

No. 638,526.

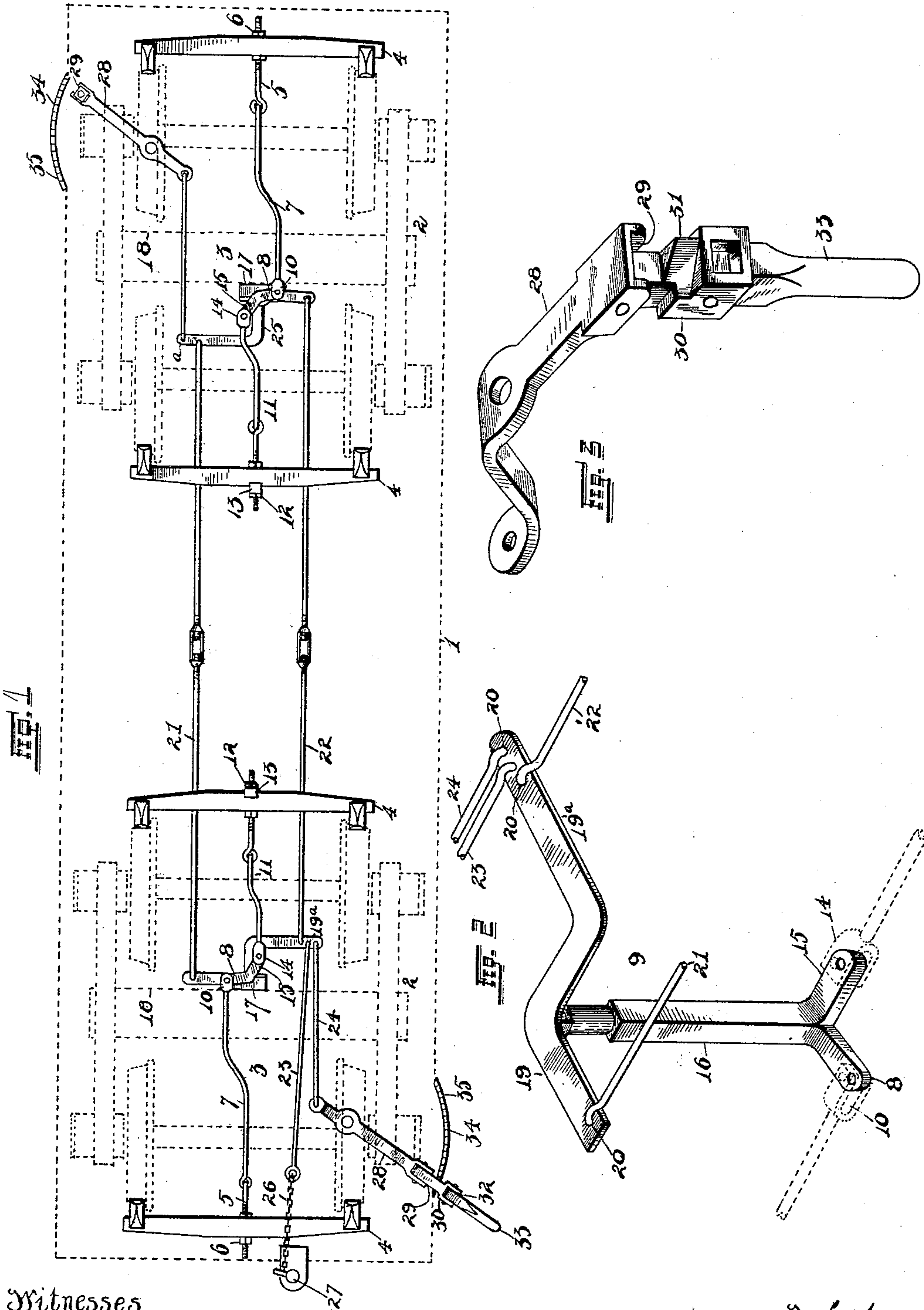
Patented Dec. 5, 1899.

J. SHELTON.
CAR BRAKE.

(Application filed May 19, 1899.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
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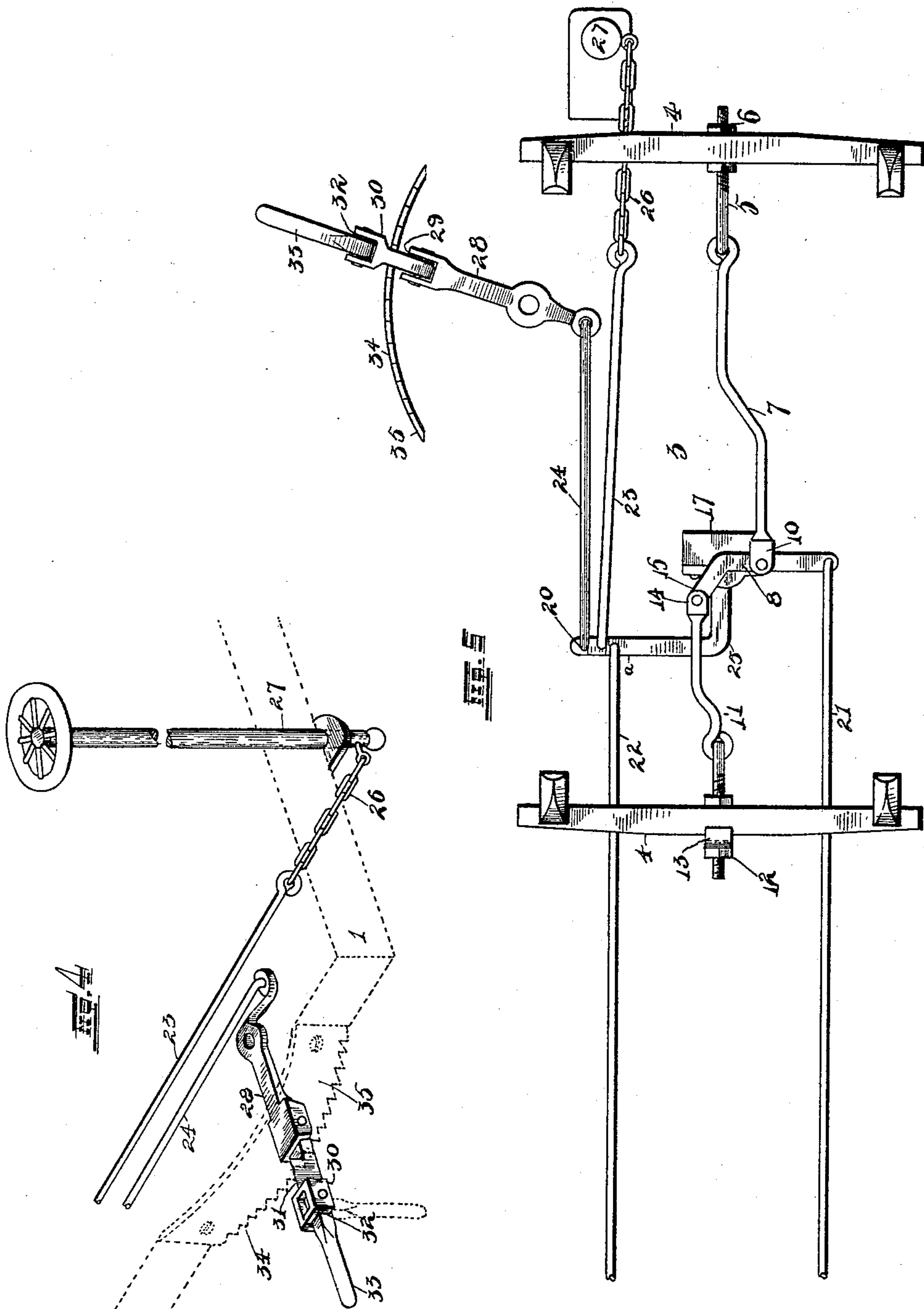
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UNITED STATES PATENT OFFICE.

JOHN SHELTON, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO
EDWARD P. BECKER, OF SAME PLACE.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 638,526, dated December 5, 1899.

Application filed May 19, 1899. Serial No. 717,414. (No model.)

To all whom it may concern:

Be it known that I, JOHN SHELTON, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Car-Brakes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in a car-brake; and it consists in the novel arrangement, construction, and combination of parts, as will be more fully hereinafter described, and set forth in the claims.

The object of this invention is to provide a car with a brake that can be manipulated from the ground on the side of the car by means of a suitable hand-lever.

Another object is that the arrangement of the brake is to be used especially for switching when a car is kicked by a locomotive, so that the same may be stopped or its speed slackened without necessitating the brakeman climbing to the top of the car in order that he may apply the brake.

Referring to the drawings, Figure 1 is a bottom plan view of my complete brake, showing the same applied to a car which is shown in dotted lines. Fig. 2 is a perspective view of the improved operating-lever used in my invention. Fig. 3 is a perspective view of the hand-lever in its normal unlocked position, showing how the parts are hinged together. Fig. 4 is a perspective view of the hand-lever when in its operative position and attached to the rod and also of the brake-staff by which said brake may also be operated and released. Fig. 5 is a bottom plan view of one-half of my brake mechanism, showing the same in detail.

In the drawings, 1 indicates a car-body which is mounted upon trucks 2, which is shown in dotted lines and which is of the usual construction as those now in common use.

To the trucks 2 is applied my improved invention 3, which consists of a set of brake-beams 4, hung to the body of the car in any desirable manner and are connected to operate one another by rods, their connections being fully hereinafter set forth.

To the outer brake-beams are applied rods 5, which are held thereto by means of nuts 6, located on each side of said brake-beams,

which are for the purpose of adjusting and also tightening said rods when properly adjusted. To the rods 5 are coupled rods 7, which extend toward the center of the trucks, being slightly bent, and are secured to arms 8, formed on the foot of each operating-lever 9, by means of yokes 10, provided on the ends of said rods 7.

To each of the inner brake-beams 4 is secured a combined adjusting and operating rod 11, constructed the same as rods 5 and 7, previously described. The nut 12, used to adjust the rod, rests upon a binding-block 13, through which is also passed said rod. The combined rod is provided with a yoke 14, being constructed to fit over and pivoted to a horizontal arm 15, forming a part of the operating-lever 9 and on an angle horizontally to the arm 8.

The operating-levers 9 consist of a vertical bar 16, having a portion of itself rounded, which acts as a bearing and is mounted and supported in a journal-bearing 17 of common construction and being held in position and securely bolted to a truck-bolster 18, forming a part of the truck, being shown in dotted lines in Fig. 1.

On the top of the bar 16 and above the journal-bearing 17 is mounted a bell-crank lever 19, having an extension-arm 19^a, each provided with bores or perforations 20, through which are passed and secured therein operating-rods 21, 22, 23, and 24. In Figs. 1 and 5 the levers 9 are shown inverted, by reason that the same are viewed from the bottom. The rod 21 extends along the bottom of the car and connects to the extension-arm *a* of the bell-crank lever 25, which is of the same construction as the one formed on the operating-lever 9, but carried in a journal-bearing secured to the other truck of said car. (See Fig. 1.) The construction of the brake mechanism on each truck is a duplicate, with the exception that it is rear foremost. The rod 22 connects the extension-arm 19^a of the bell-crank lever 19 with the bell-crank lever 25 of the opposite truck. By these rods the levers 19 and 25 are simultaneously operated. The rod 23 is connected to a chain 26, which is connected to and adapted to be wound around the brake-staff 27, which is of the general construction as now used on all cars. The

rod 24 is connected to a hand-lever 28, which is pivotally secured to the bottom of the car and is provided on its outer end with a channel 29, in which is pivotally secured a casting 30, having a portion of itself tapered, forming a tooth 31, and is also provided with a channel 32, in which is pivotally secured an arm 33. The casting 30 and arm 33 are arranged to hang at right angles to the lever 28 when in their normal or unlocked position, as shown in Fig. 3. The tooth 31, formed on the casting 30, is for the purpose that when the same is placed in a horizontal position by means of the arm 33 it will come in communication with the ratchet-teeth 34, formed on the plate 35, secured to the side of the car-body. (See Figs. 1 and 4.) When the tooth is in this position and the arm 33 is tightly drawn upon on a side movement, the tooth finds lodgment in said ratchet-teeth 34, which will keep the brake in a locked position and by the tension of said brake upon the lever 28 will hold the tooth in communication with the plate 35, allowing the arm 33 to hang at right angles to the casting 30 in order that said arm will not project out beyond the car-body, which is shown by dotted lines in Fig. 4. One of these levers 28 is secured to each left-hand corner of the car, and its object is to provide a means by which to operate the brake mechanism from the ground by the brakeman, which is of great importance when cars are being switched in the railroad-yards, especially when the cars are being kicked by the locomotive and does not give the brakeman ample time to climb to the top of the car to set the brake in the manner which is now in common use.

The operation is as follows: When a car is being switched by means of a kick from the locomotive and the brakeman finds that he has not time enough to ascend the car, he waits for the approaching car, and when the lever 28 comes to his reach he takes hold of the arm 33, lifts it upward into a horizontal position, and pulls sidewise upon said arm, bringing the lever in an angular position horizontally, as shown in Fig. 4, and the same is held in this position by means of the ratchet-tooth of the casting 30 coming in communication with the ratchet-teeth 34 of the plate 35 and held tightly therein by means of the drawing pressure of the brake mechanism. When this lever is pulled upon, it pulls forward the rod 24, bringing forward the lever 19 of the lever 9, which pulls upon the rod 22, connected to the lever 25, and pushing upon the rod 21, which connects the lever 19 and the arm of the lever 25. When the levers 9 and 25 are being operated, the horizontal arms 8 and 15 of the vertical bar 16 pulls upon the adjusting-rods 7 and 11 of both trucks, bringing forward the brake-beam 4, tightly claspings its brake-shoes to the wheels of the truck, and in this manner the car's speed is slackened and in like manner stopped without handling the brake-staff. When the car is locked in this manner and

should the brakeman be at any time on the roof of the car and should he desire to unlock the car or release the brake, he draws upon the brake-staff 27 by turning the wheel in the usual manner, which pulls upon the rod 23, also pulling upon a bell-crank lever 29, which then presses forward the rod 24, which is connected to the lever 28, thus releasing the drawing tension of the brake mechanism upon the lever 28, which allows the casting 30 and arm 33 by its own gravity to release itself from the teeth 34 of the plate 35 to fall in its normal position at right angles to the lever 28, as shown in Fig. 3. Thus by this action the brake is released without necessitating the brakeman to descend the car to release the lever 28. The levers 28 are placed on each side of the car, so that said brake mechanism may be operated from either end, and, if necessary, an additional brake-staff may be applied to the opposite end of the car, so that the brake may be released from either end from the top of the car without handling the levers 28.

I claim—

1. A car-brake composed of levers mounted and operated in journal-bearings secured to the trucks, said levers provided with four operating-arms, each provided with perforations in which rods are secured, said levers operating adjusting-rods secured to the brake-beams arranged to simultaneously operate the brake mechanism of both trucks connected by rods and each simultaneously operating by the action of the operating-lever secured to each under side of the car, said levers provided with a casting having a ratchet-tooth adapted to come in communication and lock itself in teeth on a plate secured to the side of the car when said casting and lever are placed horizontally and drawn upon, said lever being held in its locked position by the tension or pressure of the brake mechanism upon said lever, substantially as set forth.

2. A car-brake having suitable levers mounted in bearings secured to the trucks, rods connecting said levers with the brake-beams and with the levers of the adjacent truck, said brake mechanism operated by a lever composed of three sections pivotally secured to each other and arranged to come in contact with a plate secured to the side of the car and to hold said brake mechanism in locked position without necessarily having its section extending beyond the body of the car and adapted to be operated from the ground while the car is in motion, and a means by which to release said brake from the top of the car without manipulating the operating-arm, substantially as shown and described.

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

JOHN SHELTON.

Witnesses:

M. P. SMITH,
JOHN C. HIGDON.