

No. 893,003.

PATENTED JULY 14, 1908.

E. J. MEYERS.
GRAVITATING HINGE.
APPLICATION FILED FEB. 6, 1908.

Fig. 1

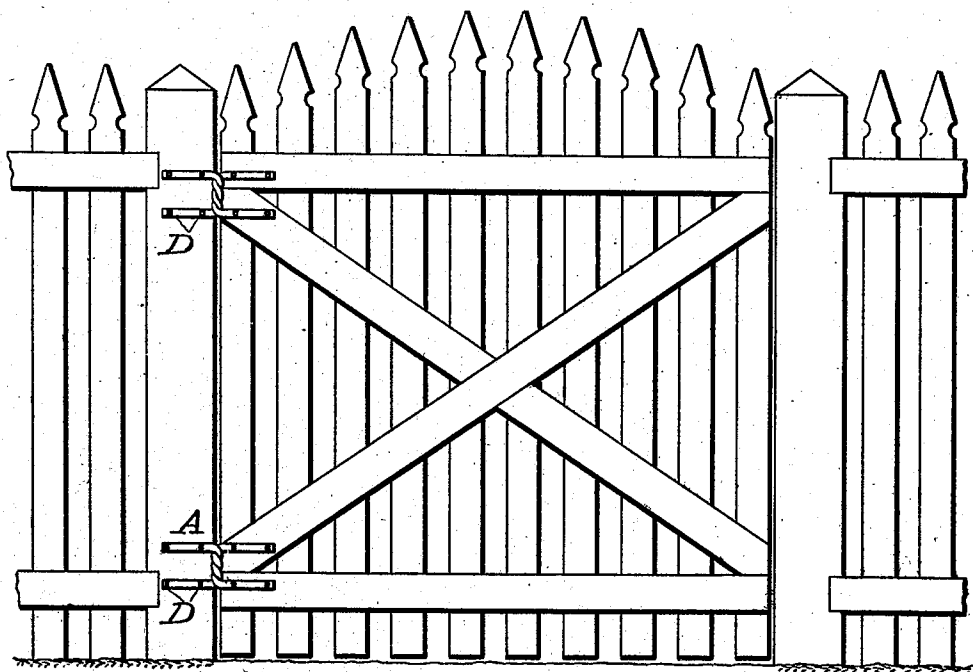


Fig. 2

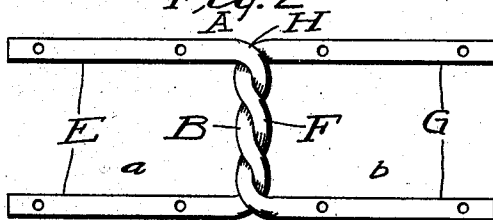
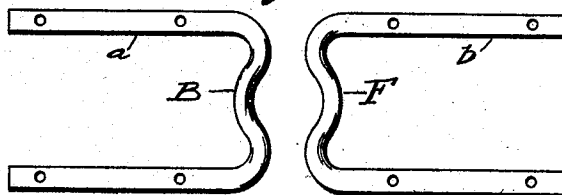


Fig. 4



Fig. 3



Witnesses
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EDWARD J. MEYERS, OF STAPLEHURST, NEBRASKA, ASSIGNOR OF ONE-FOURTH TO JOHN H. ERFORD, OF LINCOLN, NEBRASKA, AND ONE-FOURTH TO ELTON J. ERFORD AND ONE-FOURTH TO JOSEPH H. SLONECKER, OF STAPLEHURST, NEBRASKA.

GRAVITATING HINGE.

No. 893,003.

Specification of Letters Patent.

Patented July 14, 1908.

Application filed February 6, 1908. Serial No. 414,555.

To all whom it may concern:

Be it known that I, EDWARD J. MEYERS, a citizen of the United States, residing at Staplehurst, in the county of Seward and State of Nebraska, have invented certain new and useful Improvements in Gravitating Hinges, of which the following is a specification.

This invention relates to builders' hardware and particularly to hinges.

An object of this invention is to provide a novel hinge which will automatically close the gate by gravity; the said hinge also serving to elevate the gate as it is swung on the hinges, causing the gate to swing clear of the ground.

A further object of this invention is to produce hinges, each hinge comprising two parts in engagement, one riding on the other, with a cam-like action to accomplish the result heretofore stated.

Furthermore, it is an object of this invention to provide a novel device of the character noted, which will be simple in construction, efficient in practice, and comparatively inexpensive to manufacture.

With the foregoing and other objects in view, the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail, reference will be had to the accompanying drawing forming part of this specification wherein like characters denote corresponding parts in the several views, in which—

Figure 1, is a view in elevation, showing a gate with hinges embodying the invention applied thereto. Fig. 2, is an enlarged detail view of one of the hinges. Fig. 3, is a detail view of a section of a hinge detached. Fig. 4, is an end view of one of the hinge sections.

In these drawings A, denotes a hinge comprising the sections *a*, *b*, approximately U-shaped, with the ends thereof provided with apertures for the reception of securing devices, such as bolts D.

The portion B, of the hinge section between the parallel portions E, extends ap-

proximately at right angles to the parallel portions and the said portion B, is bent to form a coil which engages a similar coil F, extending between the parallel portions G, of the opposite hinge member.

The hinge members may be inexpensively constructed of round iron and bent into the form shown, in order that the section will interlock, as shown in Fig. 2, and when the section of the hinge which is secured to the gate is moved with relation to a stationary section which is secured to the post, the camming action of the engaging surfaces will cause the moving section to climb, thus elevating the gate clear of the ground. The weight of the gate after it has been opened will be sufficient to cause the return of the gate to the closed position, as the movable section of the hinge will ride down the inclined surface of the coil.

As an additional bearing for the movable section, and designed also to increase the efficiency and durability of the hinge, the corners H, of the member are curved to form camming surfaces over which the under surface of the moving member travels, and the degree of curve of the corner is preferably equal to the curve of the coiled portion of the hinge. This relation of the parts provides for equal wear of the several engaging surfaces of the hinge.

In order to permit the gate to swing back parallel with the fence it will be seen that the movable section of the hinge will ride up over the corner H of the stationary section, thus elevating the portion of the movable section, which is secured to the gate, out of alinement with corresponding portions of the fixed member of the hinge. By this arrangement, the sections of the hinges when swung fully open stand one above the other and no obstruction to the full swinging movement of the gate is encountered.

What I claim is:

A gate hinge comprising two approximately U-shaped sections having engaging coiled portions and curved corners forming camming surfaces, one of said sections being secured to a fixed object and the other of said sections being secured to a movable object to

permit the movable object to be swung with
relation to the fixed object, the portions of
the movable section of the hinge secured to
the movable object being elevated above the
5 plane of the portions of the hinge secured to
the fixed object.

In testimony whereof I affix my signature

in the presence of two witnesses this 3rd day
of February, 1908.

EDWARD J. MEYERS.

Witnesses:

C. M. FRANKLIN,
EDWARD VANCE.