

G. BARTON, Jr.

Door Spring.

No. 3 280.

Patented Sept. 23, 1843.

Fig:2.

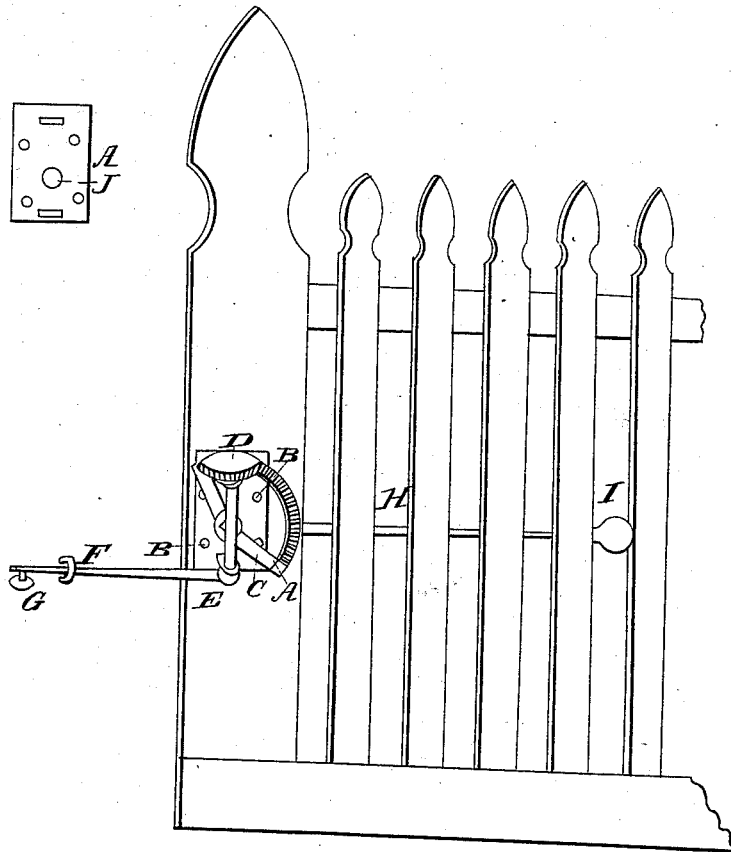
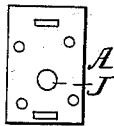
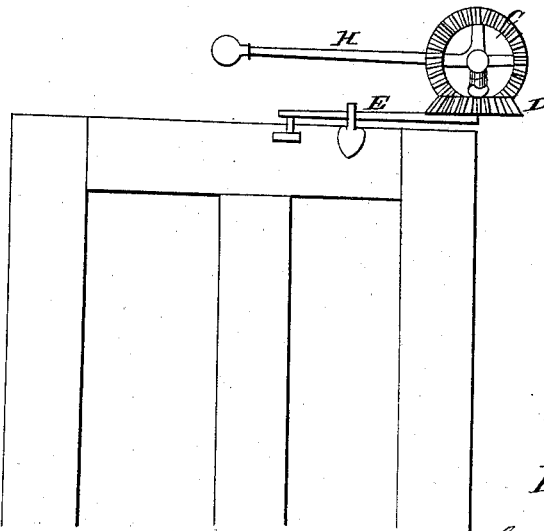


Fig:1.

Fig:3.



Witnesses,
John Harting
Jacobus Dill

Inventor,
Gardner Barton, Jr.

UNITED STATES PATENT OFFICE.

GARDNER BARTON, JR., OF WATERFORD, NEW YORK.

APPARATUS FOR CLOSING DOORS, GATES, &c.

Specification of Letters Patent No. 3,280, dated September 23, 1843.

To all whom it may concern:

Be it known that I, GARDNER BARTON, JR., of Waterford, in the county of Saratoga and State of New York, have invented a new and useful Machine for Closing Gates and Doors, denominated the "Porter;" and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view. Fig. 2 is the base plate. Fig. 3 shows a variation and reversed application.

Fig. 1; A is the base plate with standards B B. B B is the standards or ears. C is the section or segment wheel. D is the crown wheel and arbor. E is the arbor of the crown wheel. F is the arm. G is the roller. H is the lever. I is the weight.

Fig. 2: A is the base plate. J is a perforation.

Fig. 3: C is the section wheel or its substitute. D is the crown wheel or match gear. F is the arm. H is the lever. To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

I construct my base plate A of cast iron or other strong metal about four inches long, two and one half inches wide and one fourth of an inch thick. I perforate the same at a small distance below the center with a round hole about one inch in diameter J, Fig. 2. This opening serves as a box to support the arbor of the section or segment wheel C. Two standards or ears B B about one and three fourths inches long are raised perpendicular to the face of this plate, one of which is near the top and the other near the lower end of the same. A hole about one half inch in diameter is made near the out end of each of the aforesaid standards in to which the arbor E of the crown wheel D is introduced. Holes should be made in the base plate to receive wood screws by which it may be secured in its desired place.

I make of cast iron or any strong metal the segment of a bevel wheel C about five inches in diameter furnished with teeth. The nave or hub should be about one inch in diameter and project beyond the back side of the arms of the wheel about one half inch. This projection of the hub is

introduced into the perforation J in the base plate A and is the arbor on which the segment wheel C turns. The hub of this wheel should be perforated with a square hole in a longitudinal direction to receive one end of the lever H.

The crown wheel D and arbor E I make of cast iron or other strong metal. This wheel should be about two and one half inches in diameter and furnished with teeth to match with the teeth of the segment wheel C. The arbor E is about four inches long and one half inch in diameter and is supported by the standards B B in which it turns. For some uses the wheels C and D may consist of two miter gears of the same or nearly the same diameter. I make an arm F of wrought iron or of some strong material about ten inches long or of any convenient length one end of which is perforated with a hole about three eighths of an inch in diameter, into which one end of the arbor E is inserted and secured by a pin. The other end of the arm may be turned to a right angle and formed into a stud or axis on which the roller G is fixed and permitted to turn, or, otherwise, the end may be made with a mortise or crotch and the roller G secured in the same by a pin.

The lever H should be made of wrought iron or other strong material of a size capable of supporting the weight I. The length may be varied as the case may require. One end of this lever may be bent to a right angle and formed into a four square shape to fit the hole in the hub of the segment wheel C. This lever may be so constructed that it can be applied either on the front or back side of the segment wheel C.

I make a weight I of any dense material and it may be cast in the form of an eagle or other device or in any ornamental shape. This weight should be attached to the out end of the lever H and is the operating power. The mode of application will be varied according to the different constructions and situations of gates and doors.

For a common gate opening into the street I would recommend with wood screws to secure the base plate A with its appendages on the front side of the post nearly in a horizontal line and opposite to the latch. I would perforate the post with a small hole and introduce the angular end

of the lever H through the same into the hole in the hub of the segment wheel C. In such case the lever and weight will be on the inside of the inclosure and close to the back side of the wall or fence. A small staple driven into the gate around the arm F back of the roller G will serve to hold the gate open when the weight I has passed the zenith.

10 On some doors I apply the porter and base plate A in a reversed position, see Fig. 3. In such case I secure the base plate A on the cap of the door in a line nearly above the butts or hinges and attach the arm F 15 to the flat side of the crown wheel D. The roller G may then bear on a ledge near the top of the door. If the crown wheel and the wheel with which it matches be made of like diameters the door will be 20 forced backwards to the wall after it is opened beyond a right angle by the bear-

ing of the arm F against a staple or other fixture attached to the door. The weight I on the end of the lever H moving on the curve or nearly on the quadrant of a circle 25 operates on the gate or door with an increasing force the greatest power will be exerted when the latch is near the catch the base plate A with the wheels attached may in some cases be let into the post or 30 casement or the same may be inclosed in a metallic case.

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

The combination and arrangement of the 35 wheels C and D the lever H weight I arm F and door or gate operating in the manner and for the purpose described.

GARDNER BARTON, JUN.

Witnesses:

JOHN HASTINGS,
ARCHIBALD BALL.