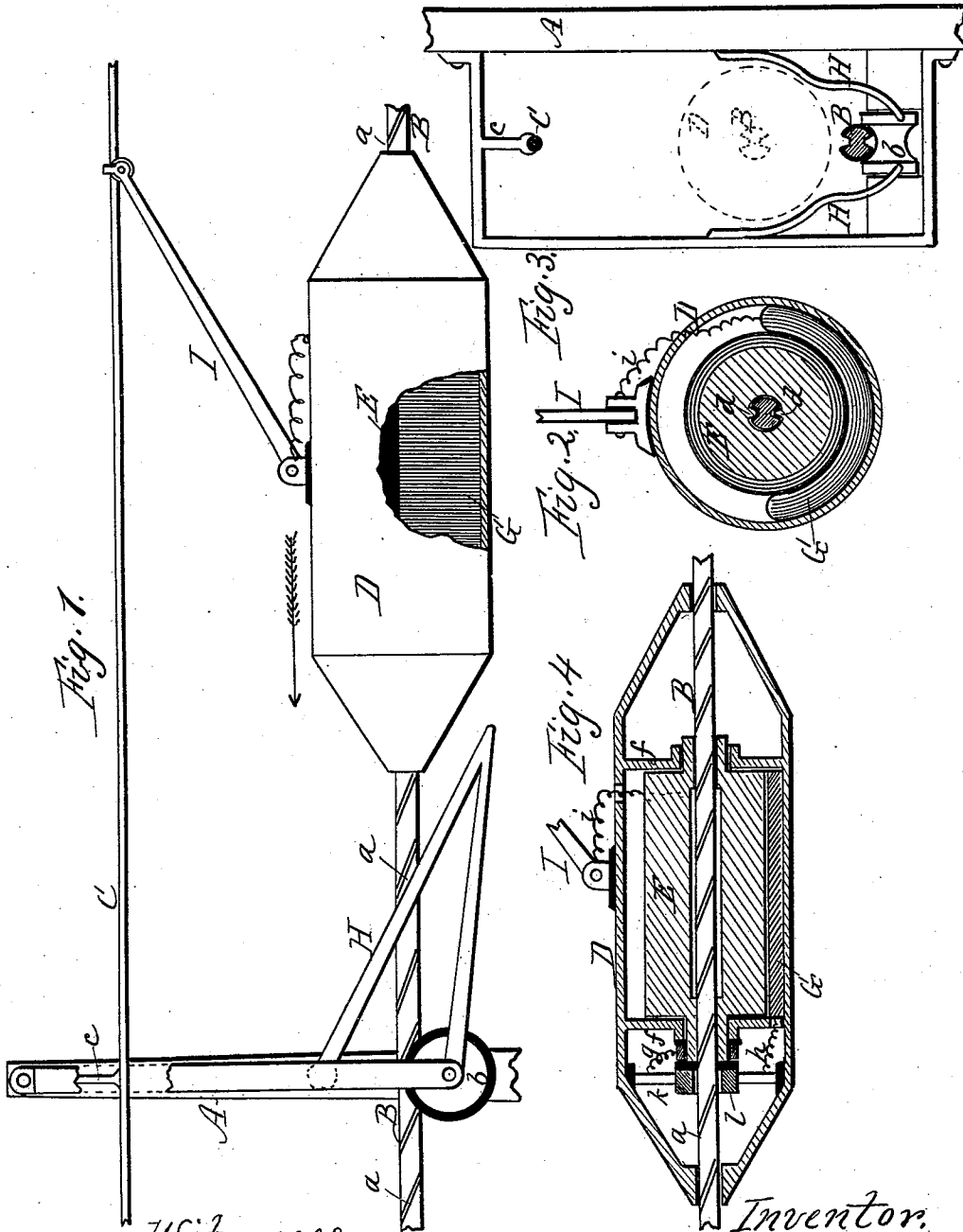


(No Model.)

M. W. HASSAN.
ELECTRIC TELPHERAGE APPARATUS.

No. 471,790.

Patented Mar. 29, 1892.



Witnesses.
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UNITED STATES PATENT OFFICE.

MIDBURY W. HASSAN, OF ROCHESTER, NEW YORK.

ELECTRIC TELPHERAGE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 471,790, dated March 29, 1892.

Application filed December 29, 1890. Serial No. 376,134. (No model.)

To all whom it may concern:

Be it known that I, MIDBURY W. HASSAN, of Rochester, in the county of Monroe and State of New York, have invented a certain
5 new and useful Improvement in Electrical Apparatus for the Rapid Transit of Packages; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompa-
10 nying this specification.

My improvement relates to electrical apparatus for the rapid transit of small packages—such as mail-matter and other articles; and it consists of an overhead system composed
15 of wires attached to supporting-poles, one of said wires, which is the working conductor, being spirally grooved or threaded, and a pointed car running thereon, provided with a trolley that engages with the ground-wire to
20 complete the circuit.

It also comprehends a peculiar arrangement of inclined ways, whereby the car is enabled to pass the supporting-pulleys, all as herein-
after described.

25 In the drawings, Figure 1 is a side elevation, partially in section, of my improvement. Fig. 2 is an enlarged cross-section of the car. Fig. 3 is a front elevation of one set of the inclined ways for guiding the car over the supporting-
30 pulleys. Fig. 4 is a longitudinal section of the car.

A indicates one of the supporting-poles on which the wires are strung.

B is the working wire, and C the return or
35 ground wire, arranged one above the other, or horizontally, if desired. The working conductor B is of any suitable diameter and is provided with spiral threads or grooves *a a*, as shown. A single thread may be used ef-
40 fectively; but preferably two or more are used, similar to the double threads of a screw. This wire is supported at intervals by insulated pulleys *b b*, over which the wire passes freely, the pulleys being grooved to receive
45 the wire. The ground-wire C is supported by hangers *c c*, located above it, by which means the trolley can run free.

D is the car or conveyer, the same consist-
50 ing of a hollow cylinder with pointed ends, the latter facilitating the rapid passage of the car and also furnishing an inclined surface that enables the car to pass readily up over the

inclined ways. The ends of the car are tubular and pass loosely over the wire.

E is the armature within the car, resting 55 between head-blocks *f f*, and G G the field-magnets. The armature is also cylindrical, and at one end it has keys or splines *d d*, which fit in the spiral grooves *a a* of the working wire B. By this means when the arma- 60 ture revolves the keys run along in the spiral grooves and impart forward motion to the car. The field-magnets G G are of segmental form and are located in the bottom of the car, thereby adding weight that tends to keep the 65 car from turning. This result, however, is principally effected by the trolley hereinafter described.

H H are inclined ways located at each supporting-pole to enable the car to pass over the 70 pulleys. The ways consist of inclined arms that point in the opposite direction to that in which the car runs, and they are so far separated as to catch the pointed end of the car and guide it up over the pulley, lifting the 75 wire with it. The wire then drops back into place on the grooved pulley. In case cars are to be run in both directions, these ways are made double, pointing in opposite direc- 80 tions.

I is a trolley-arm of ordinary construction attached to the top of the car and running in contact with the ground-wire C. By this means the current is maintained by which motion is imparted to the car, and, further- 85 more, it keeps the car in an upright position and prevents it from turning. The end of the trolley that engages with the ground-wire is provided with guards to preserve contact.

By means well known a resistance may be 90 produced to the car near the crossing of the pulley *o* and at stations, thus making the operation entirely automatic.

The car may be made of sufficient capacity to carry the articles to be transported or it 95 may be used as a motor to draw another receptacle which carries the articles.

The circuit is made by means of the conducting-wires *g h i* and the ordinary brushes *k k* and commutator *l*. The current passes 100 from the conducting-wire through the armature, thence through wire *g* to one of the brushes, thence through the commutator and the other brush, thence through wire *h* to the

field-magnet, and from the latter through wire *i* to the trolley.

Having described my invention, what I claim as new, and desire to secure by Letters

5 Patent, is—

1. The combination of the conductor-wire B, provided with spiral grooves or threads *a*, the ground-wire C, the car D, provided with armature E and field-magnets G G, the arma-
10 ture engaging with the spirals, and the trolley I, attached to the car and engaging with the ground-wire, as shown and described, and for the purpose specified.

2. The combination, with the wire B and pointed car D, of the pulley *b*, supporting the wire, and the inclined ways H H for guiding the car over the pulley, as herein shown and described.

In witness whereof I have hereunto signed my name in the presence of two subscribing
20 witnesses.

MIDBURY W. HASSAN.

Witnesses:

R. F. OSGOOD,

WM. J. MCPHERSON.