No. 855,948. PATENTED JUNE 4, 1907.

J. M. HIGBE.

GATE.

APPLICATION FILED FEB. 18, 1907.

Fig. 1.

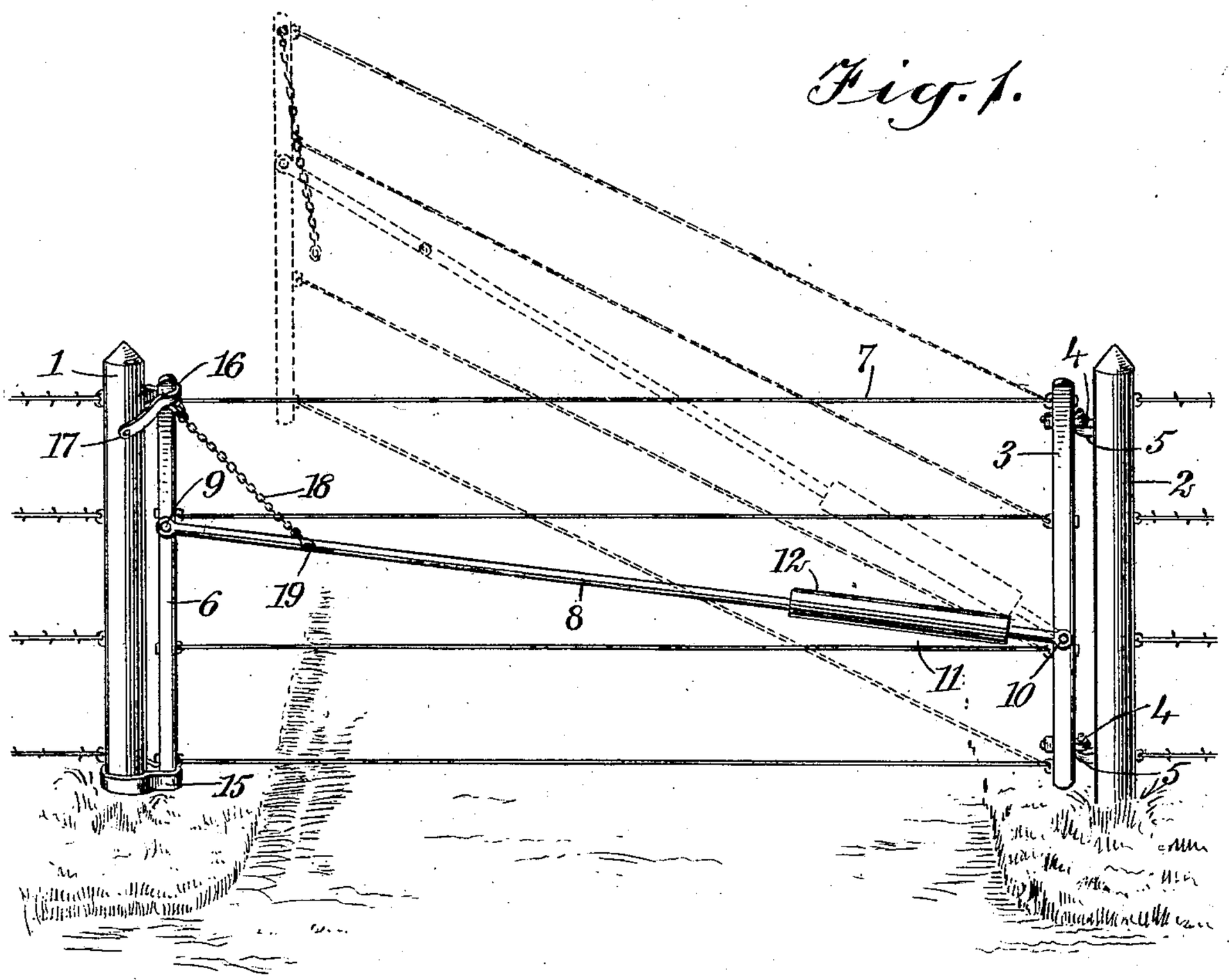
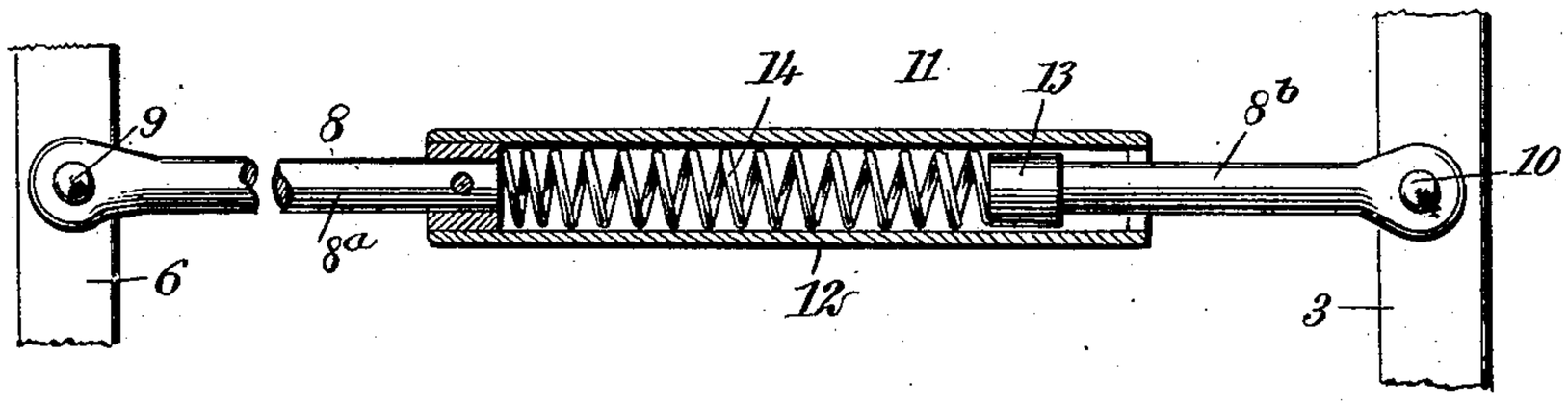


Fig. 2.



WITNESSES

Geo. W. Naylor.

F. D. Clarke

INVENTOR

James M. Higbe

BY Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

JAMES M. HIGBE, OF MANSON, IOWA.

GATE.

No. 855,948. Specification of Letters Patent. Patented June 4, 1907.

Application filed February 18, 1907. Serial No. 357,883.

To all whom it may concern:

Be it known that I, JAMES M. HIGBE, a citizen of the United States, and a resident of Manson, in the county of Calhoun and State of Iowa, have invented a new and Improved Gate, of which the following is a full, clear, and exact description.

This invention relates to gates such as used in the fencing of farms and gardens.

The object of the invention is to produce a gate which can be formed of wire or similar light material, and to provide a construction which will prevent the gate from sagging, without necessitating a construction involving the use of a heavy frame for the gate.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claim.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in both figures.

Figure 1 is a perspective showing a gateway provided with a gate constructed according to my invention; in the dotted lines the gate is represented in an open position; and Fig. 2 is a longitudinal central section through an expansion joint which constitutes a feature of the invention.

Referring more particularly to the parts, 1 and 2 represent gate posts forming the gateway in an ordinary wire fence. The gate comprises a main end bar 3 which is provided with eyes 4 hung upon pintles 5 which project from the gate post 2 as shown. At the opposite side of the gate-way an end bar 6 is provided, which is connected with the bar 3 by a plurality of tightly stretched wires 7. These wires are maintained in a tightly stretched condition, and the gate is held against sagging by means of a brace 8. This brace is disposed in a slightly inclined position; the end of the brace adjacent to the post 1 being attached pivotally at 9 on the end bar 6, and this end of the brace is in an elevated position. The opposite end of the brace is attached pivotally at 10 to the end bar 3, and near this end bar 3 an expansion joint 11 is formed in the brace; this expansion joint is clearly illustrated in Fig. 2.

The brace 8 is formed in two sections 8^a and 8^b, which meet at the expansion joint 11. This expansion joint comprises a tubular case 12 which is rigidly attached to the upper section 8^a of the brace. The lower section 8^b of the brace extends through the open end of the case 12 and is adapted to slide in and out therein, as will be readily understood. This part is expanded within the case 12 so as to form a head 13, and between this head 13 and the end of the section 8^a a helical spring 14 is placed within the case. This spring is under compression so that it tends to elongate the brace 8. The amount of elongation of the brace is, of course, limited by the length of the wires 7 which constitute the rails of the gate.

At the foot of the gate post 1 a socket 15 is formed of a suitable strap, which is adapted to receive the lower end of the end bar 6, as indicated. The upper end of the end bar 6 is held in position by a shackle 16 formed of strap iron, so as to form a yoke as indicated, and pivotally attached to the post at 17 as shown. When it is desired to open the gate, the shackle 16 is swung upwardly so as to unhook the upper end of the end bar, and the foot of the end bar 6 may then be disengaged from the socket 15. This is readily accomplished, as it will be evident that the wires 7 will not prevent an upward movement of the end bar 6, and this follows from a consideration of the relation of the parts, for it will be seen that as the end bar 6 of the gate moves upwardly, a rotation will take place on the pivot 10, as the end of the brace becomes more elevated. There will be a slight extension of the brace 8 by the spring 14 which will constantly maintain the wires 7 taut as the upward movement takes place. In this way the gate may be unlatched and swung to an open position such as that shown in Fig. 1 in dotted lines.

Special attention is called to the fact that the gate does not include any rigid brace members or a rigid frame. The gate is held in its horizontal position simply by the compressive force existing in the brace or diagonal 8 and the tension in the wires 7. On this account, the wires 7 may be considered to perform the functions of tie rods, while the brace 8 performs the function of a strut.

It should be understood that the expansion joint 12 tends to raise the outer end of the gate. In order to prevent this rising of the free end of the gate, I provide a chain 18 which is attached to the top of the end bar 6,

the lower end of the chain being detachably connected to a stud or pin 19 on the side of the strut, as shown.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

A gate consisting of a pair of vertical end bars connected by wires and a brace pivotally attached to said end bars, the end of said brace attached to the free end bar being elevated with respect to the other end of said brace, and an expansion joint formed in said brace and maintaining said wires taut.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES M. HIGBE.

Witnesses:

M. C. SCHOENHUT,

WM. RITCHIE.