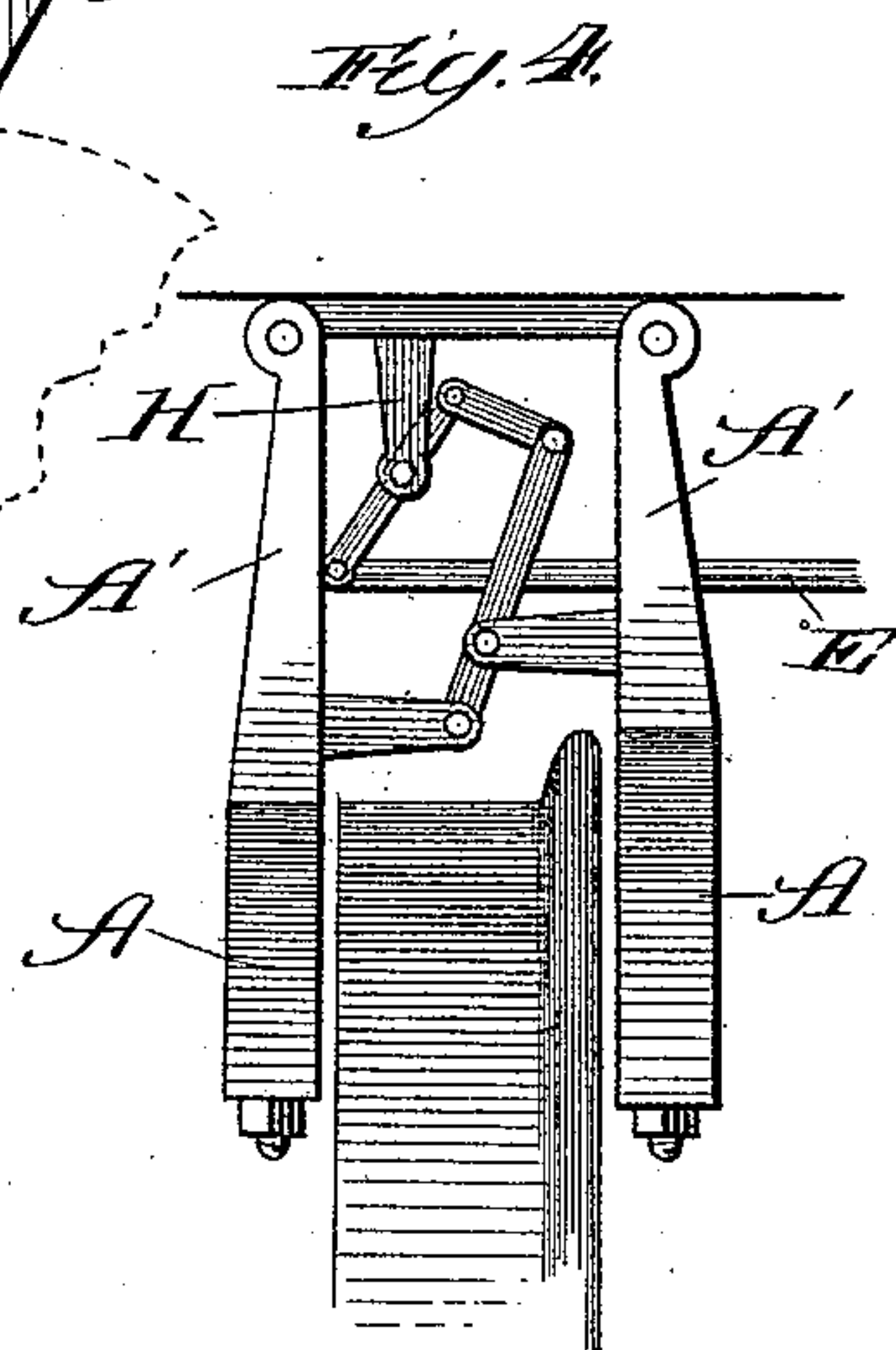
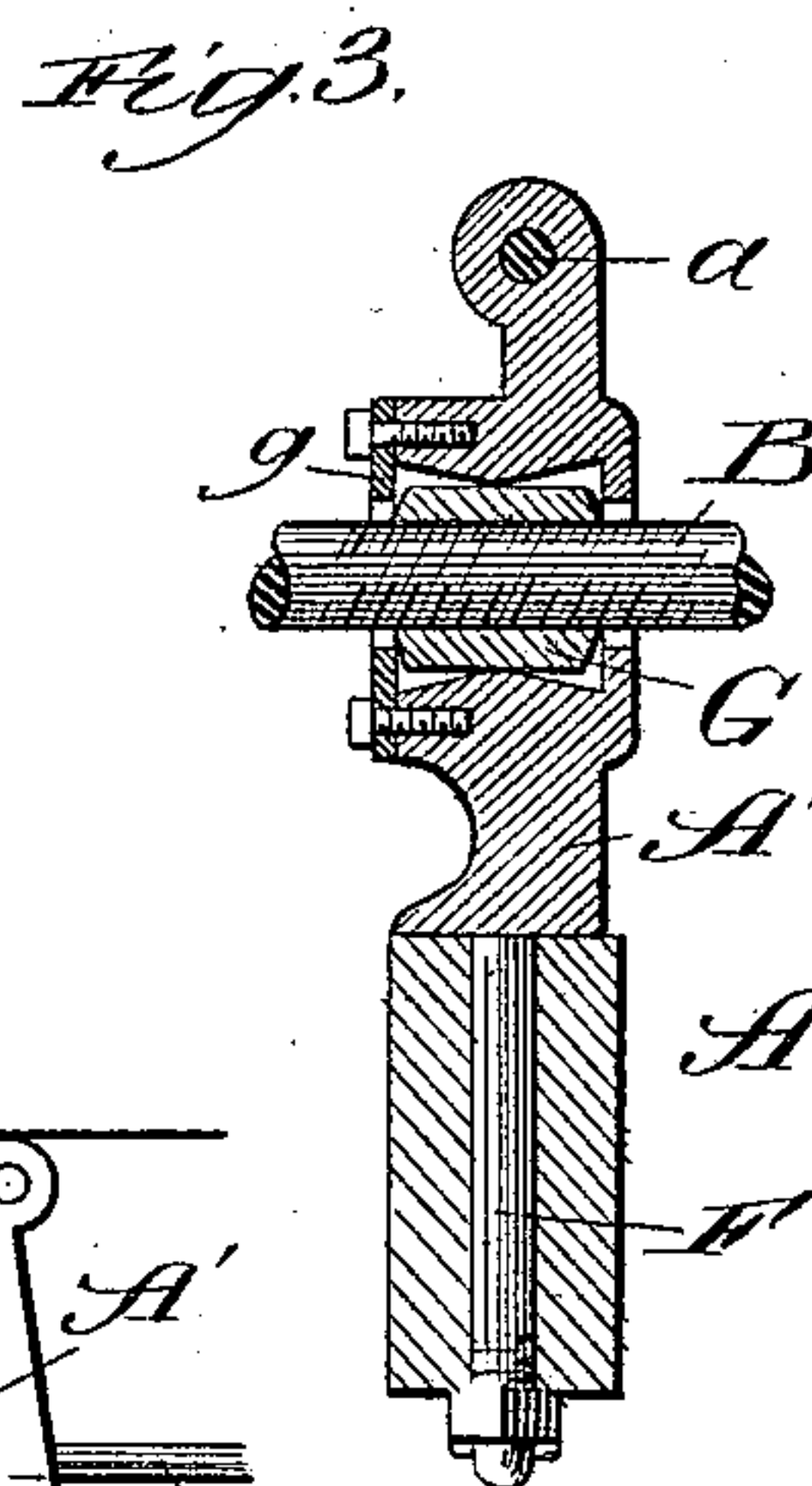
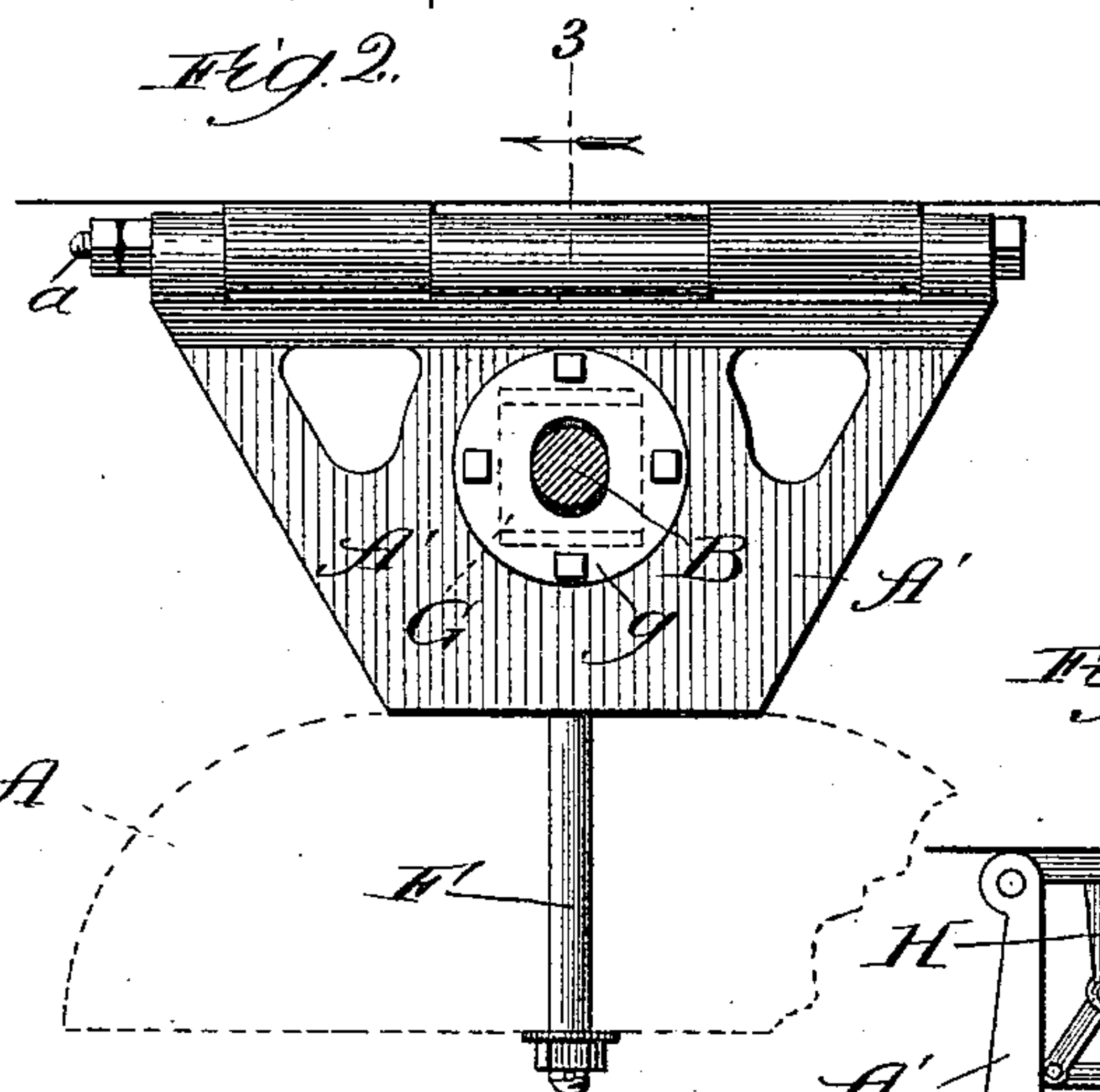
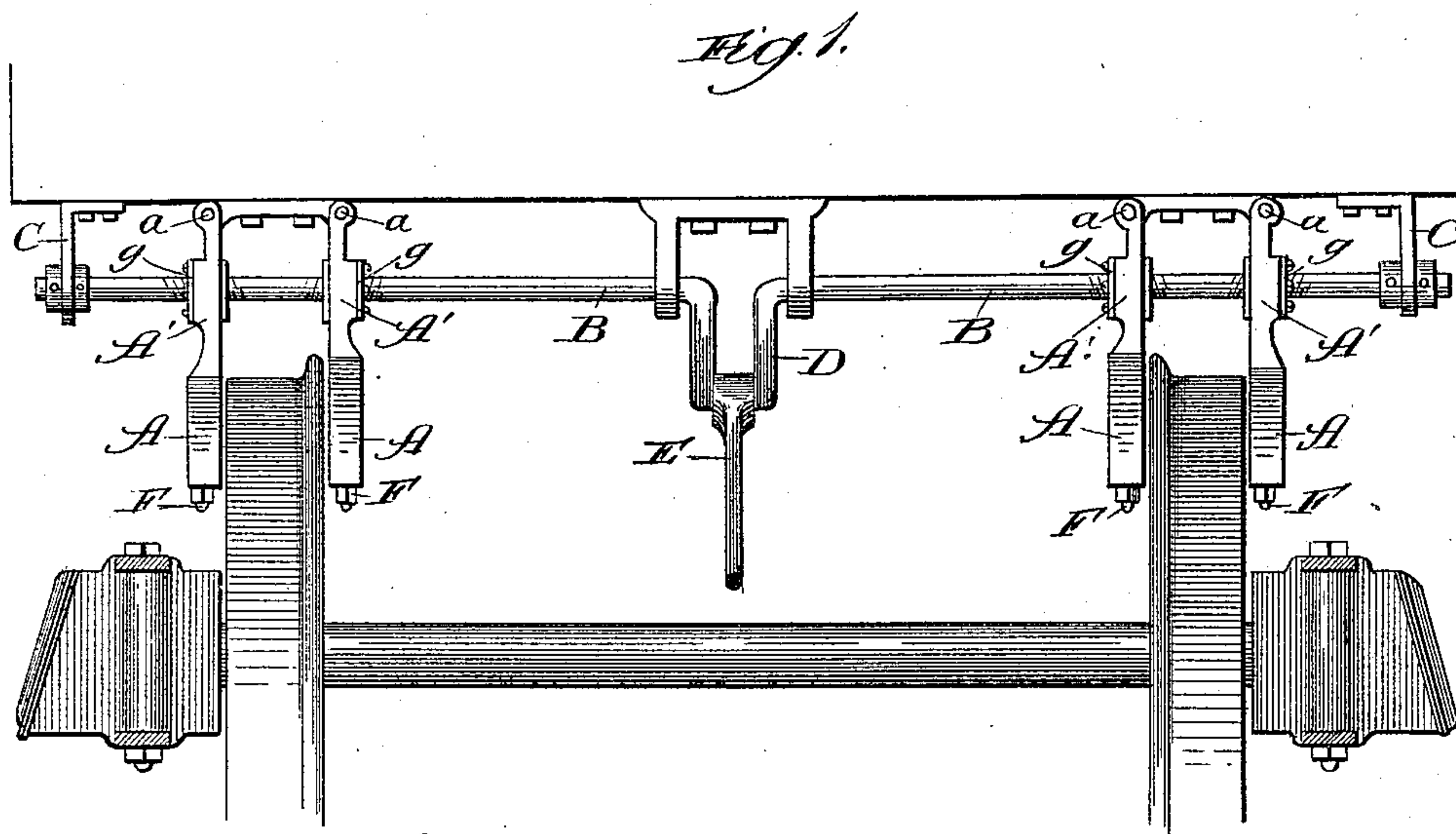


(No Model.)

J. A. LA CROIX.
CAR BRAKE.

No. 451,328.

Patented Apr. 28, 1891.



Witnesses:
Ed. D. Payson,
Clifford G. White.

Inventor:
John A. La Croix,
By Panning & Panning Payson,
Attys.

UNITED STATES PATENT OFFICE.

JOHN A. LA CROIX, OF CHICAGO, ILLINOIS.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 451,328, dated April 28, 1891.

Application filed September 2, 1890. Serial No. 363,773. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. LA CROIX, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Car-Brakes, of which the following is a specification.

The object of my invention is to make a car-brake adapted for use in connection with my improvement in car-wheels described and claimed in my application, Serial No. 348,980, filed April 22, 1890; and my invention consists in the features and details of construction hereinafter described and claimed.

In the drawings, Figure 1 is a front elevation of a pair of car-wheels with my improved brake in place. Fig. 2 is a side elevation of one of the brake-plates, showing the brake-shoe in dotted lines. Fig. 3 is a section taken in the line 3 of Fig. 2, looking in the direction of the arrow. Fig. 4 is a modified form of my invention.

In my application, Serial No. 348,980, I show car-wheels mounted on a journal provided with a hole for the axle wider at its outer edges in a horizontal plane than the diameter of the axle, which permits the wheels to automatically change the angle between themselves and the axle when they strike a curve in the track or pass from a curve to straight track again. This capacity of movement in the wheels makes it important that the brake should have a similar capacity of movement, so that should the wheel change its position when the brakes are set, the position of the brakes will change to correspond.

In making my improvement I hang the brake-shoes A A on hangers A' A', suspended on a transverse rod B, supported in suitable brackets C C at the outer sides of the car-body. The rod B is provided with a crank D, from which the brake-rod E extends along under the car. The upper ends of the brake-hangers are also further supported on rods a a, suitably supported on the under side of the car-body. The brake-shoes are preferably attached to the brake-hangers by vertical rods F F. At the point in the brake-hangers where the transverse rod B passes through them I arrange blocks G in a recess or opening in the hangers wider at its outer edges than the diameter of the block. These blocks may be retained in place in their recesses by

a cap or plate g. (Shown in Fig. 3.) They are provided with screw-threads, the one at the one side of the wheel with right-hand threads and the one at the other side of the wheel with left-hand threads. The transverse rod B at the point where it passes through the blocks in the brake-hangers is correspondingly provided with right and left handed threads. As the brake-rod E is drawn and the transverse rod B turned, the screw-threads will run the brake-hangers with their shoes toward the wheel or from the wheel, depending upon the direction that the rod B is turned. When it is desired to set the brakes, it will be drawn in that direction which will run the brake-shoes up against the sides of the wheel, so as to clasp or clamp them between the shoes, and thus secure the necessary friction to brake the wheels, and when it is desired to release the brake the rod B will be turned in that direction which will cause the brake-hangers to be run away from the wheels, so as to release them from the pressure of the brake-shoes. The arrangement of the blocks G in their recesses in the brake-hangers will permit the rod B to assume different angles with respect to the hangers.

In Fig. 4 I have dispensed with the screw-threads on the rod B and have introduced a compound lever suspended on a bracket H. This lever is so arranged that as the brake-rod is moved in the one direction or the other the brake-shoes will be moved against or away from the sides of the wheels, so as to brake them or release them from the brake, as may be desired.

As the arrangement of the compound lever will be fully understood from an inspection of Fig. 4 of the drawings, I deem it unnecessary to further describe it in detail.

In all the figures of the drawings I have shown a brake-shoe suspended on a vertical rod F, which enables it to turn on such rod as an axis to correspond to the changes of position which the wheels may assume on their axles as they pass around a curve or pass from a curve to straight track, and in all of the figures except the last I have shown provision for permitting the transverse rod B to assume a different angle to the brake-hanger, as may from time to time be necessary. I

have not shown this feature in Fig. 4, as the modification there illustrated dispenses with the transverse rod B.

What I regard as new, and desire to secure
5 by Letters Patent, is—

1. The combination of a car-wheel adapted
to shift and change the angle between itself
and the axle, brake-shoes adapted to clamp
the wheel on its sides, brake-hangers sus-
10 pended to the car-body, and a vertical rod
connecting the brake-shoes to the brake-hang-
ers and forming a vertical axis on which the
brake-shoes may turn when clamping the
wheel to accommodate themselves to varying
15 positions of the wheel, substantially as de-
scribed.

2. The combination of a car-wheel adapted
to shift and change the angle between itself
and the axle, brake-shoes adapted to clamp

the wheel on its sides, brake-hangers sus- 20
pended to the car-body and carrying the
brake-shoes, blocks arranged in holes or re-
cesses in the hangers wider at their edges
than the diameter of the blocks, the blocks 25
in the hangers on the opposite sides of the
wheel being provided with holes respectively
right and left screw-threaded, a transverse
rod passing through the hangers and the holes
of the blocks and correspondingly right and
left screw-threaded where it passes through 30
the blocks, and means to turn the transverse
rod, and thereby run the brake-hangers with
their brake-shoes toward or away from the
sides of the wheel, substantially as described.

JOHN A. LA CROIX.

Witnesses:

THOS. A. BANNING,
SAMUEL E. HIBBEN.