

W. M. SCOTTEN.
FARM GATE.
APPLICATION FILED DEC. 8, 1911.

1,019,726.

Patented Mar. 5, 1912.

2 SHEETS—SHEET 1.

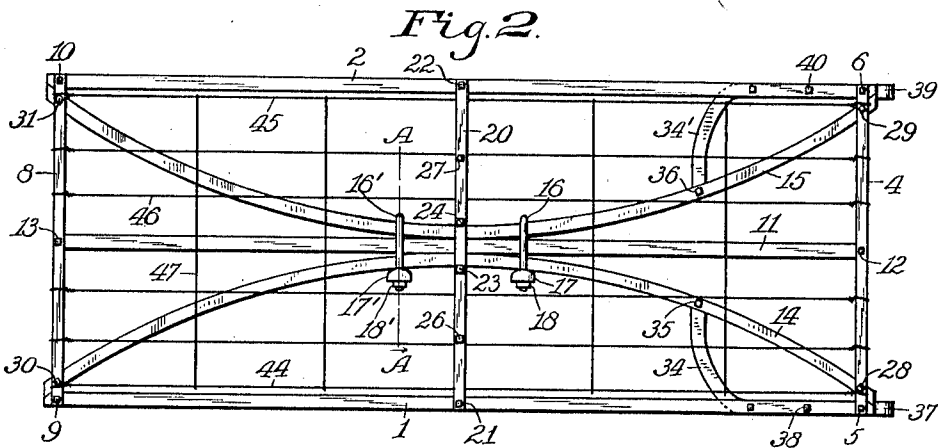
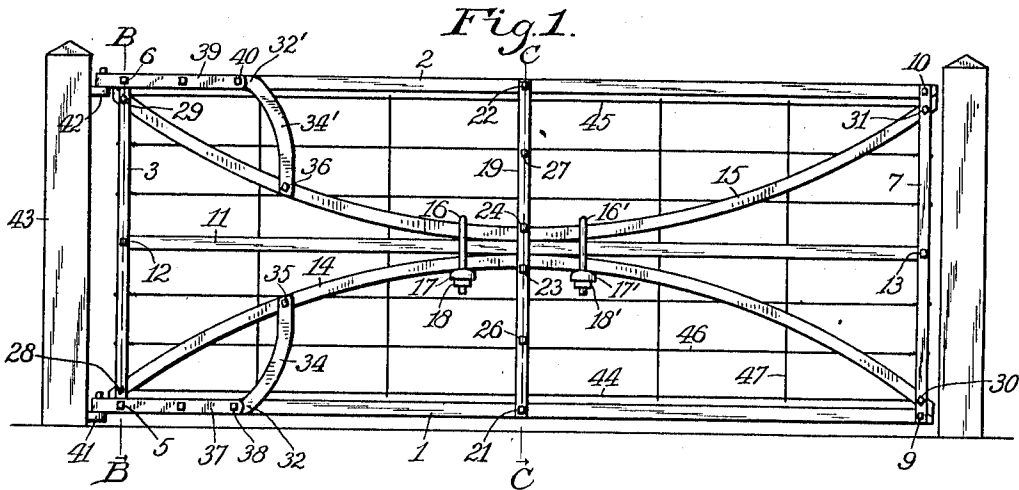
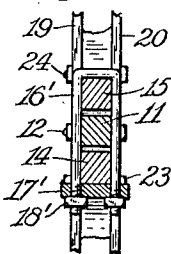


Fig. 3.



WITNESSES:

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Fig. 4.

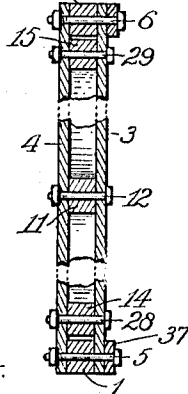


Fig. 5.

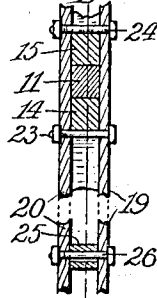
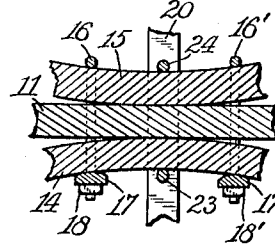


Fig. 6.



INVENTOR:

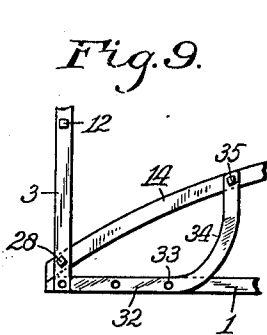
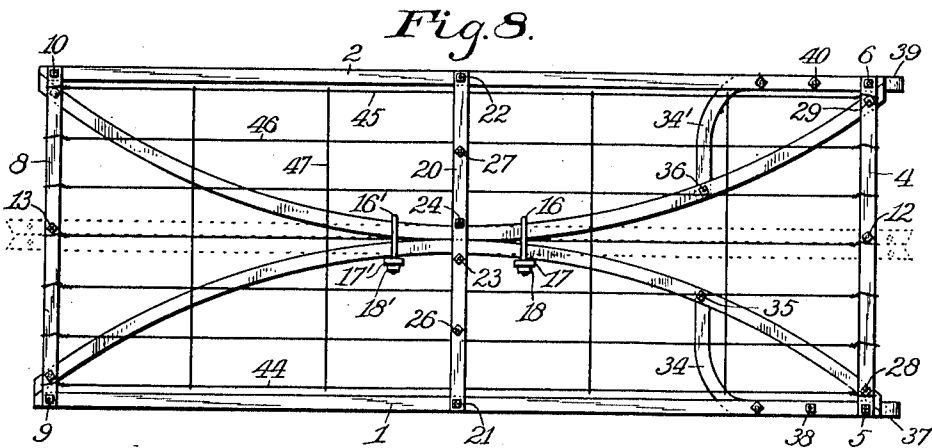
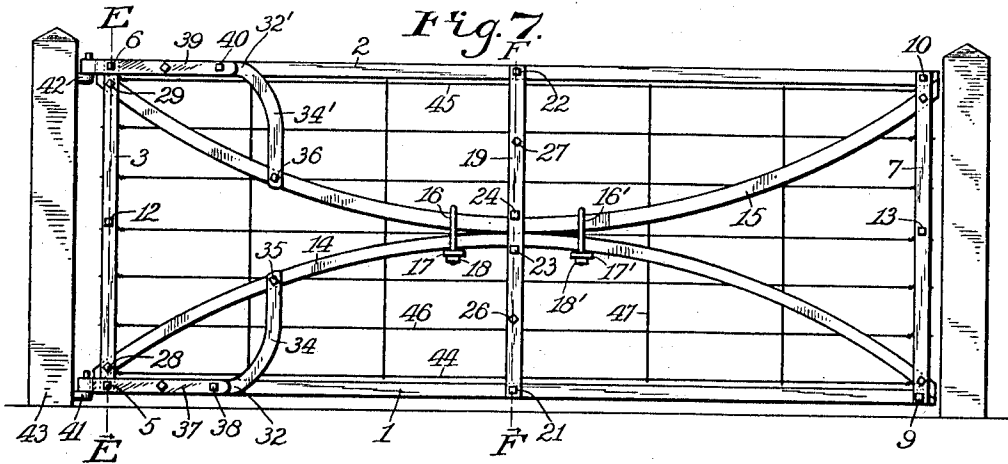
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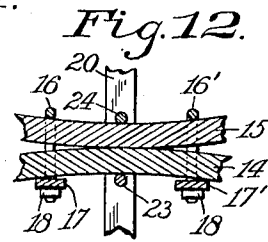
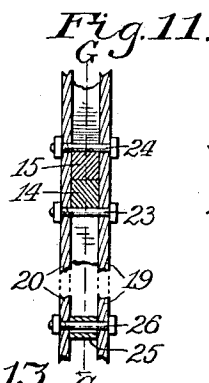
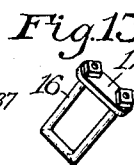
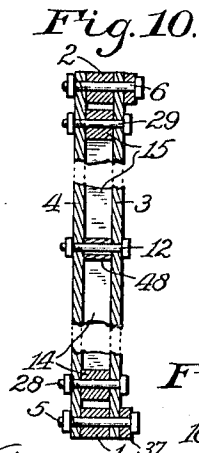
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2 SHEETS—SHEET 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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FARM-GATE.

1,019,726.

Specification of Letters Patent.

Patented Mar. 5, 1912.

Application filed December 8, 1911. Serial No. 664,656.

To all whom it may concern:

Be it known that I, WILLIAM M. SCOTTEN, a citizen of the United States, residing in Gregg township, in the county of Morgan and State of Indiana, have invented a new and useful Farm-Gate, of which the following is a specification, reference being had to the accompanying drawings and to the letters and figures of reference marked thereon.

This invention relates to the type of gate that is adapted to swing on a post and to be supported entirely by hinges, the invention having reference more particularly to the frame of the gate.

The object of the invention is to provide a cheaply constructed farm gate of relatively few parts and so as to be light in weight and at the same time to be very stiff and strong, and so constructed that it will not be liable to sag in use.

The invention consists in a gate having certain novel features of construction, and in the parts and combinations and arrangements of parts as hereinafter particularly described and pointed out in the accompanying claims.

Referring to the drawings, Figure 1 is an elevation of one side of the improved gate as preferably constructed; Fig. 2, an elevation showing the opposite side of the gate; Fig. 3, a fragmentary section on the line A A in Fig. 2; Fig. 4, a fragmentary section on the line B B in Fig. 1; Fig. 5, a fragmentary section on the line C C in Fig. 1; Fig. 6, a fragmentary section on the plane of the line D D in Fig. 5; Fig. 7, an elevation of one side of the gate constructed in a slightly modified form; Fig. 8, an elevation of the opposite side of the modified gate; Fig. 9, a fragmentary elevation of parts of the frame; Fig. 10, a fragmentary section on the line E E in Fig. 7; Fig. 11, a fragmentary section on the line F F in Fig. 7; Fig. 12, a fragmentary section on the plane of the line G G in Fig. 11; and Fig. 13, a perspective view of a clamp comprising a part of the gate frame.

Similar reference characters in the different figures of the drawings indicate like elements or features of construction herein referred to.

As preferably constructed the frame of the gate comprises a bottom rail 1 and a top rail 2, both composed preferably of wood,

both being alike in dimensions and secured at one end between opposite end portions of two end bars 3 and 4 which preferably are formed of flat bar iron, a bolt 5, securing the rail 1 to the bars and a bolt 6 securing the rail 2 to the bars. Two similar end bars 7 and 8 are secured at their opposite ends by means of bolts 9 and 10 to the opposite ends of the rails 1 and 2 respectively. When the gate is in normal position for use the end bars are substantially perpendicular to the rails. Preferably a center rail 11 is arranged midway between the rails 1 and 2 and is secured at one end to the middle portions of the bars 3 and 4 by a bolt 12, said rail being secured at its opposite end to the middle portions of the end bars 7 and 8 by a bolt 13, the center rail being between the two of each pair of end bars.

Two curved trusses 14 and 15 are provided which are composed of straight pieces of wood, each piece being rectangular in cross section and somewhat longer than each rail of the frame before being formed to the required shape. The middle portions of the trusses are placed at opposite sides of the center rail 11 and secured thereto by means of two similar U-shaped yokes 16 and 16' spaced apart a suitable distance, the yokes extending through clamp bars 17 and 17' respectively and provided with binding nuts 18 and 18' respectively so as to draw the middle portions of the trusses tightly against the center rail. In some cases, however, the center rail 11 may be omitted as shown in Figs. 7 to 12 inclusive, and in such cases the two trusses are clamped close together. Two center bars 19 and 20 are placed against opposite sides of the trusses, and the center rail if employed, and are secured at one end to the middle portion of the rail 1 by a bolt 21 and at their opposite end to the rail 2 by a bolt 22, said center bars being tightly held against opposite sides of the trusses between the yokes by means of two bolts 23 and 24 placed close against opposite sides of the two trusses respectively. Preferably spacing thimbles 25 are placed between the two center bars and secured therein by bolts 26 and 27.

The lower truss 14 is arch shaped and is formed by bending the wood without steaming it so that the elasticity of the wood is preserved, one end of the truss being secured

to the lower portions of the end bars 3 and 4 adjacent the bottom rail 1 by means of a bolt 28. The upper truss is formed in the same manner so as to constitute an inverted arch, one end of which is secured to the upper end portions of the bars 3 and 4 adjacent the rail 2 by means of a bolt 29. The opposite end of the truss 14 is secured by a bolt 30 to the lower end portions of the bars 7 and 8 adjacent the lower rail 1, the corresponding end of the truss 15 being secured by a bolt 31 to the upper end portions of the bars 7 and 8 adjacent the upper rail 2. It will be clear from the foregoing that the horizontal rails and the trusses are all in one and the same plane between the upright bars, the latter being relatively thin, so that the frame is symmetrical.

The end portion of the frame that is provided with hinges is strongly braced by means of metallic knee braces composed of bars 32 and 32' secured to the sides of the rails 1 and 2 respectively, the bars having bolt holes 33 therein, said braces comprising also curved members 34 and 34' extending respectively from the bars 32 and 32' to the trusses 14 and 15 respectively to which they are secured by bolts 35 and 36 respectively. The bars 32 and 32' are equal in thickness to the end bar 3 against which they are placed and a hinge member 37 is placed against the bar 3 and the bar 32 and secured thereto by the bolt 5 and bolt 38 respectively. A similar hinge member 39 is secured to the upper portion of the bar 3 by the bolt 6 and to the bar 32' by bolts 40, said bolts as will be understood extending through the horizontal rails and secured thereto. The hinge members 37 and 39, when the gate is in operative position, are connected to companion hinge members 41 and 42 respectively that are secured to a post 43.

The frame of the gate preferably is provided with woven wire fencing comprising bottom and top wires 44 and 45 and a plurality of intermediate wires 46, a suitable number of stay wires 47 being connected to the horizontal wires. The lower wire 44 is placed near the bottom rail 1 and is secured to the end bars 3 and 4 and also to the end bars 7 and 8 between the bottom rail and the ends of the lower truss, the top wire 45 being similarly secured to the upper portions of the end bars between the ends of the upper truss and the top rail 2.

The pieces of wood forming the trusses 14 and 15 before being bent are straight and appear as indicated by dotted lines in Fig. 8, and the adjacent ends being sprung apart and connected to the bottom and top rails by means of the end bars, it will be clear that the trusses tend to strain and keep the horizontal rails straight and therefore prevent warping of the horizontal rails. This

arrangement of the elastic trusses insures great stiffness of the frame in all directions yet permitting slight elasticity that is desirable in order to provide against accidental fractures. When the center rail 11 is omitted, which is permissible, it is preferable that thimbles 48 be placed on the bolts 12 and 13 for stiffening the relatively thin end bars.

In practical use the gate is swung on its hinges as usual and may be stopped and latched by any suitable or desired means.

Having thus described the invention, what is claimed as new is—

1. A gate comprising two concavo-convexly curved spring trusses arranged with the middle portions of their convex sides in proximity one to the other, the end portions of each of the trusses being sprung away from the end portions of the other, a clamp connected to the middle portions of the two trusses, and a frame connected to the clamp and also to all the end portions of the trusses.

2. A gate comprising two rails spaced apart, two end bars connected at their ends to the ends of the two rails, two center bars secured at their ends to the middle portions of the two rails, two curved spring trusses secured at their middle portions to the middle portions of the two center bars, the ends of the two trusses being secured to the end bars adjacent the two rails respectively, and two yokes connected to the two trusses adjacent the two center bars.

3. A gate comprising two rails spaced apart, two end bars connected at their ends to the ends of the two rails, two center bars secured at their ends to the middle portions of the rails, and two curved spring trusses secured at their middle portions to the middle portions of the center bars, the ends of one of the trusses being secured to the two end bars adjacent one of the rails, the ends of the remaining one of the trusses being secured to the two end bars adjacent the remaining one of the rails.

4. A gate comprising two rails spaced apart, two end bars connected to the two rails, two center bars secured together and to the two rails between the end bars, two curved trusses secured together and to the center bars and also to the end bars, the corresponding ends of the two trusses being sprung apart toward the two rails respectively, a brace secured to one of the rails and to one of the trusses, and a brace secured to the remaining one of the rails and to the remaining one of the trusses, the braces being in proximity to one of the end bars.

5. A gate comprising two rails spaced apart, two pairs of end bars secured to the two rails, a center rail midway between the two rails and secured to the two pairs of

end bars, two curved trusses in contact at
their middle portions with opposite sides of
the middle portion of the center rail, the end
portions of the two trusses extending sub-
stantially to the end portions of the two
rails respectively and secured to the adja-
cent pairs of end bars, two center bars se-
cured to the two trusses and also to the two

rails and the center rail, and two yokes
securing the two trusses to the center rail. 10

In testimony whereof, I affix my signature
in presence of two witnesses.

WILLIAM M. SCOTTEN.

Witnesses:

HARLEN KENWORTHY,

ELMER G. KENWORTHY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
