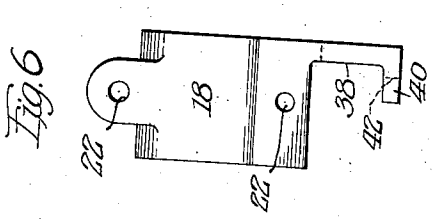
B. H. WHITING.

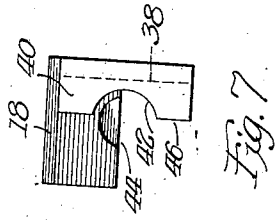
SUPPORT FOR ELECTRIC CURRENT COLLECTOR SHOES.

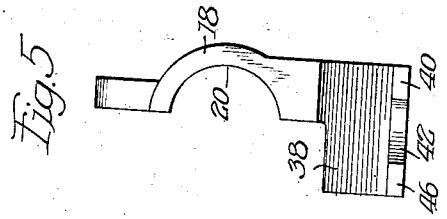
APPLICATION FILED MAY 2, 1919.

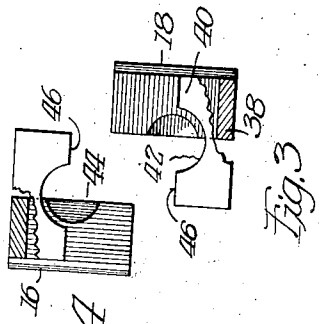
1,354,789.

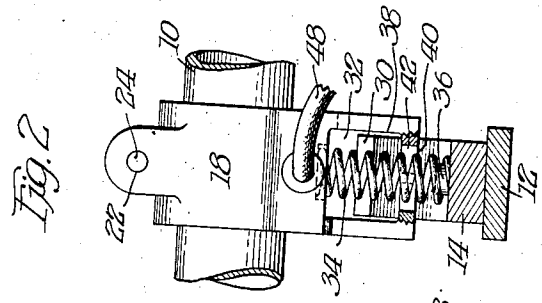
Patented Oct. 5, 1920.

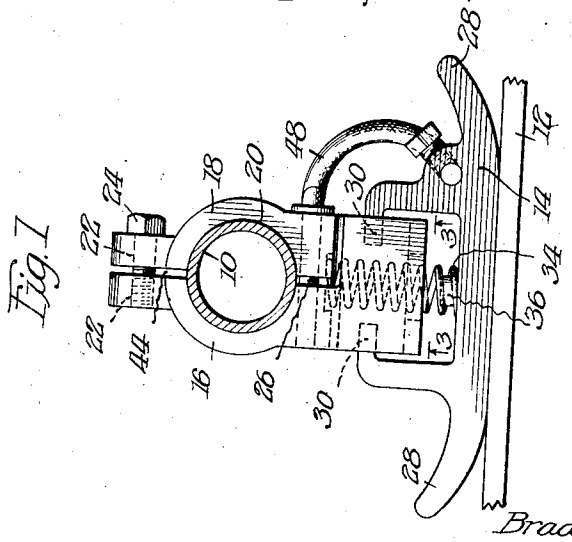












Inventor:
Bradford H. Whiting
By Cheever & Cox
attys

UNITED STATES PATENT OFFICE.

BRADFORD H. WHITING, OF CHICAGO, ILLINOIS, ASSIGNOR TO WHITING FOUNDRY EQUIPMENT COMPANY, OF HARVEY, ILLINOIS, A CORPORATION OF ILLINOIS.

SUPPORT FOR ELECTRIC-CURRENT-COLLECTOR SHOES.

1,354,789. Specification of Letters Patent. **Patented Oct. 5, 1920.**

Application filed May 2, 1919. Serial No. 294,354.

To all whom it may concern:

Be it known that I, BRADFORD H. WHITING, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Supports for Electric-Current-Collector Shoes, of which the following is a specification.

In a traveling crane having electrical propelling and lifting mechanism, it is common practice to have a trolley mechanism traveling on top of the crane to take its current from a plurality of parallel collector bars extending along the crane bridge, there being a collector shoe for each bar. These conditions require that the shoes be attached to a rod, pipe or the like, extending downward from the trolley mechanism and running at right angles to the lengths of the collector bars on the crane bridge.

This invention relates to a suitable support for attaching the collector shoes to such a rod or pipe at right angles to the collector bar or bars.

The object of the invention is to make such a support which is relatively short, compact in form, which can be readily applied to a sustaining rod or pipe, which will hold a shoe in suitable position on the collector bar, and permit of its movement under spring control with reference to the bar as the conditions of work may require.

The invention consists in a device capable of carrying out the foregoing objects, which can be made in two substantially identical parts, therefore convenient to cast and readily fittable together, to make one complete device capable of carrying out the foregoing objects. More particularly, the invention consists in the features and details of construction hereafter more fully set forth in the specification and claims.

Referring to the drawings, in which like numerals represent the same parts throughout the several views,

Figure 1 is a side view of a completely assembled support, the shoe, and the adjacent collector bar, illustrating this invention in its preferred form.

Fig. 2 is an end view, partially in section, of the parts shown in Fig. 1.

Figs. 3 and 4 are bottom views, taken on the line 3—3 of Fig. 1, together showing the two parts or castings constituting the support member of this invention, they being, however, separated one from the other before the drawing was made instead of in assembled position as in Fig. 1.

Fig. 5 is an elevation of the casting forming the right hand half of the whole support as viewed in Fig. 1, Fig. 3 showing a bottom view of this same part.

Fig. 6 is a side view of the parts shown in Fig. 5.

Fig. 7 is a bottom view of the parts in the position of Fig. 6.

Figs. 1 and 2 show a pipe 10, referred to in the introductory statement, at right angles to the collector bar 12, along which the collector shoe 14 travels, and the problem of this invention is to flexibly support the shoe from the pipe 10 in contact with the bar with minimum expenditure of space and metal of construction.

This is accomplished by making the support of two castings 16 and 18, shown in Fig. 1, identical in construction and, therefore, castable from the same mold. Each one of these castings consists of an upper body portion, as shown in Figs. 5 and 6, recessed at 20 to partially embrace the pipe 10 and provided with holes 22 through which suitable securing devices, as for instance bolt 24 and rod 26, pass. The shoe 14, which is to be connected to this support is made of the standard form shown in the drawings, provided with upwardly inclined ends 28 which permit of the shoe rocking slightly on the bar 12 in the plane of the length of the bar, and also provided with inwardly turned teeth 30 adapted to enter a recess 32 formed within the support to receive the shoe and hold it in position on the collector bar 12, while permitting said rocking movement.

One of the problems to be solved is to provide a recess or chamber 32 within the finished support which is of sufficient size to permit the shoe 14 to properly rock with reference to the support without becoming detached from the support, and which will afford space for the customary spring 34 to be interposed between the body of the support and the shoe, (engaging the post 36 thereon) to press the shoe into contact with the collector bar 12. This result is accomplished by providing at one side of each casting, as 18, a side wall member 38 from which projects, at the bottom, a ledge or shelf 40, forming the bottom of recess 32, there being cut in this ledge 40 a half circle

42 which affords, when combined with the other half of the support, a suitable opening for the spring 34.

Considered in another way, the entire support 16—18 comprises but a single block of metal parted in one-half of its length along a line or plane 44 and recessed on said plane to form an opening for the pipe 10 or other support and parted throughout the remainder of its length on a plane 46 at right angles thereto, and recessed along said plane to form the chamber 32 containing the spring and entered by teeth 30 of the collector shoe.

In actual practice the shoe 14 tilts backward and forward to such an extent that the teeth 30 have to play up and down within chamber 32 something over an inch and it is practically impossible to attain this result under the conditions of angularity between the pipe 10 and the bar 12 in a satisfactory way except by the construction here shown and described.

In assembling the device, the operator takes two castings 16 and 18, identically alike, and fastens them together by the securing means shown about the support 10 and the teeth 30 of the collector shoe 14. He then applies the electric cable 48, of any suitable construction, between the support and the shoe, whereupon electric current passes from the support 10 to the collector bar 12, or vice versa, through the support, and the cable 48 to the shoe 14 in the obvious manner. The two halves of the support being identical in construction, require the carrying on hand of only a minimum number of repair parts for use in case an accident should happen to the support.

Having thus described my invention what I claim as new and desire to secure by Letters Patent, is:—

1. In combination with a sustaining rod extending in one direction and a collector shoe extending in a direction at right angles thereto, an inclosing support between the rod and shoe separable in its portion adjacent to the rod in the plane of the rod to receive it, and separable in the portion adjacent to the shoe in the plane of the shoe to receive it, and means for securing the parts together and a spring in the support forcing the shoe away from the support for the purposes set forth.

2. In mechanism of the class described, in combination with a supporting rod and a collector shoe at right angles thereto, a hollow recessed support carrying the shoe from the rod, teeth on the shoe adapted to enter a recess in the support, the support being made up of two completely separable identical members so made that the complete support is adjacent to the rod, separable in the plane of the rod to receive it and is in the portion adjacent to the shoe separable in the plane of the shoe to form a recess to receive it, there being in the end of the support, adjacent to the shoe, an opening for a spring, this in combination with such a spring engaging the shoe and entering said recess in the support, and also with mechanism securing the two halves of the support together, for the purposes set forth.

In witness whereof I have hereunto subscribed my name in the presence of two witnesses.

BRADFORD H. WHITING.

Witnesses:
T. J. HAMMOND,
LEONA COYLE.