

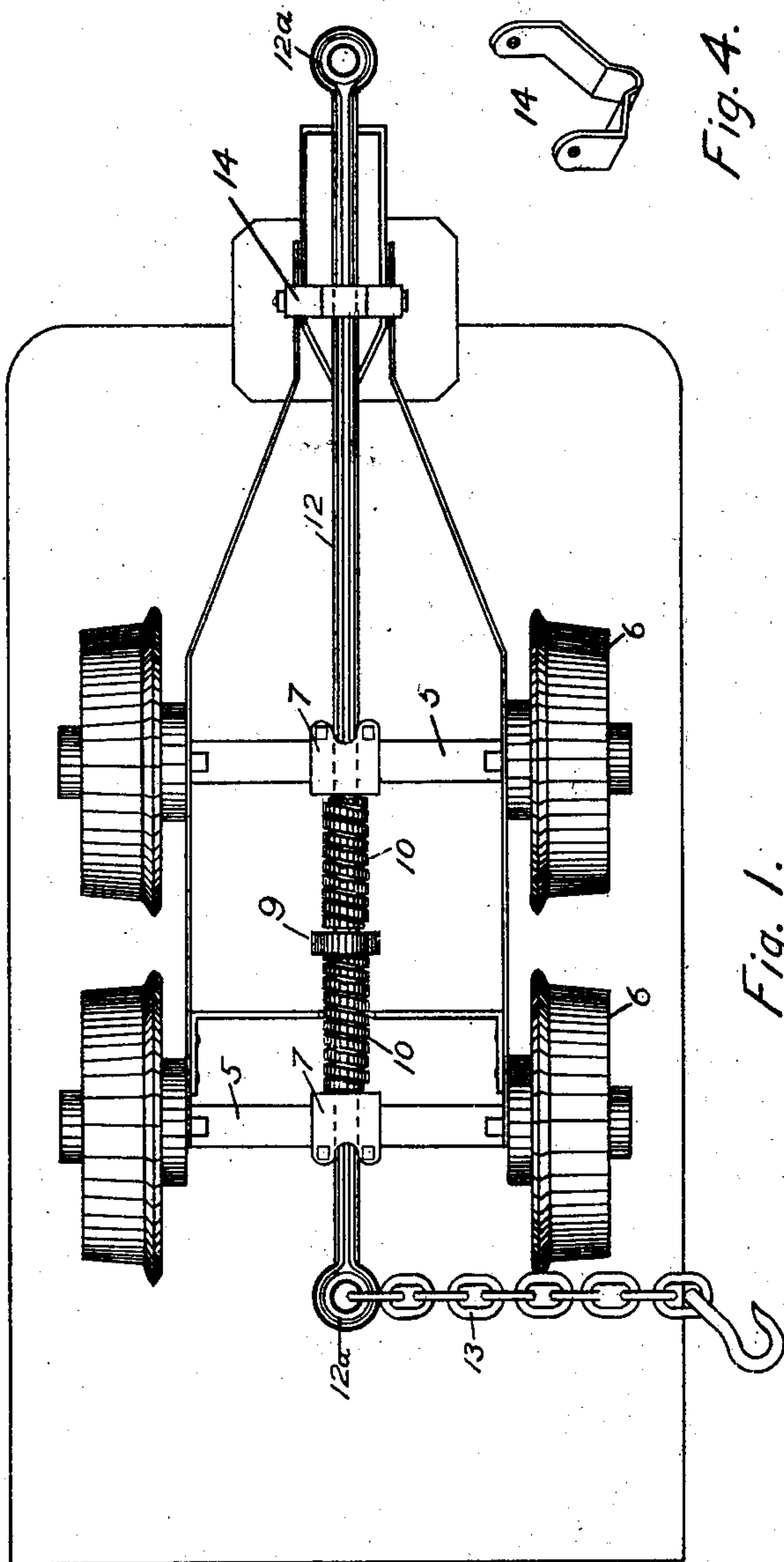
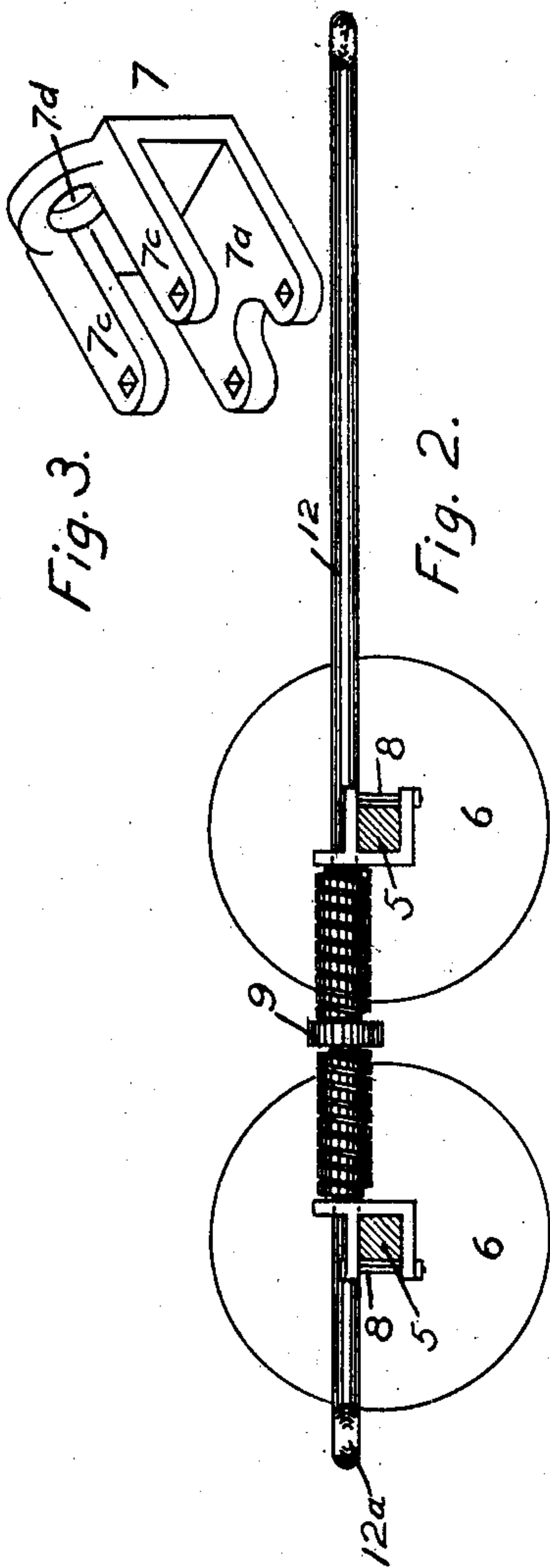
No. 693,810.

Patented Feb. 18, 1902.

G. E. TRUAX.
DRAW BAR FOR ORE CARS.

(Application filed Apr. 9, 1901.)

(No Model.)



Witnesses :-

Dora C. Shick.
Mary C. Lamb.

George E. Truax Inventor.
BY *A. J. [Signature]* Att'y.

UNITED STATES PATENT OFFICE.

GEORGE E. TRUAX, OF DENVER, COLORADO.

DRAW-BAR FOR ORE-CARS.

SPECIFICATION forming part of Letters Patent No. 693,810, dated February 18, 1902.

Application filed April 9, 1901. Serial No. 55,090. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. TRUAX, a citizen of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Draw-Bars for Ore-Cars; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in yielding draw-bars or couplings for cars, more especially intended for use in connection with ore-cars having an end dump, and which therefore cannot employ couplings arranged as on ordinary railway-cars. It is often necessary or at least highly advantageous to run ore-cars in trains. The ordinary way of coupling the cars has been such that the entire train must be started at once, thus requiring an initial or starting force entirely out of proportion to the power required to haul the load when once started.

My object is to provide a practicable coupling for cars of this class, which shall allow the cars to be started one at a time until the whole train is in motion; and to this end the invention consists of the features, arrangements, and combinations hereinafter described and claimed, all of which will be fully understood by reference to the accompanying drawings, in which is illustrated an embodiment thereof.

Figure 1 is an underneath view of a car equipped with my improved yielding draw-bar coupling. Fig. 2 is a section taken through the axles of the car, showing the draw-bar in elevation. Fig. 3 is a perspective view in detail and on a larger scale of one of the boxes in which the draw-bar is slidably mounted. Fig. 4 is a perspective view showing a guide-bracket for the draw-bar on a larger scale than in Fig. 1.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate the axles of a car, and 6 the wheels journaled thereon. To each of these axles is securely fastened in

any suitable manner a box 7. As shown in the drawings, the axles are square in cross-section, and each box is open at one end to receive its axle, its opposite end being closed to form a stop for the axle. The lower part of each box consists of a plate 7^a, while its upper part is composed of two separated arms 7^c. The plate and arms of the box are provided with openings to receive fastening-bolts 8, which, as shown in the drawings, are employed to attach the boxes to the axles. Above the closed end of each box and in line with the space between the two arms 7^c is formed an opening 7^d, through which the draw-bar passes. This draw-bar, as shown in the drawings, is located above the axles of the car and is provided with a collar 9, normally occupying a position about midway between the axles of the car. Coiled around the draw-bar between the stop 9 and each box 7 is a spring 10.

The draw-bar is arranged to slide freely in the boxes 7 and terminates in an eye 12^a at each extremity. At the dumping end of the car the eye of the draw-bar is concealed from above by the car-bottom and offers no obstruction to the end-dumping operation. This end of the draw-bar is provided with a coupling-chain 13, having a hook adapted to engage the eye of the draw-bar belonging to the next car. At the end of the car remote from its dumping extremity is located a bracket 14, which is secured to the truck and forms a guide for the draw-bar.

The power employed to draw the car or any number of cars coupled together is exerted directly on the draw-bar of one of the end cars. As the draw-bar slides freely in the boxes 7, it is evident that the car is moved by the action of the stop 9 on one of the springs 10, depending on the direction of travel. When moving in one direction, the hauling power is exerted on one spring, and when moving in the opposite direction the power is exerted on the opposite spring. As the end car of the train moves the spring of the next car in the rear will yield preparatory to starting the car, thus giving the end car an opportunity to start before the movement of the next car begins, and so on throughout the train. Each spring 10 only need be of sufficient strength to start its own car.

It must be understood that my improved construction is not limited to ore-cars, it being evident that it may be used on cars of all classes or descriptions regardless of their use.

5 Having thus described my invention, what I claim is—

1. The combination with the axles and boxes mounted thereon, of a draw-bar slidable in the boxes, a stop on the draw-bar between
10 the axles, and a coil-spring mounted on the draw-bar and interposed between the said stop and each box, the arrangement being such that the car may be pulled by applying power to either extremity of the draw-bar.

15 2. The combination with the axles, of a draw-bar slidably mounted on the axles, a stop on the draw-bar, between the axles, and a coil-spring located between the stop and each axle, whereby the stop acts on one spring to move
20 the car in one direction and on the other spring to move the car in the opposite direction.

3. The combination with the car-axles, of boxes secured thereto and provided with openings, a draw-bar engaging said openings and slidable in the boxes, a stop fast on the draw-
25 bar, and a coil-spring interposed between the stop and each box.

4. The combination with the car-truck, of a draw-bar slidable on the truck, and provided with a stop, a coil-spring surrounding
30 the draw-bar on each side of the stop, stops on the truck, engaging the opposite extremity of each spring, and a bracket mounted on the truck near one end of the car and forming a guide for the draw-bar.
35

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

GEORGE E. TRUAX.

Witnesses:

DORA C. SHICK,
MARY C. LAMB.

It is hereby certified that Letters Patent No. 693,810, granted February 18, 1902, upon the application of George E. Truax, of Denver, Colorado, for an improvement in "Draw-Bars for Ore-Cars," was erroneously issued to said Truax, as owner of the entire interest in said invention; that said Letters Patent should have been issued to the inventor, *said George E. Truax and John T. Plummer*, jointly, said John T. Plummer being the assignee of one-half interest in said patent, as shown by the record of assignments in this Office; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 4th day of March, A. D., 1902.

[SEAL.]

F. L. CAMPBELL,
Assistant Secretary of the Interior.

Countersigned:

F. I. ALLEN,
Commissioner of Patents.