No. 714,189. Patented Nov. 25, 1902.

A. D. JONES.

TRAVELING CONTACT FOR RAILWAY TELEPHONES, TELEGRAPHS, OR THE LIKE.

(Application filed Apr. 4, 1902.)

(No Model.) 3 Sheets—Sheet 1.

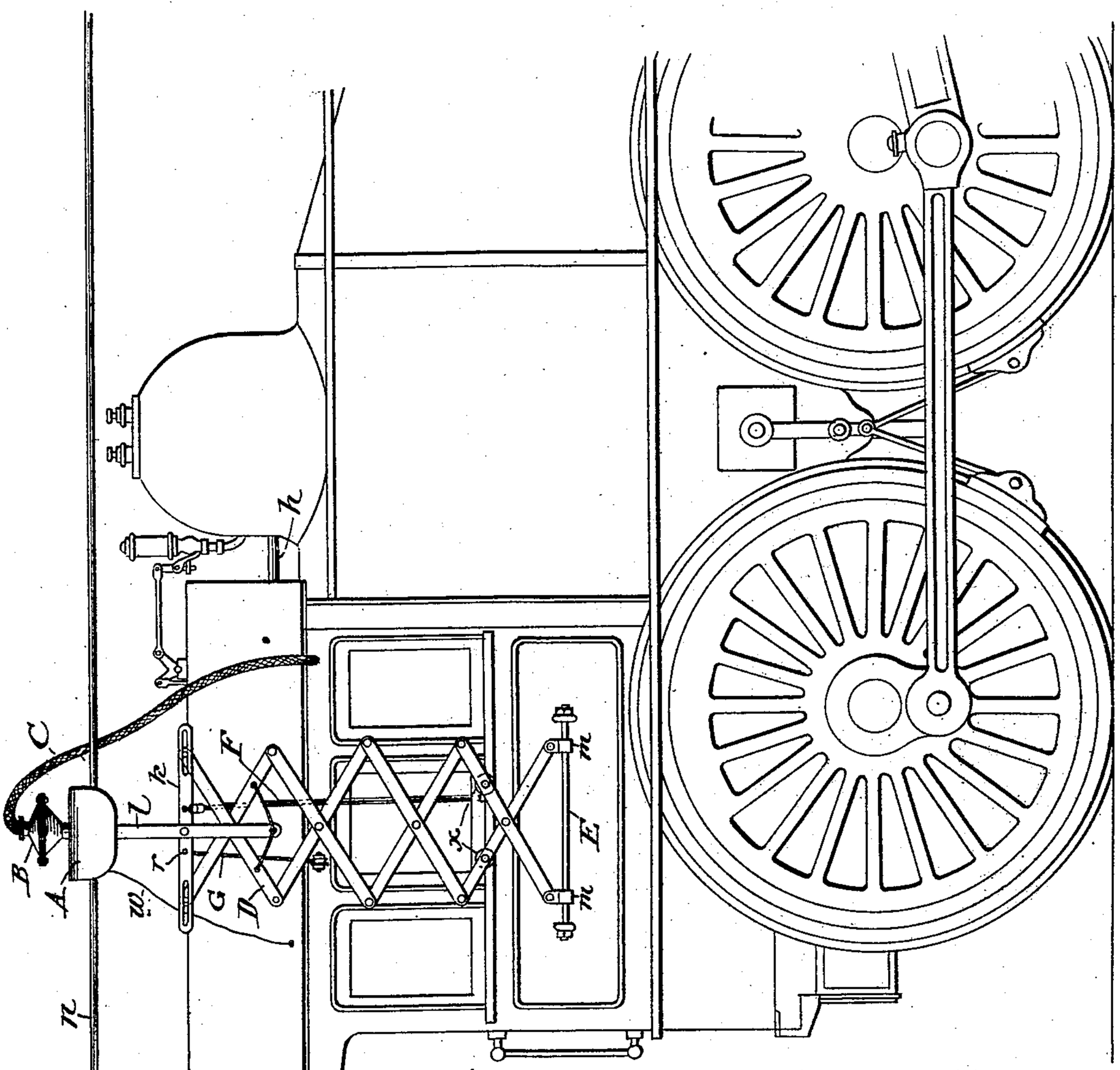

Fig. 1.

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Fig. 2.

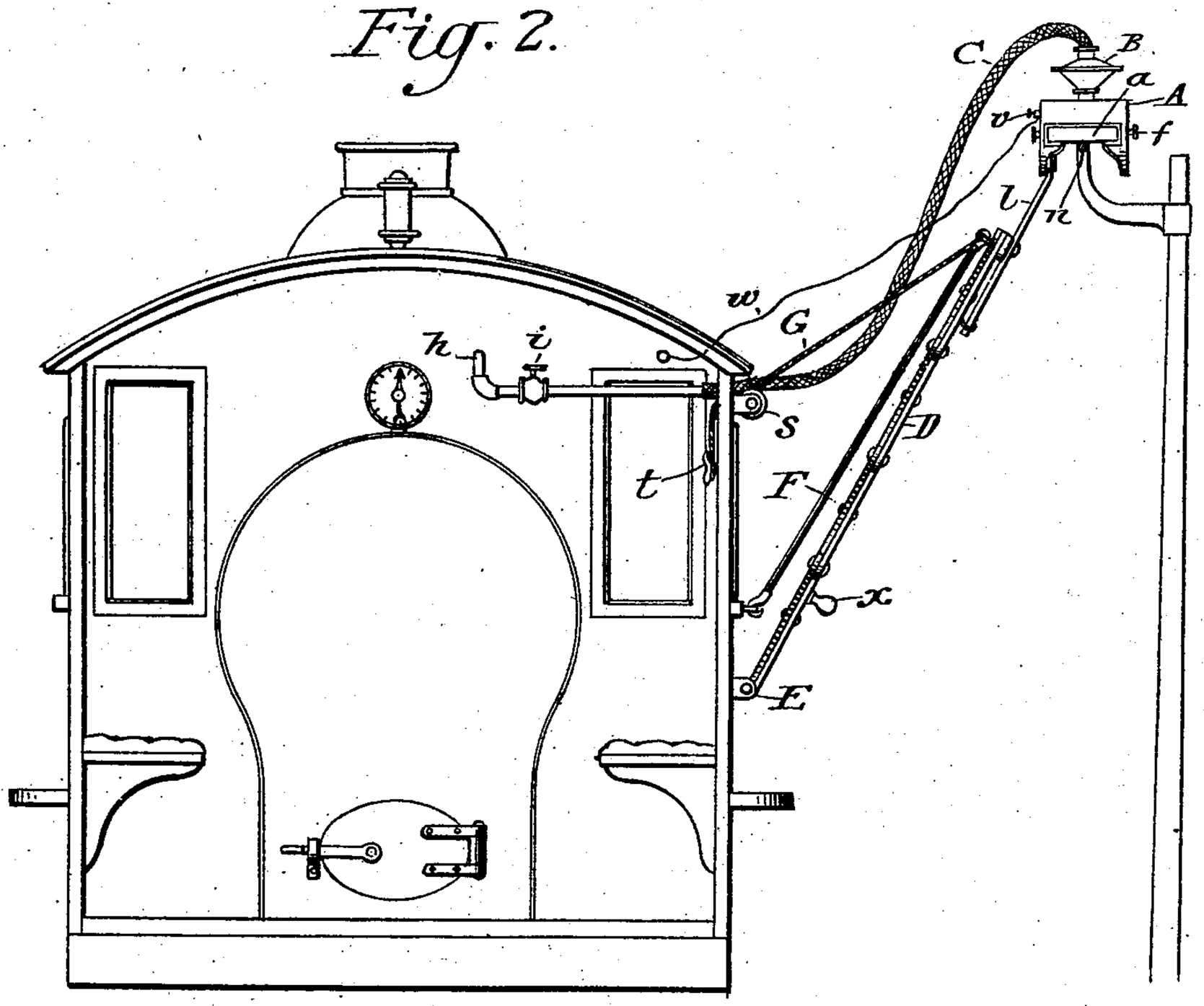

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Fig. 3.

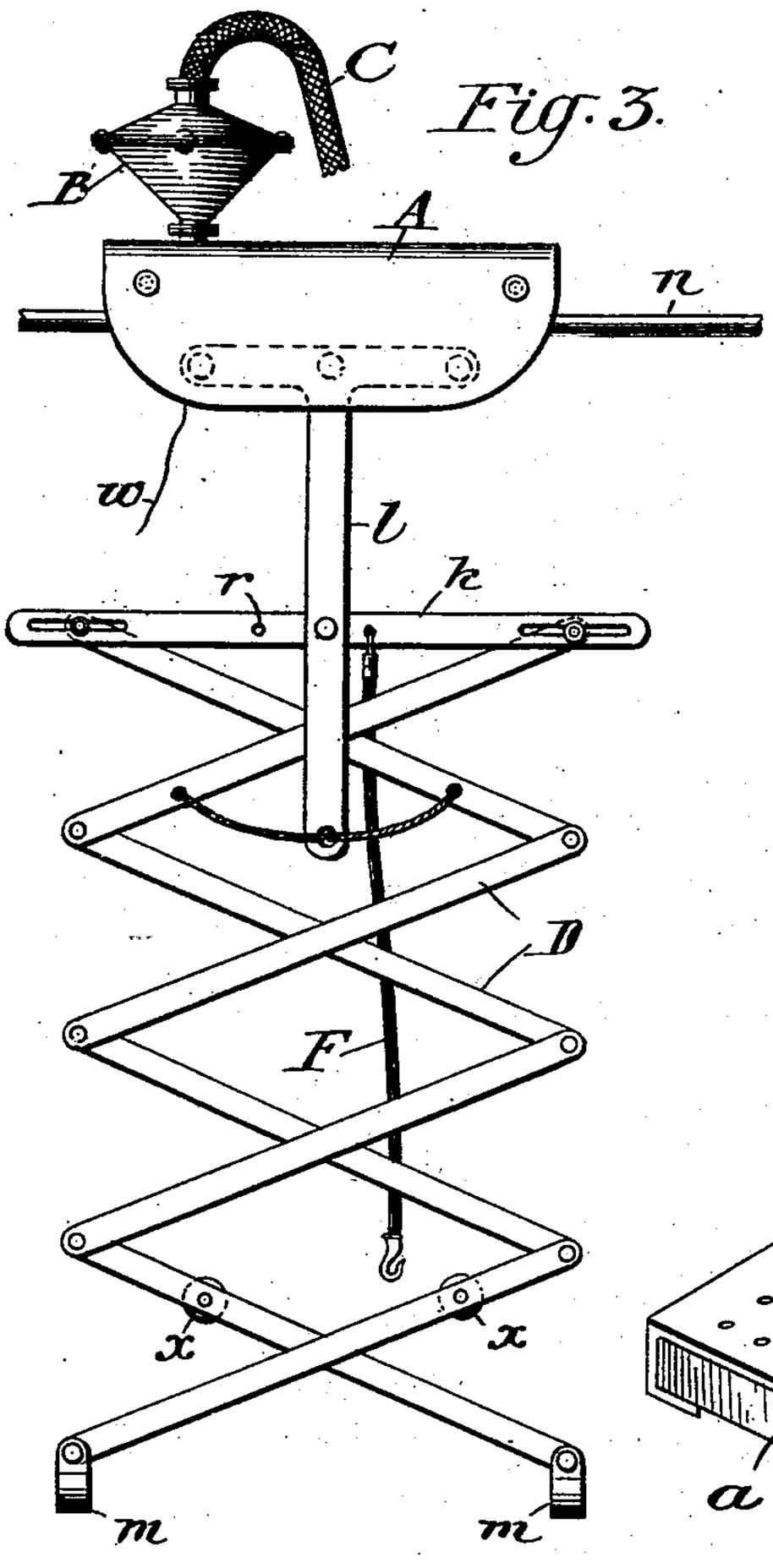


Fig. 4.

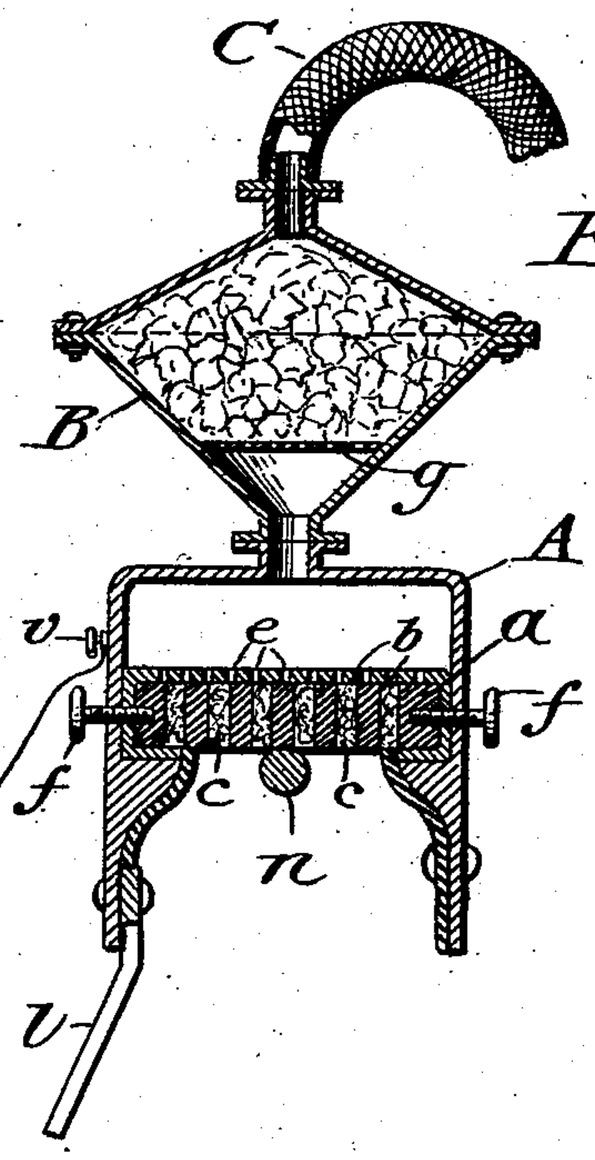
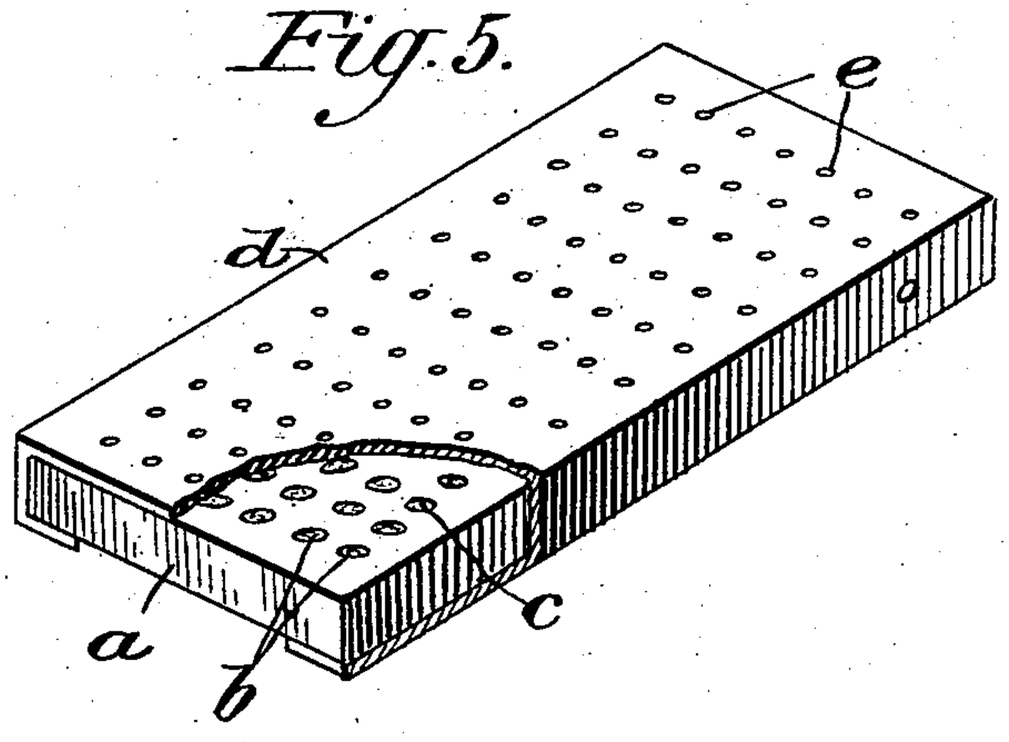


Fig. 5.



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UNITED STATES PATENT OFFICE.

ALVA D. JONES, OF LOUISVILLE, KENTUCKY, ASSIGNOR OF FORTY-SEVEN ONE-HUNDREDTHS TO JOHN C. STROTHER AND OSCAR FENLEY, OF LOUISVILLE, KENTUCKY.

TRAVELING CONTACT FOR RAILWAY TELEPHONES, TELEGRAPHS, OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 714,189, dated November 25, 1902.

Application filed April 4, 1902. Serial No. 101,384. (No model.)

To all whom it may concern:

Be it known that I, ALVA D. JONES, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Traveling Contacts for Railway Telephones, Telegraphs, or the Like; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in traveling contacts particularly adapted for use in communicating to and from trains telegraphic, telephonic, and other electrical signals and messages.

In the accompanying drawings, Figure 1 represents in side elevation a portion of a locomotive provided with a preferred form or embodiment of my invention. Fig. 2 represents a rear end view of the locomotive-cab and traveling contact and illustrates one of the supporting-poles for the line-wire. Fig. 3 represents the traveling-contact devices on a larger scale. Fig. 4 represents a sectional view on a still larger scale, and Fig. 5 represents the absorbent pad and its envelop or casing constituting one of the elements of my invention.

Similar letters of reference indicate similar parts throughout the several views.

In the drawings the traveling contact and its operating devices are illustrated as applied to the cab of a locomotive-engine. While I find it convenient and preferable to so dispose the traveling contact and its operating devices, yet I do not limit myself thereto, for the reason that in some instances it may be found desirable to connect them to some other part of the train and to place them under the charge of some one other than the engineer—as, for instance, the operator having in charge the telegraphic or telephonic apparatus upon the train.

The main characteristic feature of my invention consists in the employment of a sliding contact in the form of an absorbent pad adapted to be kept in a moistened condition through the intermediacy of a current of steam derived, preferably, from the locomotive-boiler and which on its way to the absorbent pad passes through a body of soluble chemicals (such as common salt, saltpeter, or the like) of such a character as to increase the conductivity of the pad. I find that by the employment of a sliding contact of this character continuous telephonic and telegraphic communications can be maintained between a rapidly-moving train and a station along the line or between rapidly-moving trains despite the jolting and jarring to which the traveling contacts are necessarily subjected.

In the preferred embodiment of my invention I construct the absorbent pad *a* of leather or other suitable material, providing it with a series of perforations *b*, which I pack tightly with fibrous material *c* of any suitable kind—as, for instance, cotton-batting. This absorbent pad I may conveniently insert within a casing or envelop *d*, provided with a similar series of apertures *e*. By this expedient the leather pad may conveniently be removed from the casing *d* and replaced by another pad when the original pad becomes worn. Moreover, in order to quickly replace one pad by another at a station or elsewhere during a temporary halt of the train the entire envelop *d*, together with the contained pad, may be removed from the inclosing holder A, within which it is normally held by means of the screws *f*. The holder A is open at its ends for the insertion and removal of the pad and its casing. At its upper portion the holder A is surmounted by a receptacle B, containing a reticulated bottom *g*, upon which is adapted to rest common salt, saltpeter, or other soluble chemical. A supply-pipe C, preferably of rubber tubing, conveys steam to the receptacle B, the other end of the pipe connecting conveniently with a pipe *h*, leading from the steam-dome or other source of steam-supply and provided with a regulating or cut-off cock *i*, as shown, within easy reach of the engineer or other person having charge of the same, so that the amount of steam supplied may be regulated or shut off at will.

To the holder A is affixed an arm *l*, connected to the cross-bar *k* or the lazy-tongs D. The cross-bar *k* is slotted, as shown, so as to

permit expansion and contraction of the lazy-tongs, and the lower members of the lazy-tongs are provided with depending lugs or ears *m*, which are mounted upon a rod E, so that the lazy-tongs have a capacity to swing inwardly or outwardly upon said rod and the ears *m* to move toward or from each other.

In order to maintain a yielding connection between the absorbent pad of the traveling contact and the line-wire *n*, I may provide any suitable spring connection between the cross-bar *k* of the lazy-tongs and the cab—as, for instance, the resilient or elastic cord F. Furthermore, as a safeguard against the accidental falling of the contact to the ground should it reach a place where the line-wire had become broken I provide at a somewhat higher elevation the anchoring-cord G, one end of which is connected to the cross-bar *k* at the aperture *r*, and the other end of which after passing over the pulley *s* is secured to the clamping-cleat *t*. The telephonic, telegraphic, or signaling wire *w* may conveniently be led from a binding-post *v* to the engine-cab and may thence be conveyed in the ordinary manner by electrical couplings to the instruments throughout the train, the return from the instrument being preferably grounded through the wheels of the train, or the instruments throughout the train might be upon a metallic circuit with the return through another traveling contact similar to the one shown in the drawings, but traveling upon another line-wire.

In operation the absorbent pad should be kept moistened by the admission of steam thereto through the supply-pipe C. On its passage through the receptacle B the steam will dissolve and take up an appropriate quantity of the soluble salts therein contained and carry them to the absorbent pad, the condensation of the steam serving to keep the pad in a moistened condition. Any excess of steam escapes through the open ends of the holder A, so that there will be no danger of excess of pressure in the devices. The quantity of steam supplied is within easy regulation by the engineer, and it may be entirely shut off when desired—as, for instance, when the train is at a station or when the contacts are altogether out of use. By manipulating the handles *x* the engineer may raise the traveling contact entirely from the line-wire *n* and may then fold the entire device alongside the cab, when it is desired, to put it out of use. To again extend the lazy-tongs and replace the traveling contact upon the line-wire, the engineer can conveniently manipulate the handles *x* in the opposite direction. When one of the pads is worn or for any other reason requires replacement, the entire envelop *d* may be readily slipped out from the holder and a substitute envelop and pad may be inserted in its place.

Having thus described my invention, what I claim is—

1. A traveling contact for the purposes described, comprising an absorbent pad adapted to make sliding contact with a line conductor, a supply-pipe for maintaining the pad in a moistened condition, and an intermediate receptacle containing soluble chemicals, substantially as described.

2. A traveling contact for the purposes described, comprising an absorbent pad adapted to make sliding contact with a line conductor, a supply-pipe for maintaining the pad in a moistened condition, an intermediate receptacle containing soluble chemicals, and a source of steam-supply with which the pipe communicates, substantially as described.

3. A traveling contact for the purposes described, provided with an absorbent pad consisting of a piece of leather having a series of apertures, containing fibrous material and a casing or envelop likewise perforated, substantially as described.

4. A traveling contact for the purposes described, provided with an absorbent pad, and an open-ended holder therefor, substantially as described.

5. A traveling contact for the purposes described, provided with an absorbent pad, an open-ended holder therefor, a receptacle for soluble chemicals mounted upon the holder, and a supply-pipe connected to said receptacle, substantially as described.

6. A traveling contact for the purposes described, in combination with a lazy-tongs to which said contact is connected and a resilient cord for putting the lazy-tongs at a tension, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ALVA D. JONES.

Witnesses:
JAMES W. MCMULLEN,
EUGENE T. STROTHER.