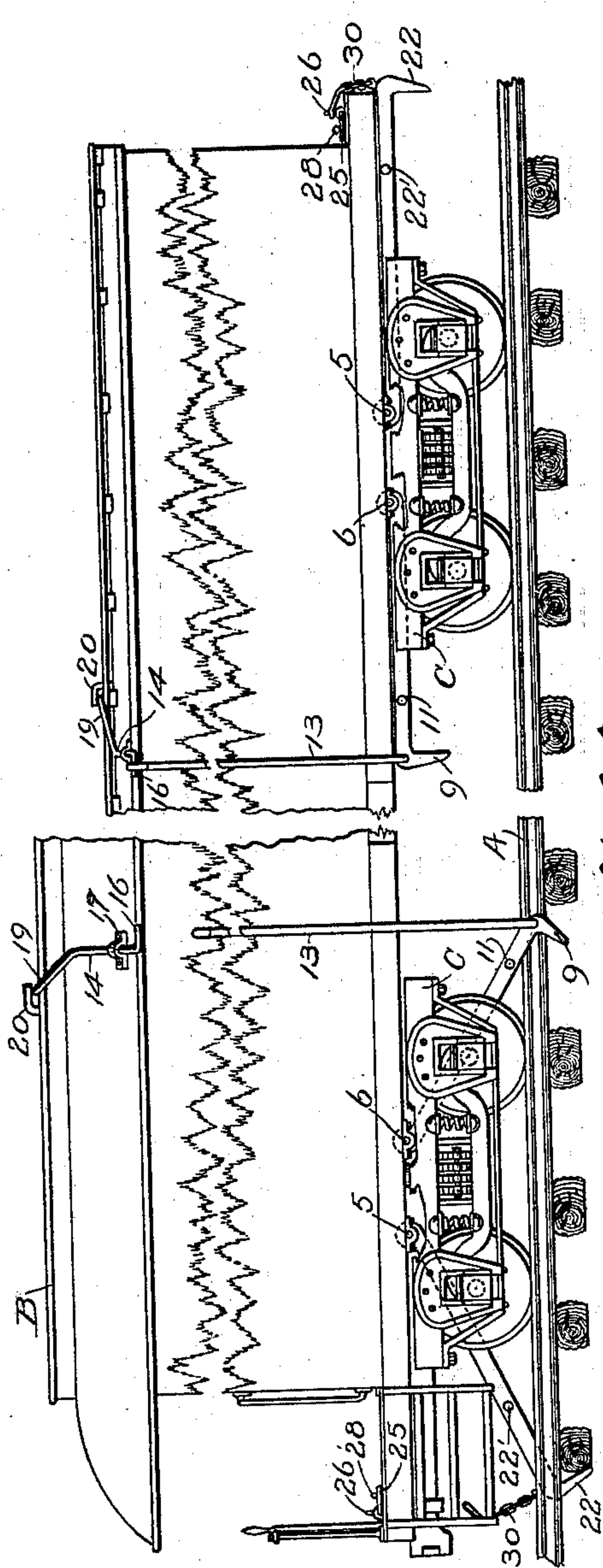


(No Model.)

S. ROGERS.
CAR BRAKE.

No. 578,776.

Patented Mar. 16, 1897.



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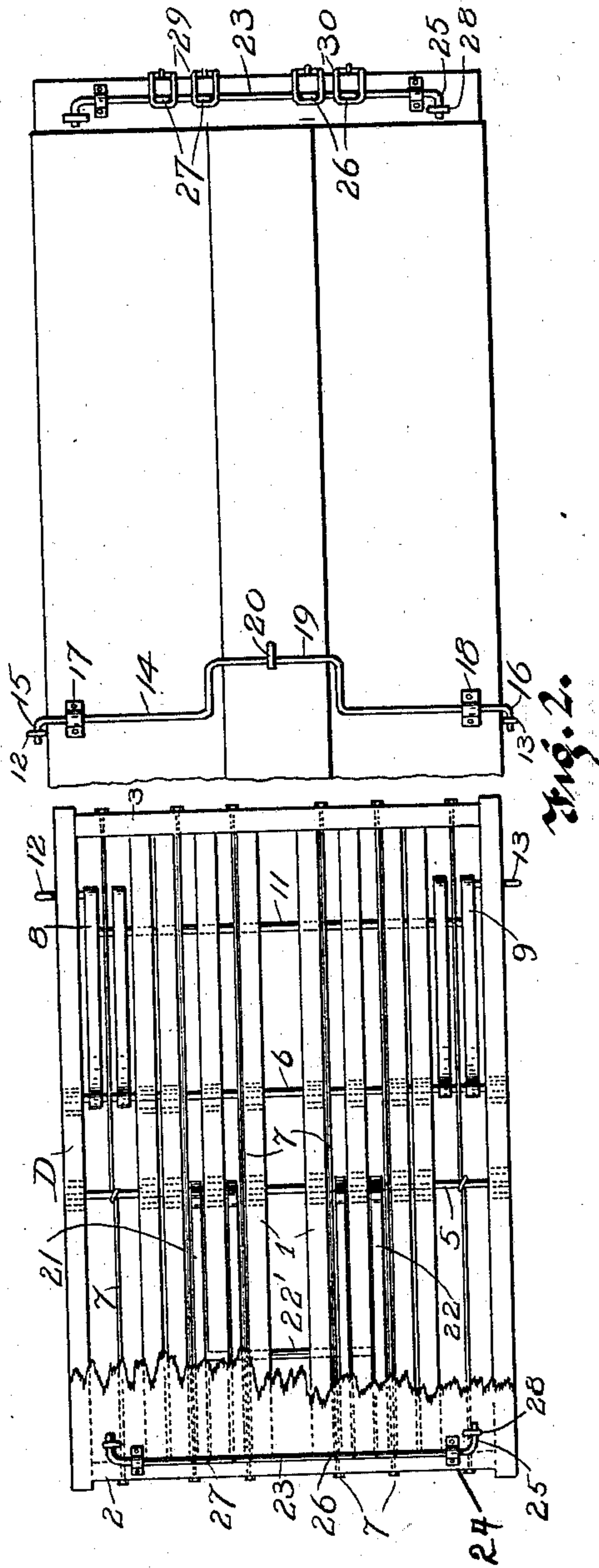


Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

STEPHEN ROGERS, OF WALDO, ARKANSAS.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 578,776, dated March 16, 1897.

Application filed July 14, 1896. Serial No. 599,153. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN ROGERS, a citizen of the United States, residing at Waldo, in the county of Columbia and State of Arkansas, have invented certain new and useful Improvements in Car-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 use the same.

My invention relates to car-brakes.

My object is to provide improved and simple brake mechanism of novel construction which can be applied to any type of car and will be adapted for quick and easy manipulation to instantly stop the car whenever such a course of procedure is necessary.

A further object is to provide brake mechanism for cars which will be of simple construction and capable of easy manipulation, so that whenever necessary it can be lowered and thrown into engagement with the ties of the track, whereby the cars may be instantly stopped, thereby avoiding damage to life and property.

Having these objects in view, my invention consists in the combination, with a car, of improved grapples which are connected to the car and are adapted to be lowered whenever necessary for engagement with the ties of the track, so that the car will stop.

The invention further consists in novel grapples pivoted to the car and adapted to be let down into engagement with the ties of the track and certain improved devices for holding the grapples normally raised out of engagement with the track.

The invention further consists of certain other features and combinations appearing more fully hereinafter.

In the accompanying drawings, Figure 1 is a side elevation of sections of passenger and freight cars equipped with my improvements; and Fig. 2, plan views showing the mechanisms for sustaining the grapples, the roof of the passenger-car being broken away.

In the drawings, A designates a railway-track, and B a section of a car, of which C is one of the trucks.

D designates a rectangular frame which is

composed of a series of parallel longitudinally-extending beams 1 and cross-pieces 2 and 3 at their ends. The frame itself is securely bolted or otherwise fastened to the floor of the car, and it is of such length that its forward end extends out as far as the platform of said car. The timbers of which this frame is constructed should be large and strong, so that they will be enabled to stand great strain.

The numerals 5 and 6 designate stationary shafts which extend transversely of the frame and are securely connected to the timbers of the frame. A series of strong rods 7 are connected at their ends to the said cross-pieces of the frame and are wrapped around the shafts just described, and these rods serve to still further strengthen the frame.

The numerals 8 and 9 designate sets of grapples. The respective sets are located next the outside longitudinally-extending timbers of the frame and are journaled on shaft 6, so that they can be raised or lowered. These grapples are located underneath the car and they are connected by a shaft 11, so that they will move in unity. Vertical pull-rods 12 and 13 are connected to the ends of the shaft. On the top of the car there is located a transversely-extending shaft 14, which is provided with arms 15 and 16 at its ends. These arms are pivotally connected to the upper ends of the pull-rods. The shaft is journaled in metal straps 17 and 18, and it is provided with a central handle 19.

The numeral 20 designates a keeper which consists of a pivoted arm adapted to be swung over handle 19 when the latter is depressed, as is the case when the grapples are raised.

Sets of grapples 21 and 22, similar in construction to those heretofore described, are pivoted to shaft 5, and these grapples extend out under the platform of the car, being connected by a shaft 22', by means of which they move in unison. It will be observed that these sets of grapples are located near the center of the longitudinal axis of the frame, whereas the other grapples are near the outer timbers of the frame.

The numeral 23 designates a crank-shaft, which is journaled in bearings 24, connected to the upper face of the car-platform. This

shaft is provided with a handle 25 and two arms 26 and 27. A pivoted keeper 28 is adapted to lock over the handle of the shaft.

The numerals 29 and 30 designate chains, 5 which have links looped around the arms of the shaft and which chains are connected to the respective sets of grapples.

By means of the mechanism just described the grapples can be raised or lowered as de- 10 sired.

The operation is as follows: If the car is going in a given direction and it is desired to stop it, the proper sets of grapples are allowed to drop and they catch upon the ties of the 15 track so that the car is brought instantly to a standstill. Should the car be going in the opposite direction, the grapples at the other end of the frame are used. When in normal position all the grapples are raised and held 20 in this position by the locking mechanisms. Owing to the fact that the frame and the grapples, as well as the other mechanisms, are made very strong, they will satisfactorily withstand the great strain brought to bear 25 upon them when the car is suddenly stopped. One set of these brakes is preferably located at each end of the car, so that the action will be more powerful, although it is only necessary that the grapples at one end of the car 30 be used.

My invention is applicable to all cars other than those of the passenger type, as well as to the latter.

It is obvious that my invention might be 35 changed in many slight and immaterial ways without departing from the spirit and scope, and hence it is to be understood that I do not limit myself to the details herein shown and described, but consider that I am entitled to 40 all such variations as come within the purview of my invention.

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

1. In a car-brake, the combination with the 45 car, of sets of oppositely-disposed pivot-grapples at each end of the car, and means for individually operating each set and for holding the same in raised position.

2. In a car-brake, the combination with the 50 car, of grapples pivoted thereto, a rotatable shaft, means for locking the same, and a connection between said shaft and the grapples whereby the latter may be held suspended.

3. In a car-brake, the combination with the 55 car, of grapples pivoted thereto, a rotatable shaft provided with a handle, a keeper adapted to engage with the handle and lock the shaft, and a connection between the shaft, and the grapples. 60

4. In a car-brake, the combination with a frame connected to the car, of grapples pivoted to the frame, a rotatable shaft provided with arms, cables connected to the grapples and having links which receive the arms, and 65 means for locking said shaft so that the grapples will be held raised.

5. In a car-brake, the combination with a frame connected to the car, of grapples pivoted to the frame, a rotatable shaft provided 70 with arms and a handle, a pivoted keeper adapted to engage with the handle and lock the shaft, and cables connected to the grapples and having links which receive the arms.

In testimony whereof I have signed this 75 specification in the presence of two subscribing witnesses.

STEPHEN ROGERS.

Witnesses:

C. L. MEDEARIS,
J. G. HIGGASON.