

No. 638,527.

Patented Dec. 5, 1899.

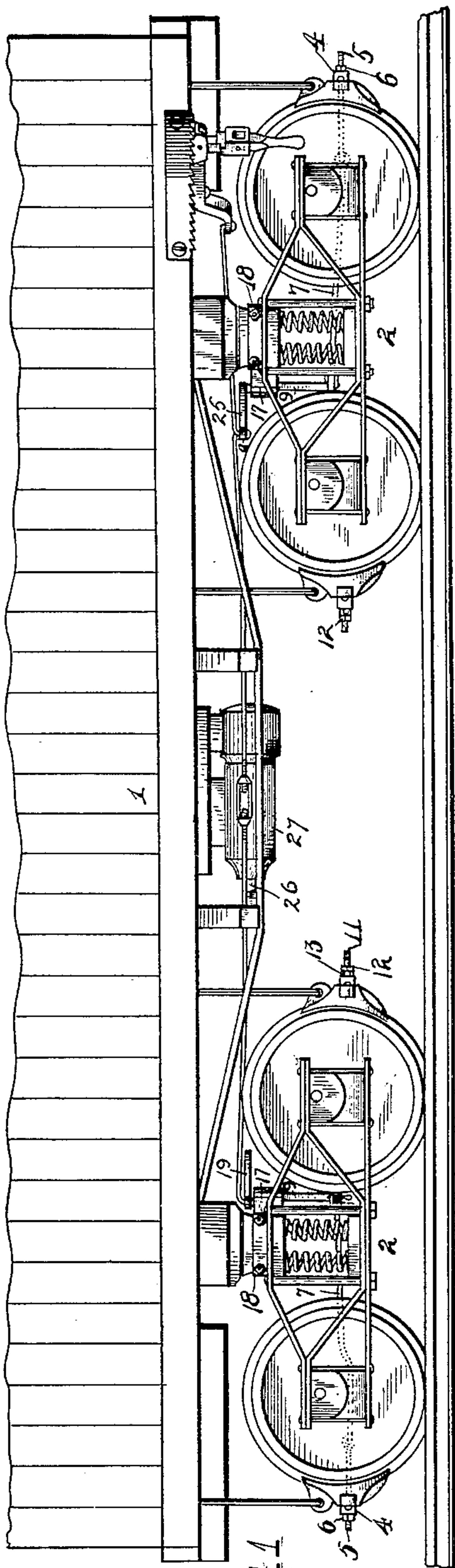
J. SHELTON.

AIR BRAKE.

(Application filed May 19, 1899.)

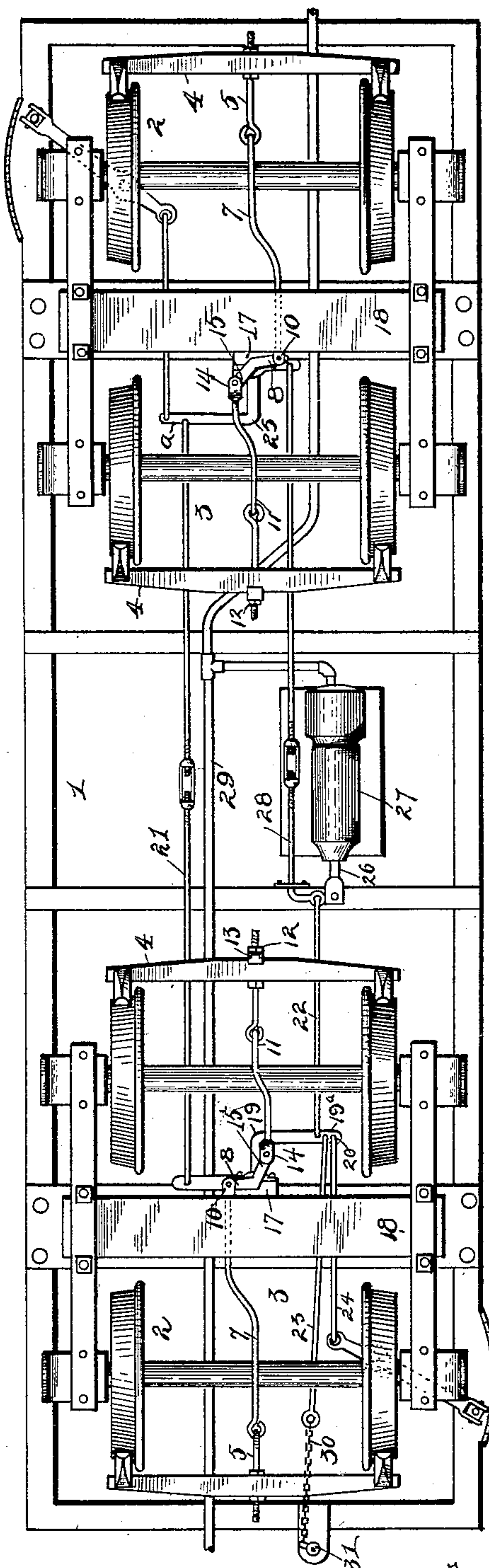
(No Model.)

2 Sheets—Sheet 1.



Witnesses

M. Smith
A. J. McCauley.



Inventor:

John Shelton.
By Higdon & Logan Attorneys.

No. 638,527.

Patented Dec. 5, 1899.

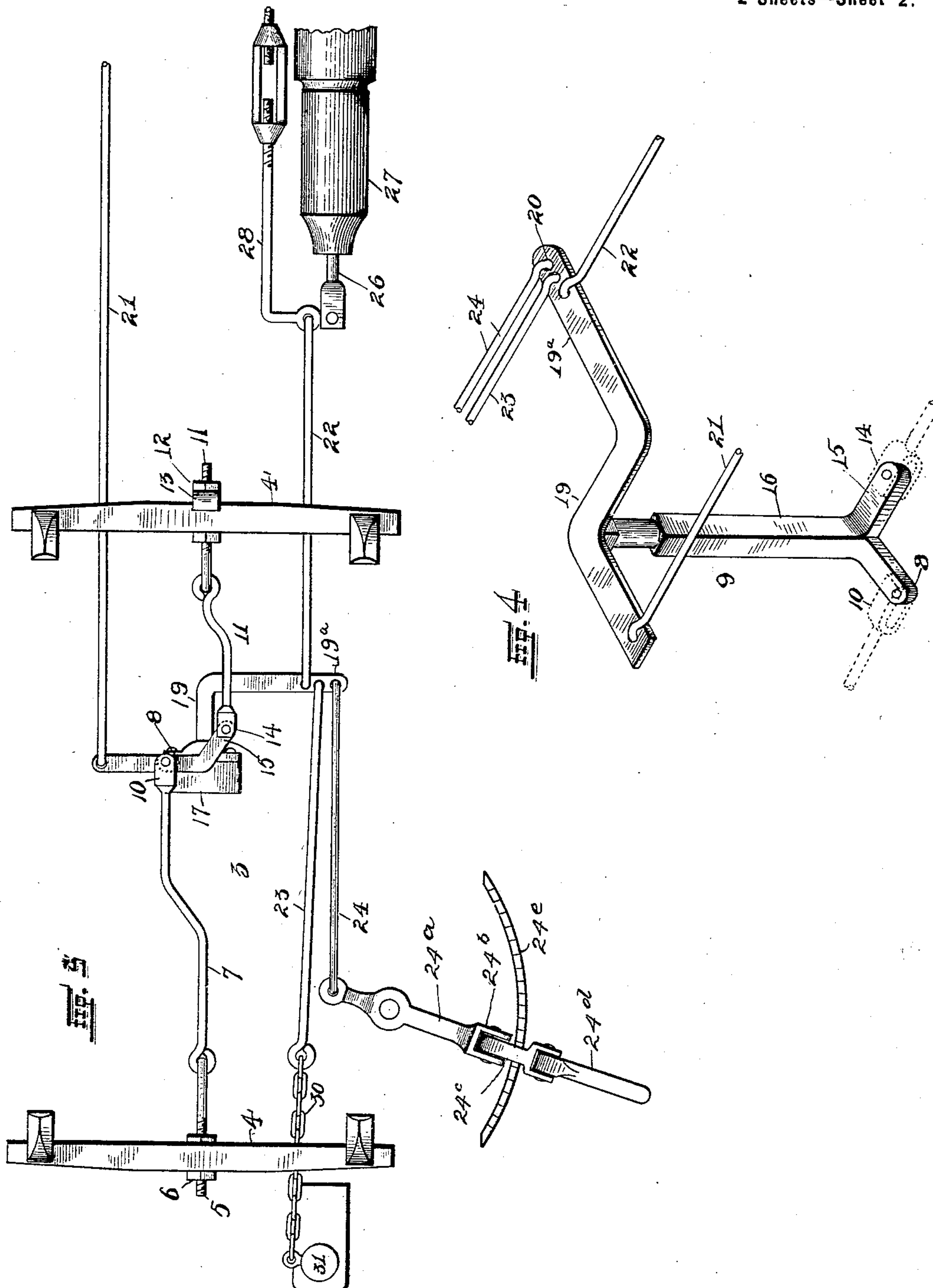
J. SHELTON.

AIR BRAKE.

(Application filed May 19, 1899.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses
M. Smith,
A. J. McCauley.

Inventor.
John Shelton.
By Higdon & Logan Attorneys

UNITED STATES PATENT OFFICE.

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

AIR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 638,527, dated December 5, 1899.

Application filed May 19, 1899. Serial No. 717,415. (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 Air-Brakes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

This invention relates to improvements in air-brakes; and it consists of the novel arrangement, construction, and combination of parts, as will be more fully hereinafter described, and set forth in the claim.

The object of this invention is to provide and equip a car with a brake that can be operated with but few bars, rods, and levers and very simple in form.

Another object is to provide a brake that can be manufactured from scrap parts of material, which cannot be used in the construction of the present brake.

Referring to the drawings, Figure 1 is a side elevation of a car, showing my improved brake applied thereto. Fig. 2 is a bottom plan view of said car, showing the complete equipment of the brake. Fig. 3 is a detail enlarged view of a part of the brake, showing its communication to the air-piston chamber or cylinder. Fig. 4 is a perspective view of the lever used in connection with a brake.

In the drawings, 1 indicates a car-body which is mounted upon trucks 2, which are of the usual construction as those now in common use. To the truck 2 is applied my improved device 3, which consists of a set of brake-beams 4, hung to the body of the car in any desirable manner and connected to operate by rods, their connections being fully hereinafter described.

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-beam, which are for the purpose of adjusting and also tightening said rod when properly adjusted. To the rods 5 are coupled rods 7, which extend toward the center of the truck, being slightly bent, and are secured to an arm 8, formed on the foot of each operating-lever 9 by means of a yoke 10, provided on the end of said rod 7.

To 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 nuts 12 used to adjust the rods rest upon a binding-block 13, through which is also passed said rod, and 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 at a right angle to the arm 8. The operating-levers 9 consist of a vertical bar 16, having a portion of itself rounded, which acts as a journal and is mounted and supported in a journal-bearing 17, being held in position and securely bolted to a beam 18, forming a part of the truck. (Shown in Figs. 1 and 2.) 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. 2 and 3 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 of the bell-crank lever 25, which is of the same construction as the one 9, but carried in a journal-bearing secured to the other truck of said car. (See Fig. 2.) 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 piston-rod 26 of the air-cylinder 27, which is secured to the bottom of the car in any desirable manner, and any style of air-cylinder may be used. To the piston-rod 26 is also connected a rod 28, which extends backward and is connected to the arm of the lever 25. By these rods the brake is operated by means of the compressed air, which is conveyed in cylinder 27 by means of the pipes 29, which are the general construction as at present used. The rod 23 is connected to a chain 30, which is connected to and adapted to be wound around the brake-staff 31, which is of the general construction as now used on all cars. The rod 24 is connected to a hand-lever 24^a, which is pivotally secured to the bottom of the car and is pro-

vided with a bifurcation 24^b at its outer end, in which is pivotally mounted a dog 24^c, also provided with a bifurcation in which is carried a handle 24^d. The dog 24^c when brought
 5 in horizontal position communicates with a toothed plate 24^e, firmly secured to the side of the car-body extending downwardly enough for the engagement of said dog with the teeth. By this mechanism the brake is operated by
 10 hand from the side of the car and being used only while the car is being switched.

The operation of my invention is as follows: When it is desired to operate the brake, I allow the air to be conveyed into the air-cyl-
 15 inder, which operates the piston-rod 26, pushing it outwardly, also pushing forward the rod 22, pressing against the arm 19^a, operating the entire lever 9, which pulls upon the adjusting-rods 7 and 11, drawing tightly the
 20 brake-shoes on the brake-beams against the wheels of said truck, both brake-beams on each truck being operated together simultaneously. By the same operation of the piston-rod 26 the rod 28 is also drawn forward,
 25 pulling upon the lever 25, which operates in like action the mechanism of the second truck. This action tightly locks the wheels of each truck.

In releasing the brake the action of the en-

tire brake mechanism is vice versa to the ac- 30
 tion before described.

The construction of my brake is far superior over the present brake now in use in simplicity, cheapness, and operation and is composed of parts which cannot be used in and 35
 have been discarded in the present braking system.

I claim—

The improved car-brake, comprising a double bell-crank lever having four apertured 40
 arms; suitable bearings in which said four-armed lever is mounted beneath the car-body; rods 7 and 11 connected to two of said apertured arms for operating two brake-beams; the rod 21 connected to another one of said 45
 apertured arms for operating two additional brake-beams, the rods 22, 23 and 24 connected to the remaining one of said apertured arms; a windlass-chain connected to said rod 23, a
 50 hand-lever connected to said rod 24, and an air-brake piston-rod 26 connected to said rod 22, substantially as specified.

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

JOHN SHELTON.

Witnesses:

M. P. SMITH,
 EDWARD E. LONGAN.