

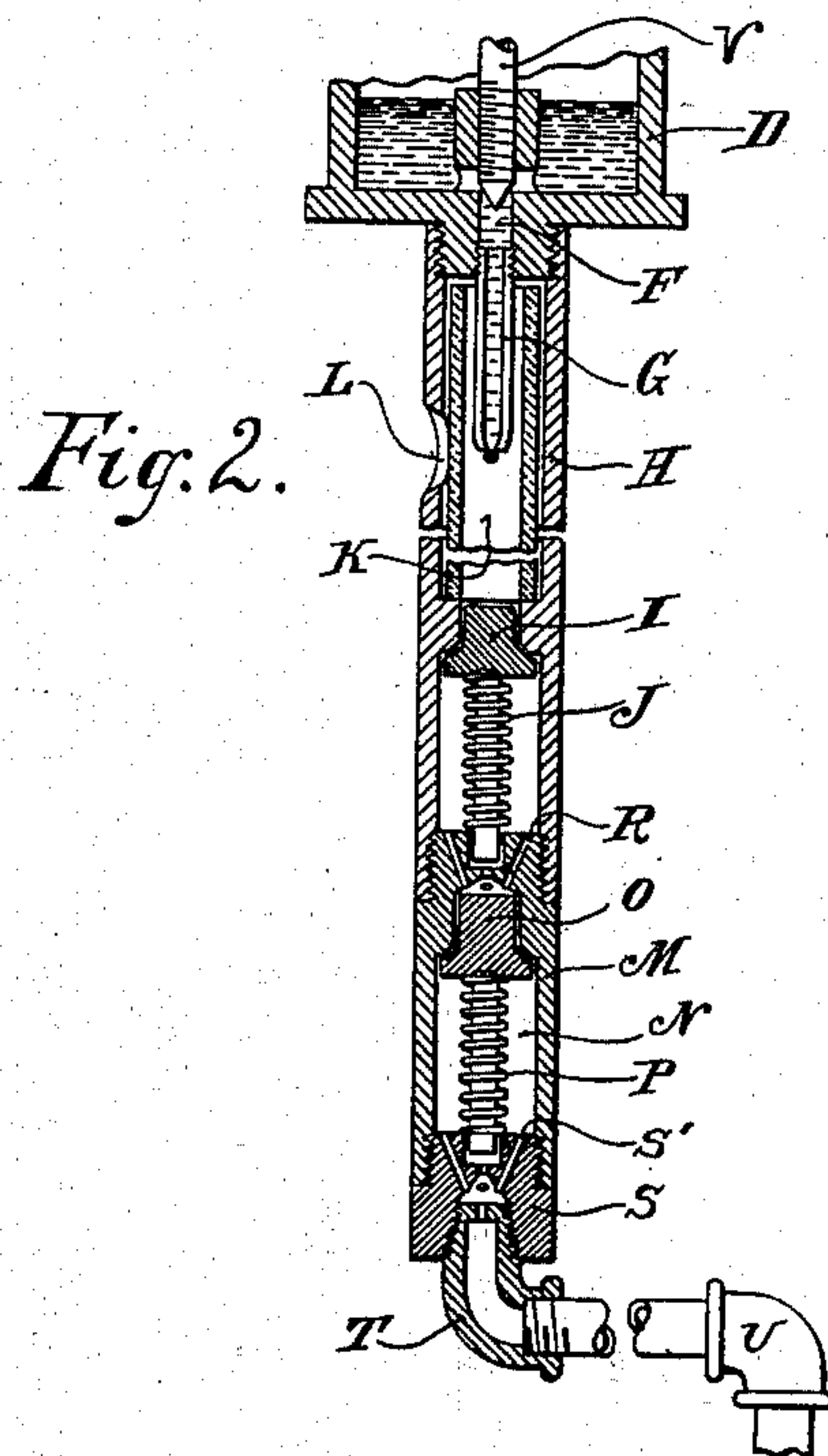
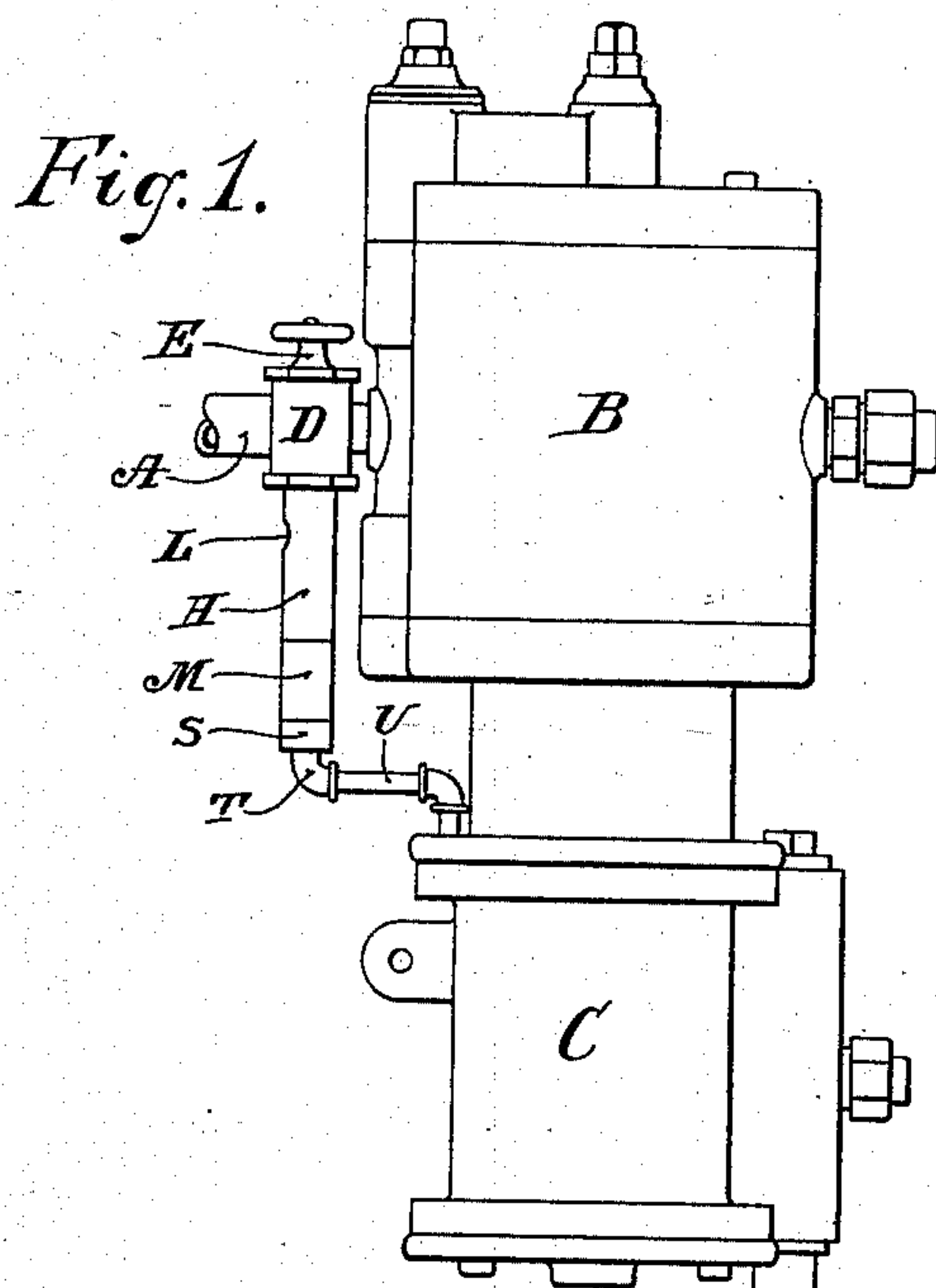
No. 714,337.

Patented Nov. 25, 1902.

G. W. THURSTON.
AUTOMATIC OILING DEVICE.

(Application filed Apr. 1, 1902.)

(No Model.)



WITNESSES

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UNITED STATES PATENT OFFICE.

GLENN W. THURSTON, OF KERN CITY, CALIFORNIA.

AUTOMATIC OILING DEVICE.

SPECIFICATION forming part of Letters Patent No. 714,337, dated November 25, 1902.

Application filed April 1, 1902. Serial No. 100,992. (No model.)

To all whom it may concern:

Be it known that I, GLENN W. THURSTON, a citizen of the United States, residing at Kern City, in the county of Kern, State of California, have invented new and useful Improvements in Automatic Oiling Devices, of which the following is a specification.

My invention relates, primarily, to oiling devices for oiling the piston of an air-compressor; and the object thereof is to provide an efficient and economical device which will furnish the amount of oil to properly lubricate the piston as it is needed. I accomplish this object by the device described herein and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of an air-pump used in the air-brake system on railroad-trains with my automatic oiling device applied thereto. Fig. 2 is a central vertical section of my oiling device.

In the drawings, A is the supply steam-pipe, through which steam is supplied to the steam-cylinder B of the air-pump, which operates the compressor C, to which my oiling device is attached at the usual oiling-port thereof. My oiling device is composed of an oil-holding cup or reservoir D, having a removable cover E at the top and in the bottom thereof a port F, in which is screwed the drop-tube G, through which the oil drops into the feed-tube H, screwed onto the bottom of the oil-reservoir. In the lower portion of the tube is check-valve I, which opens downwardly and permits the oil to pass down in the tube whenever a vacuum or partial vacuum is produced in the upper part of the air-compressor. It is held normally closed or seated by spring J. Above valve I and extending nearly to the bottom of the oil-reservoir is sight-tube K, which causes the air which enters feed-tube H through air and sight port L in the side and near the center thereof to pass over the top of the sight-tube and down around the drop-tube. In the bottom of the feed-tube is screwed the casing M of check-valve chamber N, in which is seated the downwardly-opening check-valve O, which is held normally closed by spring P. The check-valve chamber is in communication with the feed-tube through channels R. The bottom of the check-valve chamber is closed by plug S,

having channels S' therein, in the bottom of which is screwed elbow-coupling T, which has the upper part thereof nearly closed, a small port, about one-sixteenth of an inch in diameter, giving satisfactory results with an eight or nine and one-half inch air-pump. This elbow-coupling is connected by the supply-pipe U with the compressor C. In the operation of my device the reservoir is filled with oil, and as the piston of the air-compressor reciprocates on the downward stroke thereof a given quantity of air is drawn into the compressor-chamber through port L and the connecting-channels. As the air passes the drop-tube it draws the oil therefrom and carries it down into the compressor-chamber upon the top of the piston therein. Any oil which may have dropped upon the check-valve will also be carried down into the compressor-chamber. By the use of the sight-tube the engineer can see whether or not the oil is being properly fed into the compressor. Should the air-pump stand idle for some considerable time, the sight-tube will hold the dropping oil until the air-pump is started up again. If desired, check-valve O and its chamber and casing may be omitted, as it is not necessary to the successful operation of my oiling device, and it is only used as a matter of precaution in case cinders or other obstruction should prevent check-valve I from properly working. It will be observed that the oil-reservoir rests against the steam-pipe, thereby always keeping the oil at a proper temperature to flow freely. The flow of oil is regulated by the regulating-stem V.

In describing my device I have shown means to apply the same to existing mechanism; but it is evident that parts may be changed in form without departing from the spirit of my invention.

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

1. An automatic oiling device for lubricating the piston of an air-compressor comprising an oil-reservoir having a drip-tube in the bottom thereof; means to regulate the flow of oil through said tube; a feed-tube surrounding said drip-tube having an admission port in the side thereof opposite the lower end of the drip-tube; a sight-tube with-

in said feed-tube extending from the check-valve to near the bottom of the oil-reservoir; a downwardly-opening spring-pressed check-valve in said feed-tube; and a channel for
5 connecting said feed-tube below said valve with the air-compressor chamber above the piston thereof.

2. An automatic oiling device for lubricating the piston of an air-compressor comprising
10 ing an oil-reservoir having a drip-tube in the bottom thereof; a feed-tube surrounding said drip-tube having an air-admission port in the side thereof opposite the lower end of the drip-tube; a spring-pressed downwardly-
15 opening check-valve in said feed-tube; a sight-tube within said feed-tube extending

from the check-valve to near the bottom of the oil-reservoir; a plug having channels extending therethrough in the bottom of said feed-tube; an elbow-coupling connected to 20 said plug having a contracted opening in the end connected with the plug; and a pipe connecting said elbow-coupling with the air-compressor chamber above the piston thereof.

In witness that I claim the foregoing I have 25 hereunto subscribed my name this 22d day of March, 1902.

GLENN W. THURSTON.

Witnesses:

JAMES QUINN,
W. J. RAY.