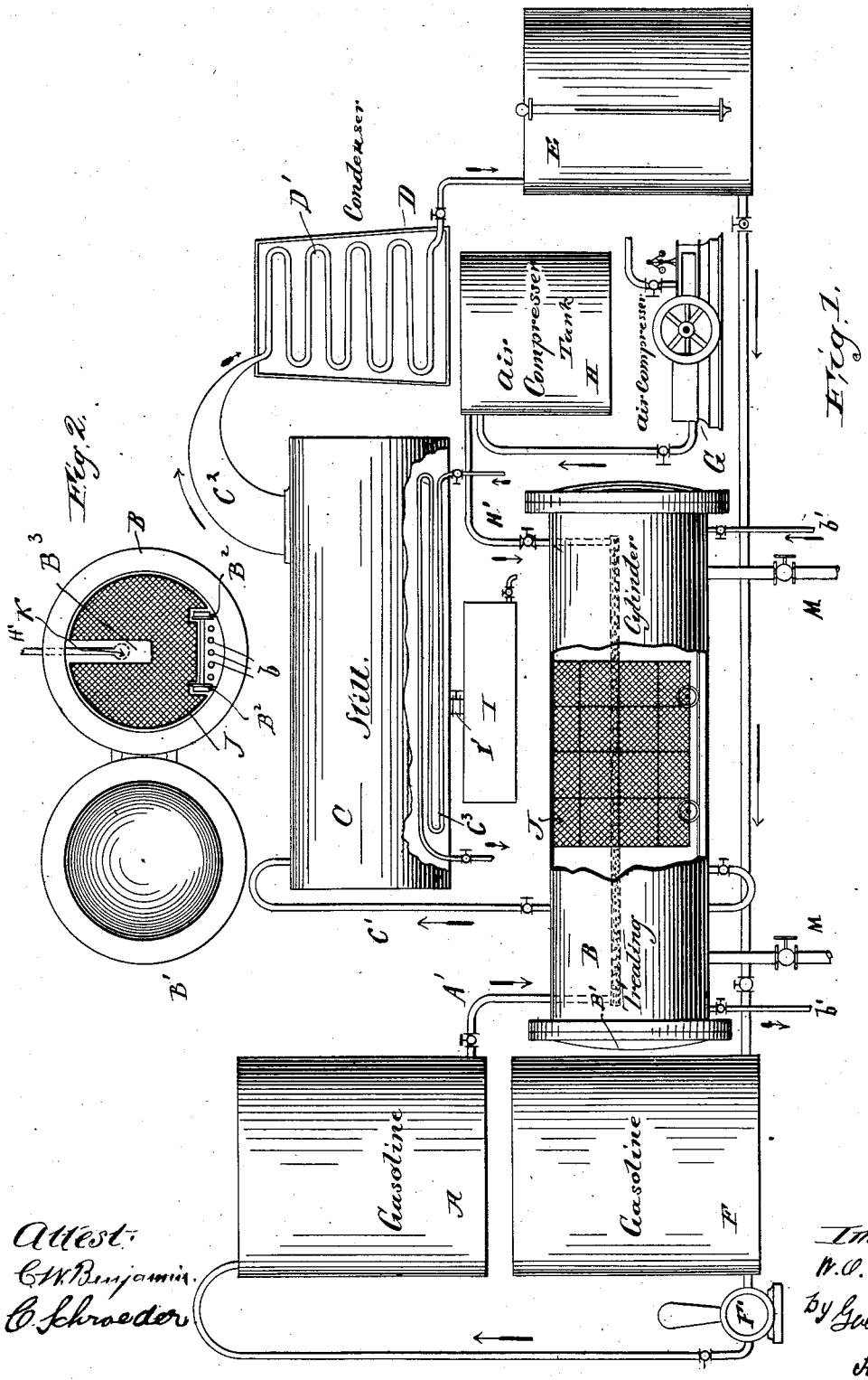
(No Model.)

W. O. ROBBINS.

APPARATUS FOR EXTRACTING OILS.

No. 523,732. Patented July 31, 1894.



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UNITED STATES PATENT OFFICE.

WILLIAM O. ROBBINS, OF NEW YORK, N. Y.

APPARATUS FOR EXTRACTING OILS.

SPECIFICATION forming part of Letters Patent No. 523,732, dated July 31, 1894.

Application filed November 18, 1893. Serial No. 491,310. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM O. ROBBINS, a citizen of the United States, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Apparatus for Treating Substances Containing Grease and Oils, as shown in the following specification.

The object of my invention is to provide an apparatus for extracting the grease, fat, oils, &c., from wool, cotton-seed and other substances containing such grease or oil.

In the accompanying drawings, illustrating my invention, Figure 1 is a side elevation of the said apparatus parts being broken out and others in section. Fig. 2 is an end view of treating cylinder.

Similar letters of reference indicate corresponding parts.

The cylinder B is provided at each end with a gate B′ and contains tracks B^2 on which a car J can run, the body of which is made cylindrical and of wire netting, so as to fit in the treating cylinder. The body of the car is provided in its top with the vertical recess B^3 extending the length of the same for the purpose that will appear hereinafter.

Between the tracks B^2 a series of steam-pipes *b* are arranged which are connected with the pipes *b′* for the purpose of admitting the steam into the cylinder for the purpose of heating the same. The bottom of the cylinder is connected by a pipe C′ with a still C which still in turn is connected by a goose-neck C^2 with a condensing coil D′ of a condenser D. A steam-pipe C^3 is arranged in the bottom of the cylinder as shown. The bottom of the still is connected by a pipe I′ with a receiver I for the fat and grease. An air condenser tank H is connected by a suitable pipe with an air compresser G and said tank H is connected by a pipe H′ with the treating cylinder, said pipe H′ extending down through the top of the cylinder to near the middle of the height of the same and is provided at its lower end with a perforated outlet pipe K extending the length of the cylinder. It is for the purpose of passing this compressed air outlet pipe that the car body is provided with a recess B^3 previously mentioned. The condensing coil has its lower end connected by a suitable pipe with a gasoline receptacle E and the same is in turn connected with a gasoline storage receptacle F from which the gasoline can be pumped by means of a pump F′ into a gasoline tank A located above the treating cylinder B. A pipe A′ connects the tank A with the pipe K.

M are outlet pipes.

The operation is as follows: The wool, cotton-seed and other material that are to be treated are packed in the cars J and the same are run into the treating cylinder B until the same is filled, when the doors *b′* of the cylinder are closed air-tight. Then gasoline or any other suitable hydro-carbon solvent of a like nature is admitted through the pipe A′ and K into the treating cylinder and is absorbed by the wool or cotton-seed and is permitted to act on the same for a certain time, according to the nature of the material. The steam is admitted into the pipes *b* for heating the gasoline and creating pressure. The cock in the pipe C′ is opened and the pressure in the cylinder forces the gasoline through the pipe C′ into the still. This gasoline now contains all the fat, grease and oils that have been dissolved out of the wool or cotton-seed. Then compressed air is admitted into the cylinder for the purpose of thoroughly drying the wool and driving off all traces of gasoline, &c., which connects on the bottom of the cylinder and is drawn off through the pipes M. In the still C the hydro-carbon is distilled off and condensed in the condenser and passes into the receptacle E from the same into the gasoline storage receptacle F, is pumped into the tank A and then passes into the cylinder B. The fat, greases, &c., are then drawn from the treating cylinder through the pipe I′ into the receiver I.

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

In apparatus for exhausting fat and oils from materials containing them, the combination with a cylinder for receiving the materials to be treated by means of solvents for extracting the fat or grease, a perforated pipe extending the length of the cylinder at about

half the height of the same and having its ends connected with means for conducting a solvent or air under pressure into said pipe, and a car having a body for receiving the material to be treated, which car fits within the treating cylinder and is provided in the top of its body with a vertical recess, the bottom of which is below the perforated pipe in the treating cylinder and which recess extends the entire length of the car, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

WILLIAM O. ROBBINS.

Witnesses:
OSCAR F. GUNZ,
CHARLES SCHROEDER.