

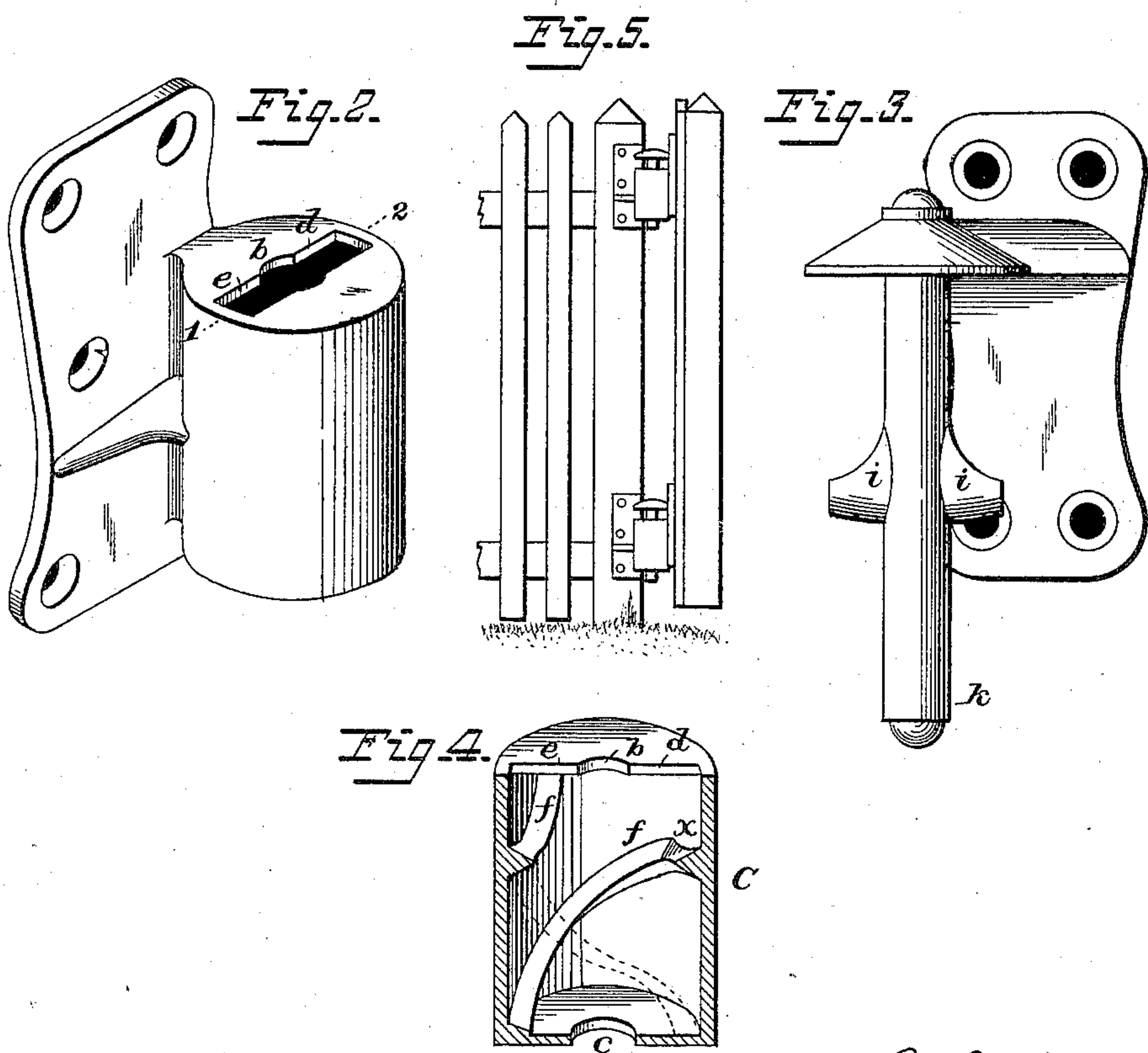
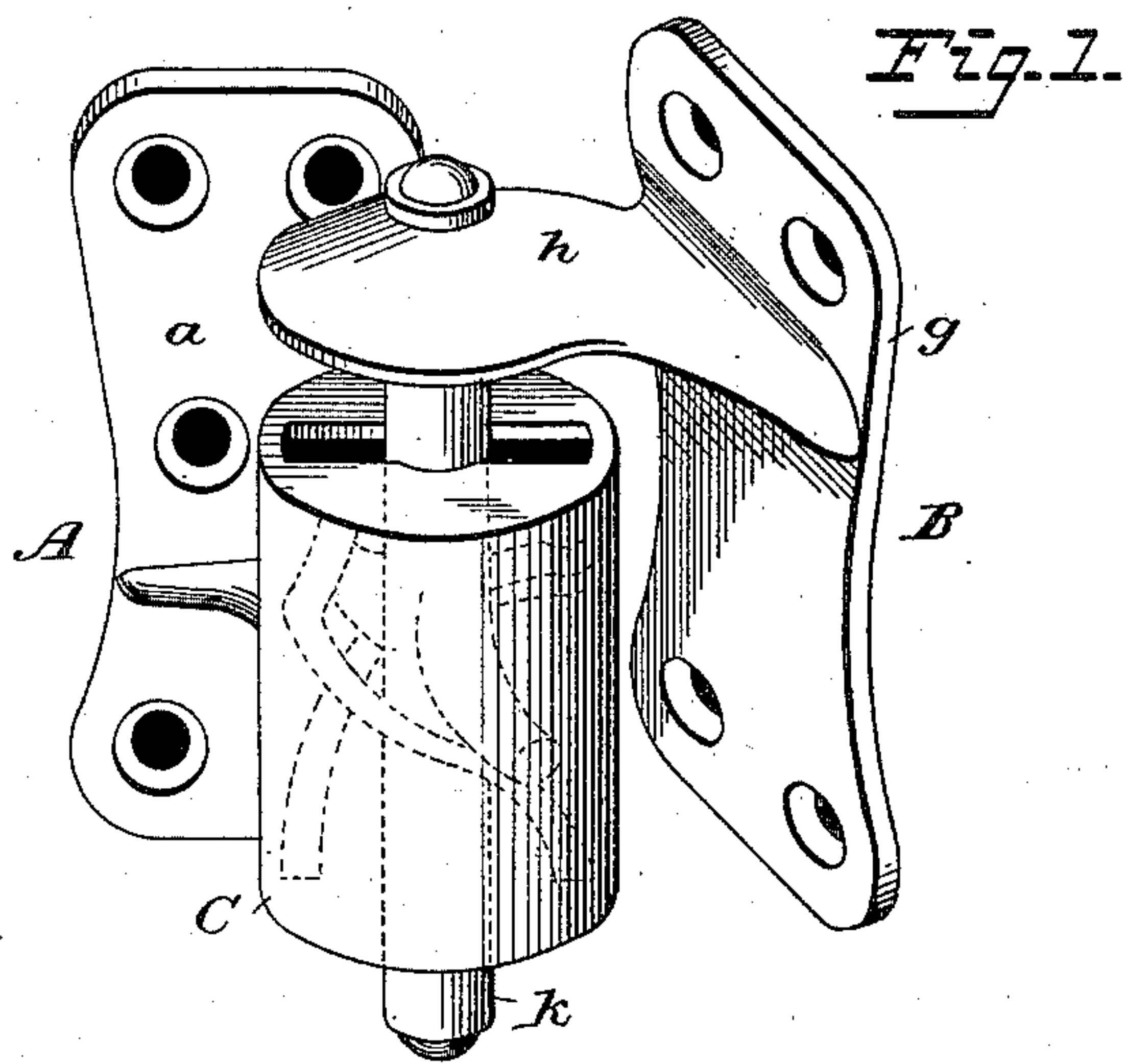
(Model.)

B. ATKINSON.

GATE HINGE.

No. 306,458.

Patented Oct. 14, 1884.



Attest:

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UNITED STATES PATENT OFFICE.

BENJAMIN ATKINSON, OF INDIANAPOLIS, INDIANA.

GATE-HINGE.

SPECIFICATION forming part of Letters Patent No. 306,458, dated October 14, 1884.

Application filed February 29, 1884. (Model.)

To all whom it may concern:

Be it known that I, BENJAMIN ATKINSON, a citizen of the United States, and a resident of Indianapolis, county of Marion, and State of Indiana, have invented a certain new and useful Improvement in Gate-Hinges; and I do declare that the following is a full, clear, and correct description of the same.

My invention relates to that class of gate and door hinges in which the weight of the gate is made the means of turning the hinge and closing the gate; and my invention consists in constructing the parts, as fully set forth hereinafter, so as to insure the positive operation and make a durable and efficient article.

In the drawings, Figure 1 is a perspective view of the hinge, showing the two parts connected. Fig. 2 is a perspective view of one of the parts. Fig. 3 is a side view of the other part. Fig. 4 is a section on the line 1 2, Fig. 2. Fig. 5 is a view showing part of a fence and a gate connected by my improved hinge.

The hinge consists of two parts, A and B. In the part A, a perforated plate, *a*, adapted for attachment to the gate-post, carries a hollow cylinder, C, having in the top an opening, *b*, and in the bottom an opening, *c*, the opening *b* communicating with slots *e d*, in line with each other, as shown. Within the cylinder are one or more spiral or inclined ribs, *f*, each of which, when there are more than one, inclines in the same direction, starting from opposite sides of the cylinder. In the part B, a plate, *g*, perforated for attachment to the gate, carries a flat plate or arm, *h*, from which extends downward a pin, *k*, and lugs *i* project from the opposite sides of the latter near the center of the same. The lugs *i* are of such size that they can be passed through the slots *e d* and brought upon the ribs *f*, the pin *k* extending through the openings *b c*, and being guided thereby. Upon pressure being applied to the part B, after the lugs *i* rest upon the ribs *f*, the said lugs will slide downward upon said ribs, and the pin *k* and the attachments thereto will consequently descend, and will at the same time be turned so that the gate attached to the part B will be turned with the said part, the weight of the gate causing the descent of the part and its revolution. Until the gate is

swung open to its full extent the parts A and B cannot be detached; but when the gate is thus opened it is only necessary to lift the same in order to carry the pins through the slots and remove one part of the hinge from the other. The cap-piece *h* serves to cover the openings or slots at the top of the cylinder C, and prevent the entrance of snow and the clogging of the hinge in severe weather, and as the pin *k* fits nicely the openings *b c*, it is guided therein, so as to prevent any friction resulting from the contact of the lugs *i* with the inside of the cylinder.

In order that the gate may be held open without the necessity of a special latching device, each of the ribs *f* is provided near its upper end with a depression or recess, *x*, which will serve as a seat for the adjacent lug, wherein it will rest until sufficient friction is applied to the gate to cause it to slip therefrom onto the inclined face of the rib. It will be seen that the hinge is thus constructed of two parts, each of which may be cast in one piece, so that there can be little difficulty in applying and adjusting the parts to their positions, and that these parts may be cheaply cast, and that as the pin *k* has two bearings, the part B is guided in its movements, so that it cannot tilt or swing out of position, thus permitting a single hinge to be employed where under other circumstances two would be necessary. It will also be seen that by guiding the pin *k* as described the vertical position of the gate is maintained at all times.

Instead of casting each part in a single piece, it may, of course, be made of several pieces connected together. I however prefer the former method of manufacture in consequence of its cheapness and the absence of joints and connections.

Without limiting myself to the precise construction and arrangement of parts shown,

I claim—

1. An automatic hinge consisting of two parts, one provided with a hollow cylinder having one or more interior spiral ribs, and the other with an arm carrying a pin provided with lugs adapted to rest upon said ribs, substantially as set forth.

2. The combination, in a hinge, of a part,

A, provided with a hollow cylinder having one or more internal spiral ribs with recesses *x*, and a part, B, provided with a pin, *k*, adapted to bearings upon the part A and provided with lugs adapted to bear upon said ribs, substantially as set forth.

5 3. The combination of the cylinder C, having a central opening, *b*, and slots *e d* in the head, and a central opening, *c*, in the bottom, with

one or more internal spiral ribs, *f*, and the plate *g*, carrying an arm, *h*, and pin *k*, adapted to the openings *b c* and provided with lugs *i*, substantially as set forth.

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Witnesses:

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