No. 656,565. Patented Aug. 21, 1900.

R. C. McCORMICK.

DRAFT EVENER FOR GANG PLOWS.

(Application filed Jan. 24, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

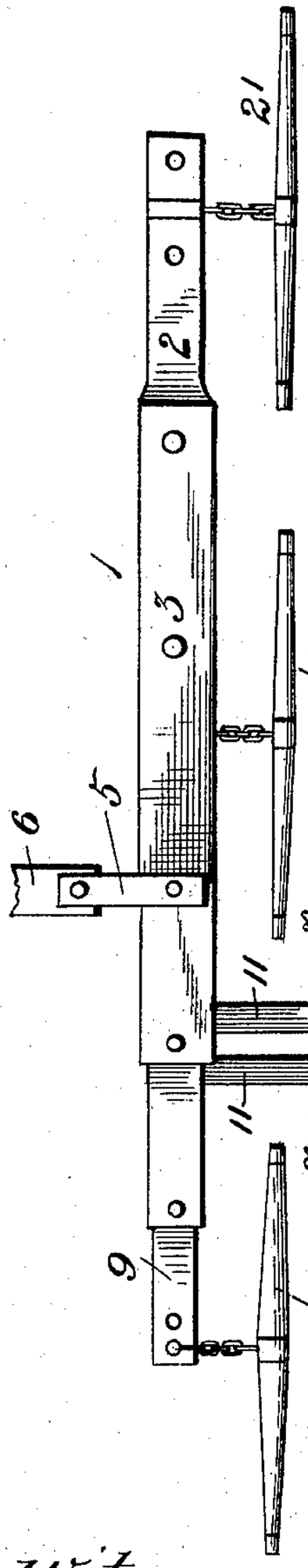
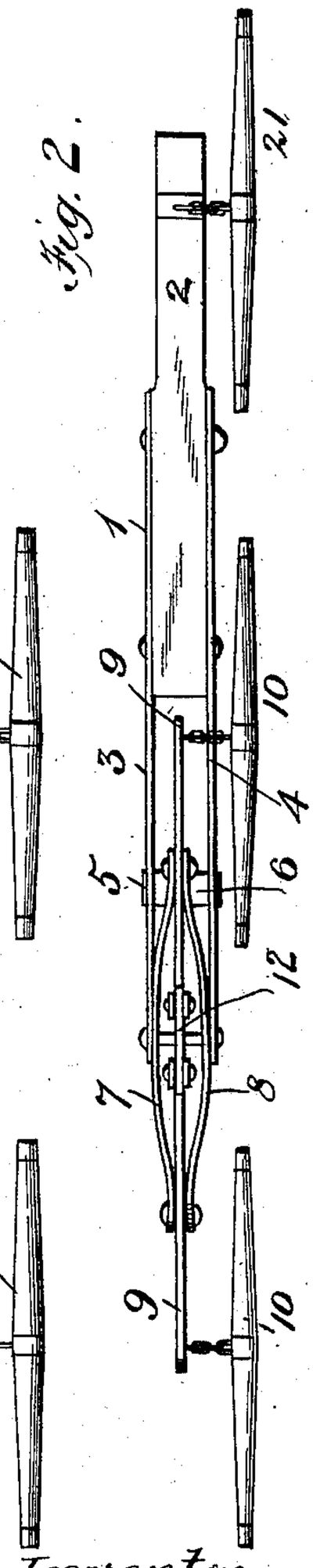


Fig. 2.



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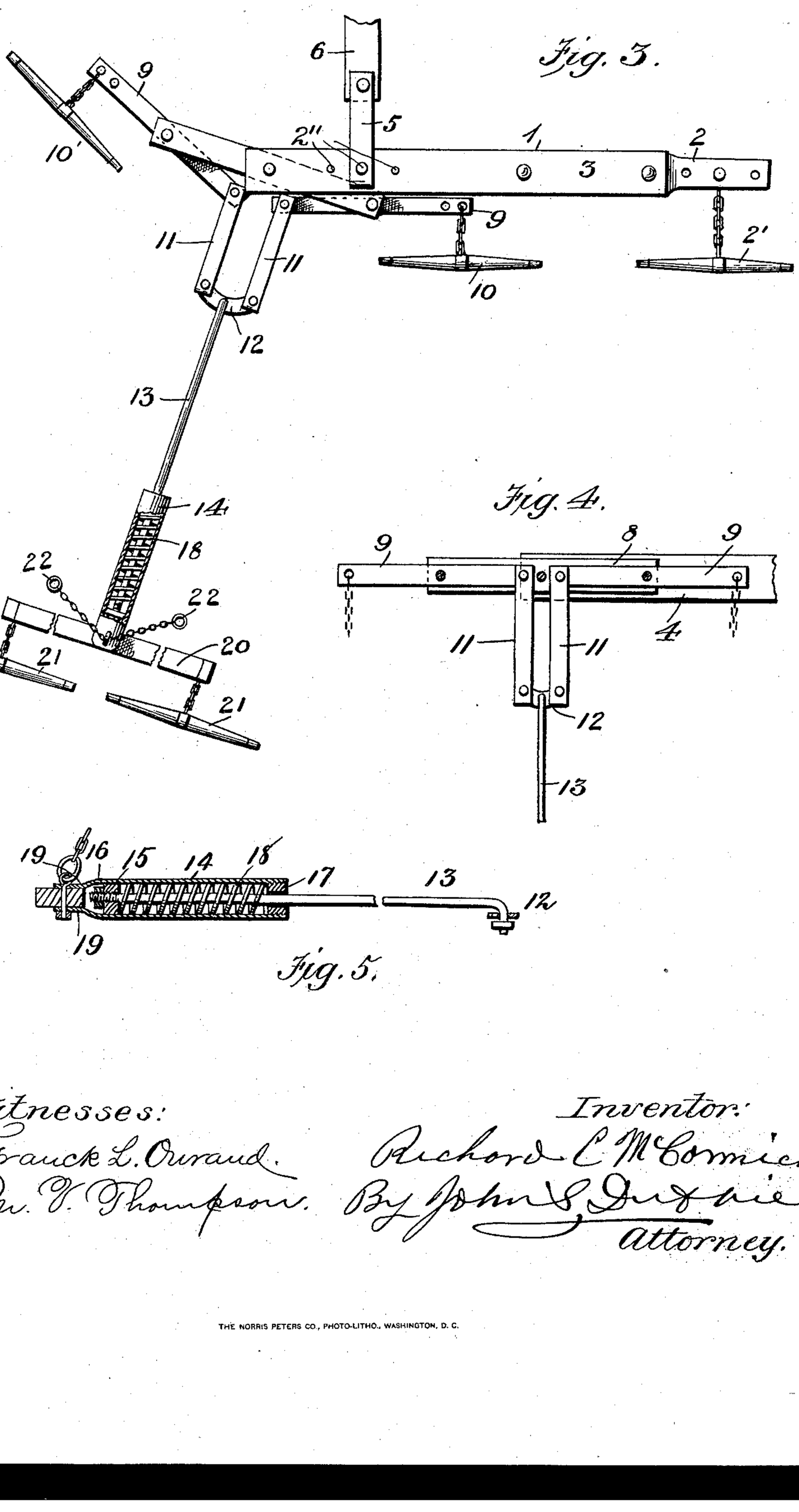

Fig. 3.

Fig. 4.

Fig. 5.

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UNITED STATES PATENT OFFICE.

RICHARD C. MCCORMICK, OF GRACEVILLE, MINNESOTA.

DRAFT-EVENER FOR GANG-PLOWS.

SPECIFICATION forming part of Letters Patent No. 656,565, dated August 21, 1900.

Application filed January 24, 1900. Serial No. 2,653. (No model.)

To all whom it may concern:

Be it known that I, RICHARD C. MCCORMICK, a citizen of the United States, residing at Graceville, in the county of Bigstone and State of Minnesota, have invented certain new and useful Improvements in Gang-Plow Draft-Eveners, of which the following is a specification.

My invention is a draft-equalizer and is intended to be used by four or five horses.

In the accompanying drawings, Figure 1 is a top plan view of my invention. Fig. 2 is a front edge view of the equalizing-beam, the equalizing doubletree and singletrees, the front part of the equalizer being cut away on the line X X of Fig. 1. Fig. 3 is a top plan view of my equalizer, partly in section and partly in perspective. Fig. 4 is a detail view showing a part of the under plate of the equalizer-beam and a view of the equalizer-doubletree, the levers 9, strips 11, cross-piece 12, and part of the rod 13, the upper piece 7 of the doubletree being removed. Fig. 5 is a detail view showing the lead-rod and spiral spring in perspective and the tube in section.

My invention is described as follows:

The equalizer-beam 1 consists of a beam of wood 2 or other material, having in its free end three perforations, to either of which may be secured a singletree 2′, and near its other end three other perforations 2″. Secured to the upper and lower faces of said beam are two plates 3 and 4. (See Fig. 2.) Near the left-hand ends of these plates are pivoted two strips 5 and 6 of sheet metal. Between the rear ends of these two strips of sheet metal may be pivotally bolted the forward end of the plow-beam 6. Between the extreme left-hand ends of these plates 3 and 4 is bolted a doubletree, consisting of an upper bowed strip 7 and a lower bowed strip 8, leaving between said two strips a considerable space, and between the two ends of these strips is pivoted a lever 9, and to the free ends of each of these levers is secured by a chain or otherwise a singletree 10, and to each of the other ends of said levers 9 is pivoted a strip 11, and between the front ends of these strips 11 is pivoted a cross-piece 12, and passing through a perforation in said cross-strip 12 is the rear end of a rod 13. Said rod 13 passes into a pipe 14, (see Fig. 5,) and on the forward end of said rod is a washer 15, and in front of the washer and on the rod 13 works a nut 16, and in the rear end of said pipe 14 is secured a short piece of pipe 17.

Working between the washer 15 and short piece of pipe 17 is a spiral spring 18. The pipe 14 has a forward extension, which I call "lips" 19, and between these lips 19 is pivoted a doubletree 20, and to each end of this doubletree is secured by a chain or otherwise a singletree 21, and to the upper face of the upper lip 19 are secured two breast-chains 22.

The operation of my equalizer is as follows: The plow-beam 6 is bolted between the strips 5, and the front end of these strips 5 may be pivoted to the equalizing-beam through either one of the perforations 2″. This is for the purpose of adjusting the equalization of the draft, as all the team is never of the same strength. One animal being stronger than the other the singletree 2′ may also be adjusted to either one of the perforations in the left-hand end of said beam. One horse is harnessed to the singletree 2, one horse to each of the singletrees 10, and one horse to each of the singletrees 21, making five horses in all.

I may work four horses by attaching the front end of the plow-beam 6 to the middle perforation of the doubletree. I adjust the equalizer to the relative strength of the animals; but this equalizer is primarily designed for five horses and I have used it to great advantage in breaking rough grounds.

The levers 9 are permitted to work back and forth between the upper and lower parts of the doubletree, and the rod 13 is also permitted to work back and forth in the tube 14 by means of the spiral spring 18. This yielding of these parts prevents certain jars which injure the shoulders of the horses and fatigue them and also relieves the operator from sudden jars, which shock and fatigue him, and thus a day's labor could be performed both by plowman and team with less fatigue than when using single and double trees that will not yield.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the perforated beam 2; perforated plates 3 and 4, secured to the

upper and lower faces of said beam, strips 5 and 6, pivoted near the right-hand ends of said strips; the doubletree, consisting of the upper and lower bowed pieces 7 and 8, pivoted between the right-hand ends of said strips 3 and 4, levers 9, one pivoted between each end of said doubletree, strips 11, one secured to each of the inner ends of said levers; perforated cross-piece 12, pivoted between the front ends of said strips 11; tube 14, provided with a short tube 17, and perforated lips 19; rod 13, one end working in the perforation of strip 12 and the other in the tube 14; washer 15, and nut 16, working on the front end of said tube; spiral spring 18, working around rod 13 and in tube 14, and between washer 15 and short tube 17; doubletree 20, pivoted between lips 19, the beam 1, levers 9 and doubletree 20, adapted to carry singletrees, substantially as shown and described and for the purposes set forth.

2. The combination of the perforated beam 2; perforated plates 3 and 4, secured to the upper and lower faces of said beam, strips 5 and 6, pivoted near the right-hand ends of said strips; the doubletree, consisting of the upper and lower plates 7 and 8, pivoted between the right-hand ends of said strips 3 and 4; levers 9, one pivoted between each end of said doubletree, singletrees 10, one secured to the outer ends of said levers 9; strips 11, one secured to each of the inner ends of said levers; perforated cross-piece 12, pivoted between the front ends of said strips 11; tube 14, provided with a short tube 17 and perforated lips 19; rod 13, one end working in the perforation of strip 12 and the other in the tube 14; washer 15 and nut 16, working on the front end of said tube; spiral spring 18, working around rod 13 and in tube 14, and between washer 15 and short tube 17; doubletree 20, pivoted between lips 19, singletrees 21, one secured to each end of said doubletree 20 and breast-chains 22, secured to the upper faces of one of the lips 19, substantially as shown and described and for the purposes set forth.

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

RICHARD C. McCORMICK.

Witnesses:
IGNATZ FROSINA,
EDWARD C. BAIRD.