

O. HYDE.
Traction Wheels.

No. 138,404.

Patented April 29, 1873.

Fig. 1

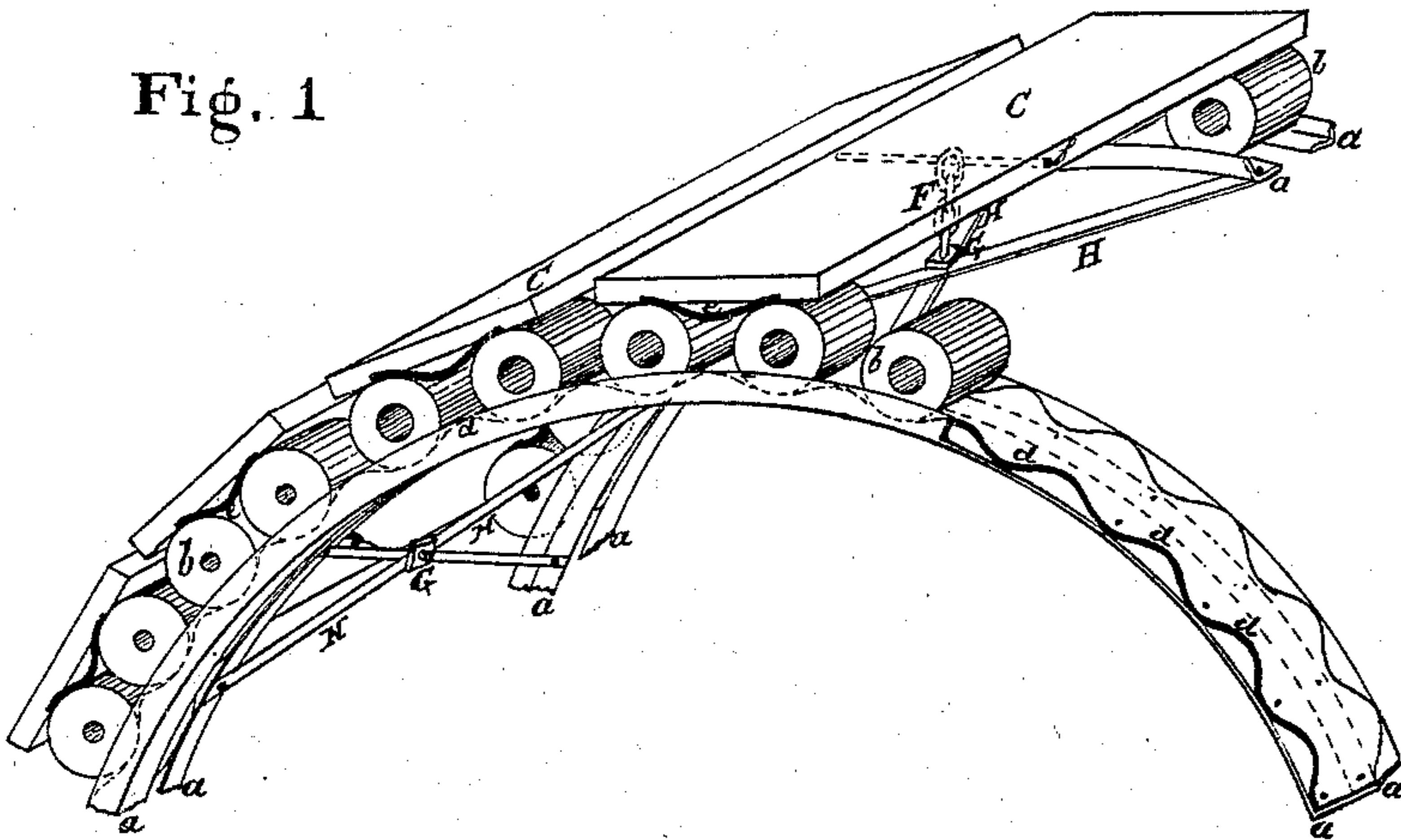
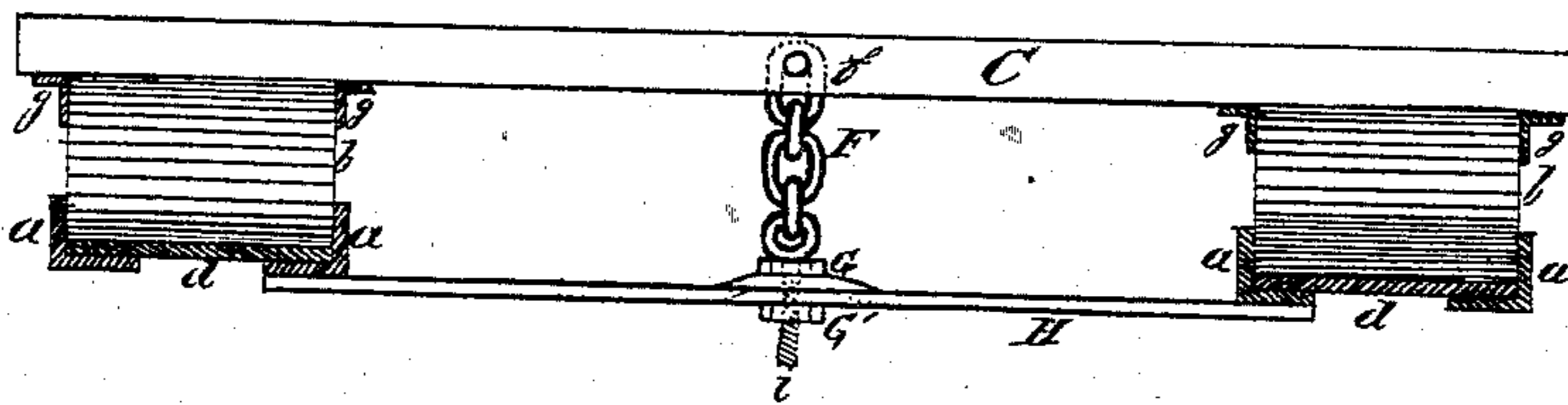


Fig. 2



Witnesses

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UNITED STATES PATENT OFFICE.

OLIVER HYDE, OF OAKLAND, CALIFORNIA.

IMPROVEMENT IN TRACTION-WHEELS.

Specification forming part of Letters Patent No. **138,404**, dated April 29, 1873; application filed February 28, 1873.

To all whom it may concern:

Be it known that I, OLIVER HYDE, of Oakland, county of Alameda, State of California, have invented an Improved Traction-Wheel; and I do hereby declare the following description and accompanying drawing are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvement without further invention or experiment.

My invention relates to an improved method of applying rubber tires to traction-wheels, which, it will be found, is an improvement upon the Letters Patent No. 117,174, which were granted to me on the 18th day of July, A. D. 1871.

In order to explain my invention so that others will be able to comprehend the same, reference is had to the accompanying drawing forming a part of this specification, in which—

Figure 1 represents a view, in perspective, of a section of the wheel. Fig. 2 represents a transverse section of the rim and tire.

In my Letters Patent No. 117,174, dated July 18, A. D. 1871, the rim of the wheel is represented as having transverse channels or corrugations, with curved bottoms, extending entirely across the face of the wheel, in which I placed my elastic rolls or cylinders; but in the present instance two or more narrow channels, *a a*, are made, which extend entirely around the wheel, the bottoms *d* of which are corrugated or fluted transversely, as shown, thus forming a series of narrow chambers with circular bottoms for receiving the elastic rolls or cylinders. The rolls or cylinders *b b* are consequently made narrow, or of the proper width to fit in the chambers and rest upon the circular bottom, thus providing two or more series of rows of elastic cylinders, which entirely surround the wheel. The shoe *U* is of sufficient size to extend across from one row to the other and bear upon four or more of the rolls; or it may extend to more than two of the rows, if found desirable; and in order to prevent displacement a trough, *g g e*, is formed on its under side, immediately over the cylinders, which are provided with chambers having corrugated bottoms to correspond with the chambers be-

low. When the shoe is in place the upper portion of the cylinders rest in this trough *g g e*, in the manner above described for the lower one. The shoe *C* can be made of wood, metal, or any other suitable material. An eye, *f*, is secured to the under center of the shoe, with which one or more links, *F*, connect; and the lowest link is connected with an eyebolt, *i*, which passes down through the rim-plate *H* of the wheel between the troughs or channels *a a*. This eyebolt is secured to the plate *H* by means of two nuts, *G G'*, one of which is screwed upon the bolt before passing it through the plate, and the other afterward, so that when the two are screwed together they bind the plate between them and hold the eyebolt firmly in place.

This arrangement provides a flexible connection for the shoe, connecting its center with the wheel, so as to allow it to vibrate and move upon the cylinders in accordance with the pressure upon it; and the nuts *G G'* permit the block to be compressed upon the cylinders, as desired.

When the shoe is made of wood a link will be substituted for the eye *f*; and in order to attach it a hole will be made through the center of the shoe or block, into which the end of the link will be inserted from below. A rod or bolt will then be run horizontally through the block, so as to pass through the hole and link, and thus secure it in place.

Any desired number of channels or troughs *a a* can be employed upon the face of the wheel, and each shoe can cover more or less of the cylinders, according to the nature of the ground upon which it is to travel and the work which it is to perform.

In place of the elastic cylinders *b b*, round elastic balls could be used, in which case the socket in which they fit will be made to correspond to their shape.

By this arrangement I combine all of the advantages of an elastic tire with economy, durability, adaptability, and strength.

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

1. A traction-wheel having its rim provided

with one or more parallel troughs or channels, *a a*, the bottoms of which are formed into concave beds for the reception of elastic cylinders *b b*, substantially as and for the purpose above described.

2. The shoe C with its parallel channels or troughs *g g e* arranged to provide a bearing for four or more of the elastic cylinders, and attached to the wheel by a flexible connection from its center, substantially as and for the purpose above described.

3. In combination with the shoe of a traction-wheel, the eye *f*, links F, and eyebolts *i*,

with its nuts G G', substantially as and for the purpose above described.

4. The troughs *a a*, separated by the plate H, in combination with the elastic cylinders or rolls *b b* and shoe or block C, with its troughs *g g*, all arranged in the manner and for the purpose above described.

In witness whereof I hereunto set my hand.
OLIVER HYDE.

Witnesses:

JNO. L. BOONE,
C. M. RICHARDSON.