J. S. SPIREWFKI, Jr.

CARRIER.

APPLICATION FILED AUG. 28, 1913.

1,079,373. Patented Nov. 25, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

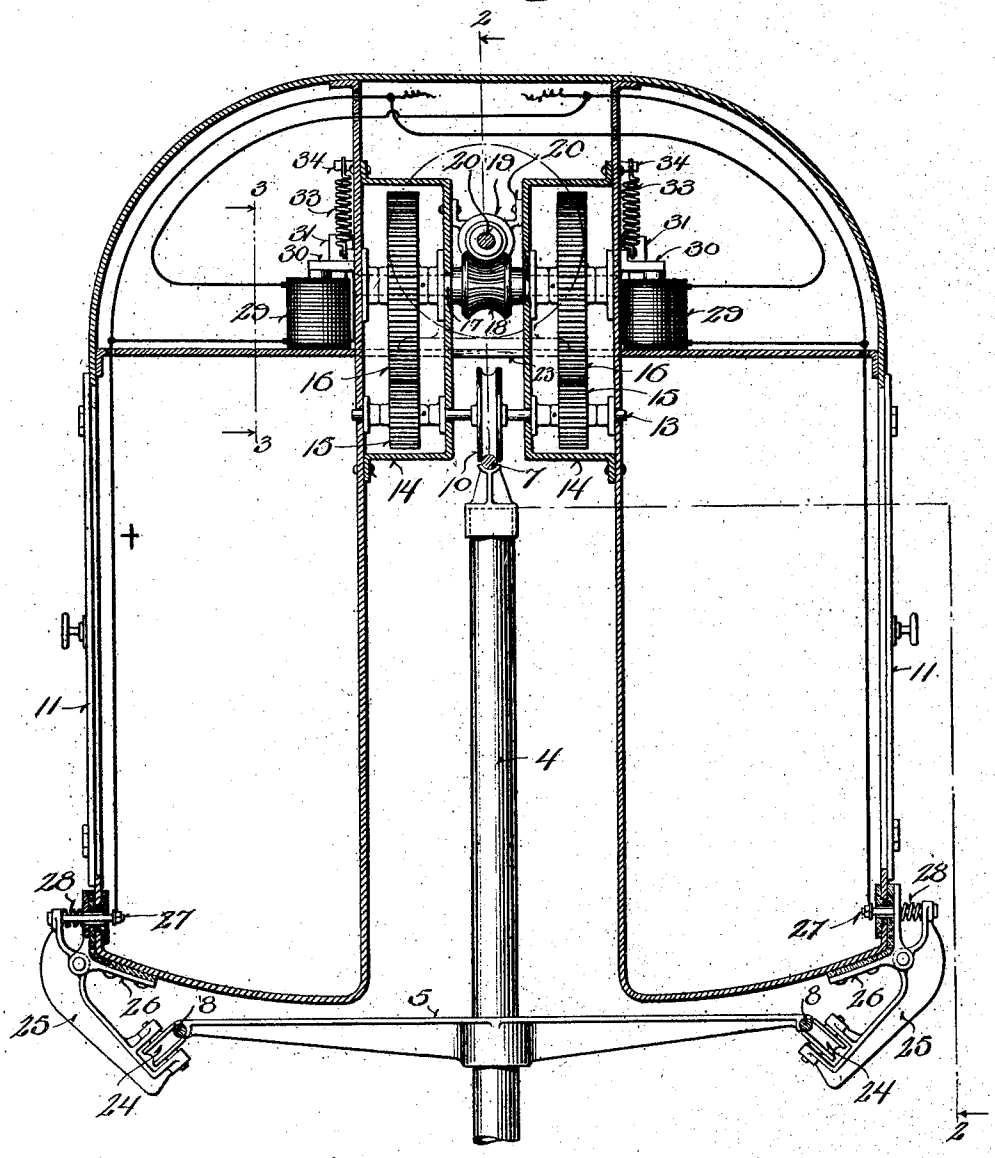
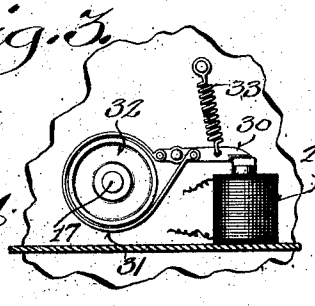


Fig. 3.



Witnesses:

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2 SHEETS—SHEET 2.

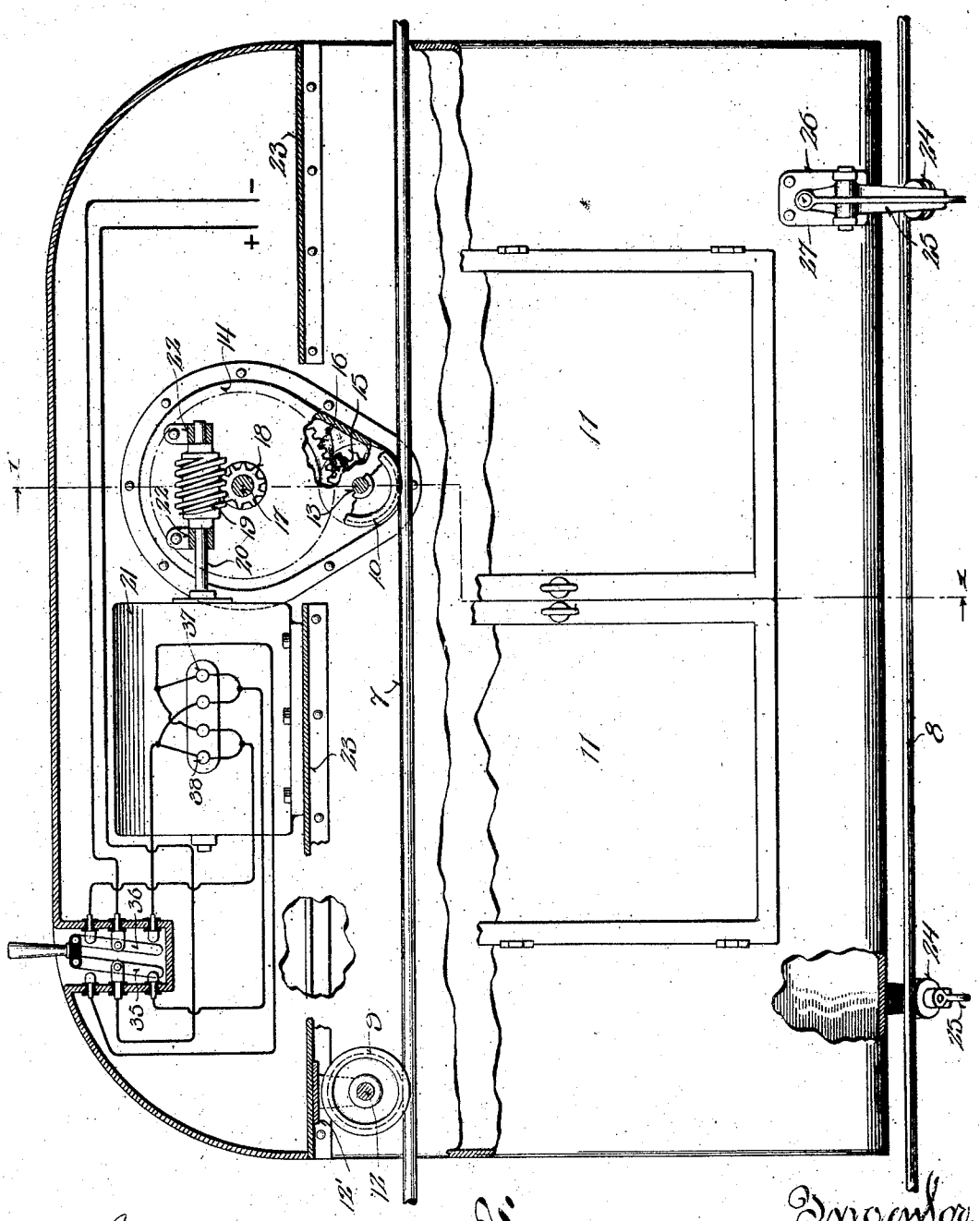


Fig. 2.

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UNITED STATES PATENT OFFICE.

JOHN S. SPIREWFKI, JR., OF MILWAUKEE, WISCONSIN, ASSIGNOR OF ONE-THIRD TO DANIEL C. O'CONNELL AND ONE-THIRD TO SAMUEL A. STRZELCZYK, BOTH OF MILWAUKEE, WISCONSIN.

CARRIER.

1,079,373. Specification of Letters Patent. Patented Nov. 25, 1913.

Application filed August 28, 1913. Serial No. 787,071.

To all whom it may concern:

Be it known that I, JOHN S. SPIREWFKI, Jr., a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Carriers; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention consists in what is herein particularly set forth with reference to the accompanying drawings and pointed out in the claims of this specification, its main object being to provide for economic rapid transportation of mail matter between stations.

Figure 1 of the drawings represents a partly transverse section view of an electric line and carrier in which my improvements are embodied, the section being indicated by line 1—1 in the next described illustration; Fig. 2, a side elevation of the same partly in section, the view being indicated by line 2—2 in Fig. 1, and Fig. 3, a sectional view of a fragment of the carrier indicated by line 3—3 in Fig. 1.

Referring by numerals to the drawings, 4 indicates one of a series of posts and 5 a cross arm of the same. A cap 6 of each post terminates in a seat for a track-wire 7 between stations, and the ends of each cross arm are in connection with an electric-current line wire 8. Astraddle of the track-wire are traction trolley-wheels 9, 10, hung in a carrier, which carrier is constructed to clear the posts and cross arms thereof. The carrier is also constructed to provide compartments in which to store mail matter or other material for transportation, side openings to the compartments of said carrier being closed by doors 11.

The axle 12 of the traction trolley-wheel 9 has its bearings in a bracket 12′ depending into a central space of the carrier adjacent to one end of the same, and the axle 13 of the trolley-wheel 10 has its bearings in gear-cases 14 of said carrier, there being two of these cases, one each side of the track-wire 7 upon which said trolley-wheels travel. In each gear-case a spur-pinion 15 is fast on the trolley-wheel axle 13, and in mesh with each pinion is a spur-wheel 16 fast on a spindle 17 that also has its bearings in the gear-cases. Fast on the spindle 17, intermediate of the gear-cases 14 is a worm-wheel 18 in mesh with a worm 19 that is fast on the shaft 20 of an electric-motor 21, additional bearings for the motor-shaft being provided in the form of brackets 22 suspended in connection with said gear-cases.

The motor 21 is supported on a deck 23 of the carrier, and suitably wired to a reversing-switch shown in Fig. 2.

Opposing each electric-current wire 8 is a conductor trolley-wheel 24 supported in a hanger 25 that has pivotal connection with an insulated bracket 26 of the carrier, and a binding-stem 27 of each bracket extends into the carrier. Surrounding each binding-stem, between the hanger therewith and the carrier, is a spiral-spring 28 under tension, the same operating to keep the trolley-wheel with said bracket in contact with the opposing electric-current wire. The binding-stems 27 are wired in circuit with the aforesaid switch, the motor and electro-magnets 29. A pivotally supported armature 30 for each magnet has a shank thereof connected to the ends of a brake-band 31 that surrounds a brake-wheel 32 on the worm-wheel spindle 17, and the armature is also connected to a spring 33 suspended from a lug 34 in the carrier. Current being on, the armatures are attracted by the electro-magnets against resistance of the springs to loosen the brake-bands, otherwise said bands are tightened on the brake-wheels by the pull of said springs.

The wiring with reference to the switch and motor aforesaid is such as to provide for taking current from either of the line wires 8 according to the direction the carrier is to travel. The switch shown is a two-blade knife-switch, and assuming that its blades 35, 36, are in the position shown in Fig. 2, it may be assumed that the direction of travel of the carrier is to the right in said Fig. 2, and that the current is being taken from line wire 8 at the left in Fig. 1, to flow through the then positive side of said switch to the motor, entering at 37 and passing out at 38 to continue through the then negative side of the aforesaid switch to the other line wire at the right in said Fig. 1. By reversing the switch, the flow of current will be reversed to reverse the motor and cause travel of the carrier in a direction opposite that aforesaid.

To provide for automatic stop of the carrier at stations, it is intended that portions

of the line wires 8 shall be insulated, or provision may be had for an automatic switch of the current conductor trolley-wheels 24 of the carrier onto deënergized wires at said stations where controllers may be employed to regulate the current. However specific-wiring with relation to energization and deënergization of the motor and brake-band controlling electro-magnets may be varied indefinitely from what is herein specified without departure from my invention as claimed, and it is also practical to provide for a reversal of the current through the line wires, instead of employing a switch, as above described, for reversing the motor when said current is continuous in one direction.

The idler traction trolley-wheel 9 steadies the carrier on the track-wire 7, and the disposition of the conductor trolley-wheels 24 is such as to prevent swaying of said carrier when in travel.

I claim:

1. The combination of a pair of electric-current line-wires, an intermediate track-wire and supports for said wires; a carrier provided with a traction trolley-wheel on the track-wire, an electric-motor in the carrier geared in connection with said wheel, hangers having insulated connection with the carrier, conductor trolley-wheels with the hangers in opposition to said line-wires, and means electrically connecting said hangers with the motor.

2. The combination of a pair of electric-current line-wires, an intermediate track-wire and supports for said wires; a carrier provided with a traction trolley-wheel on the track-wire, an electric-motor in the carrier geared in connection with said wheel, hangers having insulated connection with the carrier, conductor trolley-wheels with the hangers in opposition to said line-wires, and switch-controlled wiring by which the hangers of the conductor trolley-wheels are put in reversible electric connection with the motor.

3. The combination of a pair of electric-current line-wires, an intermediate track-wire and supports for said wires; a carrier provided with a traction trolley-wheel on the track-wire, an electric-motor in the carrier geared in connection with said wheel, automatic set brake-mechanism for the same wheel, and electric brake-release means in circuit with the motor; hangers having insulated connection with the carrier, conductor trolley-wheels with the hangers in opposition to said line-wires, and means electrically connecting said hangers with the motor.

4. The combination of a pair of electric-current line-wires, an intermediate track-wire and supports for said wires; a carrier provided with a traction trolley-wheel on the track-wire, an electric-motor in the carrier geared in connection with said wheel, hangers having insulated and spring-controlled yielding connection with the carrier, conductor trolley-wheels with the hangers in opposition to said line-wires, and means electrically connecting said hangers with the motor.

5. The combination of a pair of electric-current line-wires, an intermediate track-wire and supports for said wires; a carrier provided with a traction trolley-wheel on the track-wire, spur-pinions fast on the axle of said trolley-wheel with which it is rigid, an electric-motor in the carrier, a spindle in gear with the motor-shaft, spur-wheels fast on the spindle in mesh with said pinions, hangers having insulated connection with the carrier, conductor trolley-wheels with the hangers in opposition to said line-wires, and means electrically connecting said hangers with the motor.

6. The combination of a series of posts between stations and each provided with a track-wire supporting cap as well as with a cross-arm connected at its ends to a pair of electric-current line-wires, a carrier provided with a traction trolley-wheel on the track-wire, an electric-motor in the carrier geared in connection with said wheel, hangers having insulated connection with the carrier, conductor trolley-wheels with the hangers in opposition to said line-wires, and means electrically connecting said hangers with the motor.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee in the county of Milwaukee and State of Wisconsin in the presence of two witnesses.

JOHN S. SPIREWFKI, Jr.

Witnesses:
N. E. Oliphant,
R. K. Oliphant.