

(No Model.)

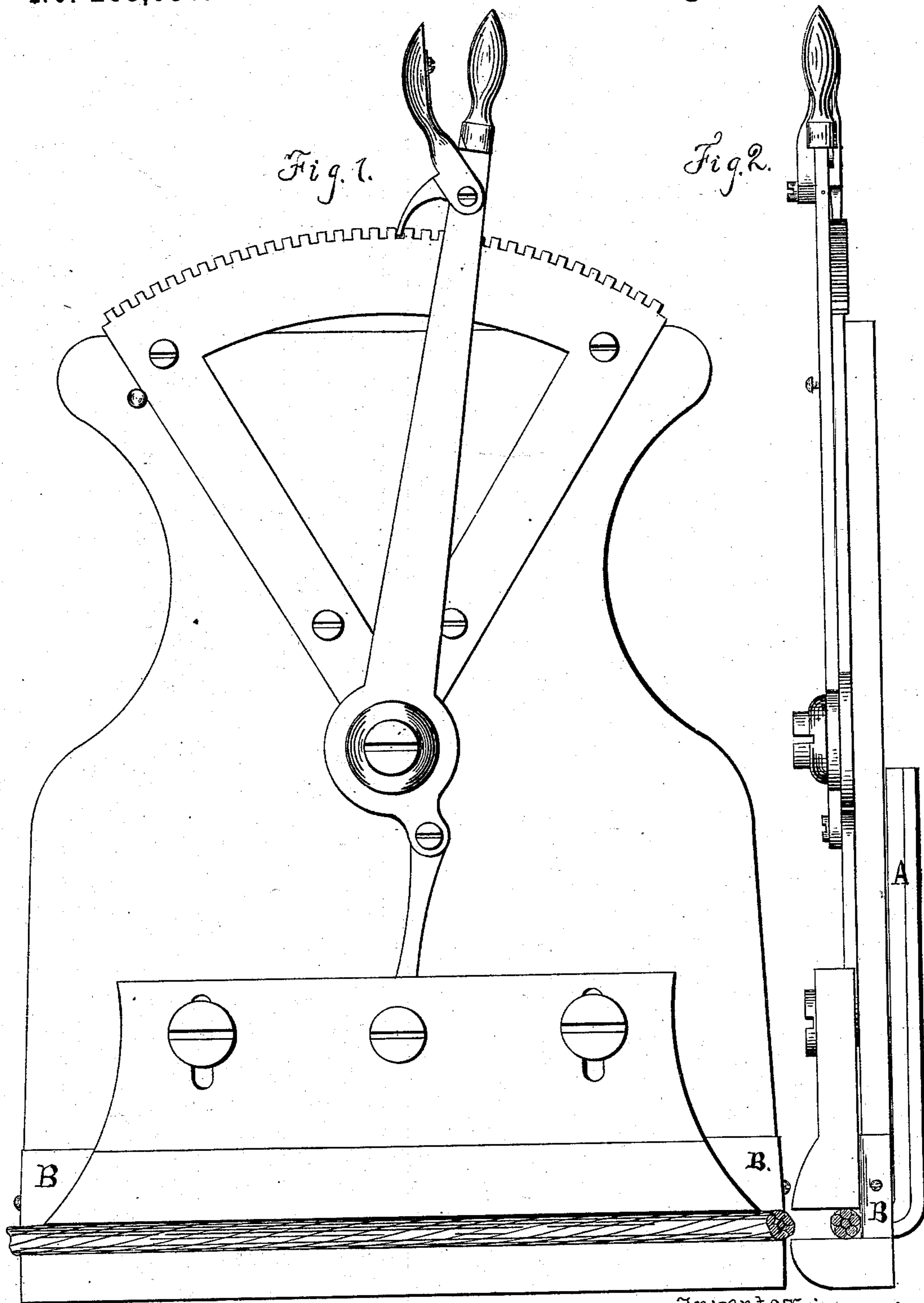
2 Sheets—Sheet 1.

M. ARNHEIM.

SUPPORTING CABLE USED IN PROPELLING CARS.

No. 283,058.

Patented Aug. 14, 1883.



Witnesses:

Joseph L. Levy  
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# UNITED STATES PATENT OFFICE.

MARKS ARNHEIM, OF NEW YORK, N. Y.

## SUPPORTING-CABLE USED IN PROPELLING CARS.

SPECIFICATION forming part of Letters Patent No. 283,058, dated August 14, 1883.

Application filed April 23, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, MARKS ARNHEIM, of the city and county and State of New York, have invented a new and improved method of holding or supporting a running cable used in drawing or propelling passenger or freight cars—that is, of keeping the said cable in place in reference to the vise or grappler connected with and forming part of the car, and of preventing the running cable from slipping off and dropping entirely away from the vise or grappler of the car; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and the letters of reference marked thereon, making part of this specification.

Figure 1 is a front view. Fig. 2 is a side view. Fig. 3 is a back view. Fig. 4 is a section taken on the line *x x*, Fig. 3.

My invention consists in the application or attachment of a magnetized bar of appropriate shape and form, or of an electro-magnet, to the vise or grappler of the car, or in making the grappler itself, or some portion thereof, in such form and of proper materials as to be itself a permanent magnet of sufficient and proper strength, or to be capable of being electro-magnetized in a sufficient and proper manner, so as to support by its attractive power the running cable in its proper place, and in connection with the vise or grappler, and so as to prevent the cable from slipping off and dropping away from the grappler of the car.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct my vise or grappler in any of the known forms and apply thereto any or all of the appendages of such grapplers; but in order to obviate the danger that may result from the cable's slipping off and dropping

away from the grappler, and thereby causing delay and the necessity of pushing the car to the next station, where access may be had to the cable, and where the attachment of the car to the cable may be renewed, I apply or attach a magnetized bar of appropriate shape, form, and strength, or an electro-magnet, as shown by letter A in the accompanying drawings, or in making the grappler itself or some portion thereof I use materials such as may constitute a permanent magnet of proper and sufficient strength, or such materials as are capable of being electro-magnetized to a proper and sufficient extent to support by its or their attractive power the running cable in its proper place with reference to the vise or grappler, and to prevent the cable from slipping off and dropping away from the grappler; and, furthermore, for the purpose of lessening the friction and wear of the cable against or upon any part of the grappler, or from contact with the magnet just described, resulting either from the weight of the cable or from the attraction of the magnet, I use in the construction of the grappler some soft material—such as lead, brass, or copper—or wheels and pulleys, either each alone or in conjunction with each other, for that portion of the grappler which comes in contact with the running cable, as shown by letter B in the accompanying drawings. When the car stops, the cable moves against this soft material, or upon the wheels and pulleys, or both, and thereby is worn away less rapidly and moves with less friction.

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

A gripper for a traveling cable, a part whereof is rendered magnetic to retain the cable in its proper place, substantially as described.

MARKS ARNHEIM.

Witnesses:

JNO. H. HAMILTON,  
D. McLEAN SHAW.