No. 704,671. Patented July 15, 1902.

H. F. ACKERMAN.

MOPPING DEVICE.

(Application filed Nov. 15, 1901.)

(No Model.)

Fig. 1.

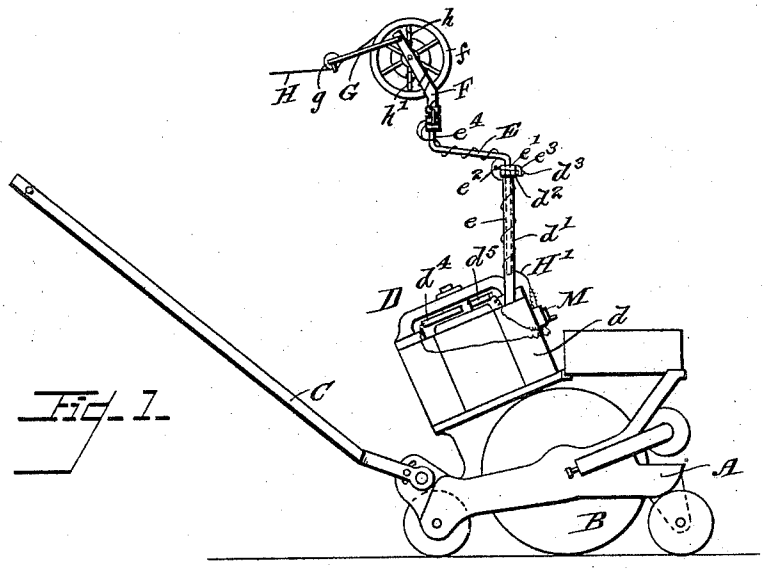


Fig. 2.

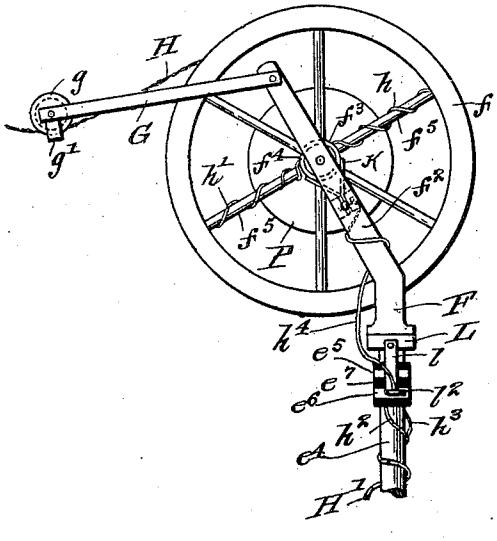
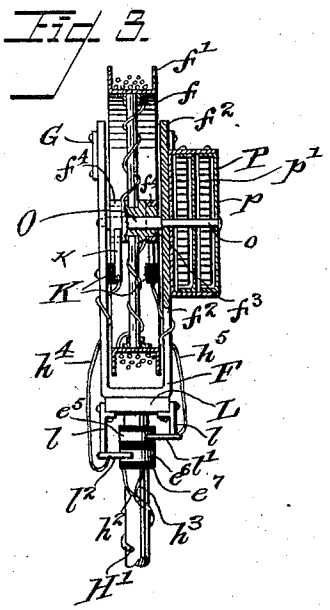


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HARMON F. ACKERMAN, OF CLEVELAND, OHIO.

MOPPING DEVICE.

SPECIFICATION forming part of Letters Patent No. 704,671, dated July 15, 1902.

Original application filed May 13, 1901, Serial No. 60,104. Divided and this application filed November 15, 1901. Serial No. 82,450. (No model.)

To all whom it may concern:

Be it known that I, HARMON F. ACKERMAN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Mopping Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

This specification is intended as a division of an application filed by me May 13, 1901, for which Letters Patent were granted to me June 10, 1902, No. 701,958.

There are machines in use adapted to different purposes which are capable of considerable freedom of movement, though they are not wholly independent of an extraneous source of power. It has been my object to provide a simple means for conducting power to machines of this class from an extraneous point, at the same time permitting great freedom of movement with respect to that point, and I shall describe hereinafter an instance in which I have adapted my invention to a mopping-machine.

The invention consists in certain features to be more fully described hereinafter and definitely set forth in the claims.

In the drawings which fully illustrate the features of my invention, Figure 1 represents a mopping device to which my invention has been attached. Fig. 2 represents an enlarged side elevation of part of my invention. Fig. 3 represents a front elevation of the same, part of which is shown in section.

Referring to the parts by letter, A represents a frame provided with a suitable mop B and having attached thereto a suitable operating-handle C. A motor D may be adapted to operate the mop in any suitable manner. At any convenient location, preferably upon one of the pole-pieces d of the motor, may be mounted a hollow standard d', which may be provided at its upper extremity with a collar d^2, which collar may be provided with a radially-projecting stop d^3. Within this standard may be mounted the vertical extension e of an arm E, and this extension e may be provided with a collar e', adapted to be secured thereto by means of a set-screw e^3 and provided with a downwardly-projecting finger or dog e^3, as indicated. This arm E projects radially from its point of support, and its outer extremity e^4 projects vertically, as indicated. Upon this extremity may be rotatively mounted a bracket F, which bracket rotatively supports the reel or trolley f, and this reel may be provided with marginal flanges f' for a purpose which will appear later. At or near the extremity of the forks f^2 of this bracket F, I provide a guide-bracket G, which at its outer extremity may be provided with a small grooved guide-wheel g, and beneath this guide-wheel g may pass the operating-cable H, a yoke g' passing from side to side beneath the guide-bracket G for the purpose of supporting the cable H. This guide-bracket is pivoted at its inner extremity, as shown.

The hub f^3, part of which has been shown in section in Fig. 3, may be made of wood or other suitable insulating material, and it may be provided, as indicated, at each end with contact-rings f^4, and each of these contact-rings may be made the terminal for the branches h h' of the cable H, which branches may be carried to said contact-rings by wrapping the same about the spokes f^5 of the reel F, passing first through the rim of the reel f, as indicated.

Insulated brushes k are properly mounted upon insulators K, carried by the forks f^2, and are adapted to make contact with the rings f^4, described above, and from the construction described it will appear that whatever be the position of the reel the rings f^4 will form terminals of the circuit.

Below the bracket F may be provided an insulating-block L, from which insulating-block may depend arms l, carrying brushes, respectively, l' and l^2. These contact, respectively, with rings e^5 e^6, which are mounted upon an insulating-sleeve e^7, surrounding the extension e^4. Each of these rings constitutes a terminal for branches h^2 h^3 of the cable or conductor H', which cable H' may be wrapped about the arm E and the standard d' and is connected to a suitable starting-box M, whence its branches are conducted to the brushes d^4 d^5 of the motor, as indicated. Conductors h^4 h^5 may have one of their extremities connected, respectively, with the brushes k, and may

have their opposite extremities connected with the brushes $l' l^2$, wherefore current received at the brush k may be transmitted to the brushes l' or l^2, whatever be the position of the reel. The hub f^3 of this reel F may be rigidly secured upon a pin or spindle O, and one of the forks f^2 may be provided with a suitable spring-barrel P. This pin or spindle O may be provided with a reduced extension o, which passes through said spring-barrel. This spring-barrel, as indicated, may be formed in two compartments by means of the diaphragm p, and each compartment may be provided with a coiled spring p'. One end of each spring may be secured to the barrel P and the others to the spindle o. These springs are adapted to constrain the reel F in that direction which would wind up its cable H, so that whatever be the position of the mop with respect to the fixed end of the cable the cable leading to the mop will always be maintained taut and the excess of length of cable necessary will lie coiled upon the reel between the flanges f', as indicated.

Recurring again to the standard e' and the collars d^2 and e', to which reference has been made, it will appear that the dog e^3 and the stop d^3 may contact and will prevent the arm E making more than one complete revolution about the standard d'. In this manner the conductors supported by the same will always be maintained intact.

What I claim is—

1. In combination a reel adapted to have a cable coiled thereon, springs constraining said reel to coil said cable, and means for rotatably supporting said reel upon a vertical axis, substantially as set forth.

2. In combination, a reel adapted to have a cable coiled thereon, a bracket adapted to support said reel, springs constraining said reel so as to coil said cable, said bracket being supported upon a vertical axis and rotatable thereabout, substantially as set forth.

3. In combination, a standard, an arm rotatably mounted thereupon, a reel carried by said arm, and adapted to receive a cable, and a spring constraining said reel so as to coil said cable upon it, substantially as set forth.

4. In combination, a standard, an arm rotatable thereabout, a bracket rotatably mounted upon said arm, a reel rotatably mounted in said bracket, and adapted to carry a cable coiled thereon, and a spring constraining said reel so as to coil said cable, substantially as set forth.

5. In combination, a standard, a bracket carried thereby, and rotatable about a vertical axis, a reel carried by said bracket, said reel being adapted to have a cable led to and coiled thereon, a guide-bracket pivoted to said first bracket, and a guide-roller carried by said guide-bracket, substantially as set forth.

6. In combination, a standard, an arm rotatably mounted thereupon, said arm having a collar adapted to be secured thereto, said standard and said collar having the one a stop and the other a finger adapted to contact therewith, substantially as set forth.

7. In mopping-machines, in combination, a movable and traveling mopping device, a motor supported thereby, a cable-reel carried thereon and rotatable in a vertical plane, automatic current-collecting devices interposed between said reel and motor, and a spring tending to coil said reel, substantially as set forth.

8. In an electrically-operated machine, a current-conductor reel, a standard therefor, a base-standard to receive the wheel-standard in pivoted relation thereto, and a movable stop secured to the wheel-standard, in combination with means on the base-standard for limiting the motion of the wheel-standard, substantially as set forth.

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

HARMON F. ACKERMAN.

Witnesses:

E. L. PARDEE,

F. D. AMMEN.