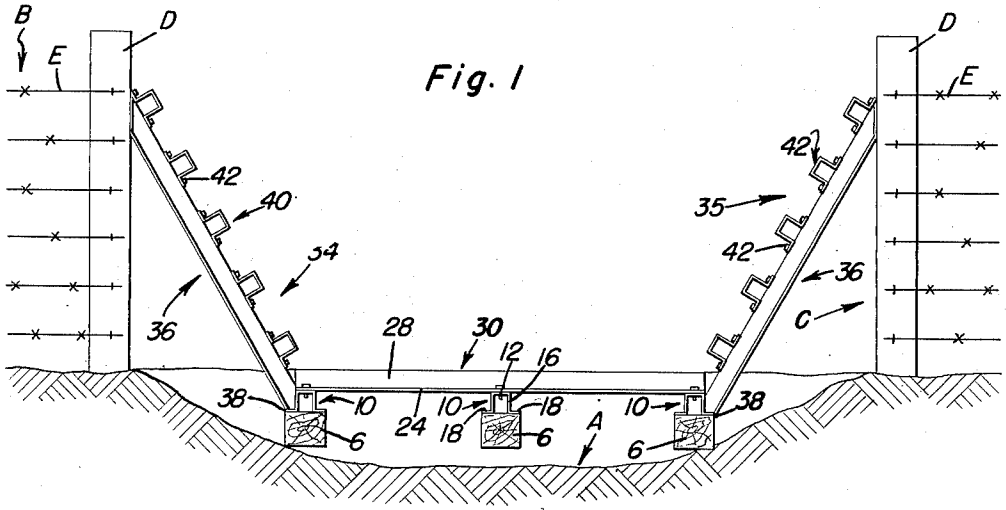
April 1, 1952 G. C. WELTER 2,591,220

CATTLE GUARD

Filed April 3, 1950 2 SHEETS—SHEET 1

Fig. 1



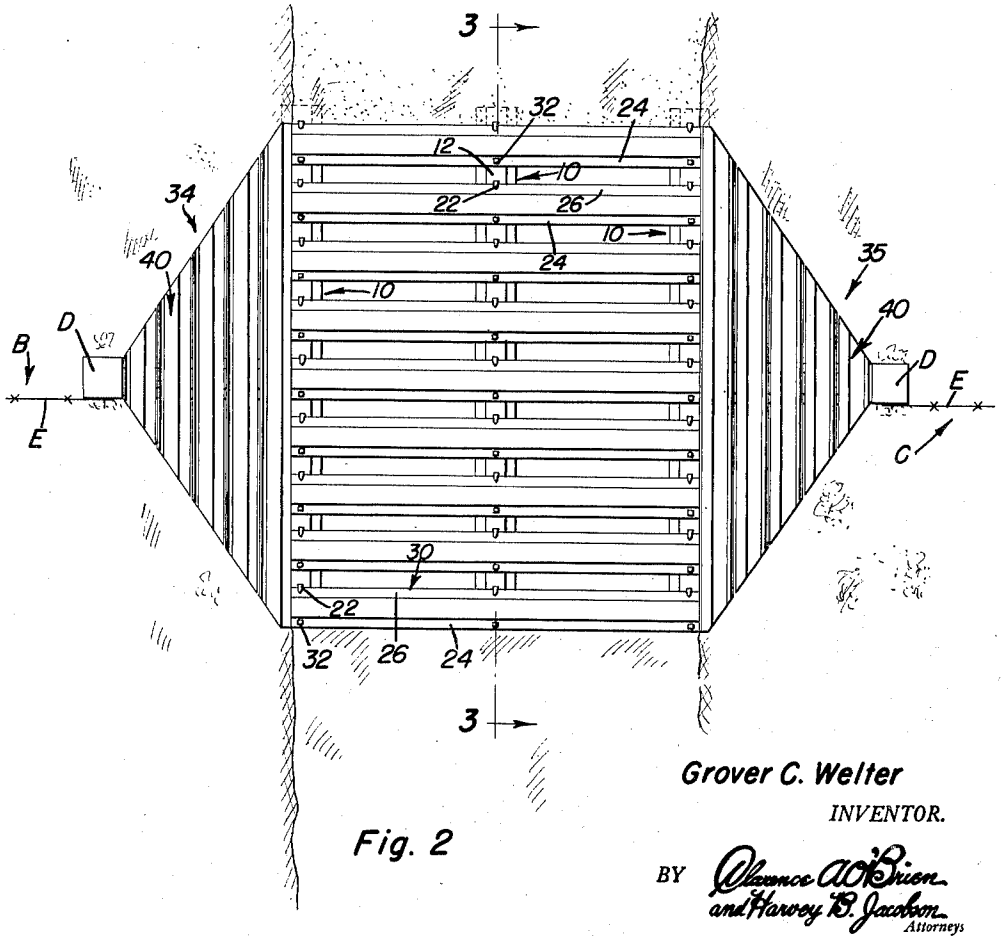


Fig. 2

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CATTLE GUARD

Filed April 3, 1950 2 SHEETS—SHEET 2

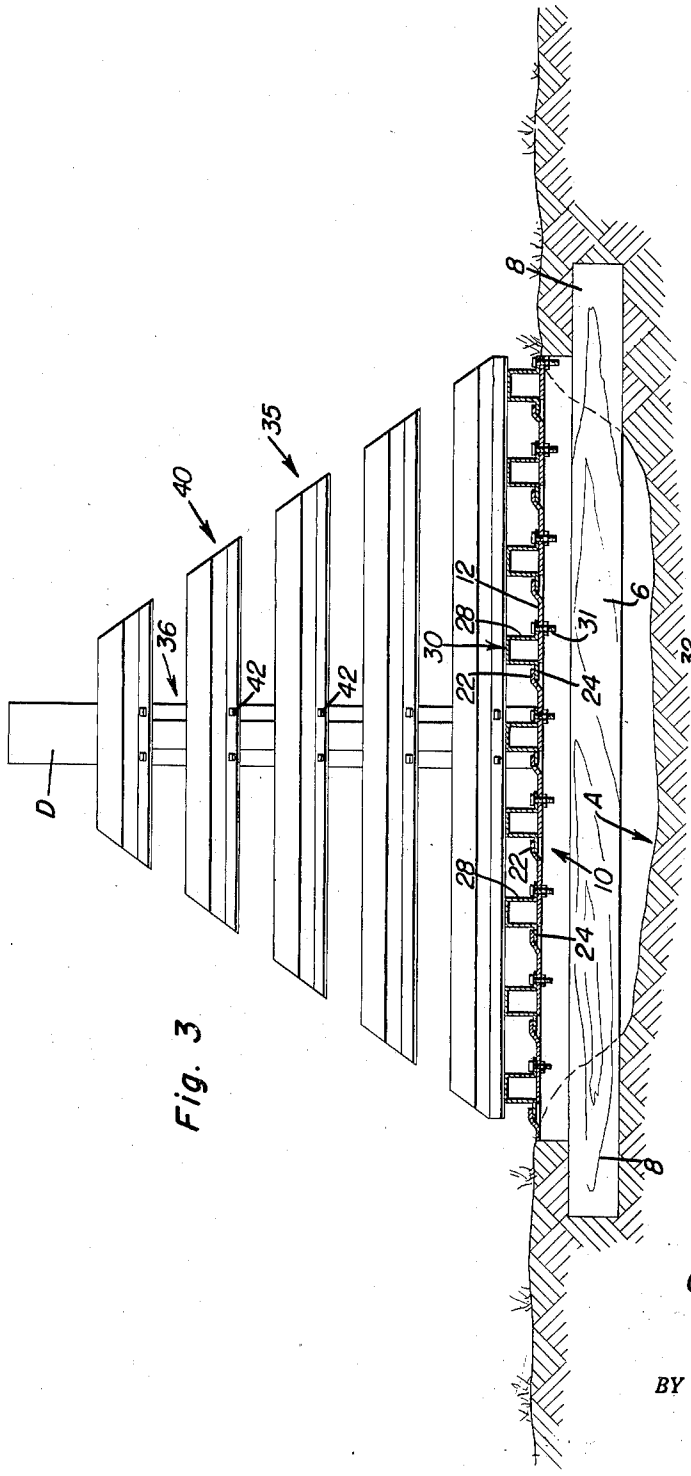


Fig. 3

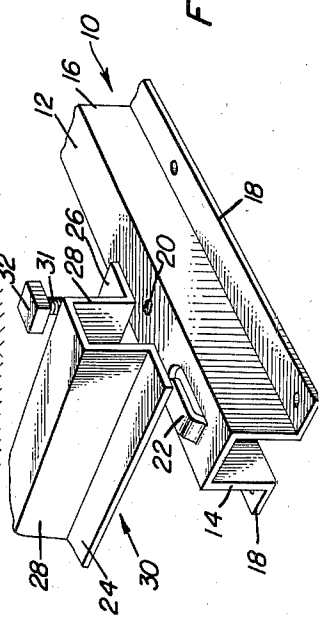


Fig. 4

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CATTLE GUARD

Grover C. Welter, Roswell, N. Mex.

Application April 3, 1950, Serial No. 153,695

4 Claims. (Cl. 256—17)

1

The present invention relates to certain new and useful improvements in cattle guards which are generally installed over an excavation and in alignment with fence sections to prevent cattle and stock from straying out of an enclosed pasture or from one pasture to another.

More specifically, the invention pertains to a heavy duty type open-work grating which is lined up with a runway to serve not only as the aforementioned cattle guard but as a safe and reliable bridge over which automobiles, trucks and farm machinery may be driven.

Needless to say, there are many and various styles and forms of so-called bridge-type cattle guards in use and virtually all of them are characterized by a grating of one type or another over which cattle, due to insecure footing, will not pass. In carrying out the principles of the instant invention the construction employed is likewise an openwork grating. It is an improvement in this line of endeavor in that the constructional parts employed take the form of individual components which are carefully prefabricated, shipped from the factory in knockdown form and may thereafter be assembled and properly erected by an average person, whereby to obviate the necessity of employing skilled workmen to do the job.

Another object of the invention is to provide a simple and practical grille or grating construction in which manufacturers, users and others will find their essential needs fully met, contained and readily available.

A further object of the invention is to provide a novel grating which is not necessarily restricted for use as a cattle guard but which may be equally well employed in connection with highway construction work where it is necessary to quickly set up a temporary bridge over a washout, culvert or similar excavation.

Novelty is predicated on light weight but sturdy grating which is characterized by foundation timber, channel-shaped rails superimposed on and secured to the timber, and channel-shaped traction and tread members which may be readily installed for use on the web portion of said rails.

Other objects and advantages will become more readily apparent from the following description and the accompanying illustrative drawings.

In the accompanying sheet of drawings wherein like numerals are employed to designate like parts throughout the views:

Figure 1 is an enlarged view in section and elevation showing portions of a fence, a ditch

2

or other excavation and showing the improved cattle guard constructed in accordance with the invention and properly installed for use;

Figure 2 is a top plan view of the structure disclosed in Figure 1;

Figure 3 is a horizontal section taken on the plane of line 3—3 of Figure 2, looking in the direction of the arrows; and

Figure 4 is a fragmentary perspective view showing a portion of one of the timber-rails and a fragmentary end portion of one of the complemental traction rails.

Referring now to the drawings, the excavation or ditch is denoted at A and fence sections at B and C. Each fence section includes a post D with fence wires E attached thereto.

The grating comprises three, more or less, horizontal timbers 6, and these are duplicates of one another and they are arranged to span the excavation as shown in Figure 3 and the end portions 8—8 are suitably embedded in the ground. Mounted on each timber is a longitudinally extending adapter rail 10. This includes a body portion which is channel-shaped in cross section, said body portion having a web 12 and vertical side walls 14 and 16 provided with outstanding flanges 18—18 which flanges are screwed, nailed or otherwise fastened atop the underlying timber. The timbers and rails will of course be of suitable length depending on the job in hand. At the prescribed points and carefully located are screw threaded bolt holes 20 and upstanding assembling and retaining tongues 22. These are arranged to accommodate the flanges 24 and 26 on the vertical wall portions 28—28 of the transverse or complemental tread rail 30. The flanges 24 fit into the keeper tongues 22 as is obvious and the flanges 26 have non-threaded bolt holes to accommodate a screw threaded shank 30 of the bolts 32. These bolts are obviously passed through the bolt holes in the flange 26 and screwed into the threaded holes 20 in the web 12. In the respective foundation rails 10 the keepers 20 and 22 are carefully arranged to insure proper accommodation and location of the cross rails 30. The cross rails are arranged in spaced parallelism at properly spaced points to provide the desired grille-like or grating effect.

With this arrangement the foundation members may be installed and the foundation rails 10 nailed or otherwise fastened thereon. The structure is then ready for individual placement of the cross rails 30 which are held in position by the offset keeper tongue 22 to facilitate bolting the flanges 26 to the web portion 12. It will be evi-

dent that with the parts carefully prefabricated at the factory they may be sent out in knockdown form and readily erected by the average person.

Where desired inclined auxiliary guards between fence sections B and C may be employed and these guards are denoted by the numerals **34** and **35** in Figure 1. Each guard comprises an inclined channel iron **36** which is suitably fastened at the upper end to the post D and fastened at **38** to the adjacent timbers **6**. There are horizontal channel irons **40** and these are fastened at **42** at desired points to the channel iron **36** in an obvious manner.

Where the grating is used as a bridge on highways and over road ditches, the side guards may also be used as safety fences.

It is also within the purview of this invention to make the cross-rails **30** of extensible and retractible telescoping sections (not shown) instead of one-piece, as shown in the drawings.

A careful consideration of the foregoing description in conjunction with the invention as illustrated in the drawings will enable the reader to obtain a clear understanding and impression of the alleged features of merit and novelty sufficient to clarify the construction of the invention as hereinafter claimed.

Minor changes in shape, size, materials and rearrangement of parts may be resorted to in actual practice so long as no departure is made from the invention as claimed.

Having described the invention, what is claimed as new is:

1. A structure of the class described comprising a knockdown openwork grating adapted to span a ditch, excavation or cavity in a roadway or the like embodying a plurality of independent horizontal foundation timbers disposed in a plane with each other and in spaced parallelism, longitudinal metal rails superimposed on and removably fastened to said timbers, said rails being channel-shaped in cross section and having outstanding longitudinal flanges fastened atop said timbers, and a plurality of transverse traction rails, the latter being channel-shaped in cross section, disposed at right angles to said first named rails and having outstanding flanges seated on and releasably attached to the web portions of said first named rails.

2. The structure defined in claim 1, wherein the web portions of said longitudinal rails are provided at longitudinally spaced points with struck-out tongues providing keepers for certain of the flanges on said traction rails.

3. A structure of the class described comprising a knockdown openwork grating adapted to span a ditch, excavation or cavity in a roadway or the like embodying a plurality of spaced parallel independent horizontal foundation timbers disposed in a plane with each other, longitudinal rails superimposed on said timbers, each adapter rail being a channel-iron with outstanding longitudinal basing flanges removably fastened atop its complemental timber, the web portion of said channel-iron being provided with longitudinally struck-out keeper tongues and companion screw-threaded bolt holes, and a plurality of complemental cross-rails, the latter also being channel-shaped in cross section, disposed at right angles to said longitudinal rails and having basing flanges, certain of the latter interlocked with coacting keeper-tongues, and bolts carried by certain other flanges and screwed into said bolt holes.

4. For use in spanning a roadway ditch or similar excavation, a knockdown openwork grating for ready shipping in a dismantled state and capable of being readily set up for use on the job, a plurality of duplicate longitudinal basing rails, each rail being a channel-iron embodying a flat web portion, spaced parallel side walls and outstanding attaching flanges which are adapted to be removbly secured atop an underlying foundation timber, said web portion having screw-threaded bolt holes at prescribed longitudinally spaced points and upstruck keeper tongues, the latter and said bolt holes being in predetermined paired relationship, and a plurality of complemental cross-rails, the latter also being channel-irons and each having a web portion, spaced parallel side walls and longitudinal assembling and securing flanges projecting outwardly from said side walls, one flange having bolt holes each for registration with a predetermined one of said first named bolt holes, the remaining flange being imperforate and adapted to interlockingly engage beneath a selected keeper tongue.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
506,242	Lynch	Oct. 10, 1893
2,518,855	Balzer	Aug. 15, 1950