

No. 634,666.

Patented Oct. 10, 1899.

G. H. B. HOOPER.
ELECTRIC BRAKE.

(Application filed June 8, 1898.)

(No Model.)

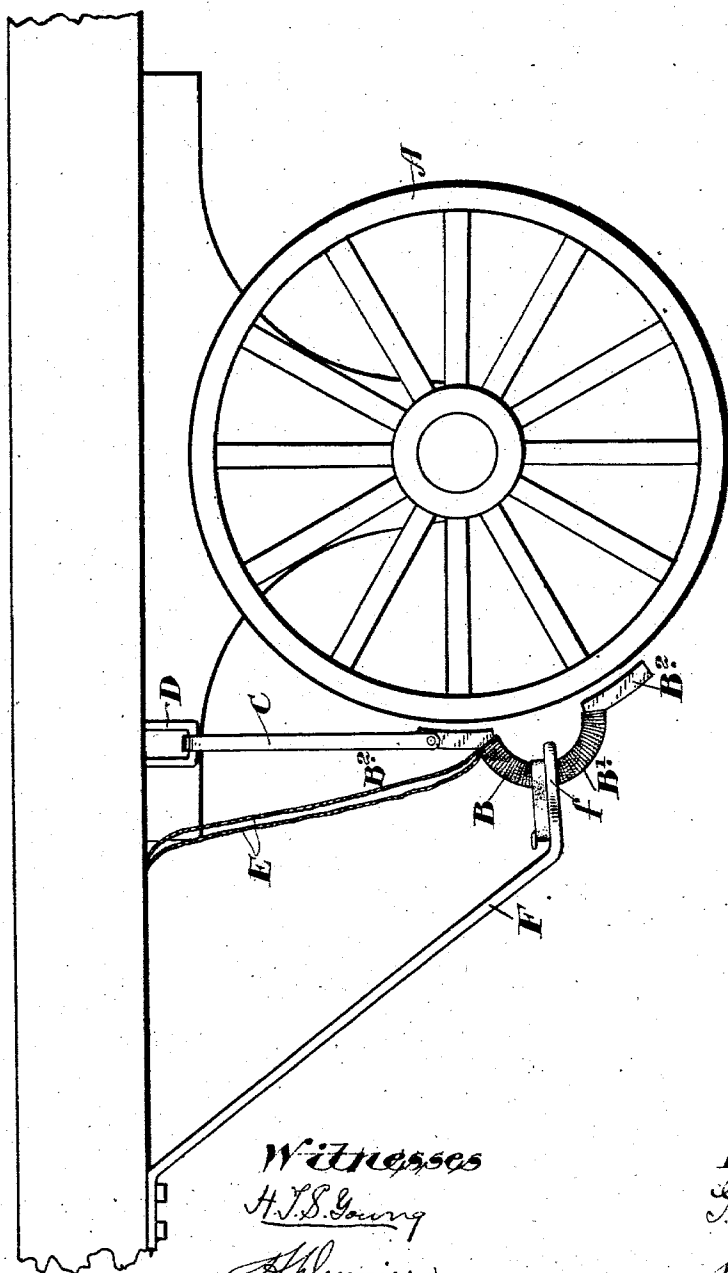


Fig. 1.

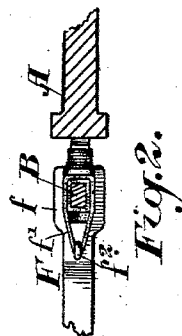


Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE HENRY BINGHAM HOOPER, OF TORONTO, CANADA.

ELECTRIC BRAKE.

SPECIFICATION forming part of Letters Patent No. 634,666, dated October 10, 1899.

Application filed June 8, 1898. Serial No. 682,900. (No model.)

To all whom it may concern:

Be it known that I, GEORGE HENRY BINGHAM HOOPER, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Electric Brakes, of which the following is a specification.

My invention relates to improvements in electric brakes for car and other wheels; and the object of the invention is to design a simple and effectual form of brake-shoe in which the lines of force passing through the ends will act with the greatest strength upon the perimeter of the wheel; and it consists, essentially, of a brake-shoe having the major portion of the magnet formed on a circle having a less arc than the contacting pole ends which are formed concentric to the center of the wheel to which the brake is applied and extend out entirely beyond the wound portion of the magnetic shoe, the parts being otherwise constructed and arranged in detail, as hereinafter more particularly explained.

Figure 1 is a side elevation showing the application of my brake to a wheel. Fig. 2 is a sectional plan of the brake-shoe and portion of the wheel, showing the means whereby such brake-shoe is normally held from contact with the wheel.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is a wheel having an iron rim and designed to be a wheel of a car or other vehicle or a wheel on a shaft or any other wheel to which it is necessary to apply a brake.

B is my brake-shoe comprising a magnet portion B', wound as specified, and the end contacting pole portions B². It will be noticed that the pole portions B² extend outwardly entirely to the outside of the magnet portion B' and are formed in arcs concentric to the perimeter of the wheel. The portion B', it will be noticed, is formed on an arc described from a less radius than that of the arcs of the pole ends. By providing outwardly-extending pole ends, as described, the magnetic lines of force are allowed a freer passage to the perimeter of the wheel, and being entirely outside of the portion B' there is no danger of short-circuiting between the poles, as would be the case if the poles approached each other or were close together.

The magnetic brake-shoe is held in position

by a link C, pivotally connected to the top of the shoe and suspended from a loop D. E are the wires running to the wound portion, which wires are provided at any convenient point with a suitable switch to throw the current into the magnet when desired.

The magnetic shoe B is held from lateral displacement by the hanger F, provided with the jaws f, between which the shoe fits.

In order to hold the shoe positively free of the wheel, I provide an elastic band f', which is passed around the magnet at one end, and a hook f² on the hanger F at the opposite end.

It will be seen from this description by the construction of my brake-shoe that I am able to procure a very much better grip upon the surface of the wheel than those heretofore devised of which I am aware.

What I claim as my invention is—

1. A brake for wheels comprising a bar-magnet of uniform cross-section throughout, having the wound portion formed on a core, the arc of which is that of a circle less than that of the rim of the wheel to which it extends, pole ends extending entirely outside such arc and formed on arcs concentric to the perimeter of the wheel and having their inner arc-shaped sides disposed to contact with the wheel, as specified.

2. A brake for wheels comprising a bar-magnet having the wound portion formed on a core, the arc of which is that of a circle less than the arc of the rim of the wheel to which it extends, pole ends extending entirely outside such arc and formed on arcs concentric to the perimeter of the wheel and having their inner arc-shaped sides disposed to contact with the wheel, a link supporting the same pivotally connected at the bottom to the top of the arc-shaped pole end thereby leaving the opposite pole end perfectly free and the inner side of both pole ends disposed to contact with the wheel, a rigidly-supported guiding-hanger having the bottom end embracing the central portion of the core and limiting its movement, and a suitable spring connected to the magnetic brake-shoe at the center and to a suitable portion of the hanger at the opposite end, as specified.

GEORGE HENRY BINGHAM HOOPER.

Witnesses:

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