(No Model.)

L. DAFT.

ELECTRO-MAGNETIC BRAKE.

No. 289,896. Patented Dec. 11, 1883.

Fig. 2.

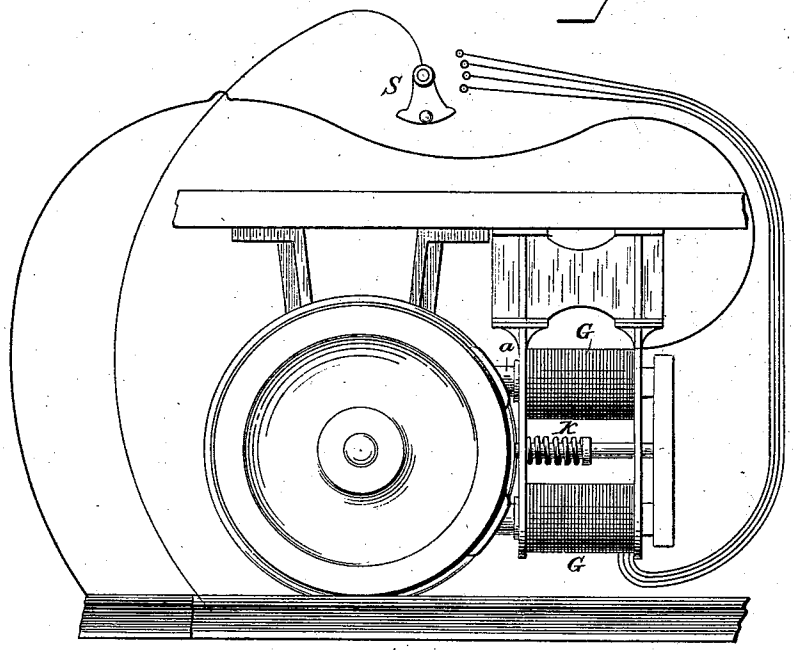
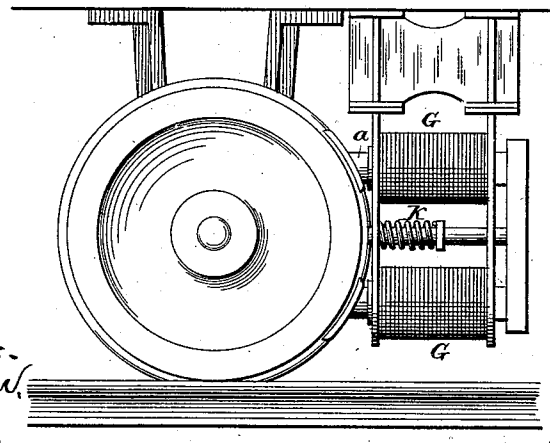


Fig. 1.



Witnesses.
Court. A. Cooper.
William Paxton

Inventor.
Leo Daft
By his Attorney,
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UNITED STATES PATENT OFFICE.

LEO DAFT, OF GREENVILLE, NEW JERSEY.

ELECTRO-MAGNETIC BRAKE.

SPECIFICATION forming part of Letters Patent No. 289,896, dated December 11, 1883.

Application filed March 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, LEO DAFT, a citizen of Great Britain, and resident of Greenville, New Jersey, have invented a new and useful Improvement in Electro-Magnetic Brakes, of which the following is a full, true, and exact description, reference being had to the accompanying drawings.

By this improvement a brake is readily applied to a revolving wheel by magnetizing the core of an electro-magnet, whereby said core is drawn forward against the surface of the wheel, sliding through the coils of a magnet.

My invention will be readily understood from the accompanying drawings.

Figure 1 is an elevation of part of a car, wheel, and brake-attachment. Fig. 2 is an elevation showing the circuits and switch.

In the drawings the magnets are represented at G G. These magnets are provided with cores *a*, movable longitudinally therewith and yoked at the back. They are normally forced back by a spring, K; but when an electric current is caused to circulate through the coils G G, the cores become magnetized and are immediately attracted toward and against the revolving wheel. The coils G G should preferably be made in independent sections or layers, which may be brought to a switch, S, under the control of the engineer, so that he may in succession throw on any number of said coils which he desires, thereby increasing the friction of the brake on the thread. It is obvious that these brake arrangements may be instantly applied to the whole length of the train, as well as upon the engine, by simply connecting them in the well-known way by a single-wire connection directly to the engine if only one coil is intended to be used, or, if different sections, by a number of wires corresponding to those sections. The opposite end of the coils will of course be connected with the rail; or, in certain cases, the brakes may be mere duplicates of the one shown in Fig. 2. In this figure the current is normally connected electrically with the single terminal of all the coils of the brake-magnet, the other terminals being separate, and being capable of being brought into connection successively with the switch S as it is moved over them. The coils are thus connected in multiple arc with the electric conductor.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. An electric brake, consisting of a stationary magnet or coil and a freely-moving axial armature carrying the brake-shoe, substantially as described.

2. An electric brake, consisting of a magnet having several independent coils and a brake-surface operated by the magnet, the said coils being independently connected, so that they may be operated singly or in multiple arc, substantially as described.

3. In an electric brake, the combination, with a fixed magnet, of a movable armature or core carrying brake-shoes and devices for holding said shoes normally out of contact with the wheel, substantially as described.

4. In an electric brake, the combination, with a fixed magnet having independent coils, of a movable armature or core carrying the brake-shoes, devices for maintaining said shoes normally out of contact with the wheels, and means for connecting more or less of said coils in multiple-arc circuit, substantially as described.

LEO DAFT.

Witnesses:
GEO. H. EVANS,
WM. A. POLLOCK.