

No. 627,470.

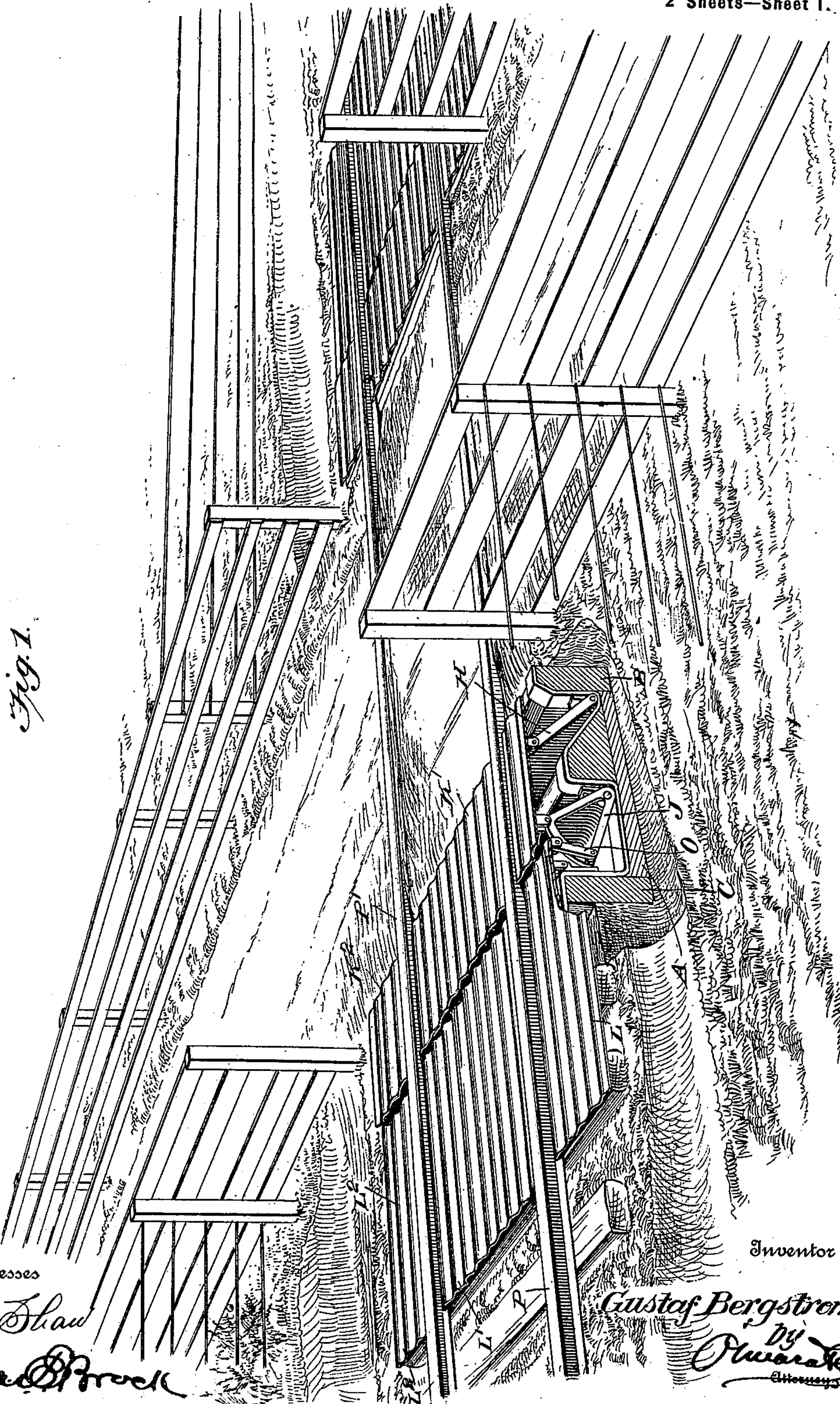
Patented June 27, 1899.

G. BERGSTROM.
CATTLE GUARD GATE.

(Application filed Nov. 23, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

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2 Sheets—Sheet 2.

Fig. 2.

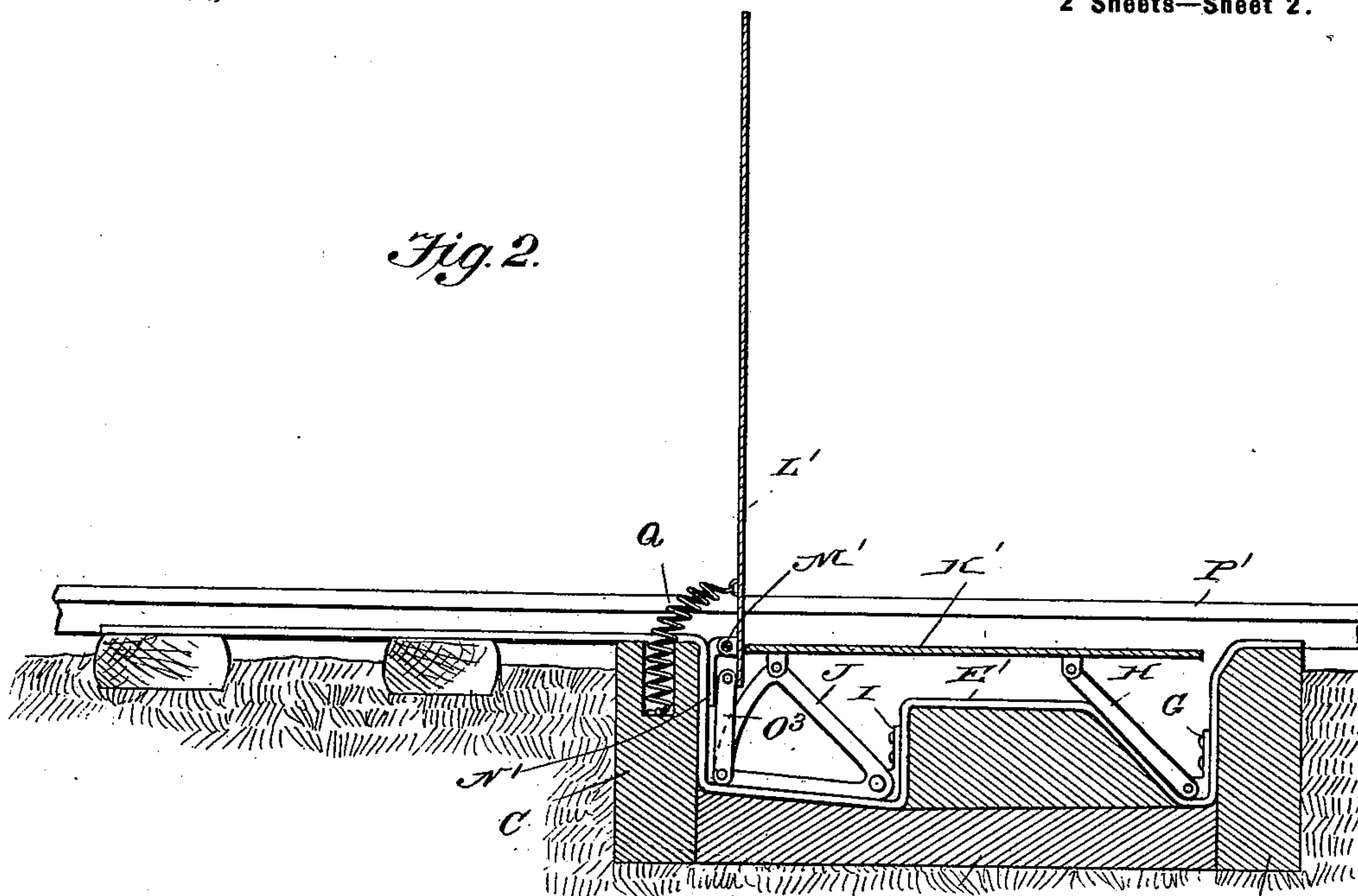


Fig. 3.

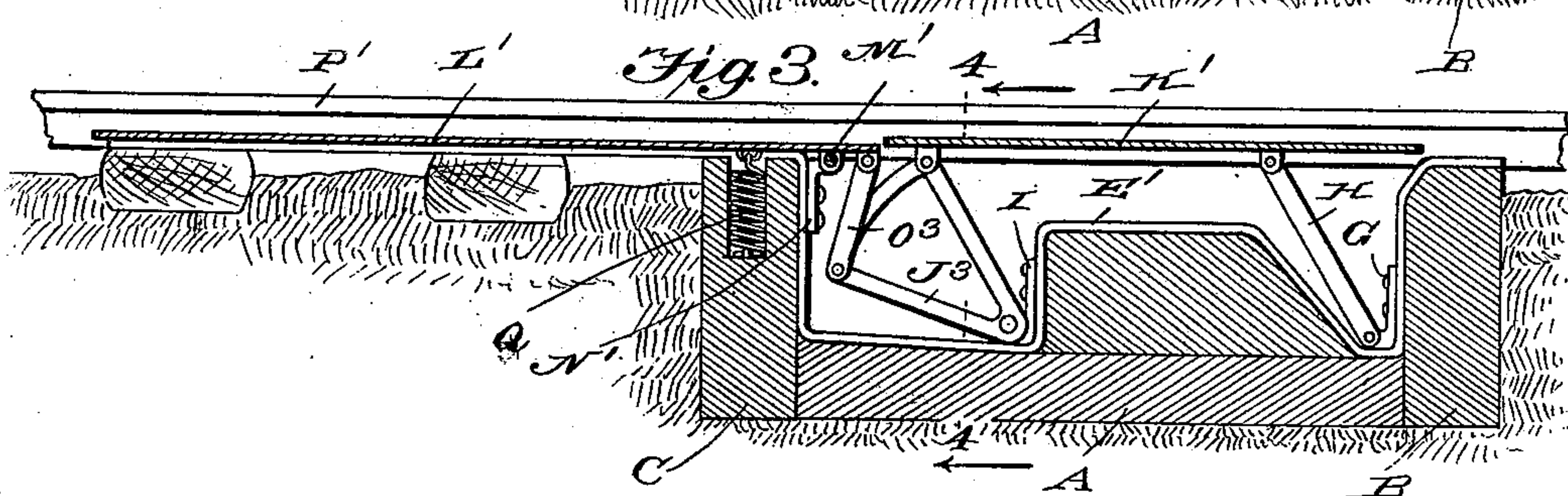


Fig. 4.

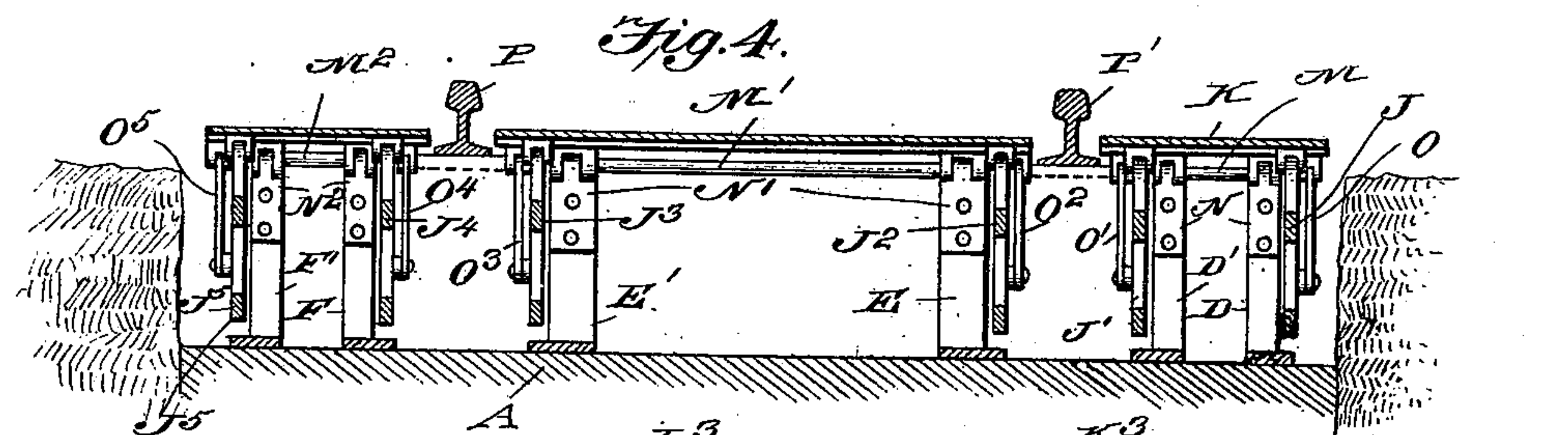
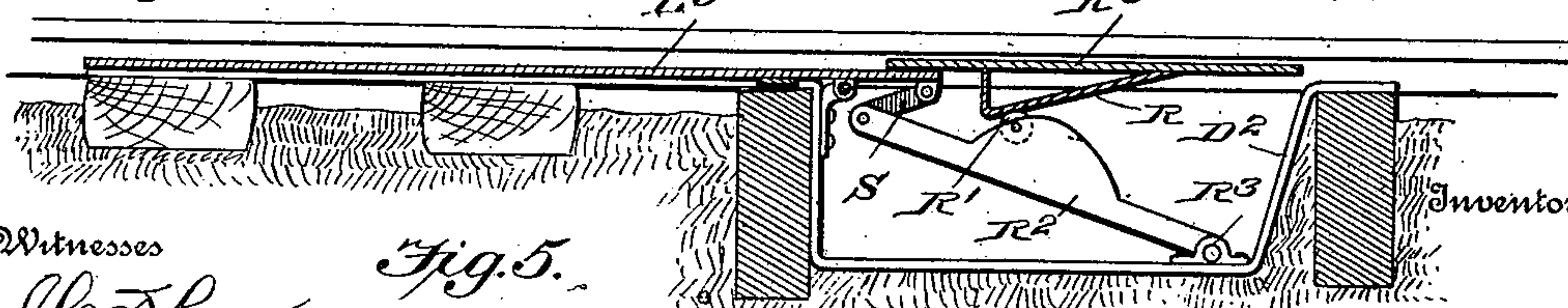


Fig. 5.



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UNITED STATES PATENT OFFICE.

GUSTAF BERGSTROM, OF REPUBLIC, MICHIGAN.

CATTLE-GUARD GATE.

SPECIFICATION forming part of Letters Patent No. 627,470, dated June 27, 1899.

Application filed November 23, 1898. Serial No. 697,301. (No model.)

To all whom it may concern:

Be it known that I, GUSTAF BERGSTROM, a citizen of the United States, residing at Republic, in the county of Marquette and State of Michigan, have invented a new and useful Cattle-Guard Gate, of which the following is a specification.

My invention relates to cattle-guard gates, and has for its object to provide an improved and easily-operated cattle-guard gate so constructed as to be raised into position to bar the passage of cattle by the act of the cattle in stepping upon a platform in advance of the gate.

With this object in view my invention consists in the improved cattle-guard gate and mechanism for operating the same, which will be fully described hereinafter, the specific points of novelty in which will be particularly pointed out in the claims appended hereto.

In order to enable others skilled in the art to which my invention most nearly appertains to make and use the same, I will now proceed to describe its construction and operation, having reference to the accompanying drawings, forming part hereof, in which—

Figure 1 is a perspective view illustrating my invention in position for practical operation, part of the structure and of the adjacent earth being removed to expose the interior operating mechanism. Fig. 2 is a vertical sectional view on a plane cutting through the ties of the track at right angles to their length and parallel with the rail, the platform being depressed and the gate standing. Fig. 3 is a similar view on the same plane, the platform being shown raised. Fig. 4 is a vertical section on a plane parallel with the cross-ties and transverse to the rails, as indicated by the dotted line 4 4 of Fig. 3. Fig. 5 is a sectional view on the same plane as Fig. 3, illustrating a somewhat modified construction.

Like letters of reference indicate the same parts wherever they occur throughout the various figures of the drawings.

In the drawing Fig. 1 I have illustrated my invention as applied at a railway-crossing, the fence being illustrated as left open at the points where the track crosses. My invention is illustrated as located in both fence-

openings, and inasmuch as the arrangement on each side of the road is a duplicate of the other a description of one will do for both.

In applying my invention an excavation is made transversely under the track alongside of the road, in which is placed a metallic or other suitable base or support A for the operating mechanism, beams B and C being mounted on edge at one end of the support. This support or base A extends entirely through the excavation, as indicated in Fig. 1, and is raised at its center to form a firmer support for bent metal bars D D', E E', and F F', which at their ends extend over and are secured upon the upper edges of the beams B and C. To the metal bar D is secured a bracket G, to which is pivotally attached a link H, and to a similar bracket I, also secured to the metal bar D, is pivotally secured at its apex a sector-shaped metallic frame J. To the bar D' are secured brackets, (not shown,) to which are pivoted a link, (not shown,) similar to the link H, and a sector-shaped frame J'. Pivotaly secured upon the upper end of the link H and its fellow and the two sector-shaped frames J and J' is a platform K. A gate L is pivotally secured by means of a horizontal rod M to brackets N, secured to the bars D and D', and links O and O' connect the short end of the gate L with the lower front corner of the sector-shaped frames J and J'.

The foregoing is the description of the platform K and gate L, which when the gate is down, as shown particularly in Fig. 1, lie in a horizontal position outside of the rail P of the track. A similar gate L' and platform K' lie between the rails P and P', and a similar gate L² and platform K² lie outside of the rail P'. The mechanisms for operating the gates L' and L² by means of the platforms K' and K² are similar to the mechanism described for operating the gate L and are partially shown in Fig. 4, the sector-shaped frames being marked J² J³ J⁴ J⁵, the links connecting them with the platform being marked O² O³ O⁴ O⁵, the brackets upon which the gate L' is swung being marked N', and those of the gate L² marked N², while the pivotal rods are respectively marked M' and M².

A description of the operation of one of the

gates and platforms will suffice for all and is as follows: A horse, cow, or other animal turning out of the roadway upon the track will step upon one of the platforms, as K, which will depress the platform, carrying downward with it the links and sector-shaped frames upon which it is pivotally mounted, the downward movement being stopped when the sector-shaped frames and links come into contact with the metal supporting-bars. The downward movement of the sector-shaped frames by means of the links O and O' will draw the short end of the gate L downward and throw its long end upward, the parts being illustrated at the end of their movements in Fig. 2. In this position the gate L will be directly in the path of the horse or other animal while the weight of the animal is imposed upon the platform K, which will cause the animal to turn back into the roadway again instead of walking along the track. As soon as the animal steps off the platform K the gate L will be returned to its horizontal position and will be assisted in this motion by a spring Q. While falling the gate will draw the sector-shaped frames J and J' upward, and thus raise the platform to its original position ready for another operation. In the act of stepping upon either of the platforms K' or K² the animal will operate the gate L' or L² in the same manner, so that it will be impossible for an animal straying off the roadway to pass along the railway-track on account of the obstruction which its own action raises in front of it. The platforms and gates may be made of any suitable material, although possibly the material illustrated—namely, corrugated metal—will be the best for general reasons.

In Fig. 5 I have illustrated a modification in which I show a platform K³ and gate L³, the platform being mounted in a horizontal position and provided with an inclined plane R on its under side facing downward in contact with a roller R', journaled in the upper face of a long bar or link R², pivoted in a bracket R³, secured in metal bars D². The outer end of the bar or link R² is connected by a short link S with the gate L³. An animal stepping upon the platform K³ will cause the bar or link R² to be depressed, carrying down the short end and carrying up the long end of the gate L³, substantially in the same manner before described, the roller R' in its bearing

against the inclined plane R serving to reduce friction and make this action easy.

When desired, the three gates may be pivoted by means of a single pivotal rod passing from one end of the excavation to the other, in which case an animal stepping upon either of the platforms will raise all three of the gates.

While I have illustrated and described the best means now known to me for carrying out my invention, I do not wish to be understood as restricting myself to the exact details of construction shown, but hold that any slight changes or variations, such as might suggest themselves to the ordinary mechanic, would be clearly comprehended within the limit and scope of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination with the platform mounted upon the upper ends of pivotal links and pivotal sector-shaped frames, of a gate pivoted in a normally horizontal position, and a link connecting the short end of the gate with the lower corner of the sector-shaped frames, substantially as described.

2. The combination with a platform mounted upon the upper ends of pivotal links and pivotal sector-shaped frames, between the rails of a railway-track and a similar platform similarly mounted outside of each rail, of gates pivoted in corresponding normally horizontal positions, and a link connecting the short end of each gate with the lower corner of the sector-shaped frames, substantially as described.

3. The combination with a suitable support, of metal bars mounted thereon, brackets on the metal bars, links and sector-shaped frames pivoted to the brackets, a platform pivotally connected to the upper ends of the links and sector-shaped frames, a gate pivoted in a normally horizontal position with its short end projecting over the sector-shaped frames, links for connecting said short ends and frames, and a spring for normally holding the gate in its lowered or horizontal position, substantially as described.

GUSTAF BERGSTROM.

Witnesses:

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