

(No Model.)

J. A. WEBBER.  
CAR WHEEL.

No. 498,038.

Patented May 23, 1893.

FIG. 1

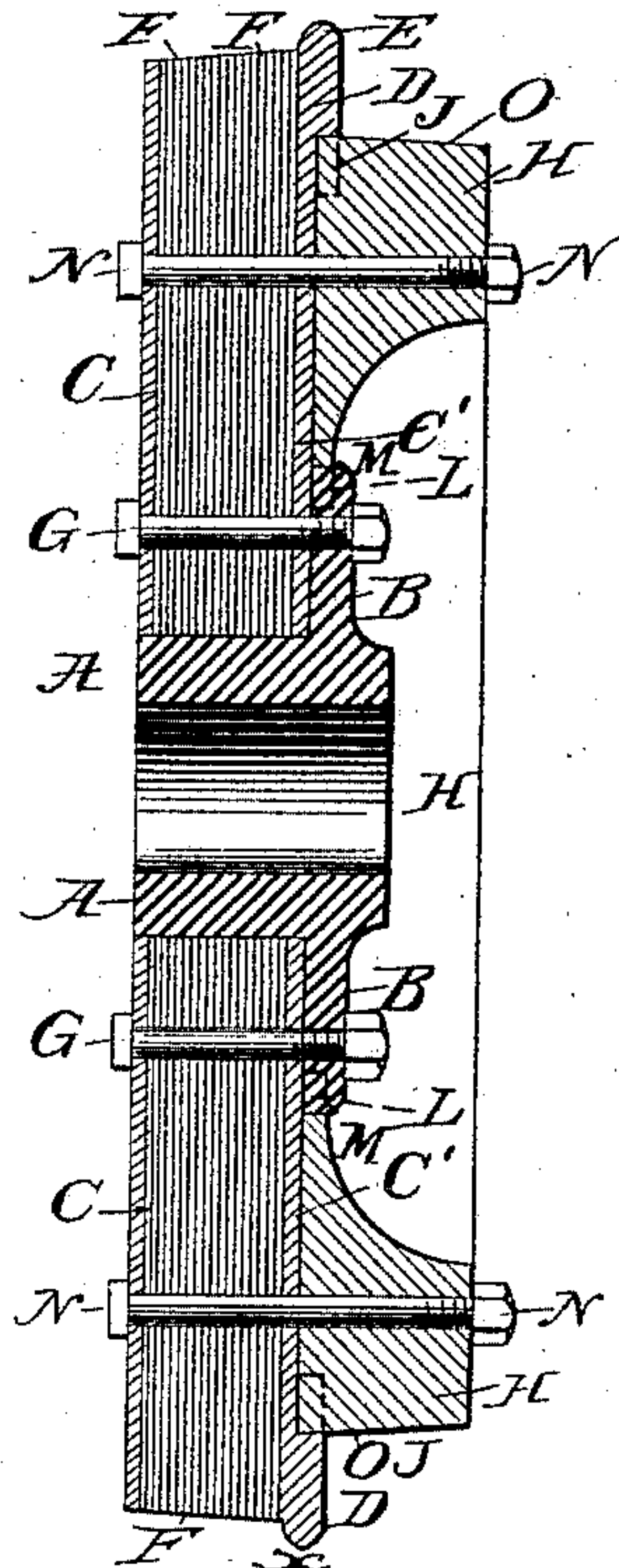
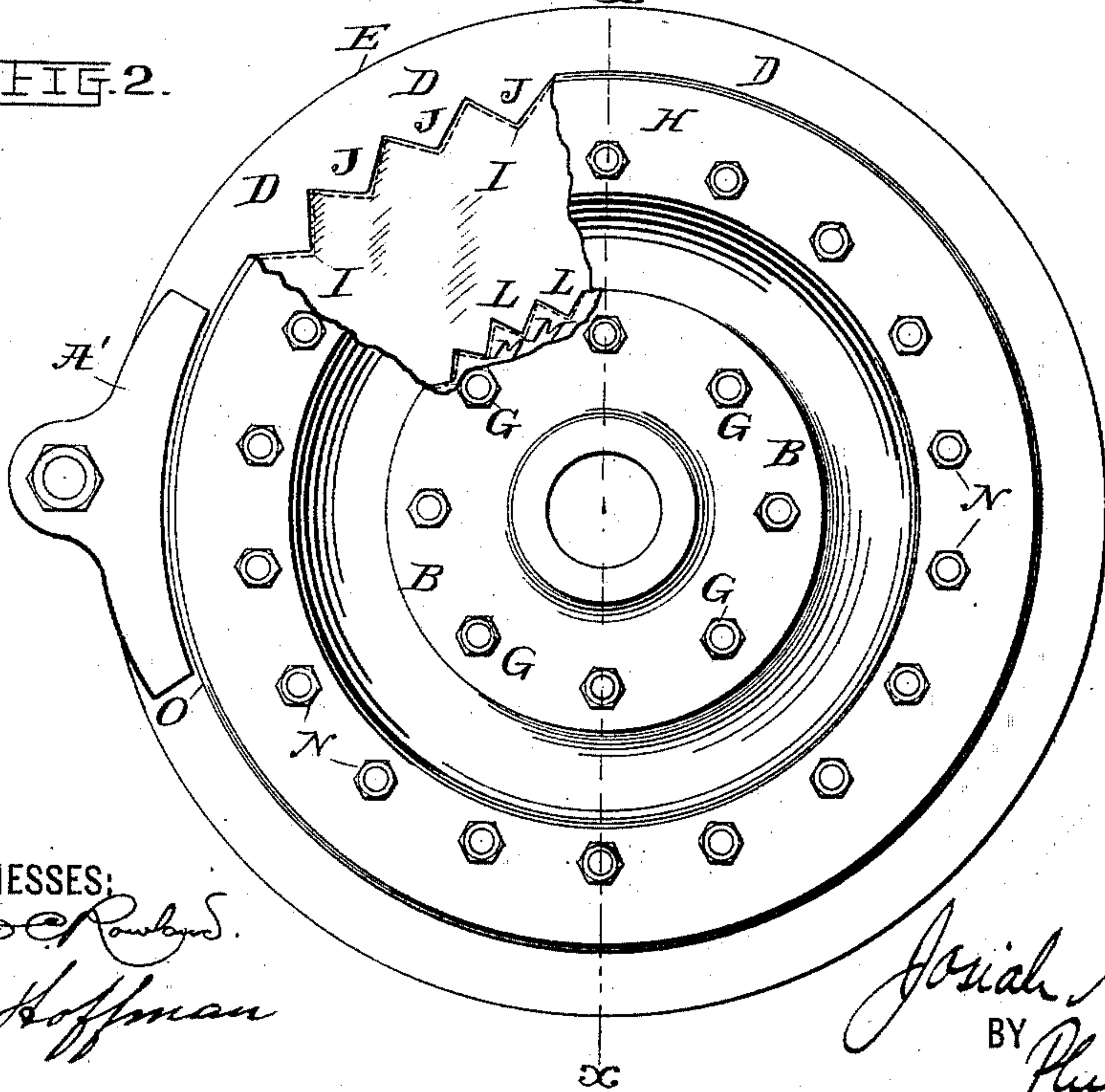


FIG. 2.



WITNESSES:  
*Edward C. Rowley*  
*J. E. Hoffman*

INVENTOR  
*Josiah A. Webber*  
BY *Phillips & Holt*  
ATTORNEY



# UNITED STATES PATENT OFFICE.

JOSIAH A. WEBBER, OF BROOKLYN, NEW YORK.

## CAR-WHEEL.

SPECIFICATION forming part of Letters Patent No. 498,038, dated May 23, 1893.

Application filed August 10, 1892. Serial No. 442,672. (No model.)

*To all whom it may concern:*

Be it known that I, JOSIAH A. WEBBER, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Car-Wheels, of which the following is a specification.

My invention relates to car wheels and it is an improvement upon the invention for which I obtained Letters Patent of the United States, dated October 27, 1891, No. 461,859. In wheels made in accordance with that former invention, the brakes were applied upon the periphery or tread of the wheel in the same manner that they are applied upon the tread of ordinary wheels.

My present invention consists in supplying a surface upon which the brake can act which is located at the side of the wheel instead of upon the periphery or tread thereof.

I also embody certain improvements in the construction of my present wheel which will hereinafter be described.

Figure 1 of the drawings, illustrates a vertical section of a car wheel embodying my invention on the line *x, x*, of Fig. 2. Fig. 2 is an elevation taken from the right in Fig. 1.

A is the hub of the wheel. It is provided on one side with a flange B.

C, C' are two side plates which afford lateral support for the wheel. The plate C' at its edge is thickened as at D and is provided with the ordinary flange E.

F, F, are the disks of non-metallic material which form the major portion or body of the wheel. They lie between the disks C and C'.

G, G, &c., are bolts which pass through the flange B of the hub A and through the plates C, and C', and through the disks of non-metallic material F, if they extend so far toward the hub and by means of these bolts the structure as thus far described is firmly clamped and rigidly held together.

I now come to the feature which in conjunction with that which has already been described, characterizes this invention. H is an annular casting of suitable material; in its back side are formed toothed or similarly shaped recesses I, I, &c., into which fit teeth or similar projections J, J, formed in the thickened part D of the plate C; and on the interior edge of the annular casting H are also

formed other recesses and teeth L, L, which interlock with similar shaped projecting parts M M, on the flange B of the hub. N, N, &c., 55 are a series of bolts which pass through the annular casting H, the side plates C and C', and the disks of non metallic material F, F, whereby the annular casting H is firmly clamped to the wheel and also the outer portions of the wheel itself are rigidly held together. The purpose of the interlocking surfaces I, J and L, M, between the annular casting H and the thickened part D of the plate C' and also between the annular casting H 65 and the flange B of the hub is so that the act of applying the brakes upon the periphery O of the annular casting H may be prevented from shearing off the bolts N, N, &c., the strain is sometimes enormous and although 70 ordinarily the bolts N would be sufficient to hold the parts rigidly to each other, especially if there are a large number of them as shown, nevertheless the interlocking surfaces afford an absolute prevention against the shearing 75 of the bolts. The construction of the wheel is, however, so much simpler when these interlocking surfaces are not employed, that I do not always use them. A' illustrates a brake-shoe showing one method in which it 80 may be applied upon the friction surface O of the annulus H.

It will be obvious to those who are familiar with this art that modifications may be made in the details of construction shown and still 85 the essentials of my invention be employed. I do not therefore limit myself to such details.

I claim—

1. A car wheel comprising essentially a metallic hub, a non metallic center portion, side 90 plates one of them provided with a flange for the wheel and an annular casting or friction plate fastened upon one of said side plates, substantially as set forth.

2. A car wheel comprising essentially a metallic hub, a non metallic center portion, side 95 plates one of them provided with a flange for the wheel, an annular casting or friction plate and bolts passing through said annular casting through said side plates and through the non metallic center portion and means whereby 100 the body of the wheel may be fastened to the hub, substantially as set forth.

3. A car wheel comprising essentially a me-



tallic hub, a non metallic center portion, side plates one of them provided with a flange for the wheel, an annular casting or friction plate, means to fasten the friction plate to the side of the wheel and interlocking parts between the wheel and the annular casting or friction plate, substantially as set forth.

4. A car wheel comprising essentially a metallic hub, a non metallic center portion, side plates one of them provided with a flange for the wheel, an annular casting or friction plate, means to fasten the friction plate to the side of the wheel and interlocking parts between the wheel and the hub and the annular casting or friction plate, substantially as set forth.

5. A car wheel comprising essentially a metallic hub, a flange upon the hub, side plates one of them provided with a flange, non metallic disks extending from the hub to the tread of the wheel, an annular casting or friction plate, bolts passing through the flange of the hub, the side plates and non metallic disks and other bolts which pass through

the annular casting or friction plate, the side plates and the non metallic disks, substantially as set forth.

6. A car wheel comprising essentially a metallic hub, a flange upon the hub, side plates one of them provided with a flange, non metallic disks extending from the hub to the tread of the wheel, an annular casting or friction plate, bolts passing through the flange of the hub, the side plates and non metallic disks, and other bolts which pass through the annular casting or friction plate, the side plates and the non metallic disks, and interlocking surfaces between the annular brake ring and the body of the wheel, substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 5th day of August, A. D. 1892.

JOSIAH A. WEBBER.

Witnesses:

PHILIPS ABBOTT,  
LEWIS HEUER, Jr.