

I. KOECHLIN.
 OIL EMPTYING MECHANISM FOR MOTOR CASINGS.
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1,006,566.

Patented Oct. 24, 1911.

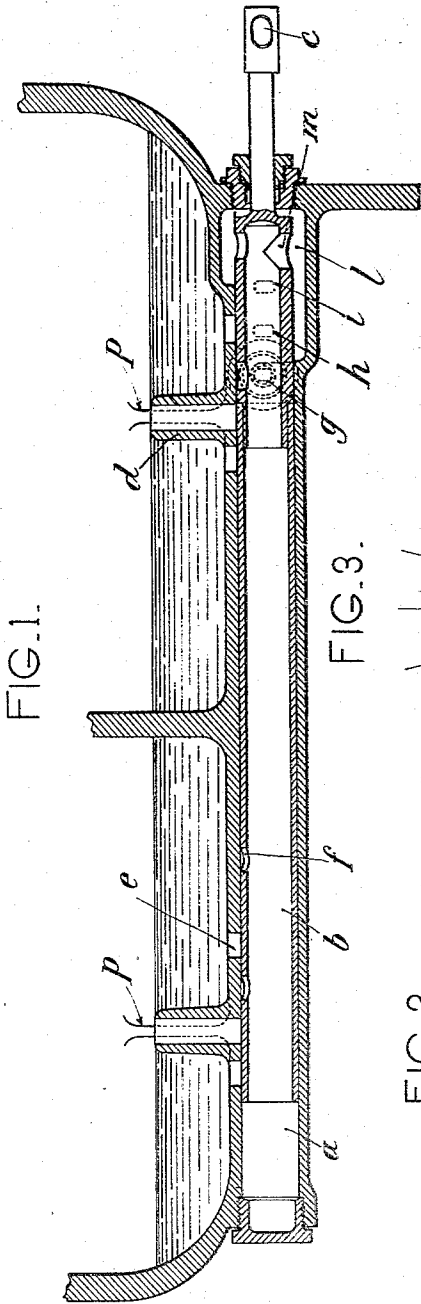


FIG. 1.

FIG. 3.

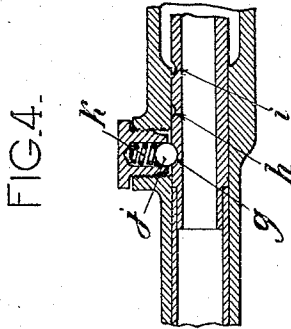


FIG. 4.

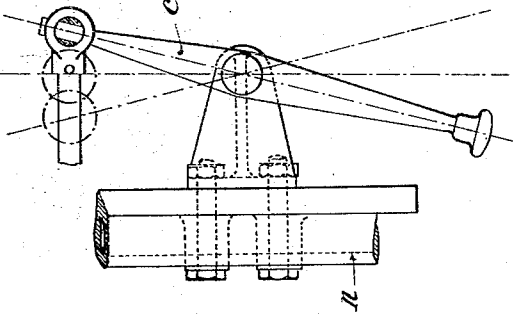


FIG. 2.

Witnesses:
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UNITED STATES PATENT OFFICE.

ISAAC KOECHLIN, OF LEVALLOIS-PERRET, FRANCE, ASSIGNOR TO SOCIÉTÉ ANONYME
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OIL-EMPTYING MECHANISM FOR MOTOR-CASINGS.

1,006,566.

Specification of Letters Patent.

Patented Oct. 24, 1911.

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To all whom it may concern:

Be it known that I, ISAAC KOECHLIN, a citizen of Switzerland, residing at 71 Rue Danton, Levallois-Perret, Seine, in the Republic of France, have invented new and useful Improvements in Oil-Emptying Mechanisms for Motor-Casings, of which the following is a specification.

This invention relates to improved oil emptying mechanism for motor casings having several compartments by which the oil can be evacuated either entirely or partially, or down to a determined level in the casing as desired. Any excess of oil can consequently be rapidly removed from any of the compartments and with all possible cleanliness.

The annexed drawing illustrates by way of example the mechanism applied to a two compartment casing.

Figure 1 is a longitudinal section of the motor casing. Fig. 2 is a side view from the back. Fig. 3 is a plan view of the operating lever. Fig. 4 is a section illustrating a detail.

At the bottom of the engine casing is a tube *a* in which another tube *b* actuated by means of the lever *c* or other appropriate device can slide, the lever *c* being arranged at a suitable spot for convenient operation by hand. The tube *b* can have sliding movement but the lever *c* or a key or other suitable device prevents it from rotating. Each compartment of the casing carries centrally a partition *p* the height of which is equal to the height of the oil necessary. The tube *a* of the casing is in communication with these compartments by two overflow pipes *d* arranged on the separating partition and the height of which also determines the level of the oil and by four holes *e* in the bottom of the casing. The tube *b* has four holes *f* and can take three positions fixed by the notches *g h i* in any of which a ball *j* under the action of the spring *k* can engage. The distances between these holes *f* are the same as those between the holes *e*.

In the drawing the tube is shown at the end of amplitude of movement to the right; the ball *j* is in the notch *g*. In this position the holes *f* are not uncovered and the oil in the casing cannot be evacuated. When the tube *b* is pushed forward so that the notch *h* corresponds with the ball *j*, two of the holes *f* come opposite those made in the

tube *d*. If at this moment the level of the oil in the casing is above the tops of the tubes *d*, the surplus flows through these holes, passes into the tube *b* and then into the chamber *l* by the hole *m*. A conduit *n* conducts this oil to the exterior, the stopper *o* of the same being unscrewed. When the ball *j* is engaged in the notch *i* the four holes *f* of the tube *b* will be opposite four holes *e* in the bottom of the casing and all the oil contained in the casing is evacuated in the same manner as previously described.

It is evident that the number of tubes and the number of outlet orifices can vary with the number of cylinders of the motor and the corresponding number of compartments of the casing.

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

1. An oil emptying mechanism for motor casings comprising in combination a tube *a* formed at the bottom of the casing, a partition *p* formed in the middle of each compartment of the casing, an overflow pipe *d* formed in each partition, holes *e* made respectively at each side of the partitions in the bottom of the casing and leading to the tube *a*, a sliding tube *b* arranged within the casing tube *a*, holes *f* made in the sliding tube *b* at the same distance one from each other as those made in the bottom of the casing, means for causing the interior of the sliding tube *b* to communicate with the exterior and operating means adapted to bring the holes *f* of the sliding tube *b* successively opposite the overflow pipes *d* and opposite the holes *e* of the casing, substantially as described and for the purpose set forth.

2. An oil emptying mechanism for motor casings comprising in combination a tube *a* formed at the bottom of the casing, a partition *p* formed in the middle of each compartment of the casing, an overflow pipe *d* formed in each partition, holes *e* made respectively at each side of the partitions in the bottom of the casing and leading to the tube *a*, a sliding tube *b* arranged within the casing tube *a*, holes *f* made in the sliding tube *b* at the same distance one from each other as those made in the bottom of the casing, a chamber *l* into which leads the sliding tube, a hole *m* formed in the sliding tube at its end leading to the chamber *l*, a conduit *n* leading from the chamber *l* to the exterior,

a lever *c* adapted to communicate to the sliding tube *b* a lengthwise movement but preventing its rotation, and a locking device adapted to lock the sliding tube in the correct position for retaining or emptying the oil, substantially as described and for the purpose set forth.

3. An oil emptying mechanism for motor casings comprising in combination a tube *a* formed at the bottom of the casing, a partition *p* formed in the middle of each compartment of the casing, an overflow pipe *d* formed in each partition, holes *e* made respectively at each side of the partitions in the bottom of the casing and leading to the tube *a*, a sliding tube *b* arranged within the casing tube *a*, holes *f* made in the sliding tube *b* at the same distance one from each other as those made in the bottom of the cas-

ing, a chamber *l* into which leads the sliding tube, a hole *m* formed in the sliding tube at its end leading to the chamber *l*, a conduit *n* leading from the chamber *l* to the exterior, a lever *c* adapted to communicate to the sliding tube *b* a lengthwise movement but preventing its rotation, and a spring pressed ball adapted to be engaged with notches *g* *h* *i* formed in the sliding tube *b* to lock said tube in the correct position for retaining or emptying the oil, substantially as described and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ISAAC KOECHLIN.

Witnesses:

ANTOINE LAVOIX,
H. C. COXE.