(No Model.) 2 Sheets—Sheet 1.

W. B. POTTER.

MOUNTING FOR CONTACT SHOES OF SURFACE CONTACT RAILWAYS.

No. 591,878. Patented Oct. 19, 1897.

FIG. 1.

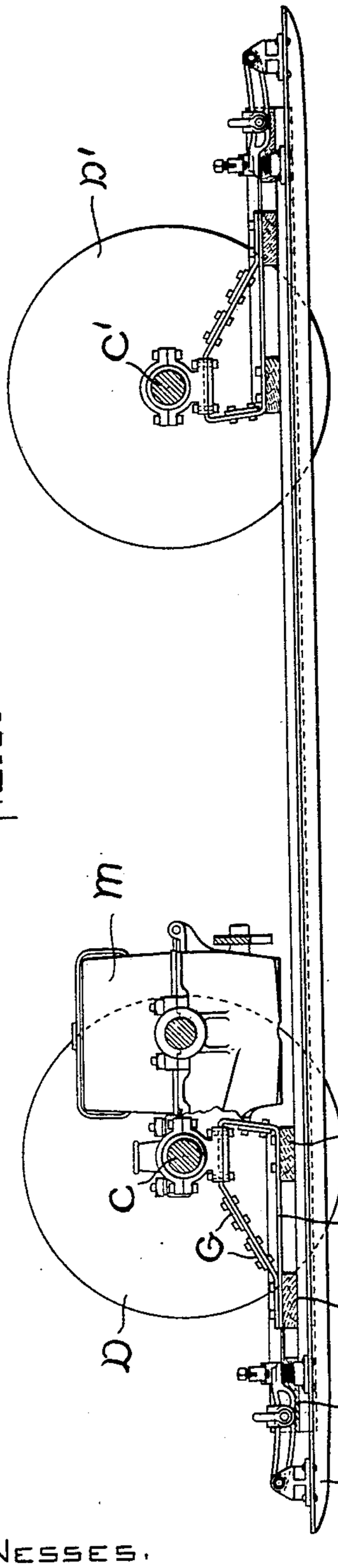


FIG. 2.

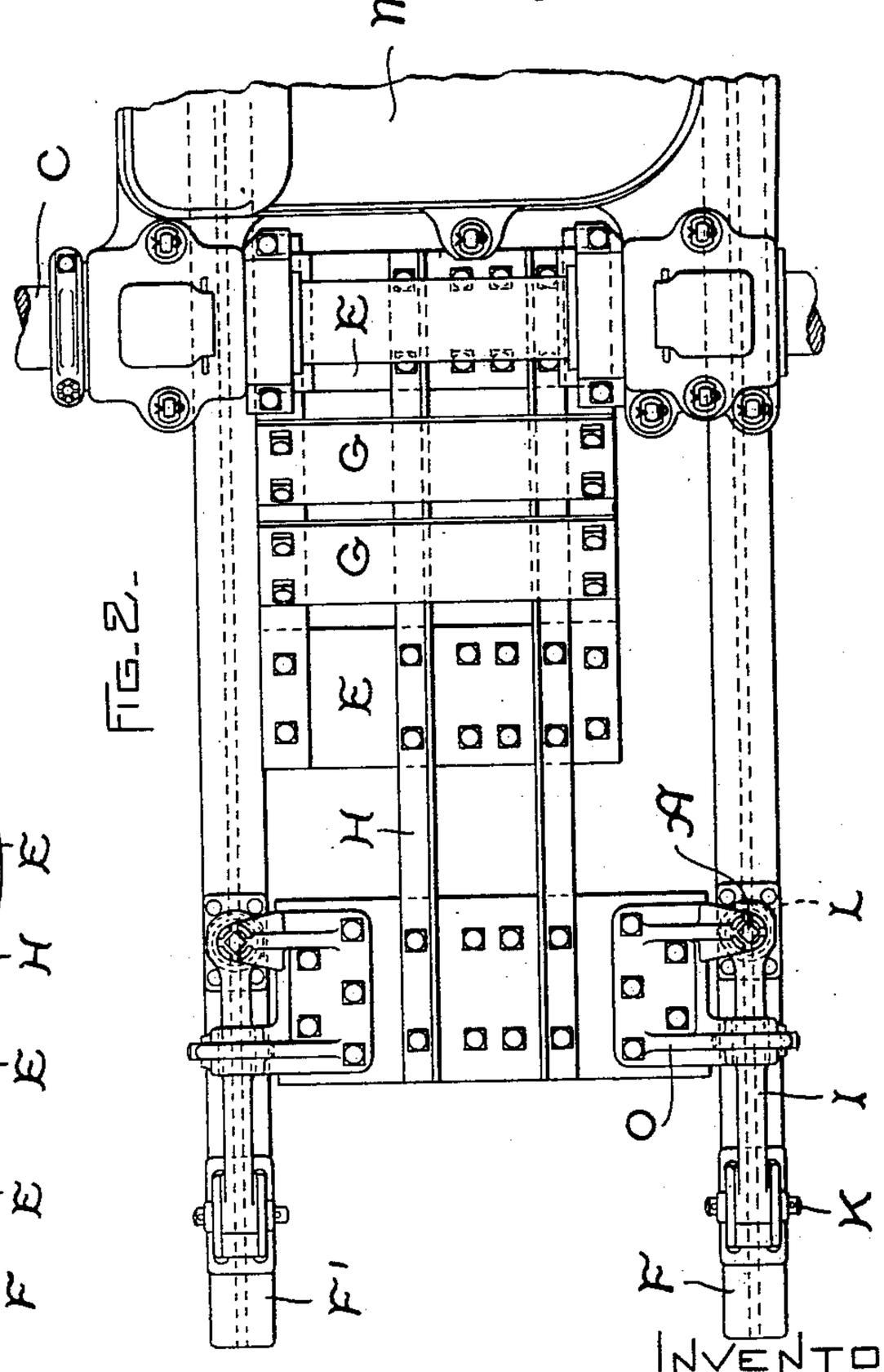


FIG. 3.

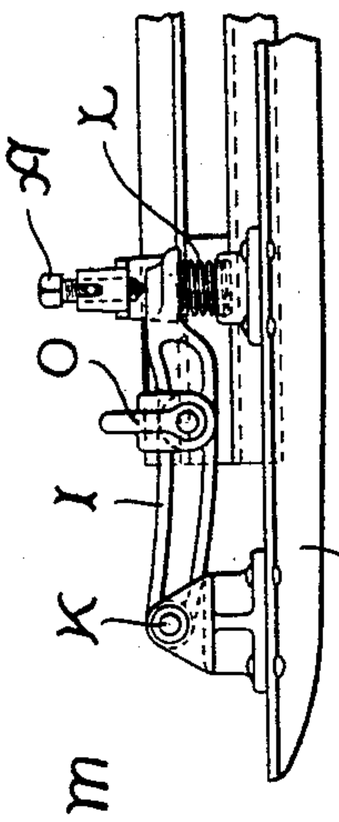
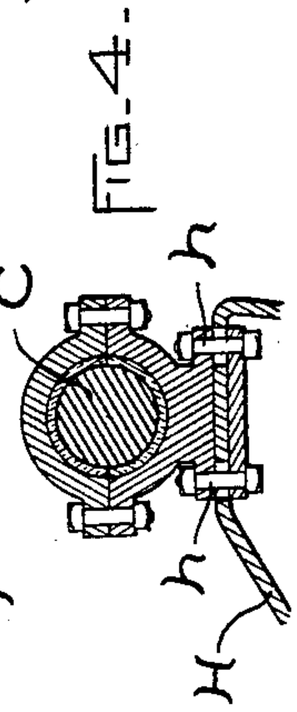


FIG. 4.



WITNESSES.

A. H. Abell.

A. F. Macdonald.

INVENTOR.

William B. Potter, by

Geo. R. Blodgett,

Atty.

(No Model.) 2 Sheets—Sheet 2.

W. B. POTTER.

MOUNTING FOR CONTACT SHOES OF SURFACE CONTACT RAILWAYS.

No. 591,878. Patented Oct. 19, 1897.

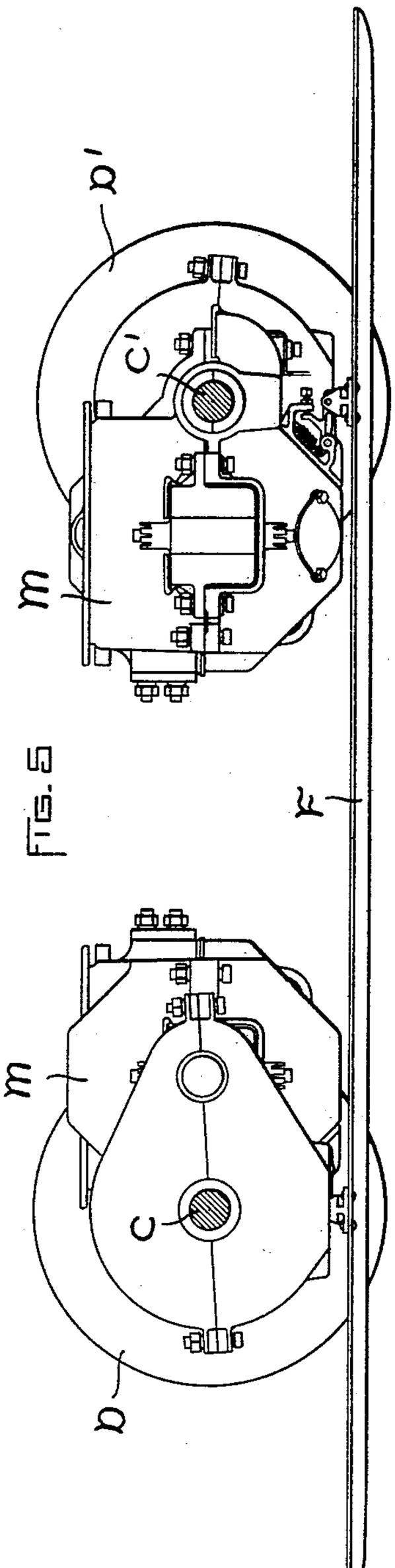


FIG. 5.

FIG. 6.

WITNESSES:
Att. Abell.
B. B. Hine.

INVENTOR:
William B. Potter,
Geo. R. Blodgett, by
atty.

UNITED STATES PATENT OFFICE.

WILLIAM B. POTTER, OF SCHENECTADY, NEW YORK, ASSIGNOR TO THE GENERAL ELECTRIC COMPANY, OF NEW YORK.

MOUNTING FOR CONTACT-SHOES OF SURFACE-CONTACT RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 591,878, dated October 19, 1897.

Application filed June 19, 1897. Serial No. 641,424. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. POTTER, a a citizen of the United States, residing at Schenectady, county of Schenectady, State of New York, have invented certain new and useful Improvements in Mountings for the Contact-Shoes of Surface-Contact Railways, (Case No. 462,) of which the following is a specification.

My invention relates to surface-contact railways, and particularly to the sliding contacts or shoes commonly employed to take currents from the surface contacts. It has particular reference to means of supporting such devices so that they may have just the proper amount of play to permit them to accommodate themselves to the contacts, which may, and often do, vary in height, and at the same time shall not have enough motion to interfere with the other parts of the road structure. To accomplish these ends, I prefer to support the shoe by a spring connection with an intermediate support. This latter may be connected to any suitable part of the truck-frame, or it may be formed of the motors themselves. I prefer that the connection of the intermediate support shall be substantially rigid at one end, the other end having a sufficient amount of play to accommodate the usual variations in alinement of the car-axles. To this intermediate support the shoe is connected by devices having a limited amount of elasticity. For this any proper arrangement of springs may be employed. I have indicated coil-springs with suitable set-screws and levers, but other devices might be employed. By the arrangement indicated the spring-support, which should be located near the ends of the shoes, yields readily when the shoe engages with the contact. At the same time the substantially-uniform height of the shoe above the road structure is maintained. By lessening the blow upon the contact in this way not only is the life of the apparatus extended, but the noise incident to the operation of such roads is materially decreased.

The accompanying drawings show my invention, Figure 1 being a side elevation, partly in section, of a shoe suitably supported, according to my invention, upon the car-axles. Fig. 2 is an enlarged plan view of one end of the structure shown in Fig. 1. Figs. 3 and 4 are enlarged details. Fig. 5 is a side elevation of a shoe supported from the motors according to my invention, and Fig. 6 is an enlarged detail.

In Fig. 1, C C′ are the axles of the car. D D′ are the car-wheels. Attached to the axle C is a supporting-device H, consisting of a suitably-stiffened support formed of angle-irons having braces G G. (Best shown in Fig. 2.) Intermediate blocks of wood E E are provided, and from these the shoe F′ is supported.

Referring to Fig. 2, the form of the support will be understood. It is secured to one of the blocks E, near the end of the shoe, and the attaching device by which the spring action is obtained is best seen in Fig. 3. It consists of a lever I, pivoted at the end to the support O, secured to the block E, as seen in Fig. 2. The lever is also pivoted at K to the shoe, a suitable attachment being provided. Under the other end of the lever I is a spring L, and the set-screw A is arranged to limit the play of the lever.

In Fig. 4 is illustrated on an enlarged scale the arrangement permitting proper play of the axles. The bolts *h h*, securing the support H to the axle-bearing, work in slots cut in the support H, so that the latter may move slightly to accommodate the motion of the axle C. This same arrangement might be used with the axle C′, but it is preferred to have the attachment to this axle rigid.

In Fig. 5 I show the shoe F attached to the motor by spring-supports. (Illustrated more fully in Fig. 6, where the equivalent parts are marked with the same letters as in Fig. 3.) The bolt K, attaching the lever I to the shoe F, works in a slot *n* in that lever as arranged on one motor, being an ordinary pivot on the other, and the lever I is formed with a lug *i*, against which the set-screw A bears to limit the action of the spring.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A mounting for contact-shoes, comprising a support substantially rigid at one end, and having a certain play at the other, with springs between the shoe and the support.

2. In a mounting for contact-shoes, the combination of a support rigidly attached to a part of the truck at one end, and having a lost-motion connection with the truck at the other end, with a contact-shoe, and springs between the contact-shoe and the support, the springs having limiting devices preventing excessive play.

3. In a mounting for contact-shoes of surface-contact railways, the combination of a support interposed between the shoe and the truck, the support being substantially rigid with its attachment to the truck at one end, and having a sliding attachment at the other, with a contact-shoe, and intermediate devices connecting the contact-shoe and the support, such intermediate devices consisting of springs and levers having limiting devices preventing excessive play.

4. In a mounting for contact-shoes, the combination of an intermediate support, a truck, a contact-shoe, and the means for attaching the contact-shoe to the intermediate support, consisting of the lever I, pivoted at N to the intermediate support, and at K to the contact-shoe, with the spring L between the lever and the shoe, and a set-screw A for limiting the motion of the lever.

In witness whereof I have hereunto set my hand this 8th day of June, 1897.

WILLIAM B. POTTER.

Witnesses:
B. B. HULL,
A. F. MACDONALD.