United States Patent

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[54] **PORTABLE LIVESTOCK PEN**
7 Claims, 2 Drawing Figs.

[52] **U.S. Cl.** **256/19,** 256/24
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[50] **Field of Search** 256/19, 24, 22, 65, 47, 48

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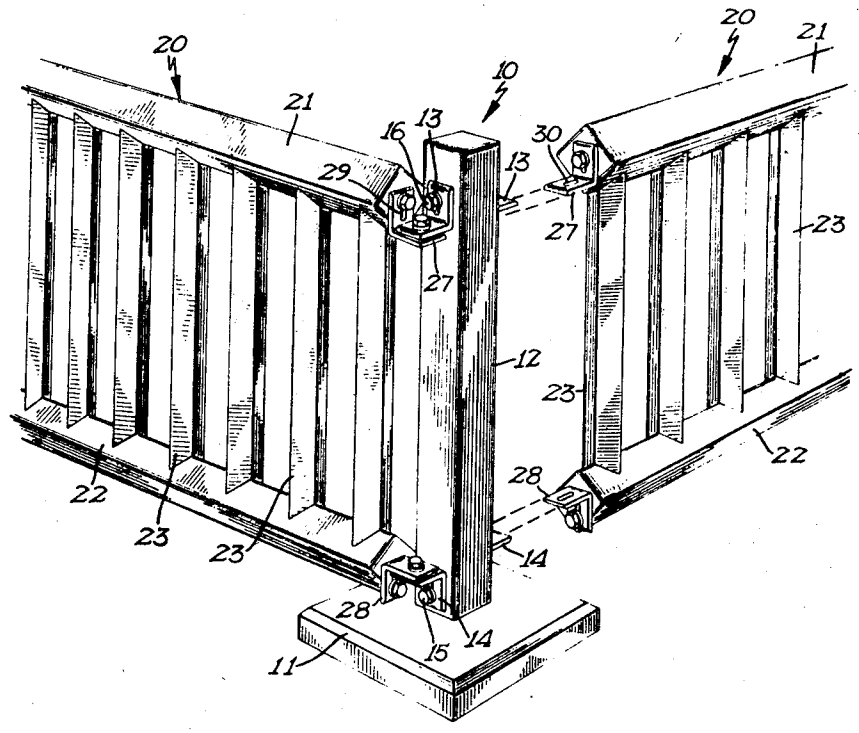
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ABSTRACT: A livestock fence of concrete is provided which collectively has sufficient mass to obviate the need for embedded post members and is formed of segments that are light enough to be readily movable. The preferred form utilizes steel reinforcing in the concrete. Joined to the reinforcing rod are metallic members to be used in joining sections of the fence.



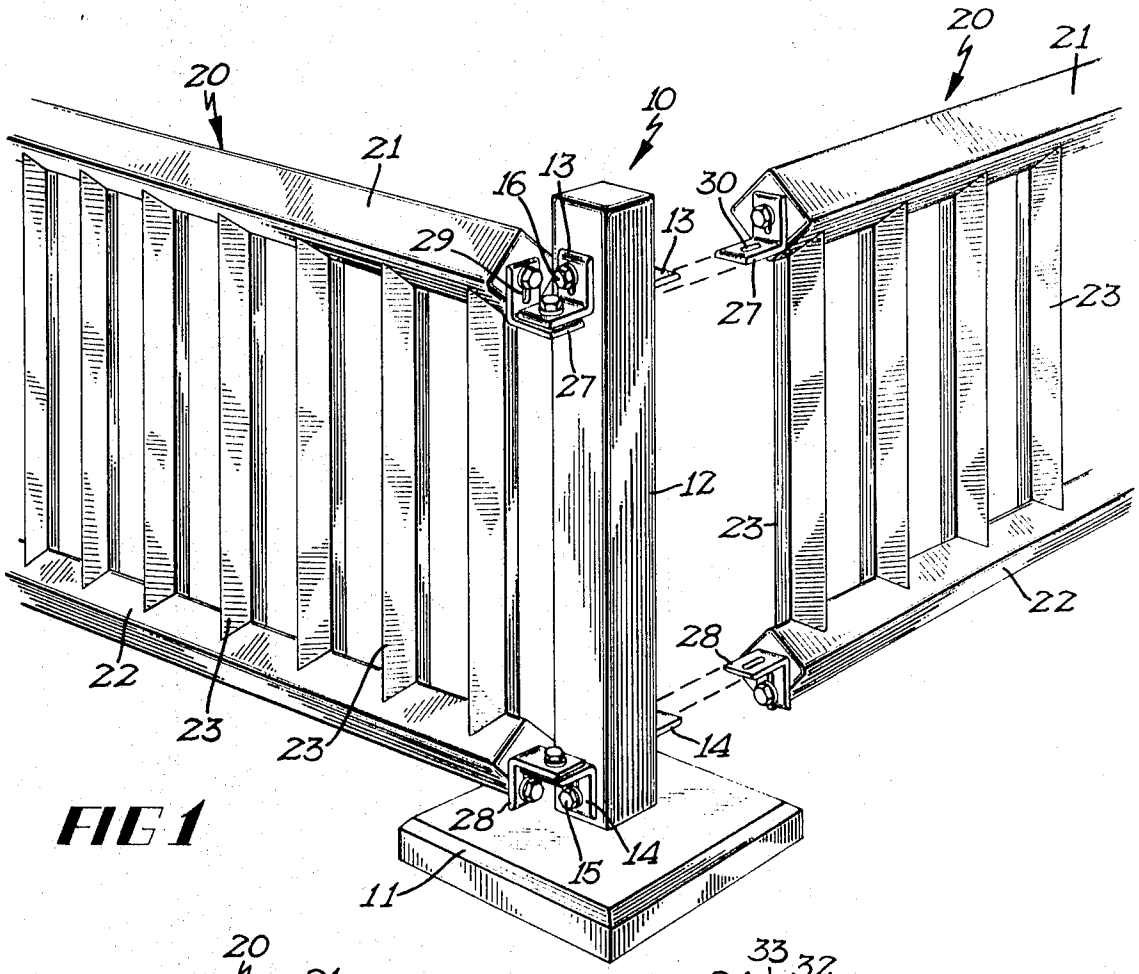


FIG 1

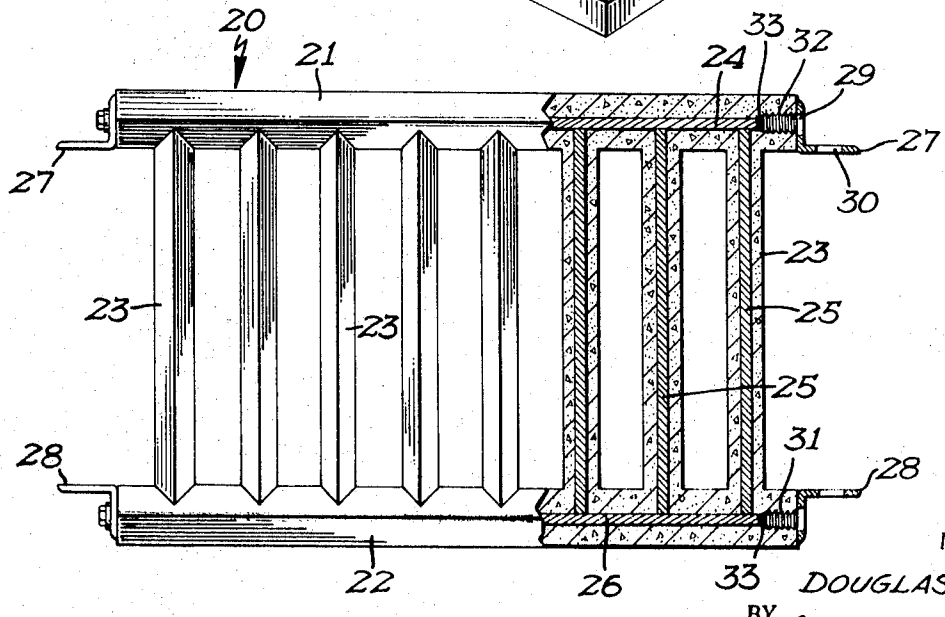


FIG 2

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PORTABLE LIVESTOCK PEN

The present invention is directed to the field of livestock pens and is more particularly directed to a portable livestock pen which does not require the use of embedded posts. The entire fence is made of concrete and thus possesses both desirable durability as well a possessing sufficient mass so that it can retain livestock, and yet the individual segments are light enough that they can be readily moved and reassembled in a new location. In the preferred form of the invention, the rail members are provided with vertical slats which are so positioned as to prevent the escape of small animals such as baby pigs, and yet, because of the vertical positioning of the slats, young animals are less likely to be injured by placing a portion of their body between the slats. While the present invention will be usable for a wide variety of animals, it will find particular application in forming enclosures for hogs.

The invention will be most readily understood from a study of the following specifications and drawings, wherein:

FIG. 1 is a perspective view of a post and rail assembly members forming a corner portion of a fence;

FIG. 2 is a side view of a rail assembly member shown partially in section.

It is frequently desired that an enclosure be provided for livestock, and in particular hogs, wherein the enclosure can be readily moved from one area to another. Attributes desired in such enclosure include long life and simple installation. In accordance with my invention, a livestock pen is provided wherein the members are essentially all of concrete, insofar as external surfaces are concerned, thus meeting the requirements of being highly durable. Additionally, the post members are formed with an enlarged base and a narrow column extending from this base, which provides a post that does not require insertion into the ground. The post has sufficient breadth at its base to make it self-supporting and adequate weight to lend stability while still remaining light enough to be readily moved. The rail members are preferably, although not required to be, formed of concrete with rails extending parallel to one another and to the ground. The rail members are interconnected into one contiguous body by vertical slat members, which are also of concrete. The individual rail sections are sufficiently heavy that they, in combination with the post members, provide the mass required to contain livestock, and yet are light enough that they can be readily moved in individual sections for reinstallation at some other point.

Turning now to the figures, there is illustrated in FIG. 1 a post member generally designated **10** which is formed of a unitary piece of concrete to produce a broadened base section **11** and a vertical support column **12** extending upward therefrom. Where greatest strength and durability are desired, the post member is formed using iron rods or screening for reinforcement thereof, so as to provide additional strength and freedom from breakage. This is shown more clearly in FIG. 2, which shows in partial section a rail assembly member formed of concrete with reinforcing rods therethrough. The post member also has upper and lower bracket members **13** and **14**, which are shown as being of an L-shaped steel. The brackets have elongated holes therethrough on both arms of the L so as to permit adjustments of the bracket, both on the post and in conjunction with the rail member, as will be discussed below. The L-shaped brackets **13** and **14** are connectable to the support column **12** by anchoring bolts **15** and **16**.

Turning now to FIG. 2, there is illustrated a side view partially in section of a rail assembly member in accordance with the invention. The rail assembly member **20** has an upper rail **21** and a lower rail **22**, with a plurality of vertical slat members **23** joining rails **21** and **22**. In the preferred form of the invention, use is made of reinforcing rods of steel **24**, **25** and **26**. It is desirable when using reinforcing rods to ensure that these rods are contained within the concrete to shield them from corrosion due to the weather and to the corrosive waste products commonly found in conjunction with livestock.

Mounting means **27** and **28** are fastened to the ends of the rail member in a spacing such as to cooperate with fastening members **13** and **14** of post member **10**. As is illustrated in FIG. 2, the L-shaped brackets have elongated openings therethrough **29** and **30** which provide for adjustments to take into account unevenness of ground and/or sloping of the ground upon which the fence assembly is to be built. In the sectioned portion of FIG. 2 there is also illustrated threaded sleeve inserts **31** and **32**, which are of a metal such as iron and which are formed in the rail member at the time the concrete is poured. These threaded metal sleeves may be of such a shape as to be rigidly held within the concrete and thus provide a long life anchoring means for the bracket members such as **27** and **28**.

When strong adult animals such as pigs are confined within a pen area in accordance with the invention, the reinforcing rods will prove highly advantageous in providing the needed strength to prevent destruction of the fence members. The metal sleeve inserts **31** and **32** are likely to become loose and break out due to impact of the animals confined in the pen. I have found that this problem can be overcome by welding the sleeve members **31** and **32** to the reinforcing rod **24** as shown at **33**. Similarly, whenever sleeve members are used they should be welded or otherwise joined to internal reinforcing wherever greatest durability is desired.

Alternatively, threaded bolt members may be formed in a like manner so as to present a threaded bolt end exterior of the concrete. Such a bolt member can be an extension of the reinforcing rod and continuous therewith. A fastening means such as a nut can then be used to join the rail and post member brackets.

In a similar manner, metallic threaded sleeve inserts may be utilized in post support column **12** to aid in anchoring the L-shaped brackets attached thereto. Likewise, reinforcing rods may be utilized in the post member in a manner analogous to that illustrated in FIG. 2 for the rail assembly manner.

Turning again to FIG. 1, it is readily seen how member **20** cooperates with post member **10** to form a fence. The L-shaped brackets are cooperatively spaced in such a way that they may be readily joined by a pin or bolt through the horizontally disposed arm of the L-shaped brackets. When the ground is uneven or sloping, adjustment is possible to provide for this unevenness. As is also illustrated in FIG. 1, the bracket members connected to support column **12** are on opposite sides of the support column. In the form illustrated in the figure, the rail members extend at right angles to one another from the support column. However, if the enclosure of a shape other than rectangular is desired, total freedom is provided in the pivot form of the bracketing to achieve any angle with respect to the other rail. This includes utilizing the post member in an intermediate position as well as in a corner post position.

While the form shown in FIG. 1 has bracket fastening means on opposite sides of the post, one may also form the post so as to have bracket forming members on all four sides. This permits more symmetric construction than the form illustrated. In any form, as discussed previously, where greatest strength is required the sleeve members should be welded or otherwise formed to the internal reinforcing steel of the concrete member.

It will, of course, be understood that other mounting means may be utilized than the L-shaped brackets described above. Likewise, it will be appreciated that the precise shapes of the various elements may be altered to meet particular needs.

I claim:

1. A fence for defining a movable livestock pen wherein the individual fence members are of concrete and of an individual weight to be readily movable and wherein the assembled fence is of sufficient weight and stability to obviate the need for embedded posts comprising:

a. concrete post members, said post members each including a broad base portion with a narrow rail support column joined thereto and extending vertically upward from the center of the base portions;

b. concrete rail assembly members intermediate said post members; and

c. connecting means on said post members and said rail assembly members positioned to cooperatively interconnect said members and entirely support the weight of said rail members on said post members.

2. A fence in accordance with claim 1 wherein said post member and said rail assembly member are internally reinforced with steel rods.

3. A fence in accordance with claim 1 wherein said rail assembly members include an upper and lower rail element joined into one unit by a plurality of vertical slats.

4. A fence in accordance with claim 1 wherein said connecting means are L-shaped bracket members having elongated slots in both arms thereof to provide a means for adjusting for uneven and sloping surfaces.

5. A fence in accordance with claim 3 wherein said vertical slats are spaced to provide openings therebetween of a size to contain young pigs.

6. A fence in accordance with claim 4 wherein a metal-threaded sleeve insert is formed in said post member and said rail assembly members to provide anchoring means for said connecting means.

7. A fence in accordance with claim 6 wherein said metal-threaded sleeve member is joined by welding to the reinforcing steel rods.