No. 792,754. PATENTED JUNE 20, 1905.

C. BRANDT.

RAILROAD VELOCIPEDE.

APPLICATION FILED SEPT. 10, 1904.

2 SHEETS—SHEET 1.

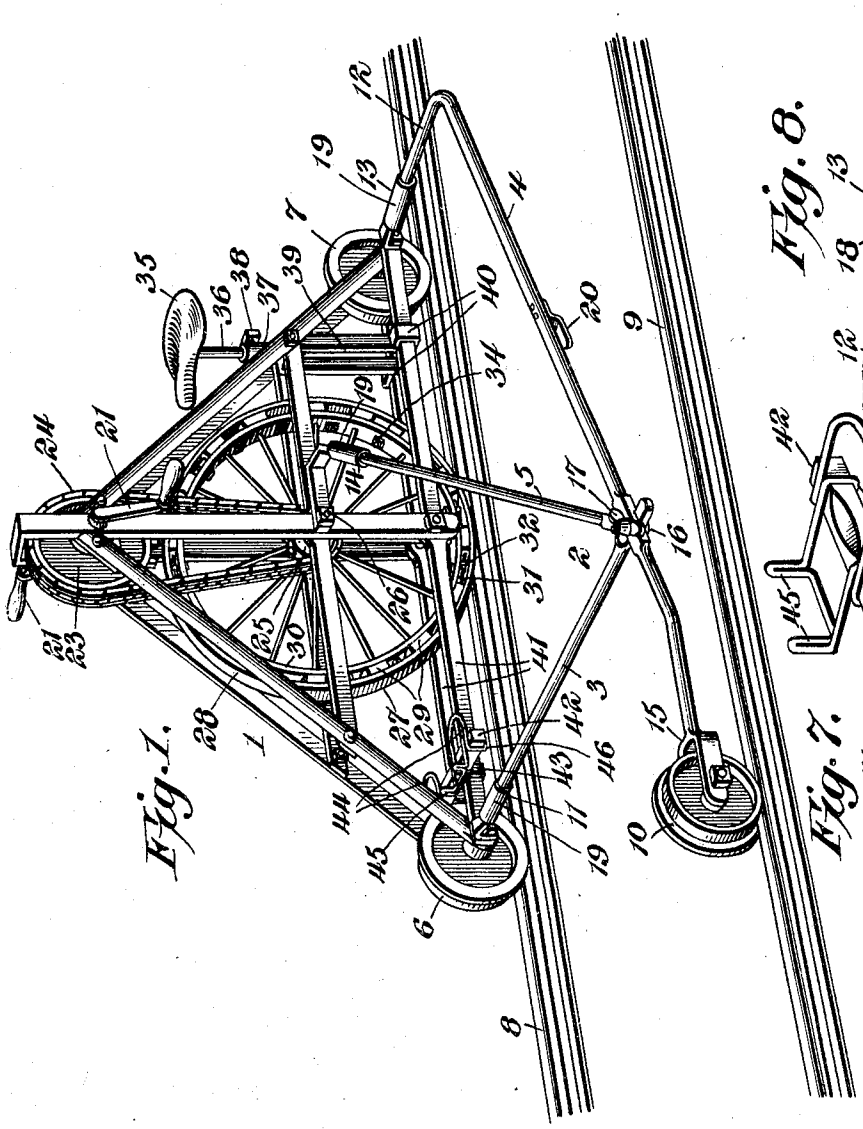

Fig. 1.

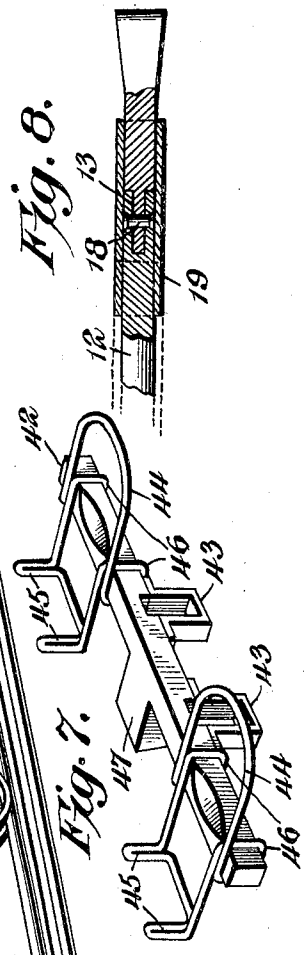

Fig. 8.

Fig. 7.

Witnesses

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2 SHEETS—SHEET 2.

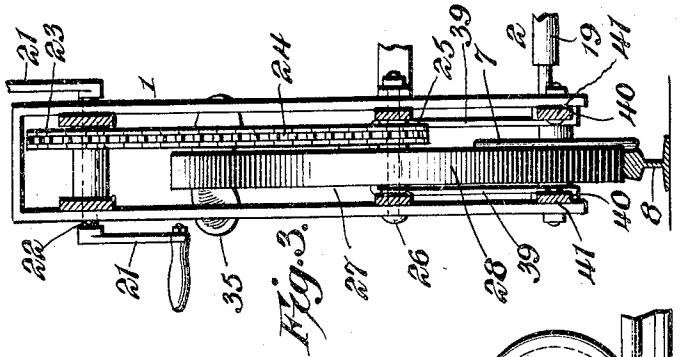

Fig. 3.

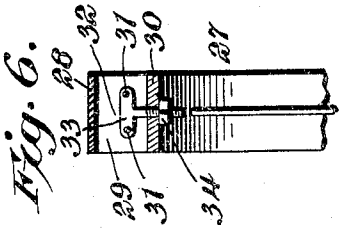

Fig. 6.

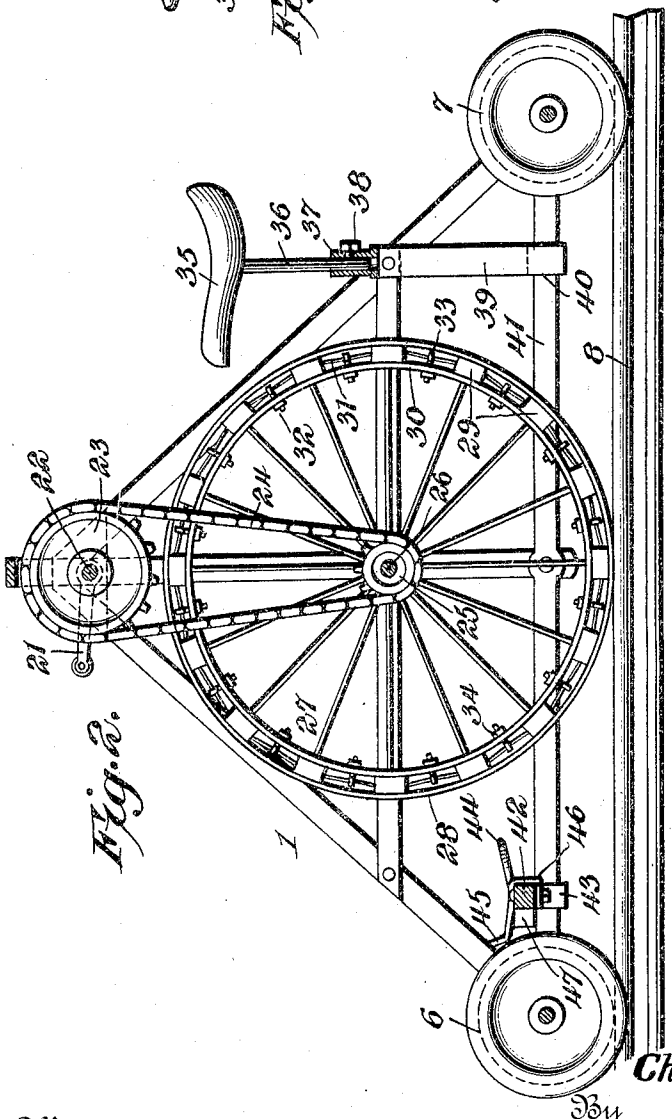

Fig. 2.

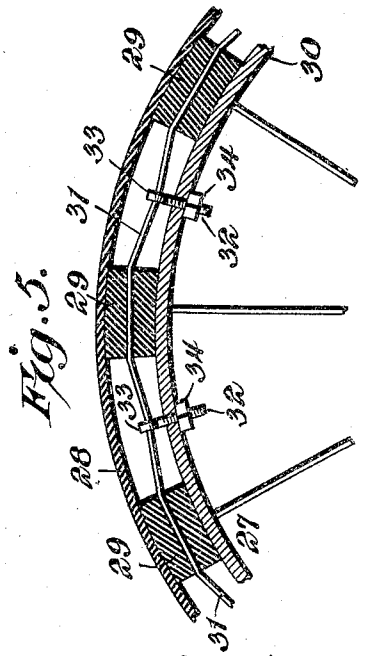

Fig. 5.

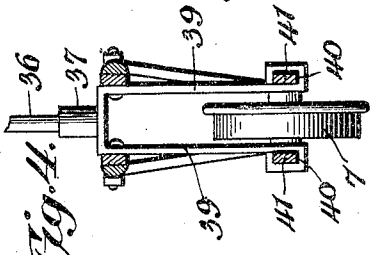

Fig. 4.

Witnesses

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No. 792,754. Patented June 20, 1905.

UNITED STATES PATENT OFFICE.

CHRISTIAN BRANDT, OF CHICAGO, ILLINOIS.

RAILROAD-VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 792,754, dated June 20, 1905.

Application filed September 10, 1904. Serial No. 224,050.

To all whom it may concern:

Be it known that I, CHRISTIAN BRANDT, having declared my intention to become a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Railroad-Velocipede, of which the following is a specification.

The invention relates to improvements in railroad-velocipedes.

The object of the present invention is to improve the construction of railroad-velocipedes and to provide a simple and comparatively inexpensive one of great strength and durability adapted when not in use to be compactly folded for enabling it to be conveniently carried on a train and capable of being quickly set up for use in case of an accident to enable a brakeman or other trainman to run back the desired distance for flagging the next train or to obtain assistance or for any other purpose.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of a railroad-velocipede constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a transverse sectional view. Fig. 4 is a detail sectional view illustrating the manner of mounting the seat. Figs. 5 and 6 are detail sectional views illustrating the construction of the driving-wheel. Fig. 7 is a detail perspective view of the movable foot-rest and brake. Fig. 8 is an enlarged detail sectional view illustrating the construction of the joints of the laterally-extending foldable frame.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

The velocipede is provided at one side with an upright triangular frame 1, and it has a laterally-extending foldable frame 2, which consists of front and rear bars 3 and 4 and an intermediate bar or brace 5. The triangular frame, which is provided at its base with front and rear flanged wheels 6 and 7, is located above one of the rails 8 of the track, and the foldable frame extends from the upright triangular frame to the opposite rail 9 and is provided with a flanged wheel 10, located at the front of the velocipede, as clearly illustrated in Fig. 1 of the drawings. The front rod or bar 3 is disposed transversely of the velocipede and is provided adjacent to its inner end with a joint 11. The rear bar 4 is provided at its rear end with a short transverse portion 12, and it extends diagonally therefrom to a point in advance of the outer end of the front bar 3, and the intermediate bar extends from the central portion of the triangular frame to the outer end of the front bar 3. The rear and intermediate bars are provided with joints 13 and 14, and the front end 15 of the rear bar is bifurcated to receive the wheel 10. The bars 3, 4, and 5 are secured together by a bolt 16, having a thumb-nut 17, arranged as clearly illustrated in Fig. 1 of the drawings, and adapted to be removed to permit the intermediate bar or brace to be separated from the front and rear bars 3 and 4 to permit the parts to fold, for a purpose hereinafter explained. The sections or members of each of the joints of the laterally-extending foldable frame are connected by a pivot 18 and are held in alinement by a slidable sleeve 19. When the sleeve is withdrawn from the joint to the dotted-line position illustrated in Fig. 8, the joint is adapted to bend to permit the laterally-extending frame to fold upward against the upright triangular portion of the frame. The intermediate bar 5 is connected at its inner end with the triangular portion of the main frame at a point above the points of attachment of the front and rear bars, and it extends downward at an inclination to brace the laterally-extending frame. This intermediate bar will effectually prevent any folding of the laterally-extending frame until its upper end is disconnected from the front and rear bars 3 and 4. When the outer end of the intermediate bar is detached from the front and rear bars, the former is adapted after its joint is

uncovered by the sleeve to fold against the upright portion of the main frame of the velocipede, and the laterally-extending frame may then be swung upward against the upright frame. The parts are retained in this position by a resilient catch 20, mounted on the rear bar and adapted to engage one of a pair of crank-handles 21 of a shaft 22.

The upright triangular frame 1 consists of two triangular sides composed of suitable bars and connected at suitable points. The crank-shaft 22 is journaled in suitable bearings of the upper portion of the triangular frame, and it has keyed or otherwise secured to it a sprocket-wheel 23, which is connected by a sprocket-chain 24 with a pinion 25 of an axle or shaft 26, which carries a drive-wheel 27. The bearings may be of any desired construction, and when the crank-shaft is rotated the drive-wheel will engage the rail 8 and propel the velocipede. The drive-wheel yieldably engages the rail, and it is provided with a tire composed of an elastic rim 28, of rubber or other suitable material, and elastic blocks 29, interposed between the rim 28 and the felly 30 of the wheel 27. The blocks 29, which are constructed of rubber or other suitable material, are held on the felly 30 by means of flexible annular connections 31, constructed of wire or other suitable material and engaged between the blocks by tension devices 32. The blocks are spaced apart, and the tension devices are mounted on the felly in the spaces between the blocks. These tension devices, which may be of any desired construction, preferably consist of threaded shanks provided with suitable heads 33 for engaging the flexible connections and having nuts 34 at the inner face of the felly. The flexible connections hold the elastic blocks firmly against the felly, and the tension devices are adapted to be adjusted to vary the elasticity of the tire.

The velocipede is provided at the rear portion of the upright triangular frame with a seat 35 for the accommodation of the operator, and this seat has a depending stem 36, which is adjustably mounted in a socket 37, being secured in its adjustment by a clamping-screw 38, as clearly shown in Fig. 2 of the drawings. By this construction the seat may be raised and lowered to arrange it at the proper elevation to suit the operator. The socket 37 is arranged at the top of an upright stand or support 39, which is approximately U-shaped, being composed of straight sides and a connecting top piece. The sides are provided at their lower ends with openings 40 for the reception of the bottom bars 41 of the upright frame 1. The sides of the stand or support are suitably secured to the sides of the triangular frame.

The front portions of the bottom bars 41 of the triangular frame receive and form guides for a slidable foot-rest 42, consisting of a transverse bar provided with depending loops 43 to receive the bottom bars of the triangular frame. The slidable foot-rest extends laterally from each side of the triangular frame and is provided at its laterally-extending portions with guards 44, constructed of stout wire or other suitable material. The guards, which are substantially oblong, have rounded rear ends to conform to the heels of the operator and are provided at their front ends with upwardly-extending spaced projections 45, which receive the front portion of the foot between them. The sides of the guards are provided with depending loops 46, which embrace the laterally-projecting portions of the foot-rest. The slidable foot-rest is provided at its center with a brake-shoe 47, extending forwardly and arranged to engage the front flanged wheel 6. The guards 44 receive the feet of the operator and enable the latter to readily control the foot-rest and to exert great pressure on the same in applying the brake. The front and rear wheels 6 and 7 are mounted between the sides of the triangular frame on suitable axles, which connect the ends of the bottom bars 41.

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

1. In a device of the class described, the combination of an upright frame, a foldable laterally-extending frame connected with the upright frame at the bottom thereof and arranged to swing upward against the same, wheels supporting the said frames, driving mechanism mounted on the upright frame and having a crank, and a catch carried by the laterally-extending frame and arranged to be engaged by the crank when the said laterally-extending frame is folded.

2. In a device of the class described, the combination of an upright frame, a foldable laterally-extending frame connected with the upright frame and provided with hinge-joints and having slidable sleeves, said sleeves being arranged to cover the joints for locking the members thereof against movement, wheels supporting the frames, and propelling mechanism.

3. In a device of the class described, the combination with a frame, of a wheel mounted thereon, and a moyable foot-rest provided with a brake-shoe for engaging the said wheel.

4. In a device of the class described, the combination of a frame, a wheel mounted thereon, and a foot-rest slidable on the frame and provided with opposite foot-receiving portions and having an intermediate brake-shoe for engaging the said wheel.

5. In a device of the class described, the combination of a frame, a wheel mounted on the frame, a foot-rest slidable on the frame and provided with a brake-shoe for engaging the wheel, and opposite guards mounted on the foot-rest and extending in advance and in rear of the same and provided with means for

engaging the front and rear portions of the foot.

6. In a device of the class described, the combination of a frame, a wheel mounted on the frame, a foot-rest slidable on the frame and provided with a brake-shoe for engaging the wheel, and opposite substantially oblong guards having rearwardly-projecting heel-receiving portions and provided at the front with spaced projections.

7. A device of the class described having a driving-wheel provided with an elastic tire composed of a rim, spaced elastic blocks supporting the rim, and a flexible annular connection passing through the blocks and securing the same to the wheel.

8. A device of the class described having a driving-wheel provided with a tire composed of an elastic rim, spaced elastic blocks supporting the rim, a flexible annular connection securing the blocks to the wheel, and means for tightening the annular connection.

9. A device of the class described having a driving-wheel provided with a tire composed of an elastic rim, spaced elastic blocks supporting the rim, flexible annular connections securing the blocks to the wheel, and tension devices connected with the annular connections and located between the blocks.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHRISTIAN BRANDT.

Witnesses:
H. A. FLUK,
CARL A. ABRAHAMSON.