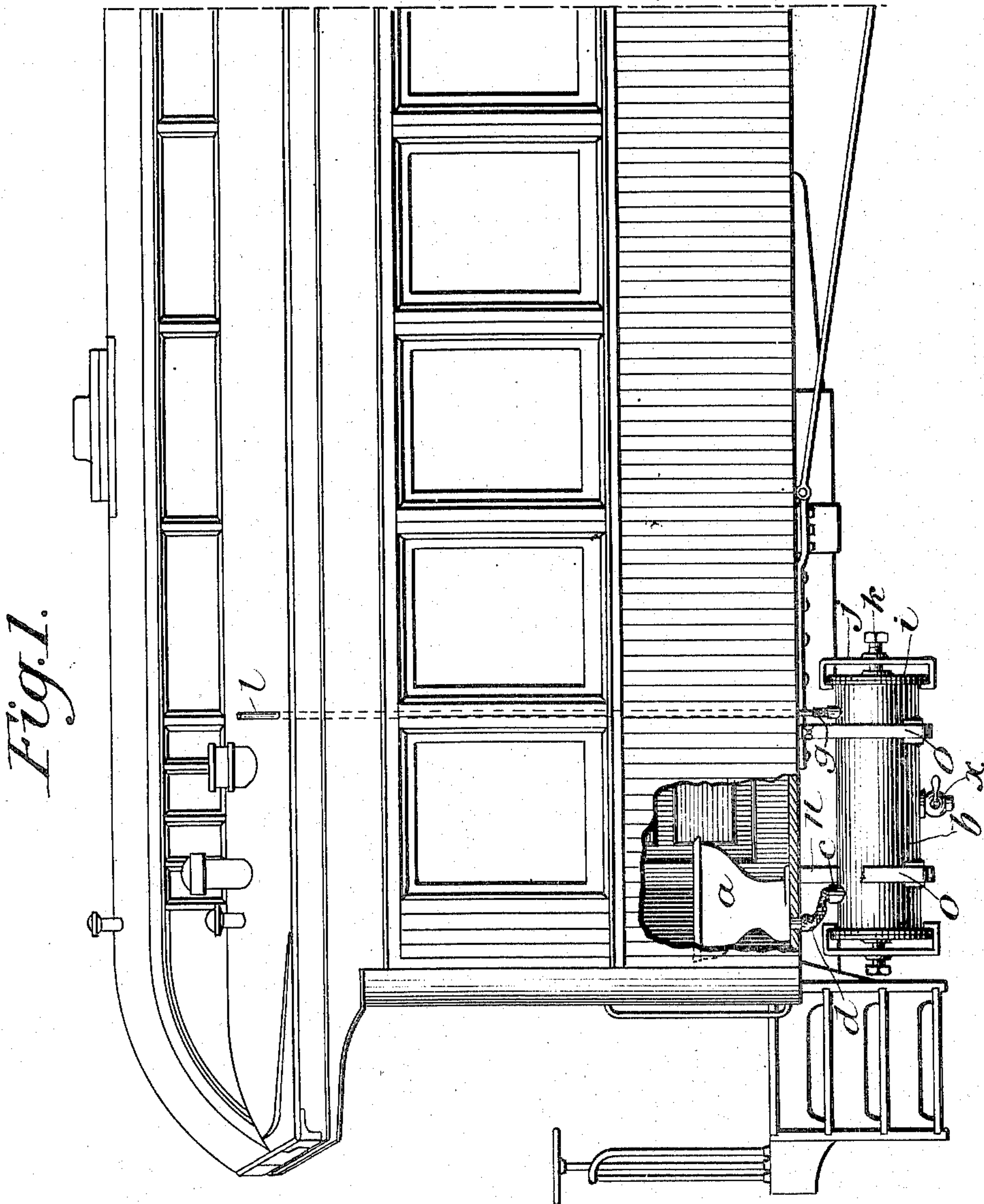


A. C. CLARKE.
SEWAGE SYSTEM FOR RAILWAY CARS.
APPLICATION FILED AUG. 15, 1907.

957,933.

Patented May 17, 1910.

2 SHEETS—SHEET 1.



Witnesses:
W. W. Edlin,
C. C. Conit.

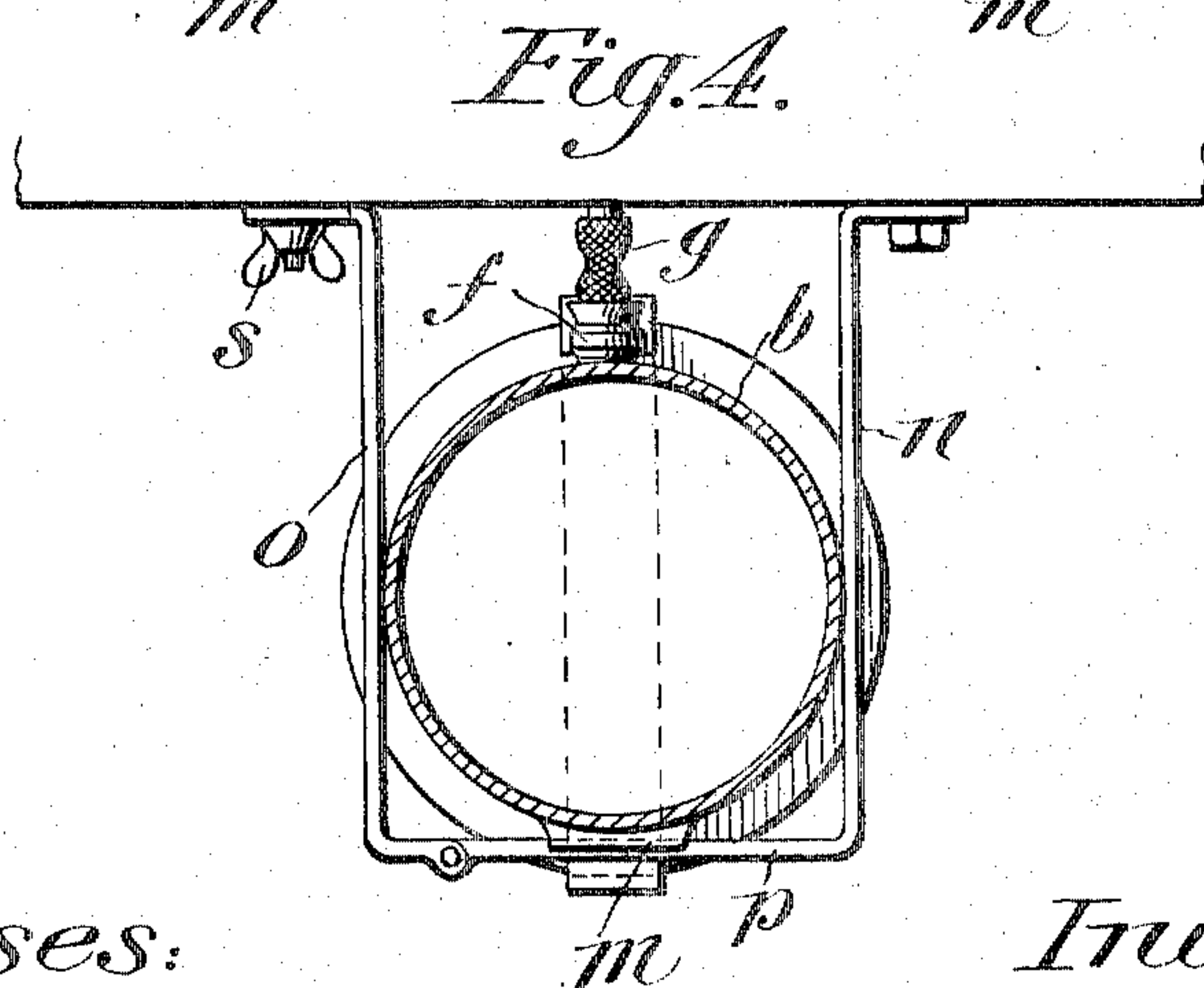
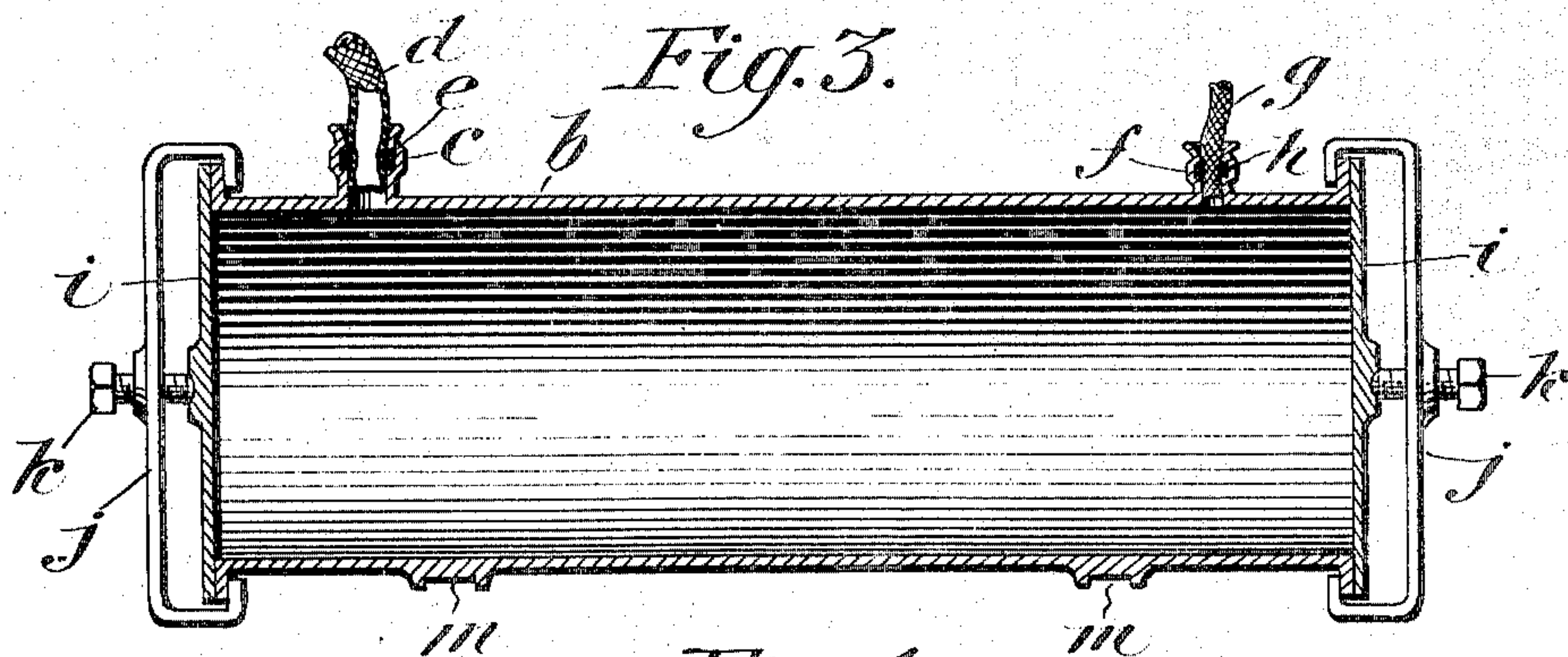
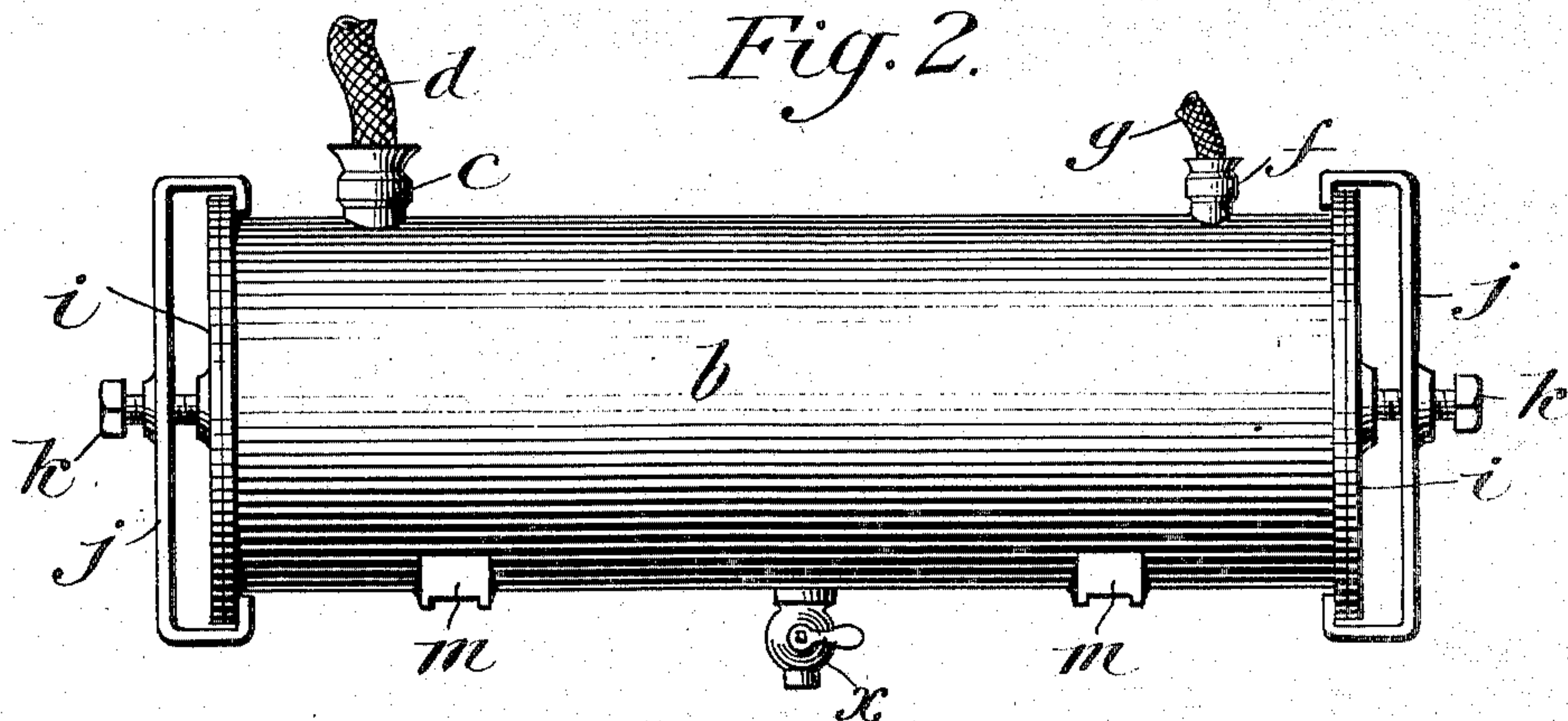
Inventor:
Anna C. Clarke,
by Henry Goldsborough,
attorney

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Inventor:
Anna C. Clarke.
by Herrie & Washbrough,
attys.

UNITED STATES PATENT OFFICE.

ANNA C. CLARKE, OF SCRANTON, PENNSYLVANIA.

SEWAGE SYSTEM FOR RAILWAY-CARS.

957,933.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed August 15, 1907. Serial No. 388,680.

To all whom it may concern:

Be it known that I, ANNA C. CLARKE, a citizen of the United States, residing at Scranton, county of Lackawanna, State of Pennsylvania, have invented certain new and useful Improvements in Sewage Systems for Railway-Cars; 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.

The invention relates to apparatus for the disposal of sewage and the like from railway cars, and is intended to be applied in connection with water closets, sinks, lavatories and the like, for the purpose of catching and retaining the discharge therefrom to prevent such discharge being deposited on the right of way, as is the present practice on most railroads.

The deposition of refuse from railway cars on the right of way and more especially where the matter consists of human excreta, is undoubtedly the source of contamination of many water supplies and is also a positive menace to the health of passengers on the cars, as well as that of persons working upon or living adjacent to the right of way.

The present invention has for its object to provide means for catching and retaining such refuse matter in appropriate receptacles or reservoirs carried by the cars, from which said matter may be discharged at appropriate places, the reservoirs being either stationary or removable, and having appropriate connections with the water-closets, lavatories or sinks on the cars and, when the reservoirs are removable, suitable flexible connections between the same and the bowl of the closet, lavatory or sink, as the case may be, are provided. The reservoir is also preferably provided with a vent pipe or stack which, when the reservoir is removable, is also provided with a flexible and removable coupling or connection with the reservoir.

In the accompanying drawings, Figure 1 shows the end of a car in side elevation, partly broken away to illustrate the invention as applied to a water closet. Fig. 2 is a side elevation of a convenient form of reservoir. Fig. 3 is a longitudinal section through the same. Fig. 4 is a transverse section of the reservoir showing also a convenient means for removably securing the same in place on the car.

The invention has been shown in connection with a water closet merely by way of illustration or example, and it is to be understood that it is likewise applicable to lavatories, sinks, urinals and the like, and that the claims are intended to be interpreted accordingly.

In the drawings, *a* indicates the hopper or bowl of a water closet, which may be of any preferred form provided with the usual trap to prevent the escape of gases or effluvia into the apartment. Suspended from the body of the car and preferably in the most convenient and accessible location is a tank or reservoir *b*, adapted to be connected with the outlet of the closet bowl. In its preferred form, the reservoir is a cylinder of metal closed at each end by removable heads *i*, held in water- and gas-tight contact with the cylinder ends, by means of yokes *j* and set screws *k*. If desired, one end of the cylinder may be permanently closed and the other provided with a removable head.

Near one end, the tank *b* is provided with a nipple *c* adapted to receive a tubular connection *d* attached at its other end to the outlet of the bowl *a*. If tank *b* is removably secured to the car, connection *d* may conveniently be made of a section of rubber hose or piping, one end of which is passed into nipple *c* and through a rubber packing *e* to effect a gas tight fit. If the tank is permanently attached to the car, it may be connected with the bowl by any suitable permanent coupling or piping.

In order to properly vent tank *b*, it is connected with a stack or pipe *l*, which is preferably carried up above the car roof so that air and noxious gases may escape from the tank, without annoying or endangering the passengers. With a permanently attached tank, said stack may be rigidly attached thereto, but when the tank is intended to be removed, the stack is connected therewith by a short section of rubber piping or hose *g* threaded through a nipple *h* and packed by a rubber gasket *f*.

In order to removably attach the tank *b* to the car, any appropriate supports or suspending means may be provided, a simple and efficient apparatus for the purpose consisting of pendent brackets *n*, secured to the under side of the car body, each having a horizontal bottom member *p* and a hinged outer side member *o*, adapted to be swung

down to permit the insertion or removal of the tank, and when turned up, to be locked in position by a set screw and nut *s*. The tank is held firmly in position against lateral movement by the bracket sides and against endwise movement by lugs *m* on the bottom of the tank which embrace the horizontal members *p* of the brackets.

The operation and utility of the invention will be apparent from the foregoing description. Matter deposited in the closet, urinal, lavatory or sink on the car will be carried directly into the tank *b* and retained therein until the car reaches the proper place for discharging the contents of the tank, such discharge being effected either by removing the tank as a whole and replacing it by another, or by opening one of the heads or closures and permitting the matter to flow out. The cylindrical form of the tank permits it to be readily cleansed by flushing, and all of the parts of the apparatus being capable of thorough cleansing and disinfecting, a thorough sanitary condition of the same may be maintained.

In order to facilitate the emptying of the tank without removing the heads when said tank is provided with removable heads, the inlet nipple *c* may be employed as a discharge when the tank itself is removable. On the other hand, when it is desired to discharge the contents of the tank when the latter is stationary and more particularly when it is not provided with removable ends, a

suitable outlet valve *x*, as indicated in Fig. 2, may be provided, so that by opening the valve *x*, the contents will flow out, and should any solid matter remain in the tank, it may be flushed out by a stream of water introduced through the inlet nipple *c*.

What I claim as my invention is:—

1. A sewage system for cars and the like comprising, the bowl of a closet, urinal, lavatory or the like, a removable closed tank having means for discharging its contents and provided with an inlet, a flexible conduit leading from the bowl and separably connected with the tank-inlet, and means for separably supporting the tank from the car.

2. A sewage system for cars and the like comprising the bowl of a closet, urinal, lavatory or the like, a removable tank having an inlet separably connected with the outlet of the bowl, or the like, and provided with guide lugs, and straps suspending the tank from the car with their lower members extending through said guide lugs, said straps having hinged sections to permit of the ready removal of the tank.

3. A tank for car sewage systems, provided with a removable head, an inlet, a vent, and guide lugs on its lower side.

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

ANNA C. CLARKE.

Witnesses:

W. A. MAY,
E. A. WILDT.