

(No Model.)

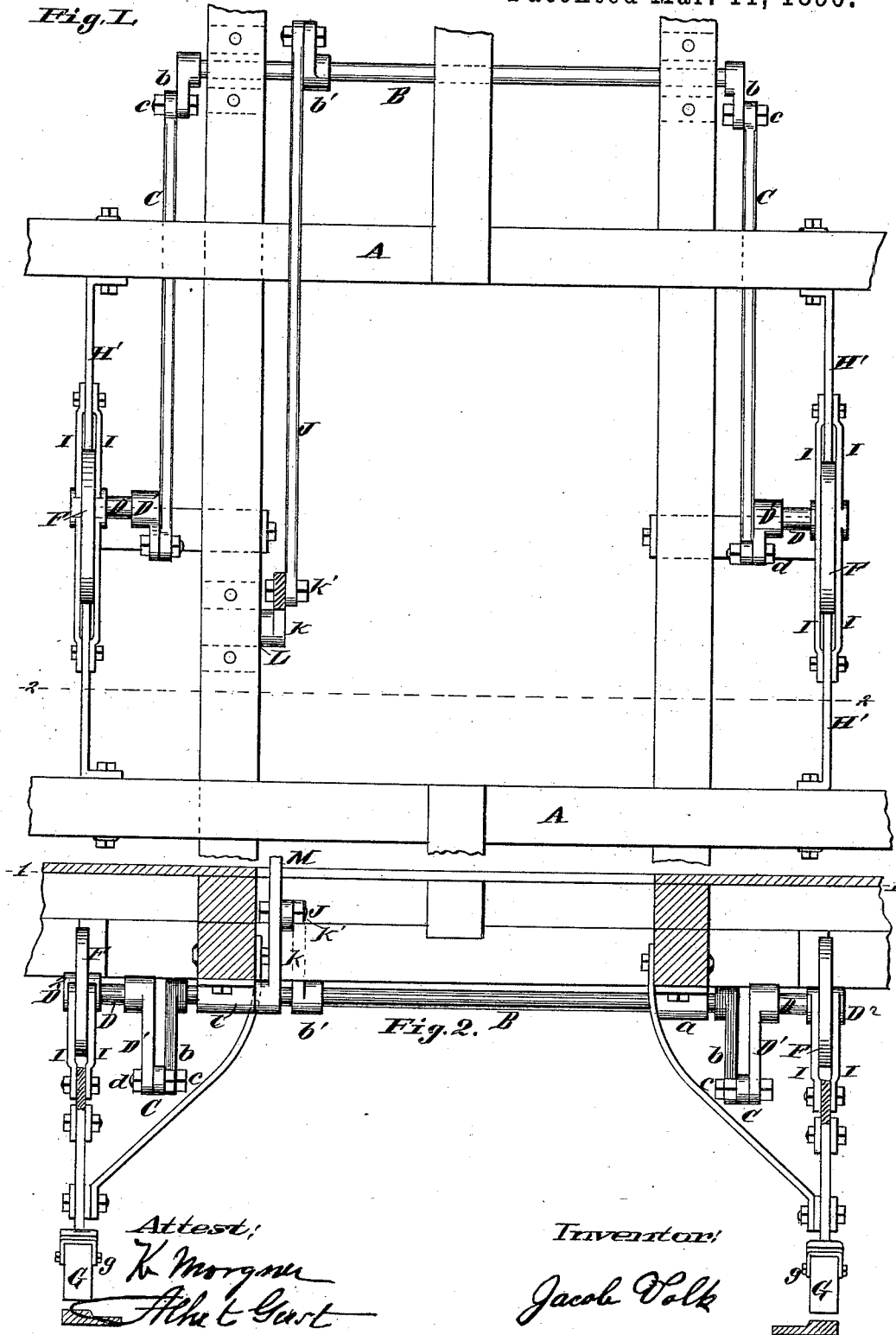
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J. VOLK.
TRACK BRAKE.

No. 423,294.

Patented Mar. 11, 1890.

Fig. I.



Attest;

49 K Morgan
Alfred Gert

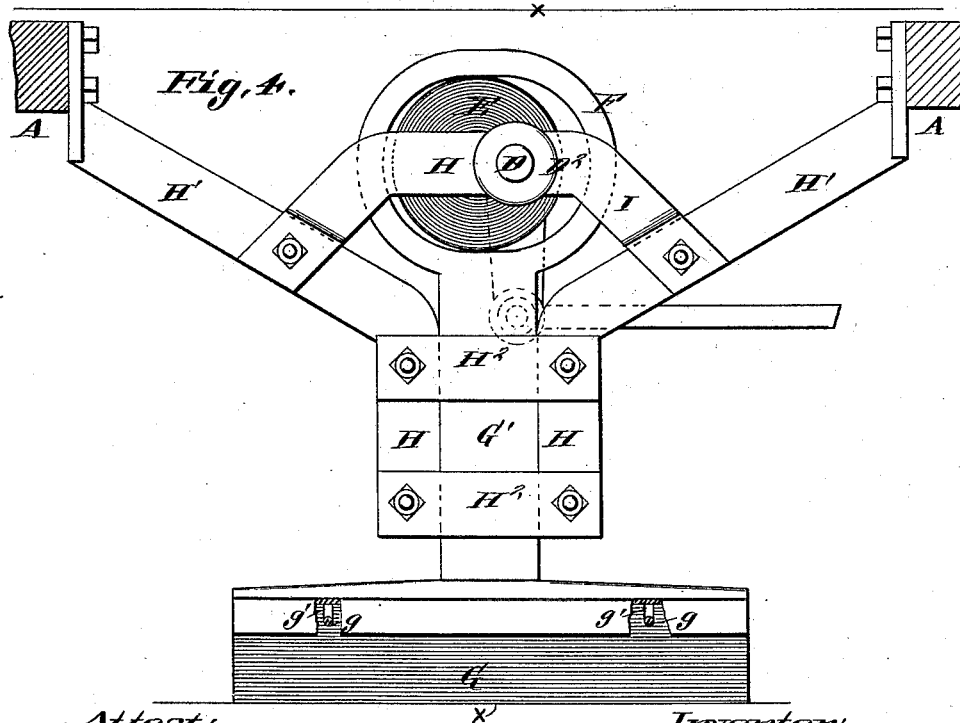
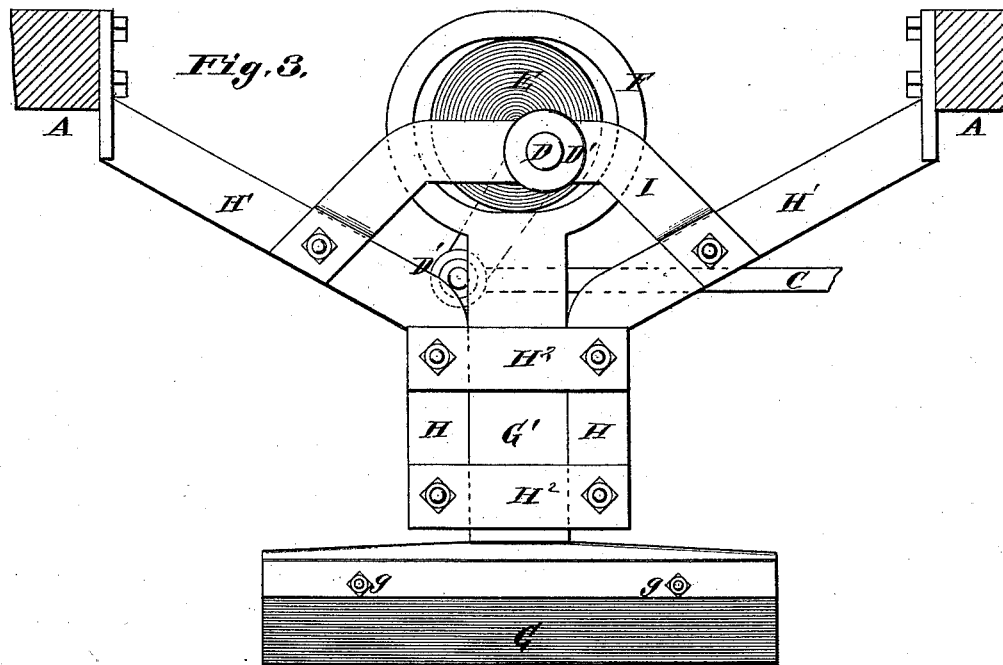
Inventor:

Jacob Volk

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Attest:
K. Morgan
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Inventor:
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UNITED STATES PATENT OFFICE.

JACOB VOLK, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE VOLK CABLE CROSS-
ING GRIP AND CAR BRAKE COMPANY, OF CHICAGO, ILLINOIS.

TRACK-BRAKE.

SPECIFICATION forming part of Letters Patent No. 423,294, dated March 11, 1890.

Application filed July 27, 1889. Serial No. 318,881. (No model.)

To all whom it may concern:

Be it known that I, JACOB VOLK, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain
5 new and useful Improvements in Track-Brakes; 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
10 use the same.

This invention relates to car-brakes which are applied to the track; and the object of said invention is to secure therein the utmost attainable efficiency with the greatest sim-
15 plicity, strength, and cheapness. This object I attain by the construction and combination of parts, hereinafter particularly set forth and claimed.

In the accompanying drawings, Figure 1 represents a plan view of my improved brakes and brake-operating mechanism with the proximate parts of the car-frame. Fig. 2 represents a vertical transverse section through the latter, showing the brakes and their operating mechanism in elevation. Figs. 3 and
25 4 represent one of the brake-shoes and the proximate operating devices in side elevation, the former showing the brake raised above the level of the rail and the latter showing it forced down thereon.

In the said drawings, A designates a part of the frame-work of the car, which is provided underneath with bearings *a*, in which a transverse rock-shaft B is journaled. Be-
35 yond these bearings on each side the said shaft is provided with crank-arms *b*, to each of which a connecting-rod C is attached at one end by bolt *c*, with freedom of motion thereon. The other end of said connecting-rod in each instance is similarly attached by
40 bolt *d* to a crank-arm D' of a short shaft D, extending outward to a point over the rail and rocking with shaft B. The two shafts D and the parts attached thereto are identical in construction, arrangement, and operation
45 on the two sides of the car. Each shaft D is supported in a bearing D², fastened, as hereinafter described, indirectly to the under side of car-frame A, and carries an eccentric E,
50 turning in a yoke F, to raise and lower the latter in the vertical longitudinal plane with

the rail on that side. From said yoke a long track-brake shoe G is suspended by means of a stout bar or shank G'. This brake-shoe may be in one piece; but I prefer to make it
55 in two pieces of different material, connected by pins *g* in the one part and slots *g'* in the other part, as shown in Fig. 4. This enables me to withdraw and replace the lower part when worn or broken without removing the
60 part attached to the shank. The lower part of said shoe has most of the wear and should be very strong and durable. It fits on the rail and is of considerable length.

The guide for the shank G' of the brake-
65 shoe consists of two parallel vertical bars H, having their upper ends H' constructed to incline and diverge and bolted to frame A of the car, also of stout horizontal straps H², extending across from one of said vertical
70 bars H to the other. A bent brace-strap I extends from the inclined part H' of one of said bars H to the corresponding part of the other bar H, and is provided near its middle with one of the bearings D², before mentioned, for
75 the support of the nearer shaft D. The main shaft B is provided with a third crank-arm *b'* at a point between the crank-arms *b* aforesaid, but preferably nearer one of them than the other. From this crank-arm *b'* a connect-
80 ing-rod J extends to a crank-arm *k* on a shaft L, journaled in a bearing *l*, attached to frame A, the attachment of said connecting-rod to said crank-arms being by bolts *k'*, which al-
85 low motion of said rod on them to prevent binding as said shafts rock backward or forward. The short shaft L is provided with a hand-lever M. By moving this hand-lever in one direction the shoe is raised from the rail,
90 as in Fig. 3. By moving said lever in the other direction the shoe is forced down to the rail, as in Fig. 4. In these two figures the line X indicates the level of the top of the rail. In either instance the motion is trans-
95 mitted through the shafts, connecting-rods, eccentric, and yoke, hereinbefore described, operating in accordance with their known and obvious function. The short shafts D D
100 L are not absolutely necessary, though preferred and convenient, since the eccentrics and hand-lever might be mounted on the main shaft B with no change of construction

beyond discarding the superfluous short shafts, connecting-rods, and bolts. In either case the two brake-shoes are operated simultaneously and equally.

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

10 1. In combination with rock-shaft B, the smaller rock-shafts D D L and their connecting-rods, the eccentrics carried by shafts D, the yokes in and with which said eccentrics operate, the shoes raised or lowered simultaneously by the action of said eccentrics and yokes, and means for rocking said shaft B, substantially as and for the purpose set forth.

15 2. In combination with a vertically-movable brake-shoe and its shank and yoke, a shaft

carrying an eccentric which turns in said yoke to raise and lower said shoe, means for rocking said shaft, a pair of bars extending downward from the car-frame partly parallel to said shank and provided with cross-straps to form a guide therefor, and a brace-bar extending from the upper part of one of said downwardly-extending bars to the other and 25 provided with a bearing for said shaft, substantially as set forth.

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

JACOB VOLK.

Witnesses:

ALBERT GERST,
K. MORGNES.