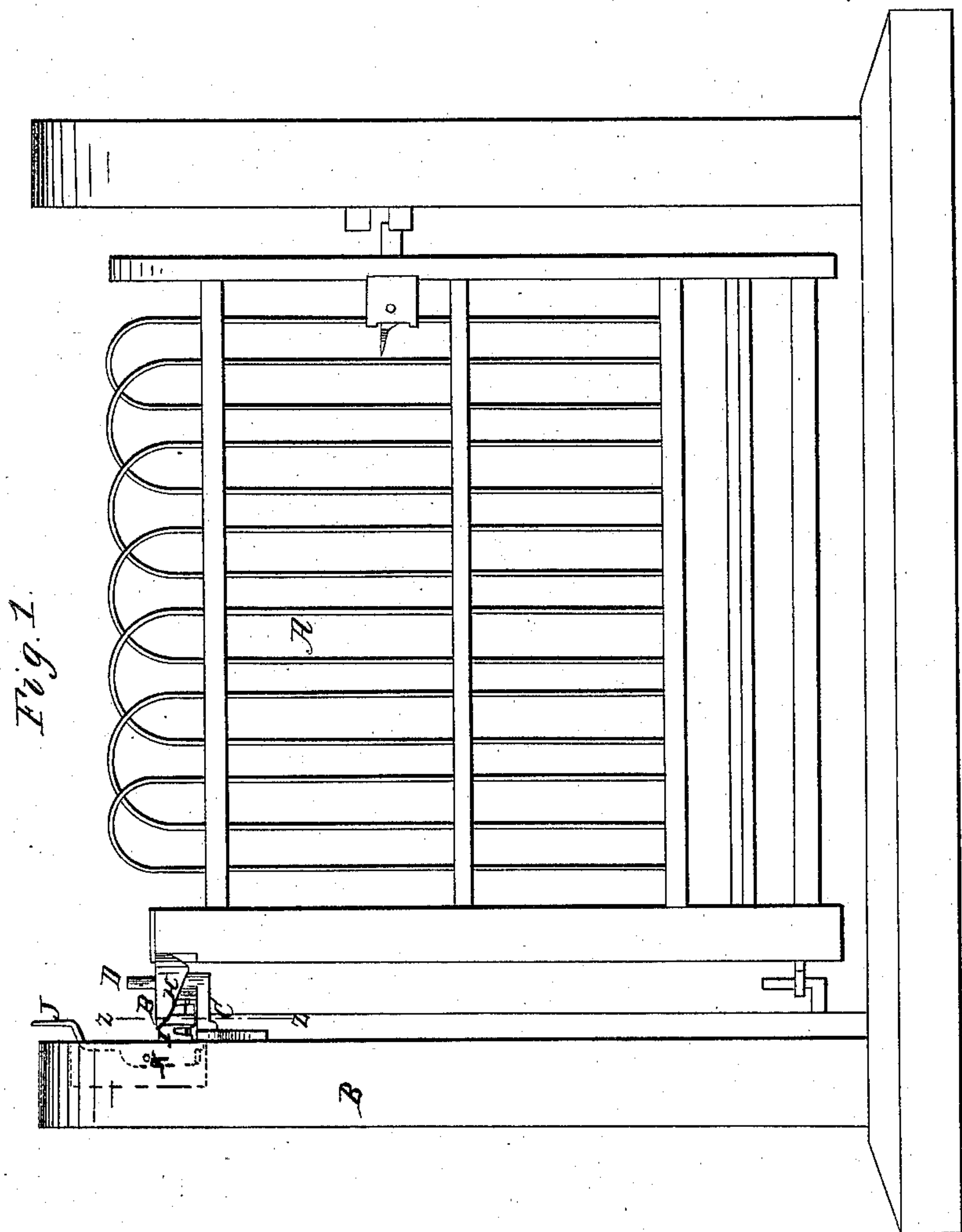
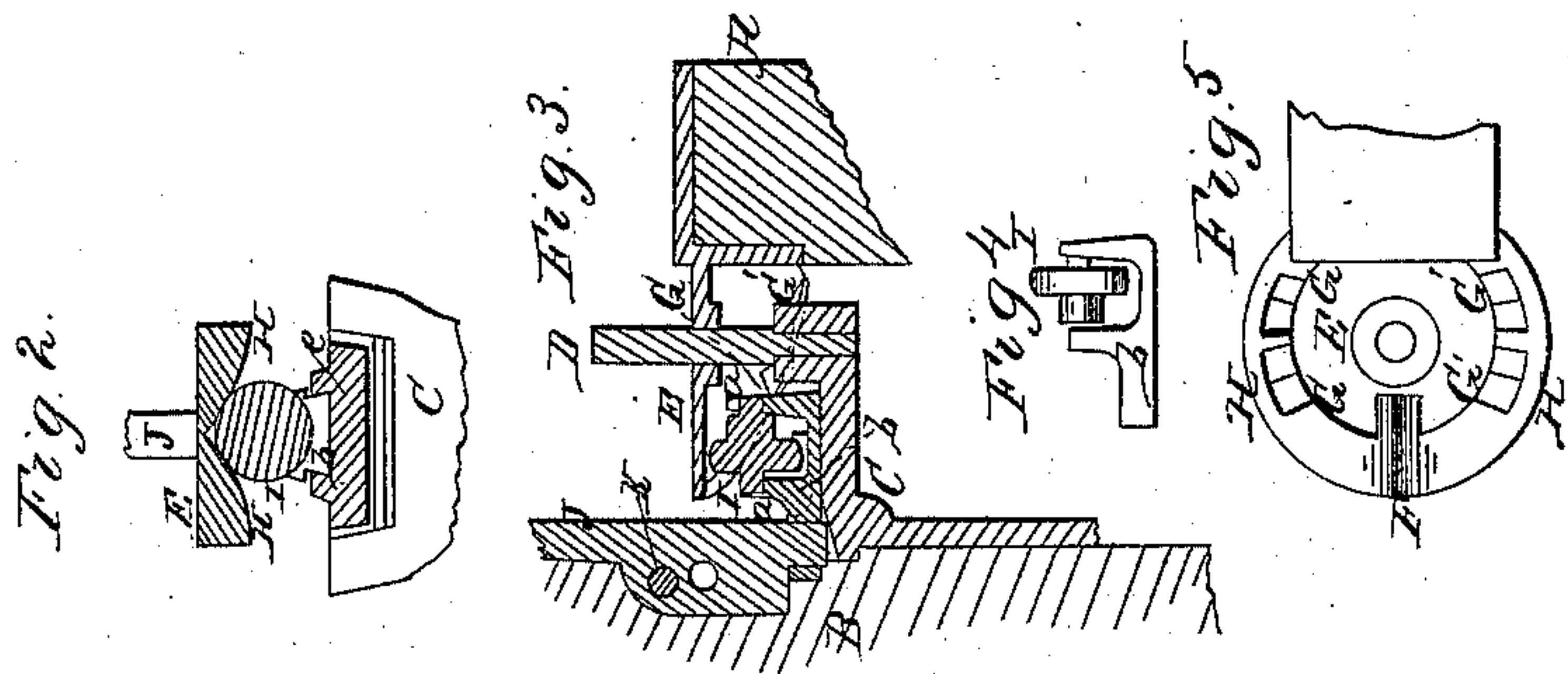


E. Woolman,

Hinge.

N^o 10,900.

Patented May 9, 1854.



UNITED STATES PATENT OFFICE.

ENOCH WOOLMAN, OF DAMASCOVILLE, OHIO.

ARRANGEMENT OF FRICTION-ROLLERS IN INCLINED-PLANE HINGES.

Specification of Letters Patent No. 10,900, dated May 9, 1854.

To all whom it may concern:

Be it known that I, ENOCH WOOLMAN, of Damascoville, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in Hinges; and I do hereby declare that the same are described and represented in the following specifications and drawings:

To enable others skilled in the art to make and use my improvements I will proceed to describe their construction and operation, referring to the drawings, in which the same letters indicate like parts in each of the figures.

Figure 1, is an elevation of a gate provided with one of my improved hinges. Fig. 2 is a section representing the left hand portion of the hinge cut through the line $z z$ of Fig. 1. Fig. 3 is a representation of the hinge cut through the center perpendicularly. Fig. 4 the stand and roller. Fig. 5 the under side of that part of the hinge which is fastened to the gate.

In these drawings A is a gate hung to the post B by a hinge of the ordinary construction with a long pivot at the bottom, and with one of my improved hinges at the top: in which hinge C is the stand fastened to the post B by screws or otherwise, and provided with a long pivot D upon which the revolving plate E, fastened to the gate by screws or otherwise turns, as the gate A is opened or closed. The plate E is provided with two inclined planes H H terminating in the score F, each of which planes is provided with two short scores G G' extending about half way across the inclined planes H H as represented in Fig. 5.

The roller I is made in the form represented and provided with a shaft or pivots $a a$ fitted to turn in scores provided for them in the stand or slide b which slide is fitted to traverse in the dovetailed score e , in the stand c when it is operated by the pivot f , of the lever J; which vibrates upon the pin k in the post B; a mortise being provided in the post for the lever as represented by dotted lines in Fig. 1.

Now while the lever J and roller I remain in the position in which they are represented in Fig. 1, so that, those portions of the inclined planes H H which have no scores across them rest and traverse upon

the roller I the hinge is self shutting as the weight of the gate upon the inclined planes is sufficient to overcome the friction of the pivots. But if the top of the lever J is pressed back against the post B so as to move the roller I toward the pivot D and let the interior portions of the inclined planes H, rest on the roller I so that when the gate is partially opened the score G will embrace the roller I, and the gate will remain in that position, until sufficient force is applied to it, to force the score from the roller, or if the gate is opened so that the score G' embraces the roller I the gate will remain open until sufficient force is applied to it to remove the score from the roller I. Thus by operating the lever and traversing the roller the hinge is made to retain the gate open or partially open. If the roller I is made nearer to one pivot than the other as represented and the slide which supports the pivots is placed in a proper position, the hinge may be changed from a self shutting to a self retaining hinge when the gate is open by taking the roller I out and reversing it and putting it in again in the position represented in Fig. 4, thereby changing the roller from that portion of the inclined planes which has not scores to the portion which has.

It will be apparent from the above description that the hinge may be changed from a self shutting to a self retaining hinge when open either by traversing the slide which carries the roller, or by reversing the roller and if the latter mode should be preferred, the supports for the pivots of the roller may be made permanent upon the stand C.

This hinge may be applied to doors or windows and used as a self shutting hinge in cold weather, and as a self retaining hinge when open or partially open in warm weather.

I contemplate that hinges with my improvements may be modified in various ways to adapt them to such peculiar circumstances as it may be desirable to use them in, without departing from the principles or merits of my invention, also that such a number of scores may be made in the exterior portion of the inclined planes as may be necessary or desirable.

What I claim as my invention and desire to secure by Letters Patent in the above-described hinge is—

Making and arranging the roller I so that
5 it can be traversed toward and from the pivot of the hinge in combination with the scores G G' in the inclined planes, so that it can be used either as a self shutting or

self retaining when open or partially open substantially as described. 10

In testimony whereof I have hereunto signed my name.

ENOCH WOOLMAN.

Witnesses:

ALEX. M. SPRAGUE,

J. DENNIS, Jr.