

(No Model.)

L. C. HUBER.

2 Sheets—Sheet 1.

CAR BRAKE.

No. 340,580.

Patented Apr. 27, 1886.

Fig. 1.

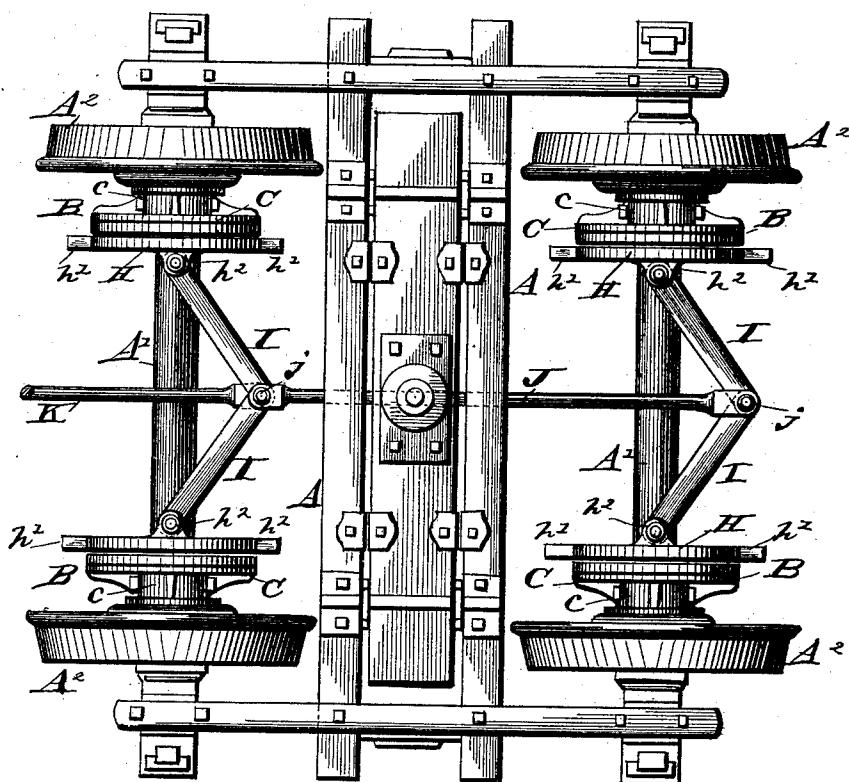


Fig. 2.

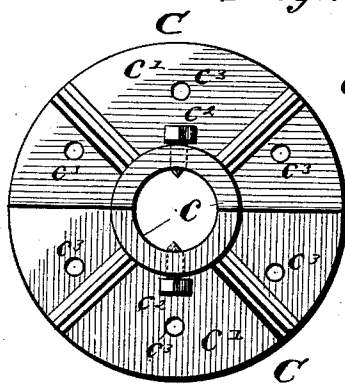
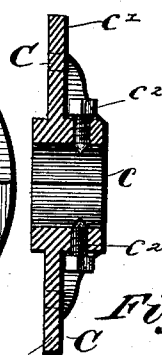


Fig. 4.

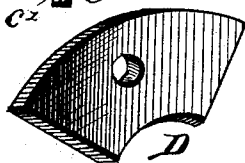
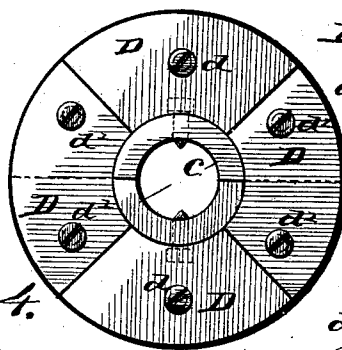
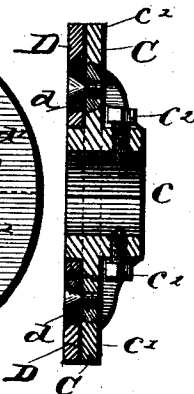


Fig. 3.



WITNESSES

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Fig. 5.

Fig. 6.

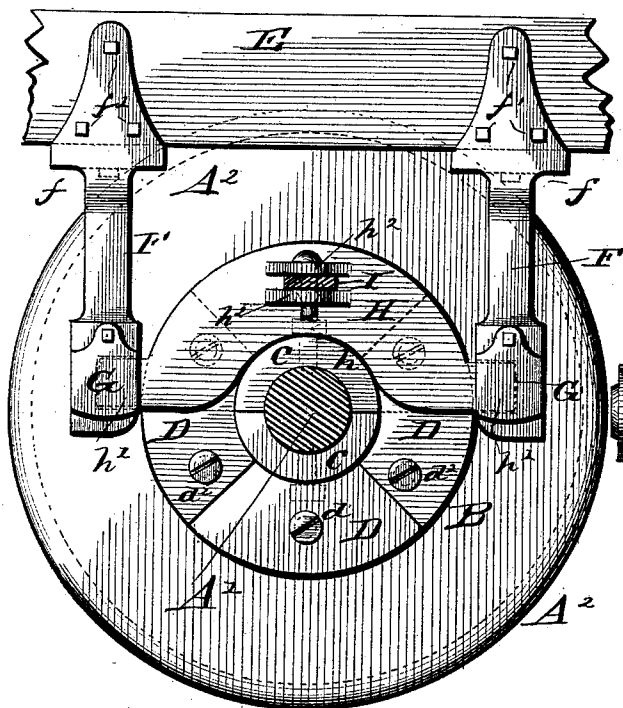
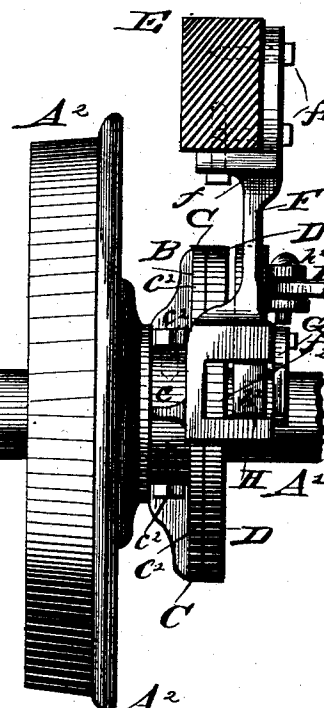


Fig. 8.

Fig. 7.

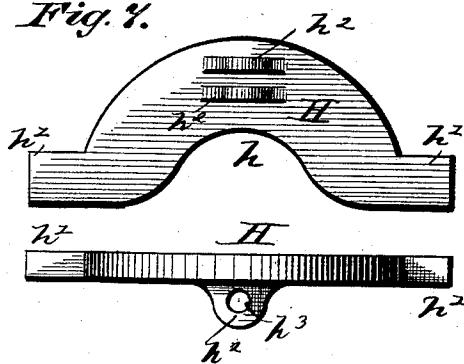
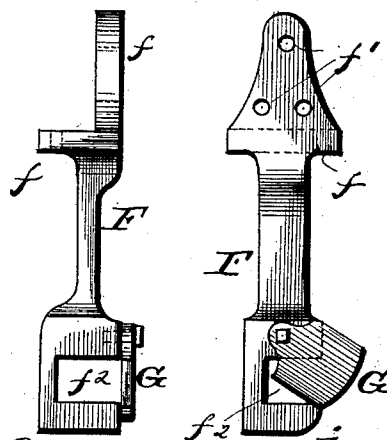
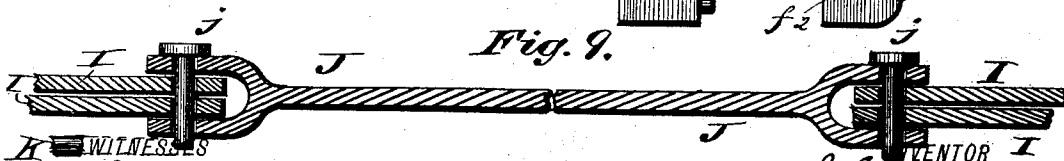


Fig. 9.



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UNITED STATES PATENT OFFICE.

LOUIS CARSON HUBER, OF HUBER, KENTUCKY.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 340,580, dated April 27, 1886.

Application filed September 10, 1885. Serial No. 176,711. (No model.)

To all whom it may concern:

Be it known that I, LOUIS CARSON HUBER, a citizen of the United States, residing at Huber, in the county of Bullitt and State of Kentucky, have invented certain new and useful Improvements in Railroad-Car Brakes; 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 letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a plan view. Fig. 2 is a rear view of the disk. Fig. 3 is a front view of the same, showing quadrants in place. Fig. 4 is a perspective view of one of the quadrants. Fig. 5 is an elevation of one of the wheels, partly in section. Fig. 6 is a side view of the same. Fig. 7 is a face and top view of the brake-shoe. Figs. 8 are detail views of the hanger. Fig. 9 is a sectional view of the coupling-rod.

This invention relates to car-brakes acting by pressure transverse to the axis of the car; and it consists in the novel construction and arrangement of parts hereinafter described, and pointed out in the appended claims.

Referring to the accompanying drawings by letter, A designates the car-truck, A' the axles turning in journal-boxes secured to the truck, and A² the wheels secured to the axles, all constructed and arranged in the usual manner:

B B are compound friction-disks, situated at the inner side of the wheels, against the hubs of the same, and each composed of the following parts:

C is a disk, having on its outer surface the hub *c*, and made in halves *c'*, which are set around the axle with their straight edges together, and are secured in place by the set-bolts *c²*, which pass through threaded openings countersunk at their outer orifices, as shown, the hubs of said disks lying against the hubs of the wheels.

c³ *c³* are three threaded openings through each half *c'*, one of which is in the central or bisecting line of the same, and the other two near to and equally distant from its straight edge.

D D are four quadrants, which, placed end

to end, form a circular plate equal in diameter to the disk C, with a circular opening through it, which fits snugly upon the axle. Two of these quadrants have through them the two countersunk holes *d d'*, which, when the quadrants are placed on the opposite sides of the inner surface of the disk and equally overlapping the two halves *c'*, overlie the holes *c³* near the straight edges of said halves. The remaining two quadrants are placed between the former two, and are each provided with a single countersunk hole, *d*, which overlies the central hole, *c³*, in the half on which it is placed. When the quadrants are thus in position, they are secured to the disk C by bolts *d²*, the heads of which enter the countersunk orifices of the holes *d*, and are flush with the inner surface of the plate formed by the quadrants. The friction-disk is thus complete, and its construction has the following advantages: The quadrants which bear the pressure of the shoes can, when worn, be removed and others substituted therefor. The overlapping quadrants bind the halves of the disk C firmly together, make the friction-disk B one united whole, and prevent its slipping on or tearing off the axle under the pressure of the brake-shoe.

E E are the longitudinal beams or sills, secured to the under surface of the car-body at the inner side of the wheels.

F F are hangers, each having at its upper end a head provided with a rectangular shoulder, *f*, and adapted to be secured by the bolts *f'* to the inner and lower surfaces of one of the sills. The lower end of the hanger is enlarged and provided with a rectangular recess, *f²*, which, when the hangers are in position, run horizontally from its inner toward its outer surface.

G is a covering plate or shield pivoted at its upper end to the inner surface of the hanger, and arranged to close, when turned down, the open inner face of the recess *f²*. Two hangers are secured to a sill adjacent to each wheel, one equally distant on each side of the same, and rather farther apart than the diameter of the friction-disk, the inner edges of the hangers being farther inward with relation to the car than said disk.

H is a brake-shoe of rubber, semicircular in shape and on the same radius as the friction-

disk. The lower edge of the shoe has a semicircular notch, h , of larger diameter than the axle, so as not to come in contact therewith. The ends of the shoe have rectangular extensions h' , which enter the recesses f^2 of the opposite hangers, and are retained thereon by turning down the shields G. As the thickness of the said extensions is less than the depth of the recesses, the brake-shoe is capable of an outward and inward motion, but when the shields are down cannot escape from the hangers. The brake-shoes are situated at the inner side of the friction-disks, and each has on the center of its inner face two horizontal lugs, h^2 , which are provided with openings h^3 in the same vertical line. The brake-shoes can be easily removed when worn and new ones substituted therefor.

I I are brake-levers, each of which has its outer end inserted between the lugs h^2 of a brake-shoe, and is retained there by a pin, i , passing through the holes h^3 and a corresponding hole on the end of the lever. The brake-levers at each end incline inward and rearward, and their inner ends are provided with similar openings that overlie each other. J is the coupling-rod for the brake-levers at the two ends of the car. The ends of the said rod are bifurcated, the inner ends of the brake-levers passing between the arms of the bifurcations, where they are retained by the pins j , which pass through holes in the said arms that register with those in the brake-levers. The front pin, j , also passes through a hole in the rear end of the draft-rod K, which is thus attached to the system of brake and levers. It is evident that any force—such as steam, air, or hand power—drawing the draft-rod forward will cause the brake-shoes to press against the friction-disks, and will thus brake the wheels.

Having described this invention, what I

claim, and desire to secure by Letters Patent, is—

1. In a car-brake, the friction-disk B, adapted to be secured to an axle by bolts c^2 , and composed of the disk C, made in halves c' , each having one-half of the hub c made in one piece with it, and each provided with the threaded openings c^3 , and the four quadrants D, provided with the holes d , and secured to the inner surface of the disk C by the bolts d' , substantially as specified.

2. In a car-brake, the combination of the iron semicircular brake-shoe H, provided with the semicircular notch h on its straight lower edge, and the rectangular horizontal extensions h' at its corners, with the hangers F, adapted to be bolted to the sills of the car-body, and provided at their lower ends with the rectangular horizontal recesses f^2 , and pivoted shields G, substantially as specified.

3. In a car-brake, the combination of the friction-disks B, each composed of the disks C, and quadrants D, the hangers F, provided with the pivoted shields G, the brake-shoes H, having the extensions h' , supported by the recesses in the hangers, and mechanism, substantially as described, whereby the brake-shoes can be forced outward against the friction-disks, substantially as specified.

4. In a car brake, the combination of the friction-disk B, the hangers F, the pivoted shields G, the brake-shoes H, the brake-levers I, the coupling-rod J, and the draft-bar K, all constructed and arranged substantially as shown and described, for the purposes specified.

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

LOUIS CARSON HUBER.

Witnesses:

B. M. RIVERS,
T. W. KENNEDY.