

2 Sheets—Sheet 1.

SPRING MOTOR FOR ROAD WAGONS.

Patented Nov. 6, 1883.



Inventor

Charles H. Jenne,

by Smith & Loeper
atyp

(No Model.)

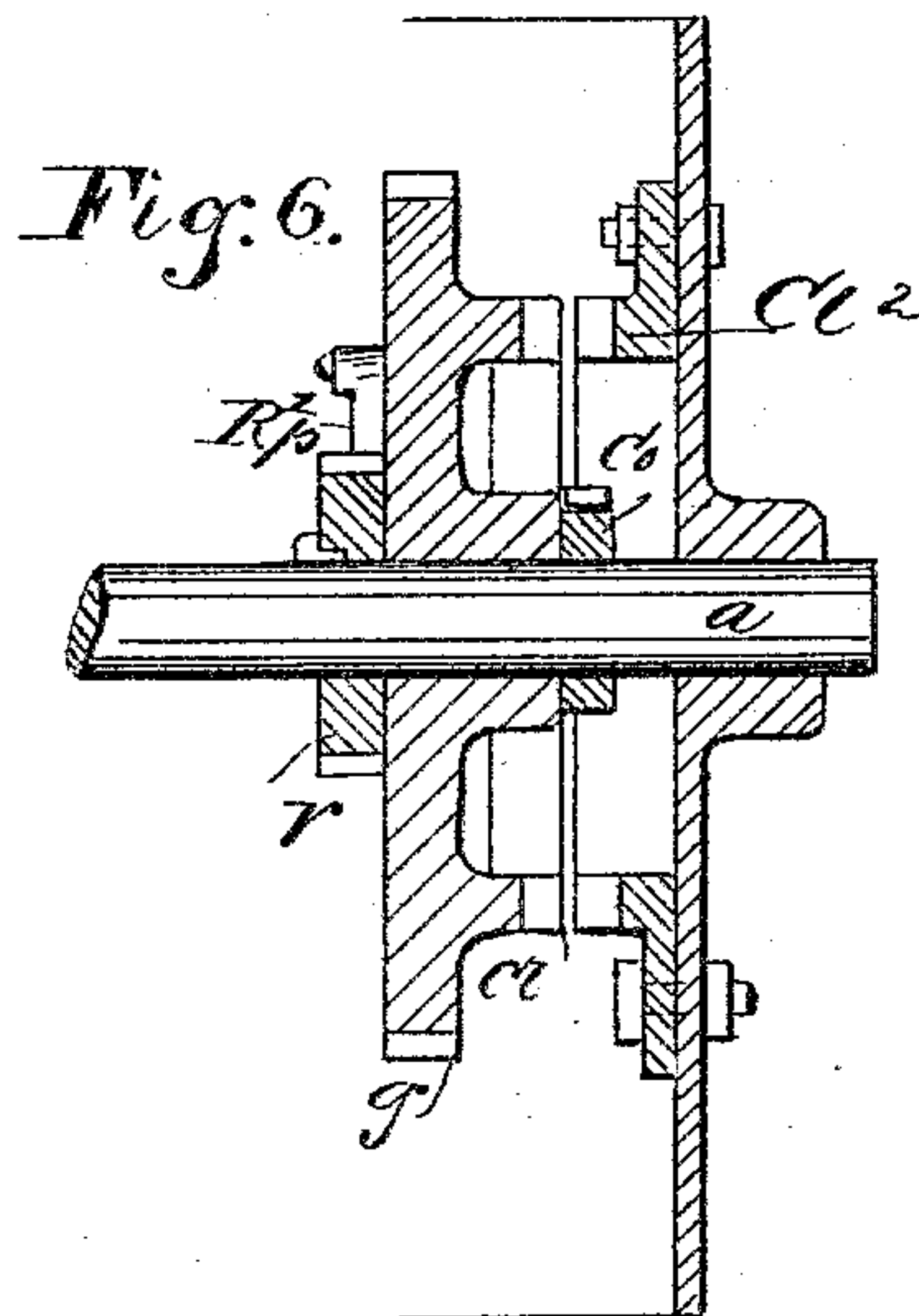
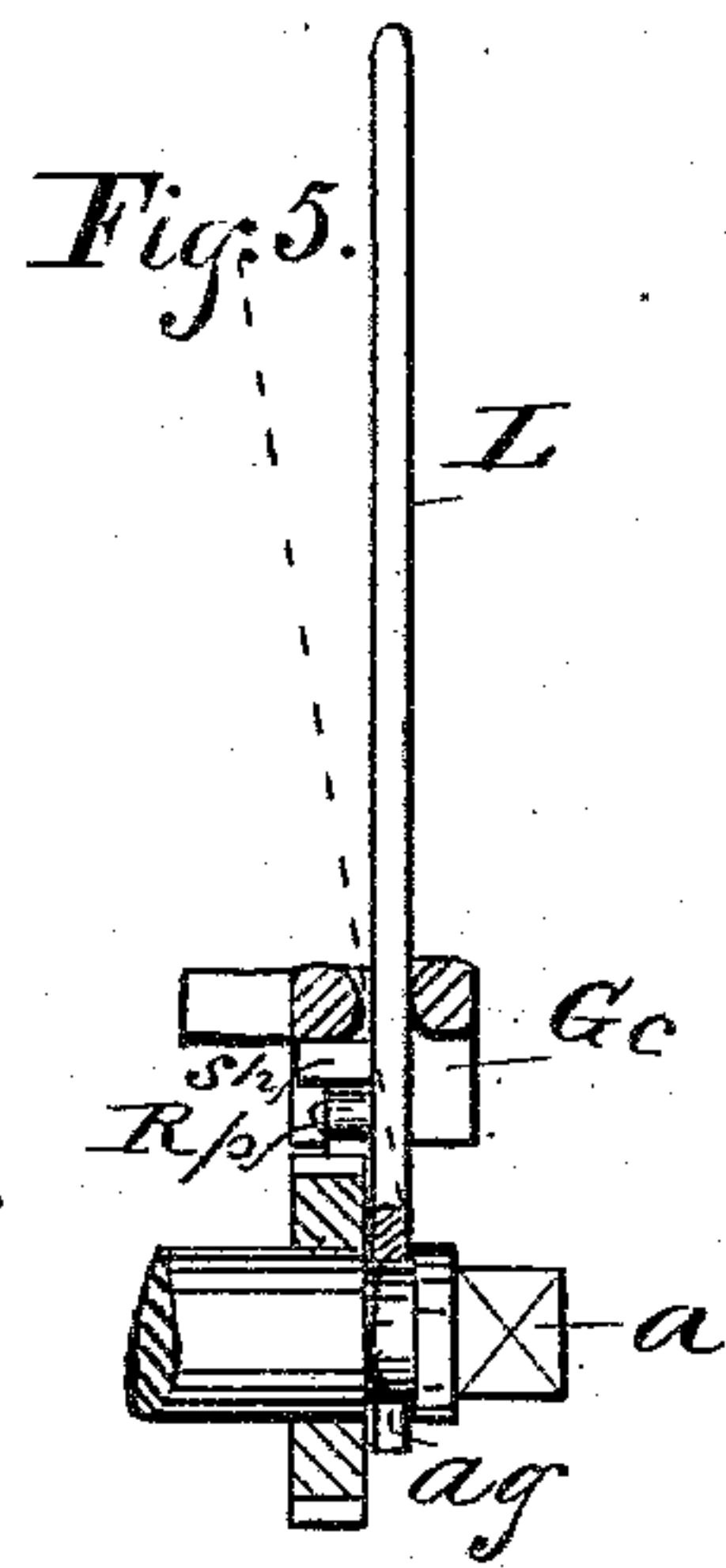
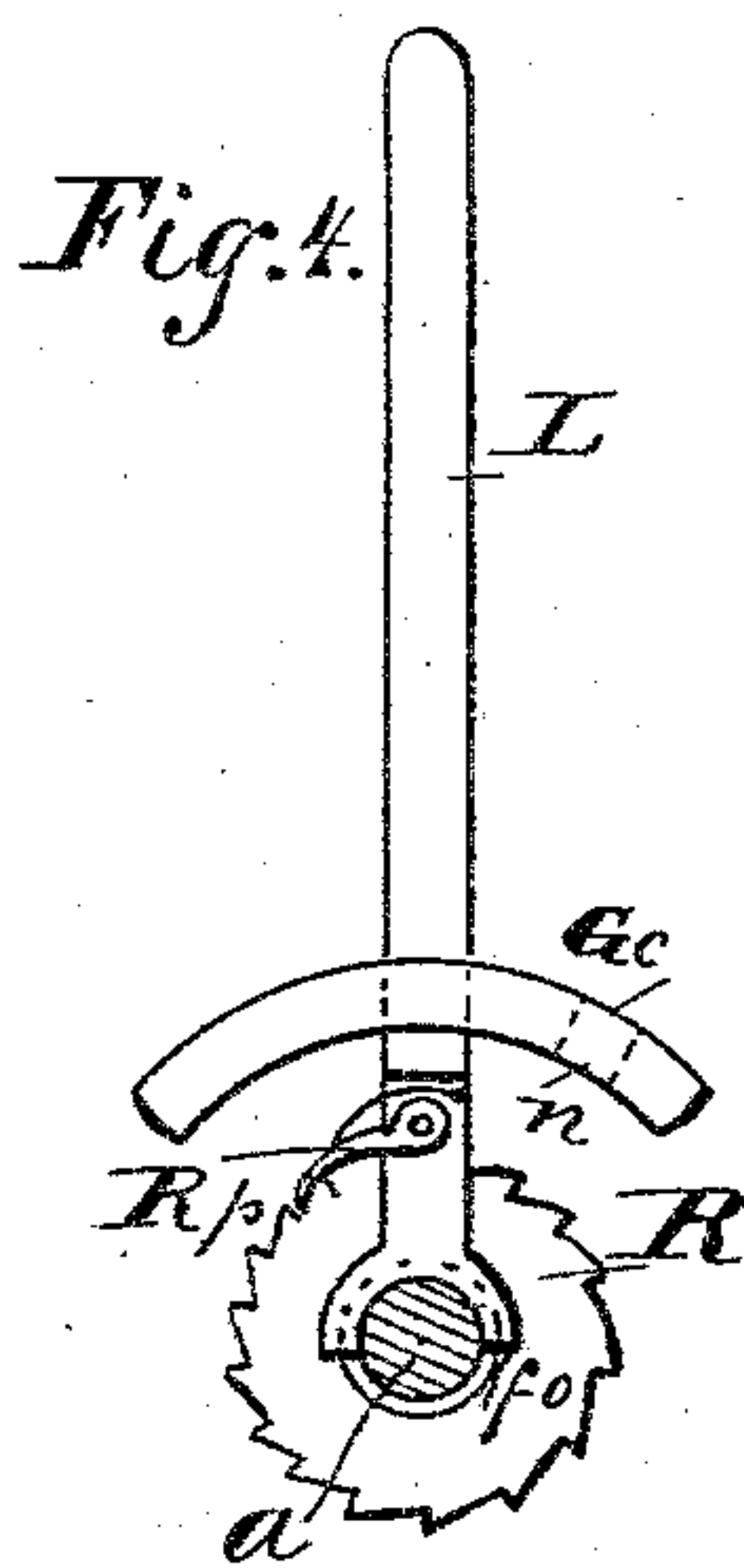
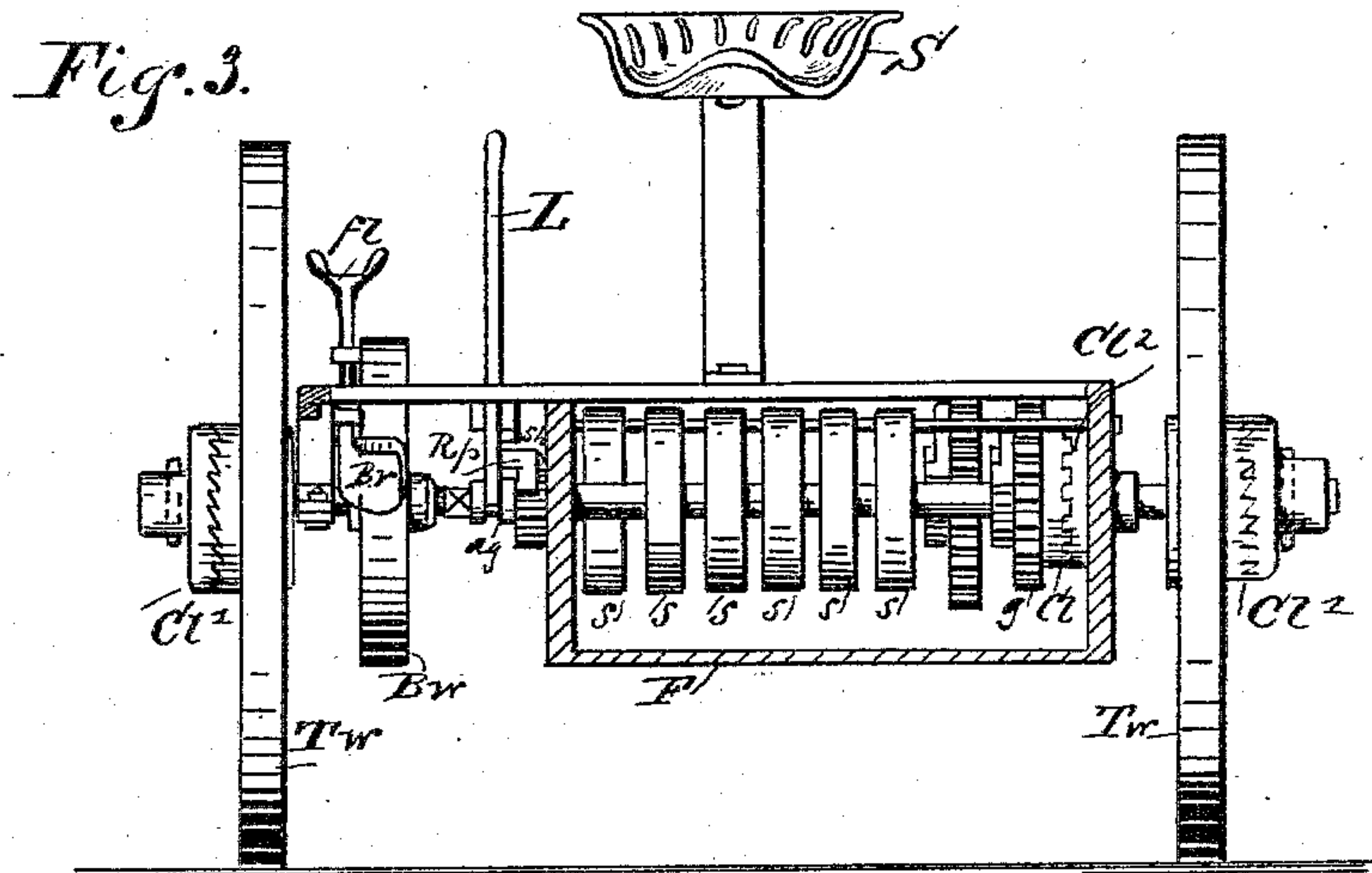
2 Sheets—Sheet 2.

C. H. JENNE.

SPRING MOTOR FOR ROAD WAGONS.

No. 287,939.

Patented Nov. 6, 1883.



Witnesses.

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UNITED STATES PATENT OFFICE.

CHARLES H. JENNE, OF INDIANAPOLIS, INDIANA.

SPRING-MOTOR FOR ROAD-WAGONS.

SPECIFICATION forming part of Letters Patent No. 287,939, dated November 6, 1883.

Application filed September 20, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. JENNE, of the city of Indianapolis, county of Marion, and State of Indiana, have invented certain new and useful Improvements in Motive-Power for Road-Wagons and Tricycles, of which the following is a correct specification.

The object of my invention is to provide motive-power to be applied to road-wagons and three-wheeled vehicles, in which the said power is supplied by means of steel coil-springs properly adjusted for moving any desired load on any ordinary highway, and provided with the necessary mechanism to bring any one or all of such springs into use at the will of the operator, as hereinafter more fully described.

Referring to the accompanying drawings filed herewith and made a part of this specification, and in which similar letters of reference designate similar parts of my invention, Figure 1 represents a longitudinal section of my invention on the line $x x$ of Fig. 2. Fig. 3 represents a sectional front view of my device as applied to a three-wheeled vehicle on the line $y y$ of Fig. 2. Fig. 2 represents a plan view of my invention without seat, showing the guide-lever broken off. Figs. 4, 5, and 6 represent enlarged views of the several parts of my invention, shown in Figs. 1, 2, and 3 by letters of reference attached thereto.

In order to enable parties skilled in the art to manufacture and to operate my invention, I will now proceed to describe the same in detail.

Referring to the above-mentioned drawings, in Fig. 1, $s s' s^2$ represent coiled steel springs, the inner ends of which are attached to axle $a a' a^2$, and the other ends having loops or eyes $l l' l^2$ to slide along the rods $ro ro' ro^2$, as shown in Fig. 2, the object of said springs being to impart power, through the gear-wheels $g g' g^2$, g^3 , &c., and ratchets $r r' r^2$, to the driving-shaft Ds , provided with clutches Cl' actuating traction-wheels Tw .

In Figs. 2 and 3, F represents a frame forming the body of the vehicle and supporting the inner frame for sustaining the necessary machinery to operate my device, said frame F resting on the axle Ds behind, and the yoke Y of the guide-wheel Gw in front, to which is attached journal-boxes $J J' J^2$, to receive the shafts $a a' a^2$, said shafts being pro-

vided at one end with gear-wheels $g g' g^2$, upon the face of which is rigidly attached clutches $Cl Cl'$, as seen in Figs. 1, 2, 3, and in enlarged Fig. 6, said wheel revolving between the collars Co and the ratchet r , firmly keyed to shaft a , said shaft having an annular groove ag .

In Figs. 4 and 5, L represents a lever provided for winding up my device and throwing the same in and out of gear, said lever having a fork, fo , at the lower end to fit into an annular groove, ag , in shaft a , and also provided with ratchet-pawl Rp to engage ratchet-wheel R for winding up the springs $s s' s^2$, said lever moving in the guide-collar Gc , which is firmly attached to frame F' and operates as a fulcrum for the lever L when used to throw the machine in or out of gear, and also as a guide for the lever L when used to wind up the springs, said guide-collar being provided with a notch, n , of sufficient depth to permit the shoulder sh on lever L to pass through and thus prevent the lever from being disengaged while winding up the springs.

The end of the shaft a may be squared to receive the crank Cr , as shown in Fig. 2, for winding up the machine, if desired.

In Figs. 1, 2, and 3, Bw represents a brake-wheel mounted on driving-shaft Ds and a brake, Br , which is operated from the seat S by a foot-lever, fl , by means of which the speed of the machine can be regulated at will.

The method of operating my machine is as follows: In order to wind up the springs, I have but to take the crank Cr and apply it to the square end of the shaft a , (see Fig. 2,) and turn till the springs are sufficiently wound, and then transfer the crank to each of the axles in succession, repeating the operation till all have been wound, leaving the several shafts locked, as indicated in Fig. 2, by means of the stationary clutch Cl^2 . Having wound up the desired number of springs, the operator takes his seat, and, removing the brake Br , the first series of springs on shaft a^2 starts the machine into motion. Should more power be desired, he has but to insert lever L through the guide-collar Gc into the annular groove ag and press inwardly, which shifts the shaft a into position and engages gear-wheel g' with gear-wheel g^2 , transmitting power through gear-wheel g^3 to pinion g^4 , mounted on shaft Ds , thence to traction-wheel Tw , and by repeating the

operation he brings into service as many of the springs as occasion may require. When the power of any one of the shafts is exhausted, the operator can at will apply the lever L to the same, and by pressing outward throw the shaft out of gear, wind up the coils, and throw the shaft back into gear without stopping or impairing the power of the other springs.

It will be readily seen that by means of the above device any number of springs can be brought into service, and any desired power applied to the vehicle.

In illustrating my invention I have used a three-wheeled vehicle to represent its application; but I do not wish to confine myself to three-wheeled vehicles, as I design applying the same to four-wheeled vehicles also.

The advantage which I claim for my invention is, a power which can be applied to any vehicle, is not subject to the noise usually attending steam-powers, and is free from the expense of maintaining animals.

I am aware that coiled springs for machinery and also for locomotion have been used; hence I do not claim those parts of my device known to be old; but

What I do claim as new, and desire to secure by Letters Patent, is—

1. In a device for propelling vehicles, the coiled steel springs $s s' s^2$, provided at the outer end with loops or eyes $l l' l^2$, to slide upon and along rods $ro ro' ro^2$, clutches Cl, and traction-wheels Tw, substantially in the manner and for the purpose set forth.

2. In a device for propelling vehicles, the forked lever L, provided with shoulder Sh and ratchet-pawl Rp, in combination with guide-collar Gc, annular groove ag, ratchet-wheel R, and shaft a, substantially in the manner and for the purpose set forth.

3. In a device for propelling vehicles, the shafts $a a' a^2$, sliding and revolving in journals J J J' J², with annular groove ag, ratchet R, clutch Cl Cl², gear-wheels $g g' g^2$, collar Co, and ratchet r, in combination with ratchet-pawl Rp', gearing $g g' g^2$, substantially in the manner and for the purpose set forth.

4. A device for propelling vehicles, consisting of a frame, F, forming the body of the vehicle and supporting the inner frame, F, to which is attached shafts $a a' a^2$, revolving and moving in boxes J J J' J², to which are attached steel coil-springs $s s' s^2$, which actuate the gear-wheels $g g' g^2$, communicating motive power to traction-wheel Tw, in combination with the mechanism above described for winding up, controlling the movement, and throwing the same in and out of gear, substantially in the manner and for the purpose set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 15th day of September, A. D. 1883.

CHARLES H. JENNE. [L. S.]

In presence of—

H. J. EVERETT,
JOSH E. FLOREA.