

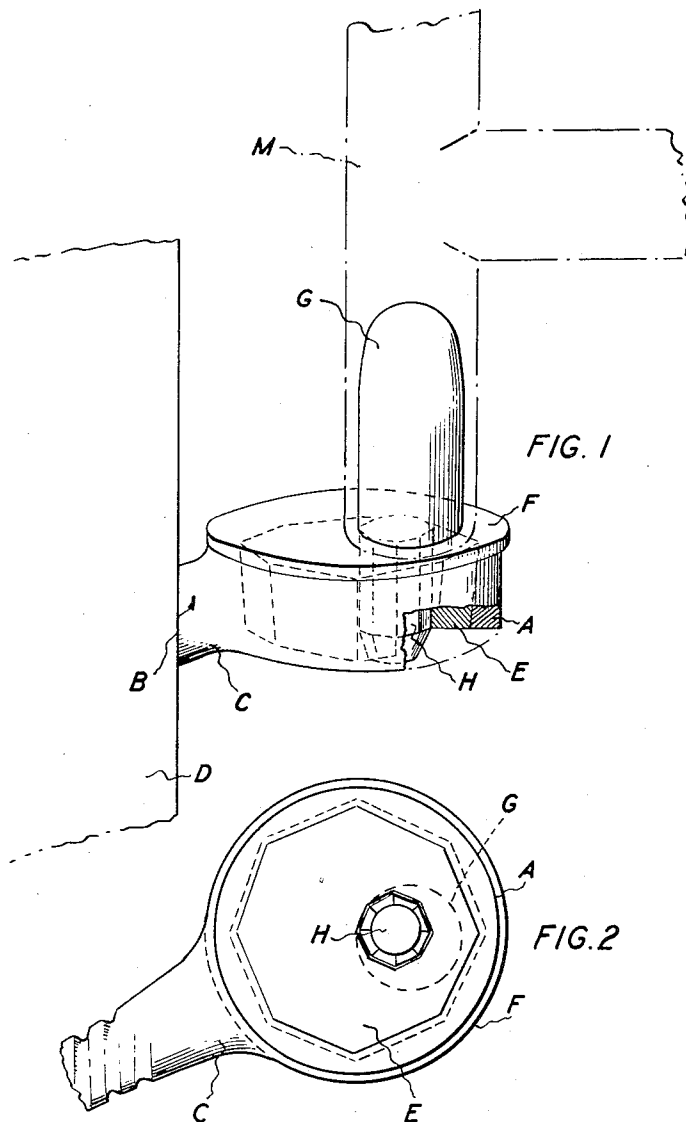
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GATE HINGE WITH LEVELING AND TILTING ADJUSTMENT

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# UNITED STATES PATENT OFFICE

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## GATE HINGE WITH LEVELING AND TILTING ADJUSTMENT

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6 Claims. (Cl. 16—131)

The object of this invention is to provide a hinge suspension device for gates (particularly farm gates) containing means for effecting adjustment to set the gate vertically, or, if required, tilted from the vertical in any direction so that the gate will hang in a neutral position or will tend to swing to a position at one or the other side of the gateway or centrally towards the slam post.

This suspension device consists essentially of a pintle having an offset polygonal stub at its bottom end, this stub adapted to socket into and extend downward through a polygonal hole which is located in an excentric position in a polygonal block; the polygonal block is socketed in a polygonal eye in a bracket which is provided with a butt for fixing it to the hanging post of the gateway.

By changing the position of the polygonal block in the eye of the post bracket or by changing the position of the pintle stub in the polygonal block, the hanging axis of the gate may be disposed in the vertical or tilted at any desired angle from the vertical, and may be readjusted with great facility to correct any disturbance of its position which may result, for instance, from sagging of the hanging post.

The accompanying drawing is a sectional perspective view (Fig. 1) of this suspension device, as it appears in use, supporting the bottom end of the hanging stile of a pipe gate, and Fig. 2 is a bottom plan view of the same device.

A is the eye piece of the hanging bracket B, the butt or stem C of which is fixed in the hanging post D of a gateway. A polygonal hole is formed in this eye piece to receive a polygonal metal block E. This block is slightly tapered, as also is the eye piece hole, so that a tight drive fit can be obtained and steadiness of the block in the eye piece ensured. Alternatively, the sides of the polygonal block E, and also of the eye piece hole, may be made parallel instead of tapered. The block may extend below the bottom of the bracket B and be chamfered around its bottom edges in order that it will not be burred if struck upward with a hammer or other instrument to effect its release. Preferably, however, the bottom surface of the block is flush with the surface of the eye. At its top end the block may be formed with a flange F which is wide enough to overhang the sides of the eye piece A and thus offer an edge against which a tool may be struck to release the block from the eye piece.

G is the pintle, and H a stub on the bottom end of it. This stub is offset from the pintle centre,

but is parallel with it. The stub is polygonal in section and is a drive fit in a polygonal hole which is located in an excentric position on the block E. The stub extends below the bottom of the block E and is chamfered about its end to obviate burring when it is being driven upward to release it from the block. The sides of the stub and also of the hole may be either parallel or tapered, as desired. The top end of the pintle is rounded or tapered to facilitate its entry into a socket hole in the gate stile M or into a socket hole in a lug fixed to the gate stile.

By rotational adjustment of the position of the block E in the bracket eye A, or by similar adjustment of the pintle stub H in the block E the axis of the pintle G can be positioned wherever desired in relation to the vertical line which passes through the companion pintle. Thus the gate may be hung in either neutral position or may be hung in offset position, so that in the former case it will tend to remain neutral and in the latter case it will tend to swing to any predetermined position in relation to the gateway provided that it is otherwise unconstrained.

To effect readjustment of the "hang" of the gate, the block E or the pintle G (or both if required) is knocked out and then reset in the position which will bring the pintle axis more or less in front of, behind, laterally of, or concentric with the vertical line which passes through the centre of the companion pintle (not shown).

In the case of pipe gates it is most convenient to use the bottom end M of the hanging stile of the gate as the socket member which works on the pintle.

The block and the pintle stub may be of triangular section or may have any number of faces greater than three, or they may be circular in cross section. When the block is made circular in cross section, it is located in any desired position by means of integral lugs which fit into complementary recesses in the eye socket. Similarly the pintle stub may have lugs which are located in complementary grooves in the side of the hole in which it operates. In practice the preferable section is hexagonal or octagonal in order to obtain a great range of adjustment.

The term "chamfered" is to be construed to include any relieving of the bottom end edges of the polygonal flats which will obviate burring by impact of a hammer or other tool used in effecting release of the pintle or the block.

What I claim as my invention and desire to secure by Letters Patent is:—

1. A gate suspension hinge comprising a lug

adapted to be fixed on a gatepost, an eye in said lug, a metal block adapted to fit in said eye and to be capable of rotational adjustment therein, a hole through said block, and a pintle with an offset stub on the bottom end of it, said stub capable of rotational adjustment in the hole in the block thereby to vary the axial position of the pintle in relation to the gatepost.

2. A gate suspension hinge comprising a lug adapted to be fixed on a gatepost, a polygonal eye in said lug, a metal block of polygonal shape adapted to fit in said eye and to be capable of rotational adjustment therein, a polygonal hole through said block, and a pintle with an offset polygonal stub on the bottom end of it, said stub capable of rotational adjustment in the polygonal hole in the block thereby to vary the axial position of the pintle in relation to the gatepost.

3. A gate suspension hinge comprising a lug adapted to be fixed on a gatepost, a polygonal tapered eye in said lug, a metal block of polygonal shape adapted to fit in said eye and to be capa-

ble of rotational adjustment therein, a tapered polygonal hole through said block, and a pintle with an offset polygonal stub on the bottom end of it, said stub capable of rotational adjustment in the polygonal hole in the block thereby to vary the axial position of the pintle in relation to the gatepost.

4. A gate suspension hinge according to claim 1 in which the block is flanged around the top end of it.

5. A gate suspension hinge according to claim 1 in which the bottom end of the block projects below the post lug and the edges of the projecting portion of it are chamfered or similarly relieved.

6. A gate suspension hinge according to claim 1 in which the bottom end of the pintle stub projects below the metal block and the edges of the projecting portion of it are chamfered or similarly relieved.

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