

No. 661,816.

Patented Nov. 13, 1900.

P. A. RENAUX.

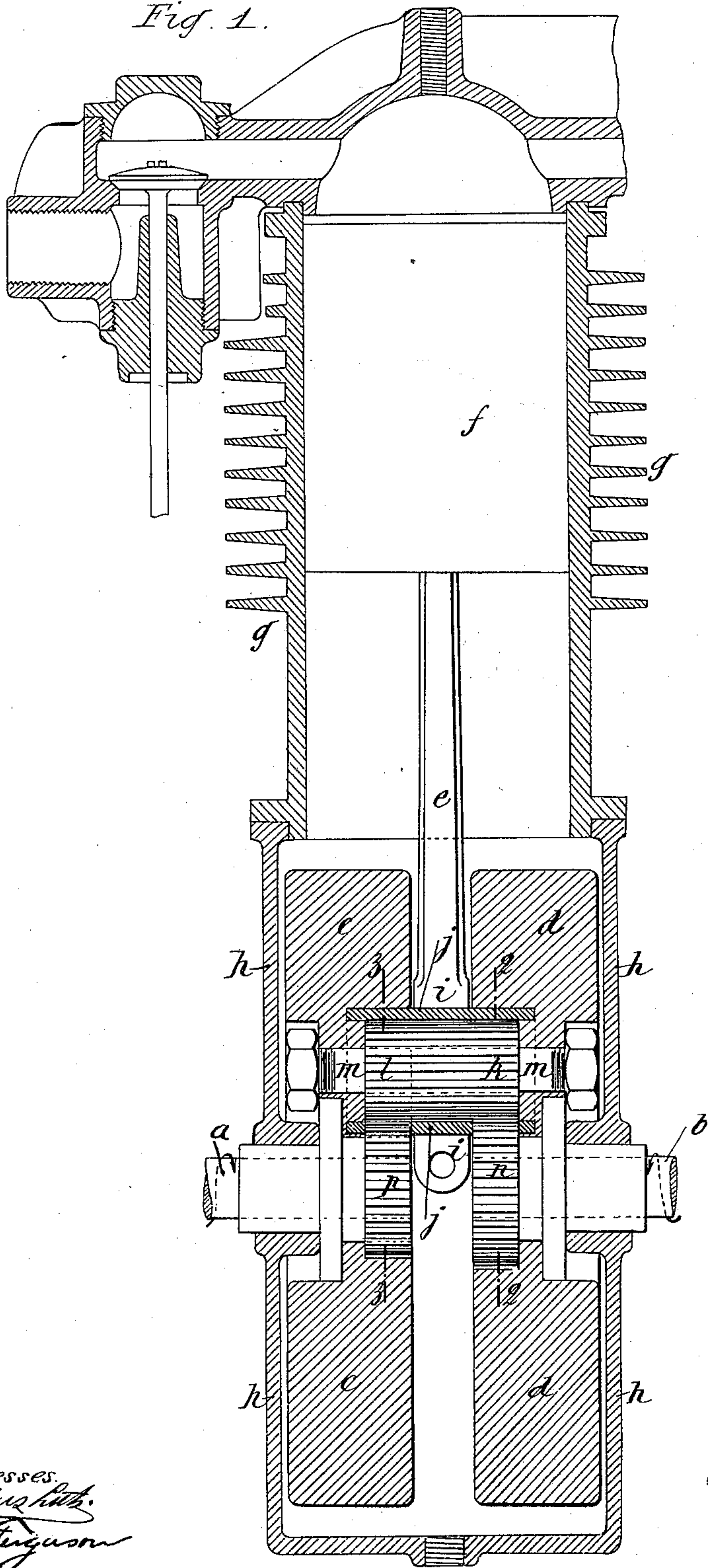
DRIVING MECHANISM FOR MOTOR CYCLES OR MOTOR CARS.

(Application filed Oct. 23, 1899.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.



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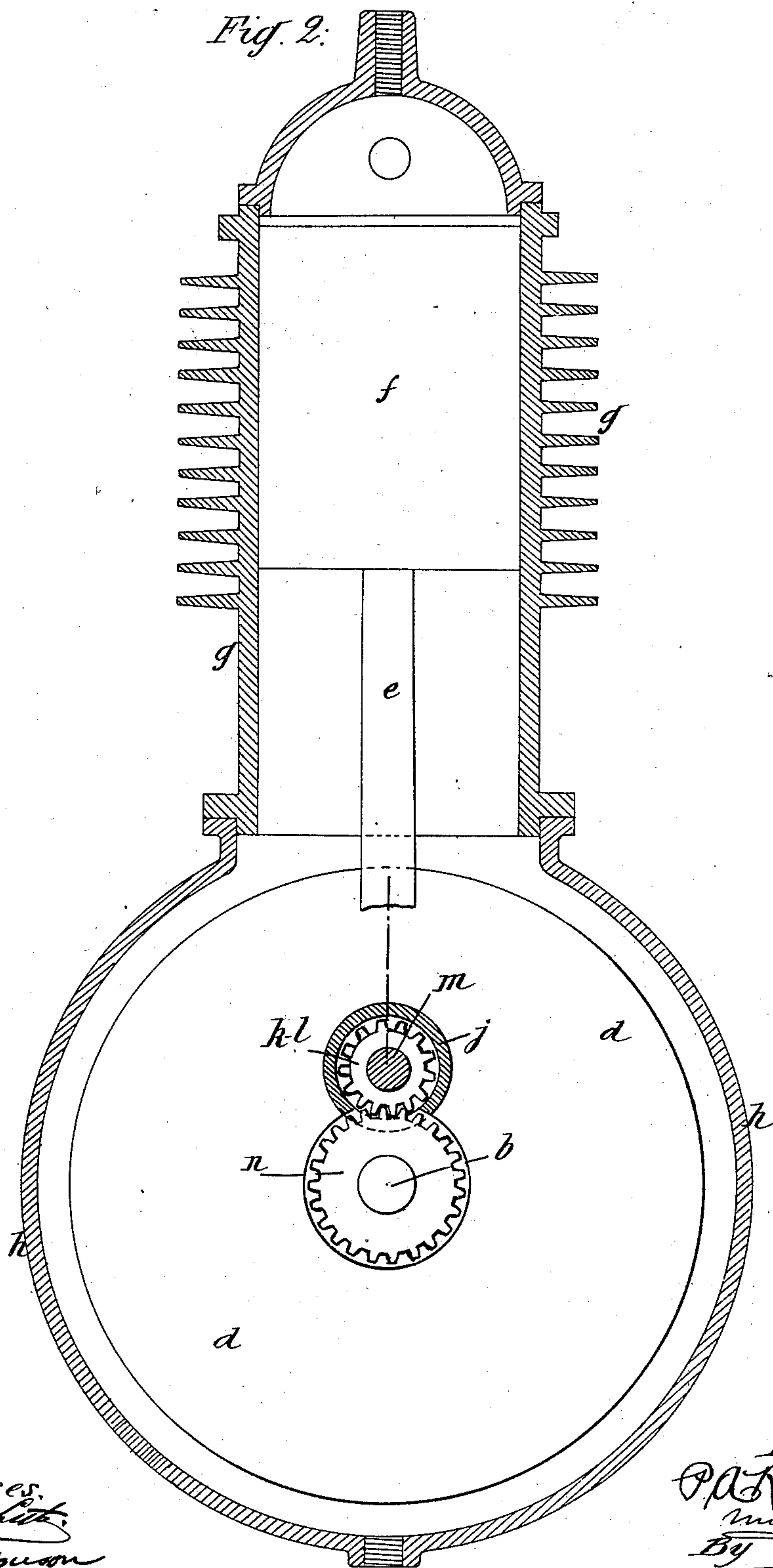
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3 Sheets—Sheet 2.



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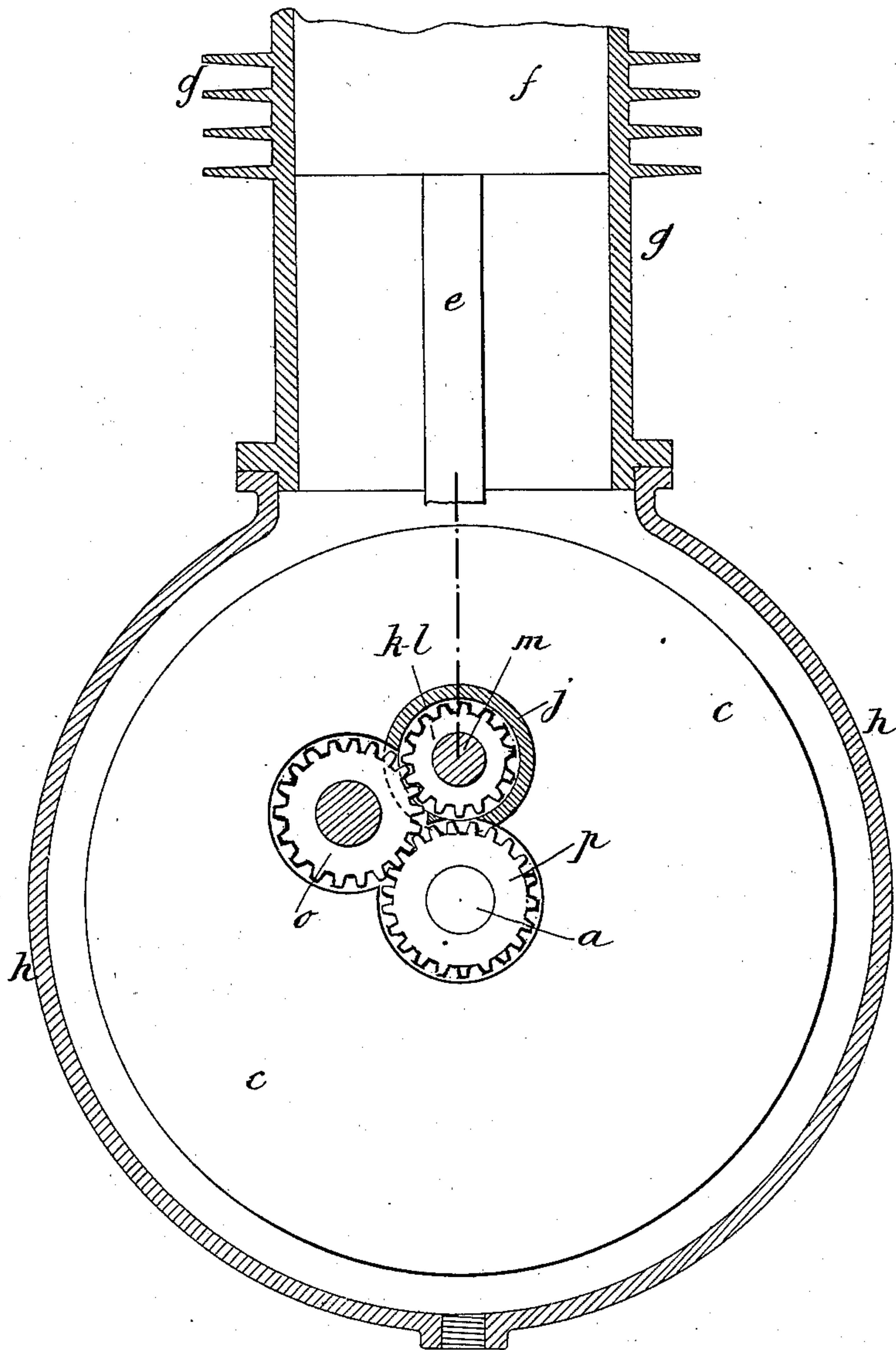
DRIVING MECHANISM FOR MOTOR CYCLES OR MOTOR CARS.

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(No Model.)

3 Sheets—Sheet 3.

Fig. 3.



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UNITED STATES PATENT OFFICE.

PROSPER ALEXANDRE RENAUX, OF PARIS, FRANCE.

DRIVING MECHANISM FOR MOTOR-CYCLES OR MOTOR-CARS.

SPECIFICATION forming part of Letters Patent No. 661,816, dated November 13, 1900.

Application filed October 23, 1899. Serial No. 734,527. (No model.)

To all whom it may concern:

Be it known that I, PROSPER ALEXANDRE RENAUX, engine-builder, a citizen of the Republic of France, residing at 33 Rue du Repas, Paris, France, have invented certain Improvements in Driving Mechanisms for Motor-cycles or Motor-Cars, (for which I made application for Letters Patent in France on the 26th day of September, 1899,) of which the following is a specification.

This invention relates to an arrangement of motor mechanism adapted to an explosion engine or motor and particularly applicable to motorcycles and automobile vehicles. The chief feature is that the explosion-motor operates the driving-axle by means of a special arrangement which takes the place of a differential gear for the motor-axle. This special arrangement effects its object under conditions particularly advantageous with respect to solidity and avoids all risk of the gearing getting out of order.

I do not ignore the gear known under the name of "differential" nor its different applications and modes of employment; but face to face with known arrangements my mechanical combination effects the transmission of the motive power in a most efficacious and satisfactory manner and gives a better utilization of the motive force than heretofore.

I will now describe my motor mechanism, reference being had to the accompanying drawings, in which—

Figure 1 is a longitudinal section taken on the axis of the cylinder and that of the motor-shaft. Fig. 2 is a section on the line 2 2 of Fig. 1, and Fig. 3 is a section on the line 3 3 of Fig. 1.

a and *b* are two shafts forming part of the motor-shaft, which operates the driving-wheels directly or by any suitable intermediary mechanism if there is any necessity for the reduction of the speed. On these two shafts *a* and *b* are mounted loosely two fly-wheels *c* and *d*, between which works the head of a connecting-rod *e*. This rod *e* is pivoted in any convenient manner to the piston *f*, which works in the motor-cylinder *g*. This cylinder is fixed at its front end to a box or carrier *h*, in which the two fly-wheels before named are inclosed and in the walls of which also are the bearings for the shafts *a* and *b*.

It is unnecessary to describe the different organs of the motor—such as admission and exhaust valves, &c., arrangement for evolving, and so on—which may vary according to the fancy of the manufacturer and form no part of the present invention, which applies only to the means for conveying the power derived from the motor to the driving-wheel axle. The head or strap *i* of the connecting-rod *e* is mounted on a sleeve *j*, situated between the two fly-wheels *c* *d* and acting as a crank-pin. In this sleeve is placed a wide spur-pinion *k* *l*, mounted loosely on a short axle *m*, carried by and connecting the two fly-wheels. This pinion at its part *k* is in gear with the spur-wheel *n*, which is keyed on the shaft *b* and projects through a slot in the sleeve *j* for the purpose, and at its part *l* with a loose pinion *o*, which also projects through a slot in the sleeve. This pinion *o* is suitably carried by the fly-wheel *c* and is in gear with the spur-wheel *p*, keyed on the axle *a*. Such an arrangement of mechanism is very strong and reduces to a minimum the different parts of the motor mechanism of an automobile vehicle.

I claim—

1. A driving mechanism for automobile carriages, comprising two shafts, a fly-wheel loosely mounted on each of them, a sleeve connecting the fly-wheels, a pinion contained in said sleeve, a pinion rigidly mounted upon each of said shafts, one of these pinions engaging the pinion in the sleeve directly, and a loose pinion engaging the pinion on the other shaft and the pinion in the sleeve.

2. In a driving mechanism, two separate shafts, fly-wheels on the shafts, pinions on the shafts, a sleeve connected to the two fly-wheels and forming a crank-pin, a gear-wheel in said sleeve and meshing with one of the pinions, a gear carried by one of the fly-wheels and connecting the gear-wheel with the other pinion, and operating mechanism having connection with the sleeve.

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

PROSPER ALEXANDRE RENAUX.

Witnesses:

GUSTAVE DUMONT,
J. ALLISON BOWEN.