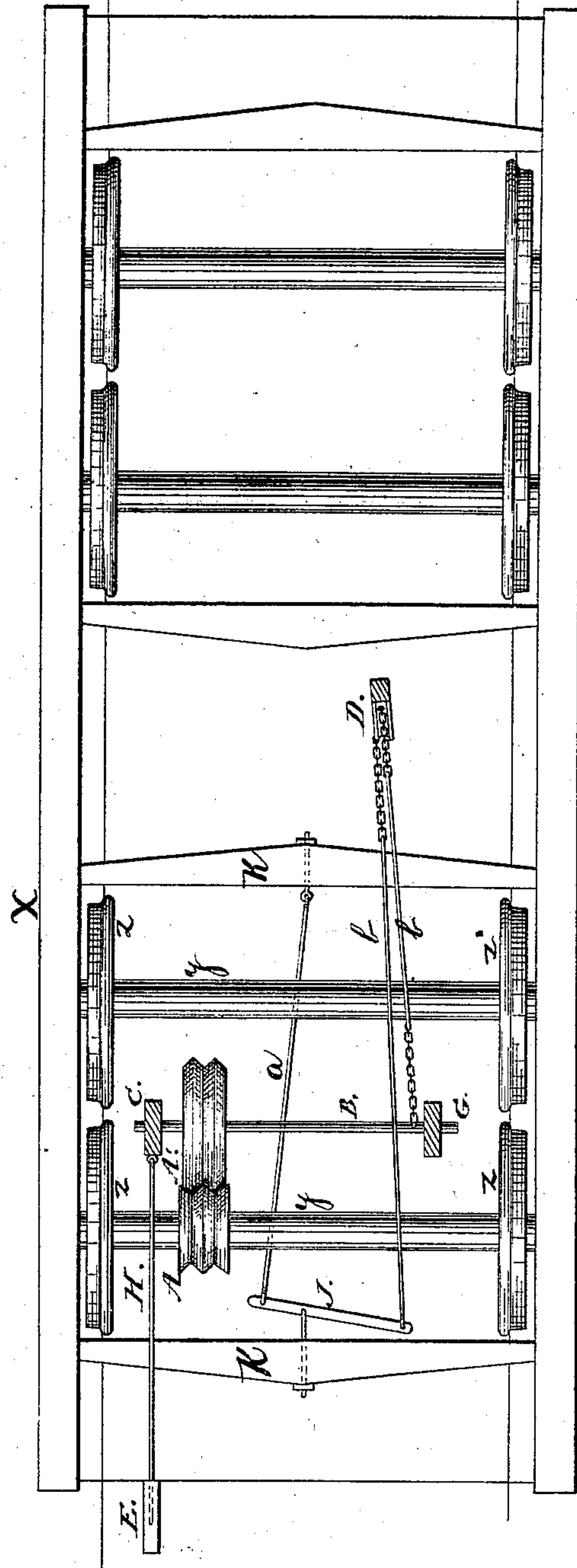


J. HERD.  
Car-Brakes.

No. 150,417.

Patented May 5, 1874.

Fig. 1.



Attest;

C. W. Kuhler  
Silas J. Day.

Inventor;

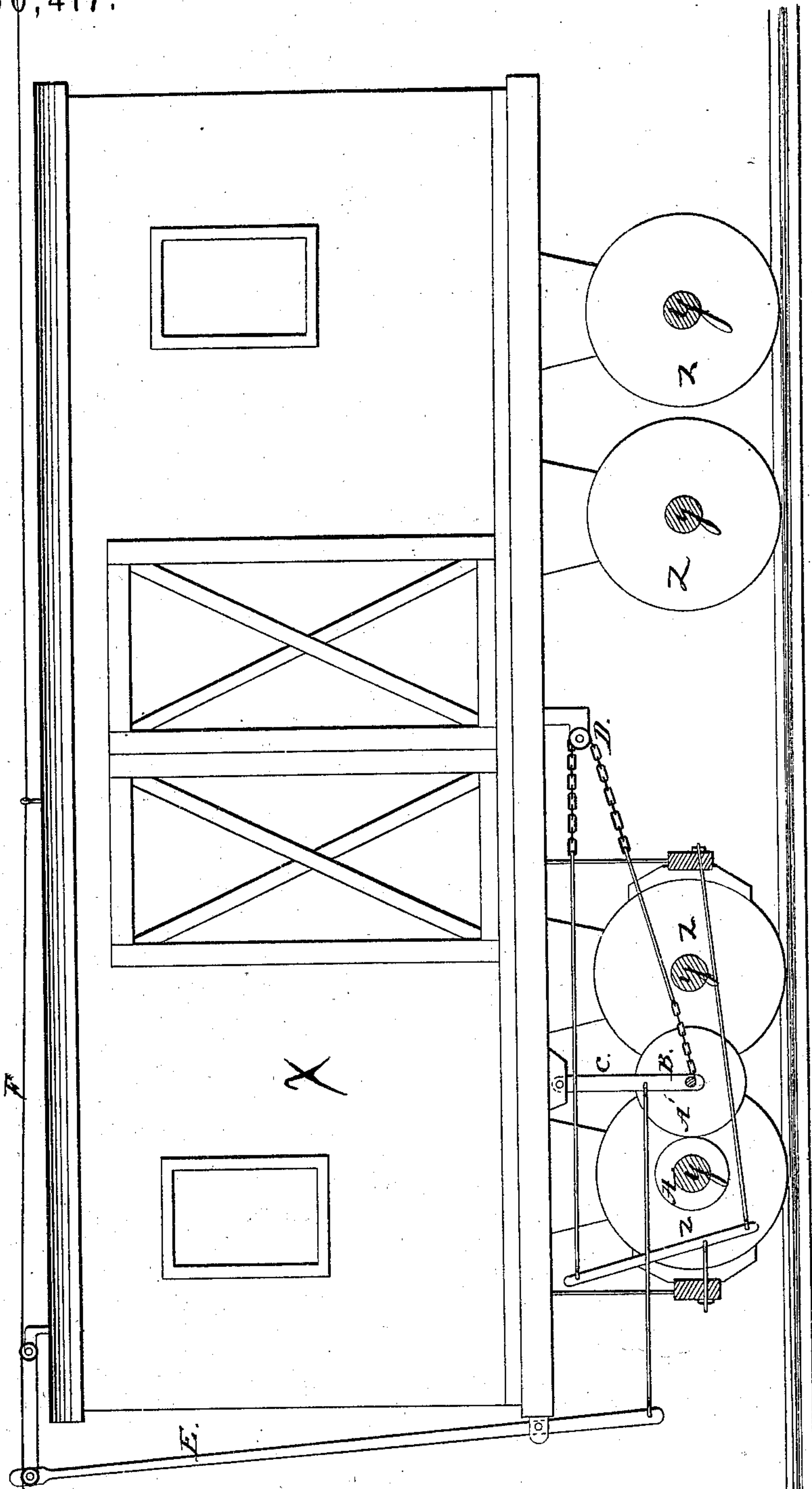
James Herd

J. HERD.  
Car-Brakes.

No. 150,417.

Patented May 5, 1874.

Fig. 2.



Attest;

C. W. Kahler  
Silas J. Day

Inventor;

James Herd



# UNITED STATES PATENT OFFICE.

JAMES HERD, OF JACKSONVILLE, OREGON.

## IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. 150,417, dated May 5, 1874; application filed April 18, 1874.

*To all whom it may concern:*

Be it known that I, JAMES HERD, of Jacksonville, in the county of Jackson and State of Oregon, have invented a new and Improved Mode of Applying Brakes to the Wheels of Railway and Street Cars; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying diagrams, and the letters of reference marked thereon.

My invention relates to that class of car-brakes, which are operated by means of a friction-disk secured on a supplementary axle, about which the brake-chain is wound when the disk is brought into contact with a friction-disk secured to the car-axle; and consists in providing one end of the supplementary axle with a laterally-moving bearing, that the position of the friction-disk may be regulated by means of a rod attached to the movable end of the supplementary axle and the hand-lever.

Figure 1 represents an under view of the car, and Fig. 2 a side elevation of the same.

*x* represents a car-body, and *y z* the car-axle and wheels, all constructed of the usual material, and in the ordinary manner. Instead of the common method of applying the power to the brakes by hand, friction-pulleys are substituted. The small friction-pulley A on the car-axle *y*, on Diagram No. 2, in connection with the larger friction-pulley A', are thrown into gear by means of the lever E and chain H. The large friction-pulley A' is attached to a horizontal shaft, B, and has a movable bearing at the pulley end C, and stationary bearing at the other end G. As soon as the friction-pulleys are thrown into gear by

moving the lever E, the motion of the car-wheels, either going forward or backward, winds up the chain *b* on the stationary end of the shaft B, thereby tightening the chain *a*, through the pulley D moving the lever J, and tightening the brakes K K on the car-wheels. The lever E extends to the top of the car, and is worked by the brakeman, by means of a cord, F, and two pulleys, one of which is on the lever, and the other on the top of the car, as shown in Diagram No. 1. This cord F may be connected with all the brakes on the train, and can be operated from any part of the train.

This improvement can be applied to the ordinary brakes now in use.

When the brakes are to be put on, the brakeman with a very slight exertion pulls the cord F attached to the lever E, which throws the friction-pulleys into gear, the motion of the car-wheels throws the brakes on, as above explained, and the friction ceases. When the brakes are to be taken off the brakeman simply slackens the cord F, and the strain on the shaft B, by means of the chain, pulls the friction-pulleys out of gear.

What I claim as my invention is—

The combination, with the car-axles and wheels *y z*, of the grooved and centrally-flanged friction-pulley A, the shaft B with friction-pulley A', and movable and stationary bearings C G, lever E, rod H, lever J, chains *a b*, pulley D, and brake-blocks K K, all constructed to operate substantially as set forth.

JAMES HERD.

Witnesses:

C. W. KAHLER,  
SILAS J. DAY.