

No. 891,416.

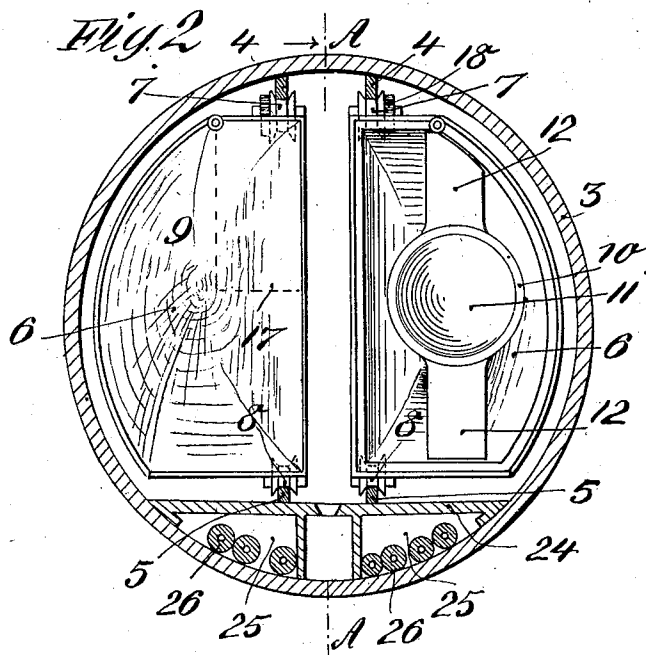
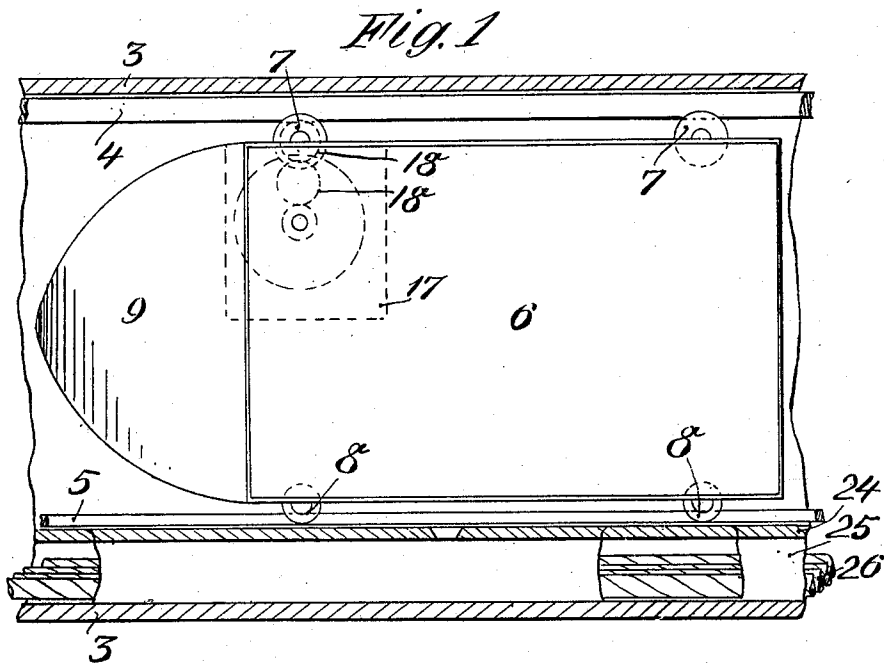
PATENTED JUNE 23, 1908.

A. G. FENYÖ.

TUBE POST.

APPLICATION FILED OCT. 7, 1905.

3 SHEETS—SHEET 1.



Witnesses
J. B. B. B.
M. J. J.

Inventor
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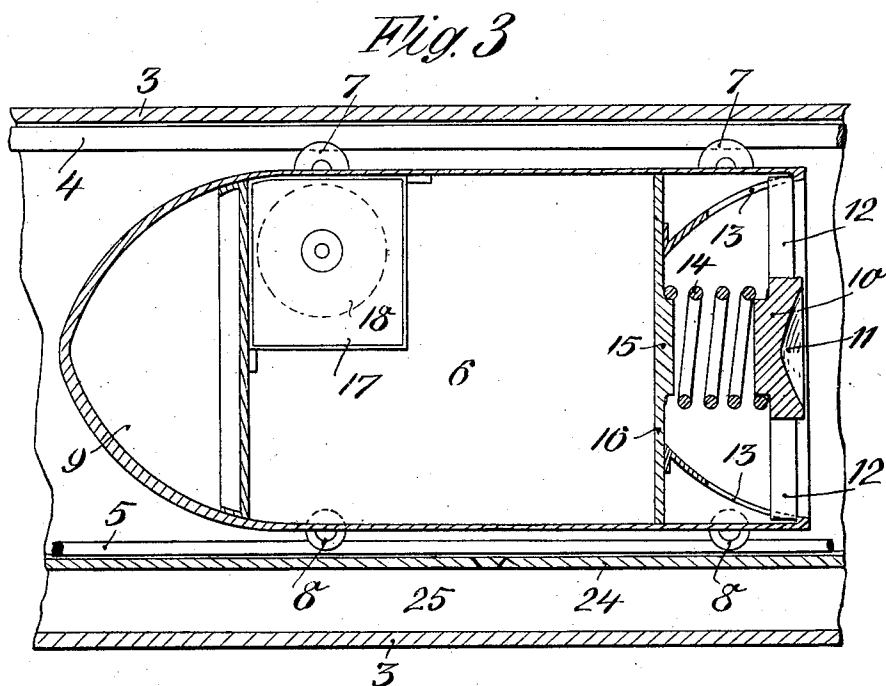
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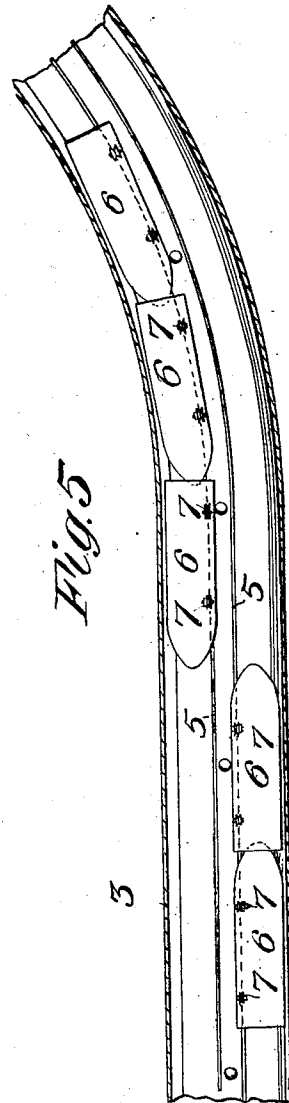
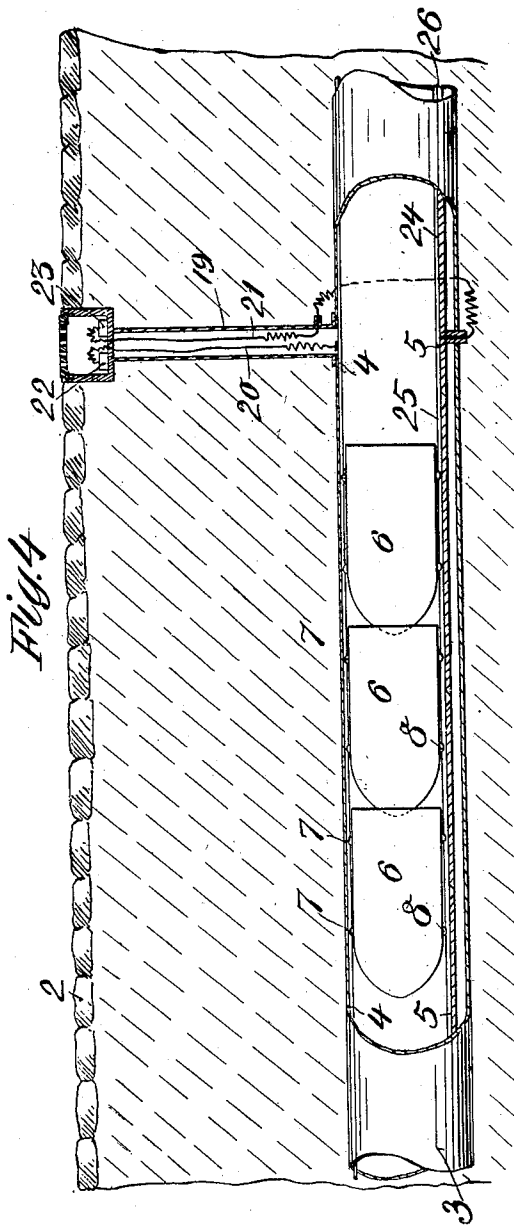
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3 SHEETS—SHEET 3.



Witnesses

[Handwritten signatures of witnesses]

Inventor

Alexander Géza Fenyő

By *[Handwritten signature of A. B. Willson]*

Attorney

UNITED STATES PATENT OFFICE.

ALEXANDER GÉZA FENYÖ, OF CHARLOTTENBURG, GERMANY.

TUBE-POST.

No. 891,416.

Specification of Letters Patent.

Patented June 23, 1908.

Application filed October 7, 1905. Serial No. 281,862.

To all whom it may concern:

Be it known that I, ALEXANDER GÉZA FENYÖ, editor, of 40 Uhlandstrasse, Charlottenburg, Berlin, Germany, a citizen of the Kingdom of Hungary, have invented a new and useful Tube-Post, of which the following is a specification.

The invention refers to tube post installations that is installations by means of which postal packages, letters parcels etc. are transported in tubes without anyone accompanying them. Up to now air tight tubes were employed for this purpose as the principle of the installation depended partly on an increased, partly on a reduced air pressure. Also for such plants, for which motoric or electric energy was proposed as driving medium, a tube closed on all sides was a condition, as it was deemed indispensable to have to remove the air in front of the carriage by suction in order to reduce the resistance caused by such air in front of the carriage. It has however been ascertained that it is entirely superfluous to consider the air pressure on electrically driven carriages even if traveling at a very high speed, if care is taken that the interior of the tube communicates with the open air so that there is the ordinary atmospheric pressure inside the tube. This can be explained by the fact that by the motion of the carriages, particularly if they are traveling in different directions, air currents are created, in the direction of the travel which can only be favorable to the working of the plant. It is also possible that when the tube is in a suitable dimension to the carriage the air in front and at the sides of the carriage will find sufficient room to escape so that no increase of the air pressure, opposing the advance of the carriage, will occur. In order to facilitate this escaping of the air and to assist the forming of the currents of air and to regulate them, the tubes can be provided with swells or extensions at given distances from each other.

The arrangement according to the present invention affords the advantage that—besides a reduction in cost of the installation owing to the tight jointing not being required and that thinner walls can be used—the inside of the tube can be made accessible anywhere and even while the tube is in use, with-

out any provision being required to shut off or preserve the inside pressure from the open air. Therefore it is possible to place the carriage to be conveyed into the tube also while the latter is otherwise in use, the walls of the tube can be opened during work for doing repairs or controlling the working, and the tubes can be made of materials permeable to gases. Besides the above arrangement offers the further advantage that the air pressures caused by the movement of the carriages are made effectless by the communication with the open air, so that even at high speed an increase of the air pressure will not occur. This arrangement allows of economically erecting tube post installations also for long distances, no limit being made as to length and size of the tubes, so that tubes of more than 1 m. diameter are possible to lengths reckoning by miles. It is only necessary that the electric current used for driving the carriages is of sufficient strength, the speed being able to be increased far beyond that allowable for the conveyance of persons, so much the more as the walls of the tube afford a safe guard against derailments and the carriages have not to overcome any lateral pressure of wind.

The tubes can be arranged both above as below the ground level. In the latter instance the communication with the open air is suitably made by channels leading to the surface of the earth. These channels can at the same time serve to take instruments for controlling the working of the installation and can be made of such size that they will likewise give access to the tubes for doing repairs, placing the carriages to be conveyed and the like. The tube can for this purpose also be provided with swells at given distances for allowing a more easy compensation of the air pressure inside the tube.

The invention may of course be put into practice in various ways.

A mode of carrying it out is exemplified in the accompanying drawings.

Figure 1 is a section through part of a pipe conduit with a carriage intended for the conveyance of postal packages. Fig. 2 is a cross section through the pipe, showing that a double track is used for working the system. Fig. 3 is a section along A—A in Fig. 2. Fig.

4 is a longitudinal section through the plant. Fig. 5 is a horizontal section through part of the pipe conduit.

As seen from above the system shown in the accompanying drawings is intended for conveying the carriages carrying the postal packages in both directions at one time.

The pipe conduit 3 is placed in the ground 1 at a suitable depth from the level 2, the pipe consisting of any suitable material. The pipes may be made of iron, clay, but suitably of reinforced concrete. The diameter of the pipes is suitably chosen of up to 1 meter. In the pipe 3 the rails 4, 4 are provided at the upper part, the rails 5, 5 at the lower part. Between two each rails 4 and 5 run the carriages 6 conveying the postal packages, these carriages running with rolls, 7, 7 & 8, 8 on said rails. The carriages can be made of any shape whatever and also of any material. It will be found advisable to give them a shape pointed at the front in order to reduce the resistance of the air. Their rear end is suitably provided with a buffer arrangement so as to reduce the shock as far as possible should a carriage run against the one in front. In the type shown this buffer arrangement consists of plate 10, which has a recess 11 of the shape of the point of a carriage 9. This plate 10 glides with arms 12 in slots 13. The plate 10 is further under action of a spring 14, which is attached to a projection 15 of the back of the car 16. The driving motor 17 is fitted into the carriage, and receives the current through the rail 4 and the rolls 7. The rotation of the motor is transmitted by gearing 18 on to the roll 7. The rail 5 serves for conducting back the return current.

In the installation shown for exemplification it has been taken as granted that either at the termini of the line or at intermediate stations there are sources of electricity, from which the current can be fed into the conductors 4. It goes without saying that the plant can also be worked with accumulators.

Instead of employing special rails as conductors for the current, the pipe itself can be used for this purpose. The pipe is then suitably made of two insulated parts, of which the one is to serve to the working current, the other for the return current.

For providing a reliable communication between the inside of the tube and the open air, canals 19 can be arranged at given distances from each other, which form a communication between the inside of the tubes and the open air. These air canals can then at the same time be arranged to take means of control for the conductors of the current as illustrated in the installation shown in the accompanying drawings. From the conductor 4 a wire conduit 20 is branched off, from conductor 5 a wire conduit 21. The

respective poles of these branchings 22 & 23 respectively, are carried up so far towards the surface of the earth 2 that they are easily accessible from outside, so that by attaching a suitable instrument, the conductors of the current can be easily controlled.

A special advantage of the present invention is that the pipe conduits 3 in which the carriages run, can also be used for other purposes as well, as exemplified by the system shown. The space inside the pipes is separated by a partition 24. In the one, the larger space run the carriages carrying the postal packages in the other space 25 cables, insulated wires etc. 26 are arranged. The space can also be used for water conduits or the like, or for laying gas pipes and the like. The wires or wire conductors respectively can serve for any purpose whatever. They can serve for telephones, telegraphs or the like. Hereby the considerable advantage will be obtained that special canals or conduits for such conductors need not be separately built. Also the conductors carrying the current for driving the carriages can besides heretofore, be used for telephones, telegraphs or the like.

The carriages conveying the postal packages can of course as well be made after the suspended railway type instead of the type shown, a railway running on tracks.

Having thus particularly described this my invention, I declare that what I claim and desire to secure by United States Letters Patent is:

1. A pipe conduit for parcel conveying carriages having a horizontal partition in its lower portion, vertical partitions between the bottom of said conduit and the said longitudinal partition, and forming a plurality of auxiliary conduits in the portion of said pipe conduit, said horizontal partition having openings establishing air communication between said pipe conduit and one of said auxiliary conduits.

2. In a device of the class described, a cylindrical tube, a supporting platform therein, a pair of track rails carried by the top of the tube, and cars having single wheels on top and bottom to engage the track rails and run in opposite directions.

3. In a device of the class described, a cylindrical tube, a pair of rails on the bottom thereof, a pair of rails on the top thereof, vehicles for traveling in said tube, wheels positioned adjacent the inner edge on the upper and lower sides of said vehicles to engage said tracks, whereby the major portion of the vehicle bodies will be positioned beyond the tracks.

4. A vehicle for parcels post systems comprising a substantially semi-cylindrical body, wheels carried by said body adjacent the flat side thereof, and means to drive the vehicle.

5 5. A vehicle for parcels post systems comprising a substantially cylindrical body pointed at one end, a socket at the opposite end, a buffer arranged in said socket to be engaged by the pointed end of another car, and wheels arranged on the upper and lower sides of said body adjacent the flat side thereof, and a motor connected with one of said wheels.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses. 10

ALEXANDER GÉZA FENYÖ.

Witnesses:

WOLDEMAR HAUPT,
HENRY HASPER.