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ELECTRIFIED GATE CONSTRUCTION

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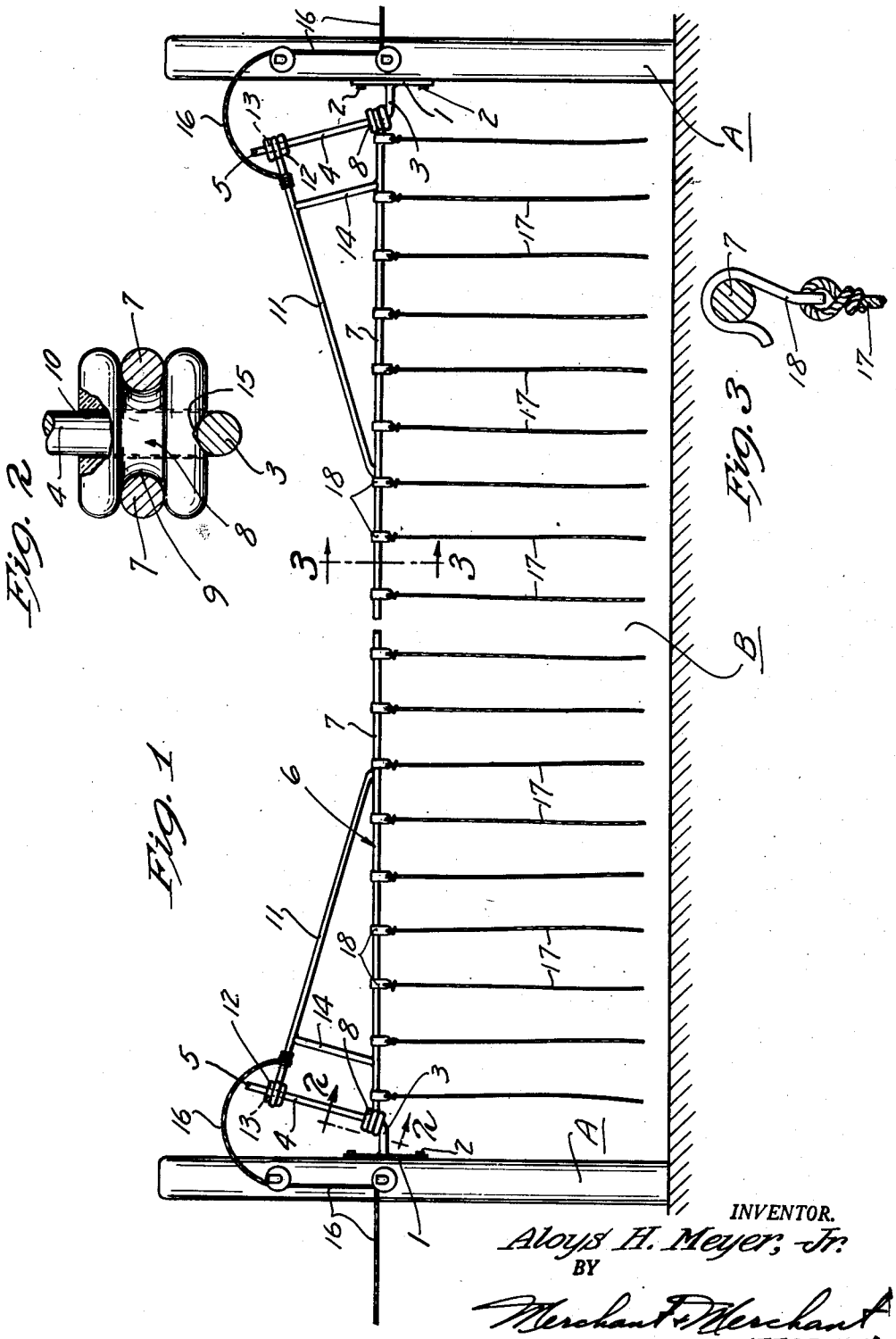


Fig. 1

Fig. 2

Fig. 3

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ELECTRIFIED GATE CONSTRUCTION

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1 Claim. (Cl. 39—84)

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My invention relates generally to gates and, more specifically, to electrical gates designed to prevent passage therethrough of cattle and live stock.

An object of my invention is the provision of an electrical gate which may be manufactured at a minimum of cost, which is extremely light in weight and very durable.

A further object of my invention is the provision of an electrical gate which is so constructed that it may be opened by an automobile or other vehicle travelling at relatively good speeds, without damaging the same or the vehicle, and which gate will thereafter close itself under the action of gravity.

A still further object of my invention is the provision of an inexpensive light-weight electrical gate which may be quickly installed and quickly and inexpensively repaired, if needs be.

A still further object of my invention is the provision of an electrical gate of the type above described, which comprises an inexpensive flexible metallic rod constituting the primary barrier member, and which will suffice to prevent cattle from passing therethrough, in further combination with longitudinally-spaced depending conducting elements which supplement the main barrier member, and which are preferably formed from light-weight metallic cables flexible throughout their length—and designed to prevent passage therethrough of other smaller live stock, such as sheep and hogs.

The above and other still further objects of my invention will become apparent from the following detailed specification, appended claim, and attached drawings.

Referring to the drawings, in which like characters indicate like parts throughout the several views:

Fig. 1 is a side plan view of my novel structure;

Fig. 2 is an enlarged view, partly in plan and partly in section, taken substantially on the line 2—2 of Fig. 1; and

Fig. 3 is an enlarged fragmentary section taken on the line 3—3 of Fig. 1.

Referring with greater particularity to the drawings, the letters A identify a pair of upstanding posts defining therebetween a passageway B. A mounting bracket or plate 1 is, by means of a lag bolt or the like 2, adapted to be secured to the sides of posts A in spaced relation to the ground and on opposite sides of the posts A. Projecting laterally from the mounting plates 1 generally transversely of the passage B and in a generally horizontal plane is member 3. Projecting upwardly and laterally outwardly from the forward end of member 3 so as to extend still further into the passage B, is an elongated pintle 4, which terminates at 5 in a free end. Preferably and as shown, the members 3 and 4 are integrally formed from cross-sectionally circular stock.

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Adapted to be received, for pivotal movements, on pintle 4 is a barrier member, identified in its entirety by the numeral 6 and including an elongated barrier rod 7, which at its rear end is rigidly secured to an insulator 8. The particular means of securing the insulator 8 to the rear end of the barrier rod 7 is not important, but, preferably and as shown, this is accomplished by bending the same into a circular form so that the same is tightly received within an annular groove 9 extending around the periphery of the insulator 8, as shown in Fig. 2.

The insulator 8 is provided with a central aperture 10 which extends therethrough at right angles to the groove 9. As shown, the axis of the apertures 10 is at such an acute angle to the barrier rod 7 that said barrier rod will assume an approximately horizontal position when said barrier rod 8 lies in a vertical plane extending through the axis of said pintle 4—which, as shown, is the normal passage closing position of said barrier rod 8. A brace member 11 extends from the intermediate portion of the barrier rod 7 rearwardly and terminates with its free rear end rigidly secured to a second insulator 12. The insulator 12 and the means of securing same to the brace member 11, preferably and as shown, is similar to the insulator 8 and the means of securing same to barrier rod 7. Insulator 12 is likewise provided with a pintle-receiving aperture 13 which is coaxial with the aperture 10 in insulator 8. Preferably and as shown, a connecting strut 14 extends between the rear ends of barrier rods 7 and brace member 11 in forwardly-spaced relation to the insulators 8 and 12.

Also, preferably and as shown in Fig. 2, the insulator 8 is provided at its lower surface with a radially-extended downwardly opening notch 15 which is adapted to receive therein the horizontal member 3 when said barrier rod 8 is moved to a normal position in a vertical plane passing through the axis of the pintle 4. Notch 15 is very useful in centering the barrier rod 8 in its normal position and retaining same in said position against partial opening movements, by high winds and the like. However, the notch 15 is not deep enough to interfere with free swinging movements of the barrier 8 when it is desired to open the gate.

Barrier rod 7 and brace member 11 are preferably formed from circular metallic rod stock capable of conducting electricity. A source of electrical energy is applied thereto through the medium of an electrical conduit 16. The insulators 8 and 12 are preferably of a conventional type made from ceramic material and serve as an insulating bushing, whereby to permit pivotal movements of the barrier 6 about the axis of the pintle 4. In the event such insulators should be accidentally broken, it is easy and inexpensive to replace them.

When installing or repairing my novel structure, it is but necessary to place the barrier 6 in operative position on the pintle 4, or remove the same therefrom by lifting upwardly and outwardly upon the barrier 6, whereby to engage or disengage, as the case may be, the insulators 8 and 12, respectively, from the upper free ends 5 of the pintles 4.

It will be obvious that my novel gate is automatically self-closing. This is effected by virtue of the fact that the forward free end of the barrier rod 7 is elevated as the same is rotated or moved to either side of its normal gate-closing position on the axis of the apertures 10 and 13 of the insulators 8 and 12, respectively.

Also, preferably and as shown, I prefer to secure to the barrier rods 7, in longitudinally-spaced relation, a plurality of relatively light and flexible supplementary barrier members 17, which are in the nature of metallic cables. Preferably, and as shown particularly by Fig. 3, these supplemental barrier members 17 may be secured in any desired spaced relation along the barrier rods 7 by resilient metallic clips 18. The spacing of members 18 may vary depending upon the type and size of animals or livestock attempted to be confined within the gate.

Also, as shown, my novel structures may be used in opposed pairs to completely lock off the passageway B, or they may be used singly to accomplish this objective.

My invention has been thoroughly tested and found to be adequate for the accomplishment of the objectives set forth; and, while I have illustrated and described a commercial embodiment thereof, it will be understood that the same is capable of modification without departure from the spirit and scope of the invention as defined in the claim.

What I claim is:

In a device of the class described, an elongated light weight resilient metallic barrier rod having a pair of spaced tubular insulator members secured to its inner end, a line drawn through the common axis of said tubular insulators intersecting said barrier rod at an angle less than 90°, a pintle pin having a free upper end and having a length greater than the distance between said tubular insulators, said tubular insulators being slidably receivable over the free end of said pintle pin, and bracket means for securing the lower end of said pintle pin to a support in spaced relation to the ground in an angularly upwardly extending position transversely of a passageway.

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