and then specifically designated by the claim.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is an elevation of a portion of a gate having my improved hinge applied thereto; Fig. 2, a detail view of the hinge, the bolt by means of which it is attached to the gate being sectioned away; Fig. 3, a section of the two members of the hinge supported, and Fig. 4 an elevation showing the upper member of the hinge turned to its open position.

In carrying out my invention as here embodied I form the hinge of two sections A and B, the body of the former having two cam-surfaces C formed thereon which meet at D for the purpose hereinafter set forth. The member B of the hinge likewise has two cam-surfaces E, which correspond to the surfaces C, but in a reversed direction, so that these surfaces will match together when brought into proper relative position, and when so matched together the weight of the gate or door which is being supported by the hinge will tend to hold these members in this position, and thus hold the gate or door closed.

The member A has a shank F formed therewith which is threaded after the manner of a wood-screw and is therefore adapted to be screwed into the post or jamb, while the member B has a shank G, threaded after the manner of a bolt, which is adapted to pass through the rear portion of the gate and be secured in place by a nut H. A pintle I is formed with or secured to the member A and projects upward and is adapted to pass through the hole J, formed in the member B, thus acting as the pivot-point of the hinge, and this pintle should be of sufficient length to permit the upward movement of the member B without losing its bearing. The pintle in the lower hinge-section and the aperture thereof in the upper hinge-section are respectively eccentric to the outer edges of the bearing-surfaces thereof, so that a minimum bearing-surface results as the gate is being opened and closed, while a maximum bearing-surface will be had when the gate is closed, thus producing a greater bearing-surface for supporting the gate and increasing the resistance when pushed open.

In practice when the door or gate is swung open the cam-surfaces of the member B will ride upon one or the other of the cam-surfaces of the member A, thus elevating the hinge to a certain extent, and consequently the gate carried thereby, and this elevation permits the weight of a gate when released to cause it to swing closed by reason of the inclination of the cam-surfaces of the member A, as will be readily understood; and it is to be noted that in whichever direction the gate is swung open it will at once automatically swing closed when released, and this is true whether the gate be swung entirely open or partially so.

The pintle is preferably provided with a nut K, which serves to prevent the gate from being lifted from off its hinges, and yet this nut is sufficiently elevated above the member B to prevent the latter from coming in contact therewith when the gate is swung open, which would otherwise interfere with the movements of the gate.

It of course will be understood that the other hinge of the gate, if not of the same construction as that just described, should provide for the movements of one member upon

the pintle of the other sufficiently to compensate for the elevation of the gate in its movements.

5 I am aware that hinges have been made which utilize the weight of the gate or door to bring about the closing thereof, and I do not lay claim, broadly, to such a device.

Having thus fully described my invention, what I claim as new and useful is—

10 In combination, a lower hinge-section having oppositely-disposed cam-surfaces and provided with a pintle arranged eccentric to the outer edge of its bearing-surfaces, said pintle being set back of a line through the center at right angles to the meeting edges of
15 the cam-surfaces, an upper hinge-section having cam-surfaces reversely disposed to those

on the lower hinge-section, and provided with a pintle-aperture eccentric to the edge of the bearing-surfaces, the said aperture being in 20 the same relative position to the meeting edges of the cam-surfaces of the upper section, as the pintle to the meeting edges of the cam-surfaces of the lower section, and means for securing the lower section to the post and 25 the upper section to a swinging object, as and for the purpose described.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

JAMES WOOD.

Witnesses:

JNO. A. MCALISTER,
L. C. MCALISTER.