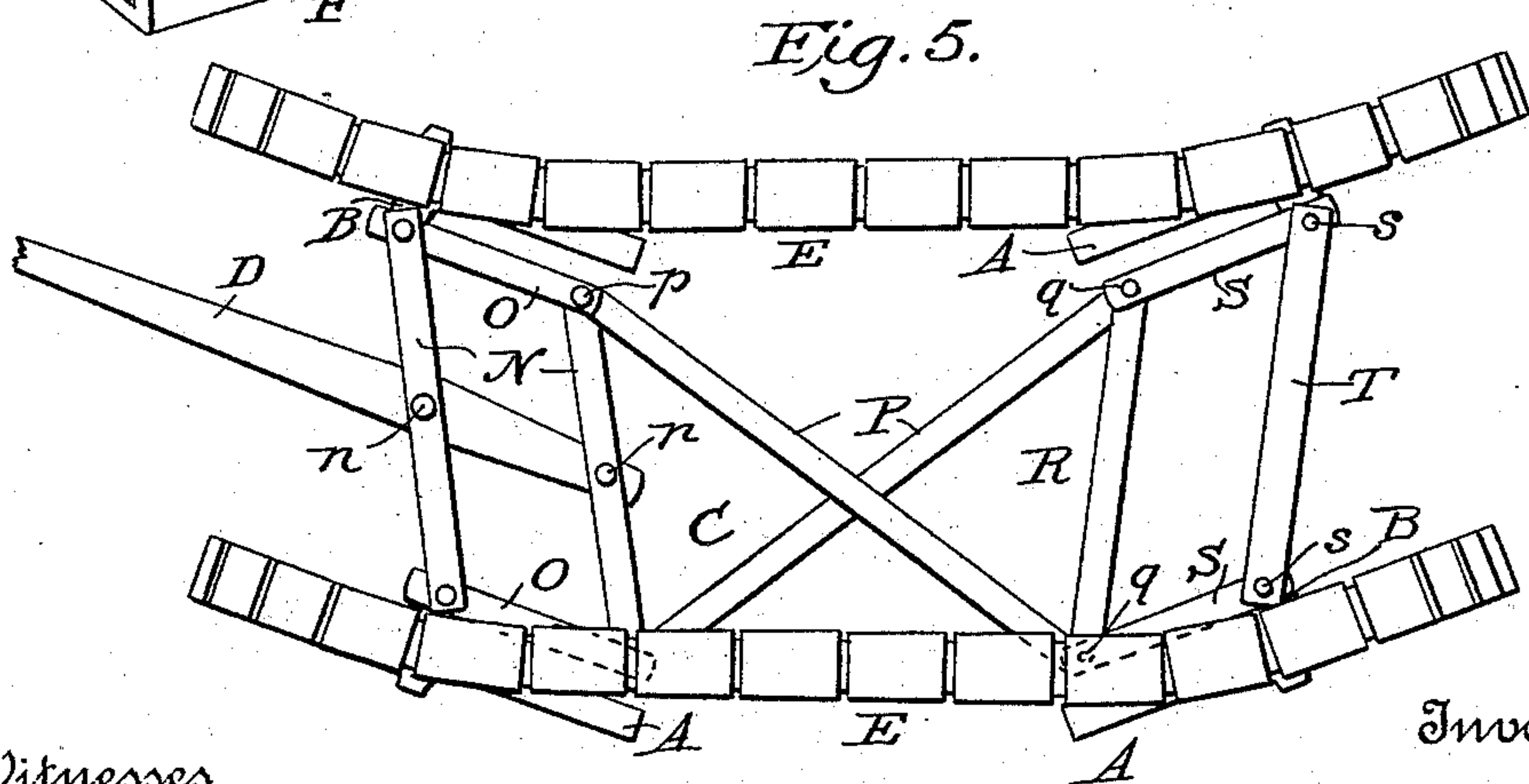
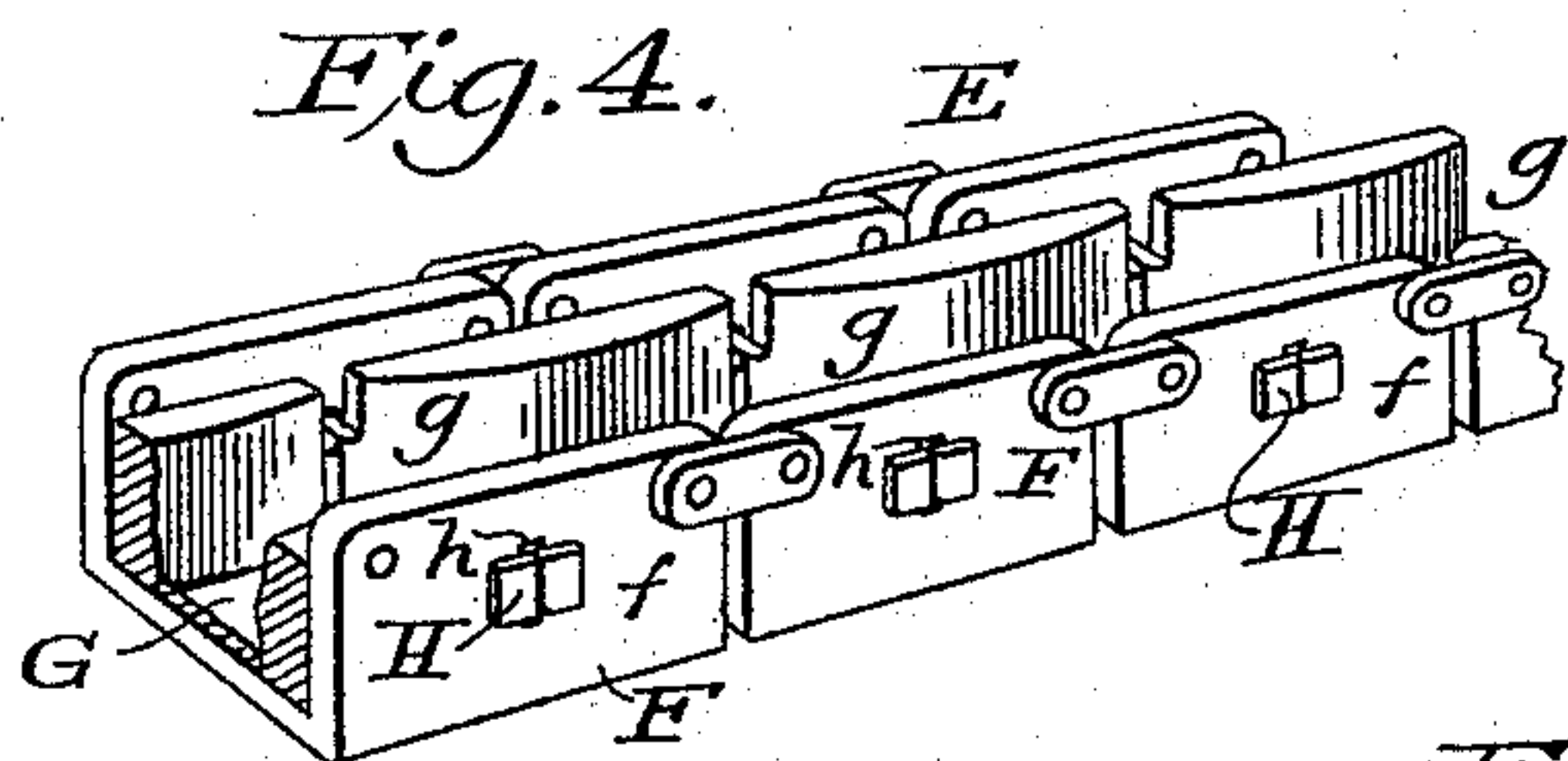
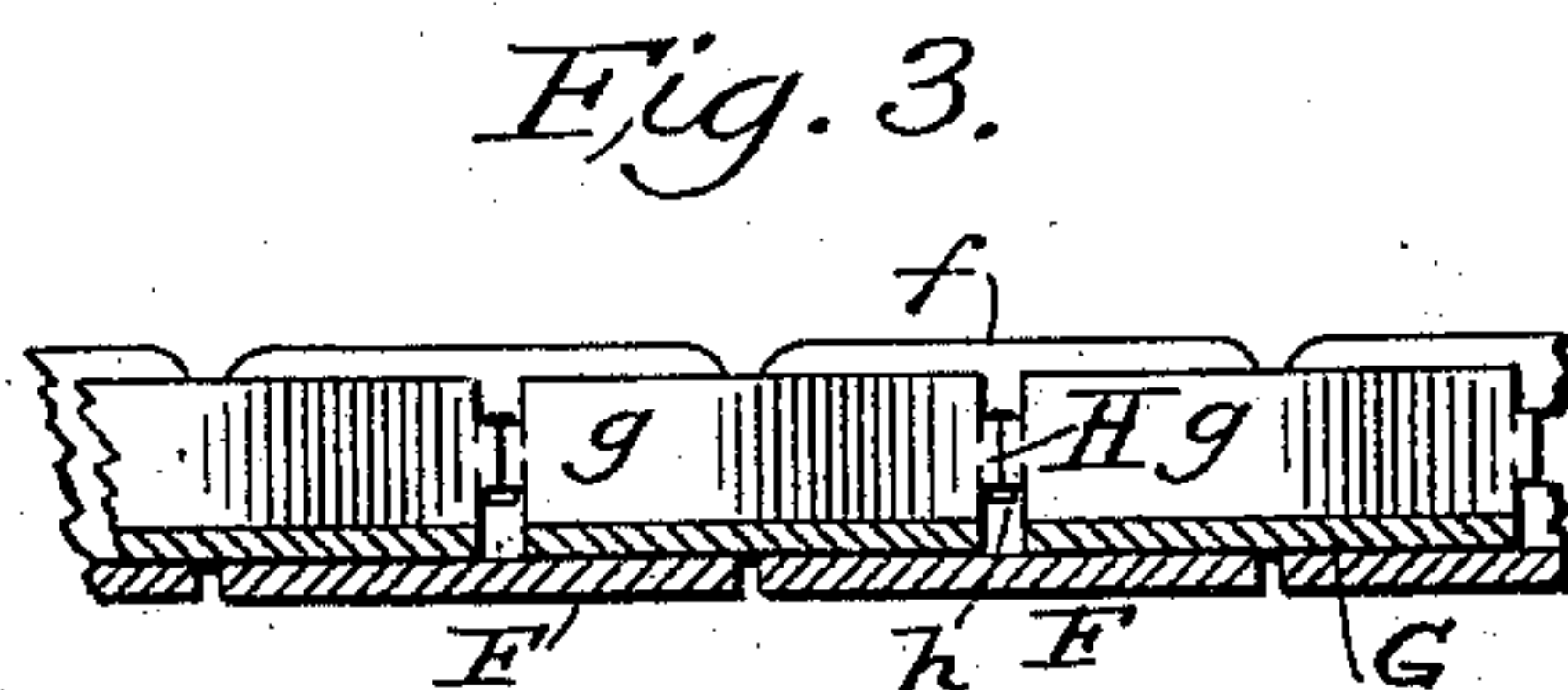
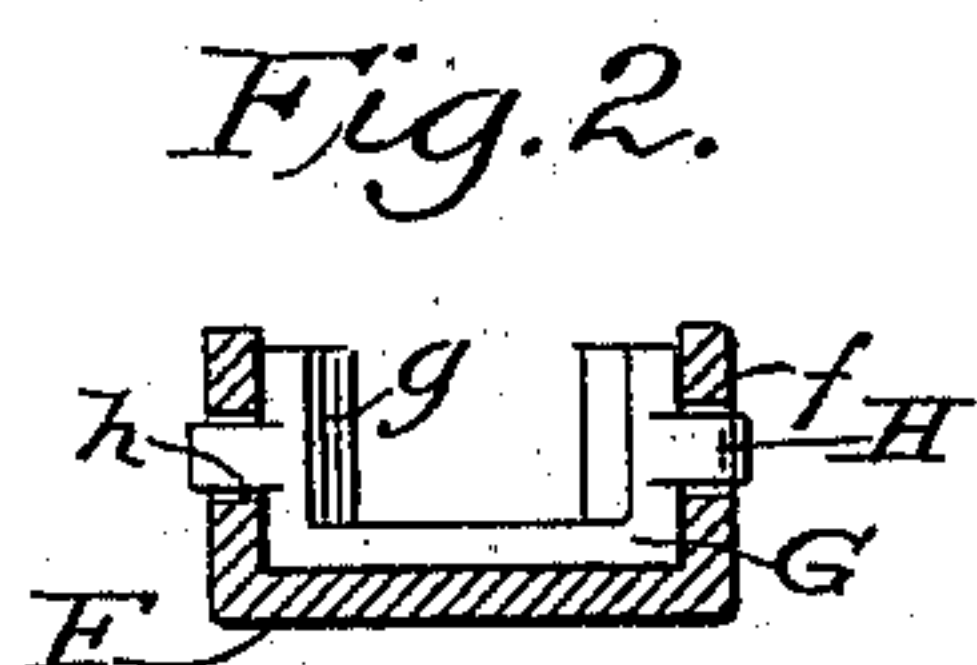
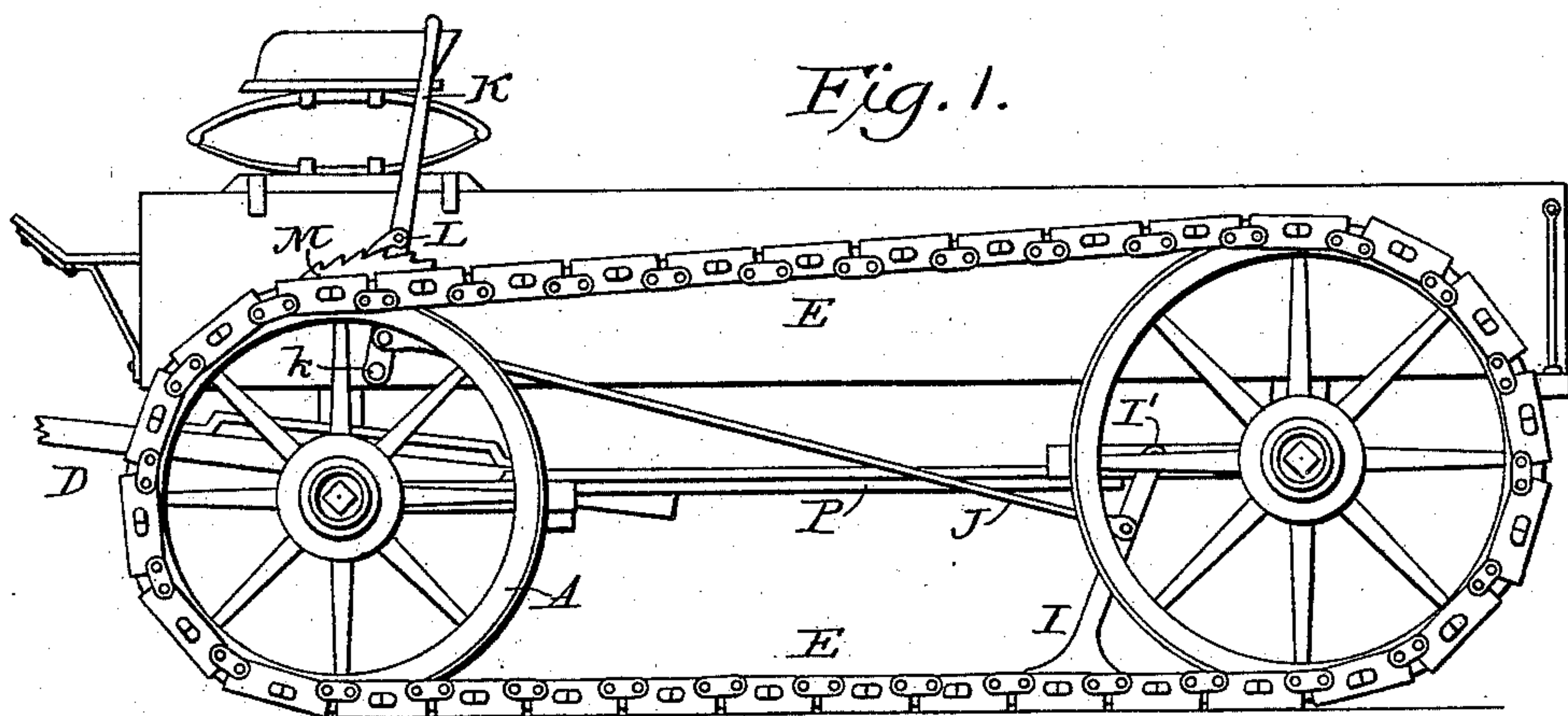


(No Model.)

J. A. JUSTICE.
TRACTION WHEEL.

No. 578,932.

Patented Mar. 16, 1897.



Witnesses

James F. Duhamel.
K. A. Nair.

Inventor

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UNITED STATES PATENT OFFICE.

JAMES A. JUSTICE, OF MACEY, ARKANSAS.

TRACTION-WHEEL.

SPECIFICATION forming part of Letters Patent No. 578,932, dated March 16, 1897.

Application filed June 3, 1896. Serial No. 594,069. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. JUSTICE, a citizen of the United States, residing at Macey, in the county of Craighead and State of Arkansas, have invented certain new and useful Improvements in Traction-Wheels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful improvements in traction-wheels and traction-engines; and it has for its object, among others, to provide a simple and cheap construction whereby the wheels carry their own track or path which is of novel construction, so arranged as to prevent slipping of the wheels and yet permitting of ready turning of the wagon when desired. The chains, which are endless and within which the wheels travel, are composed of an inner and an outer section or track, the one arranged within the other, the wheels traveling within the inner one and the outer one adapted to travel upon the ground. In this way the wheels are kept from contact with the ground, and the outer track may be as wide as may be desired, while the inner track is of a width that will just allow the wheels to travel therein and prevent lateral movement thereof.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is an elevation of my improvement. Fig. 2 is a vertical cross-section. Fig. 3 is a vertical longitudinal section through one of the chains. Fig. 4 is an enlarged detail of a portion thereof. Fig. 5 is a plan view showing a construction of frame which permits the wagon to be turned without slackening or tightening either chain.

Like letters of reference indicate like parts in the several views.

Referring now to the details of the drawings by letter, A designates the wheels; B, the axles; C, the truck-frame, and D the draft ap-

pliance of any well-known or approved form of construction.

E are the chains, which are constructed as shown.

F are the outer links, having the flanges *f* at the sides, the tread of which may be as wide as desired.

G are the inner links, which are provided with the flanges *g*, which are convex upon their adjacent faces, so that the opposite ends of the space inclosed thereby will be flared to better receive the wheel, and the space between the central points of the flanges is substantially the same width as the wheel, so that the latter will readily enter into the space between the flanges and be held against sidewise movement therein. These inner links are provided at their ends with the extensions H, which are passed through openings *h* in the outer flanges F and are then bent in opposite directions, so as to hold the inner links to the outer links, so as to constitute a double flexible chain, the outer links being designed for travel upon the ground and the inner links to receive the wheels upon which they run. These chains are made endless, as shown, and of course travel with the wagon. They may be made sufficiently long to allow of ready turning of the vehicle.

I is a brake-shoe which travels in the inner chain, being pivotally mounted on the truck-frame, as seen at I', and connected by a rod J with the brake-lever K, pivotally mounted, as at *k*, and carrying a pawl L, adapted to engage a notched segment M on the frame. This brake serves also as a plow to throw out mud, gravel, or other refuse that may fall in the track or chain, as will be readily understood.

Modifications in details may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

In Fig. 5 I have shown a construction of frame which permits of the turning of the wagon without slackening or tightening either chain. In this view the front cross-bars N have pivotally connected together at their centers, as at *n*, the tongue or draft appliance D. The opposite ends of these bars N are pivotally connected by the bars O, while to the end of the rear bar N are pivotally con-

connected, as at *p*, the cross-bars *P*, which constitute the reaches, their rear ends being pivotally connected, as at *q*, to the ends of the bar *R*, the ends of which are also pivotally
5 connected to the bars *S*, which at their rear ends are pivotally connected, as at *s*, with the rear cross-bar *T*, the bar *T* and the front bar *N* being supported from the bolster and receiving the axles in any suitable manner.

10 Having thus described the invention, what is claimed as new is—

1. In a traction-engine a chain composed of inner and outer sections, the outer one forming a track and the inner one a path on which
15 the wheels travel, combined with a brake-shoe arranged within the inner section, substantially as described.

2. A chain for a traction-vehicle comprising outer links having flanges and inner links of
20 less width having their ends connected with the outer links and their flanges convex upon their adjacent faces, with the flanges of the inner links disposed opposite the spaces between the outer links, substantially as de-
25 scribed.

3. A chain for a traction-vehicle comprising outer links having flanges and inner links of less width having their ends connected with the outer links and their flanges convex upon their adjacent faces, combined with a shoe
30 pivotally mounted on the frame and traveling within the inner section of the chain, substantially as described.

4. A chain for the purpose described, comprising outer links having flanges and inner
35 links of less width having flanges which are convex on their adjacent faces and extensions passed through transverse slots in the body portions of the outer links and bent in opposite directions to flexibly connect the inner
40 and outer links to form a double chain, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES A. JUSTICE.

Witnesses:

PETER COOPER,
JOE. MOORE.