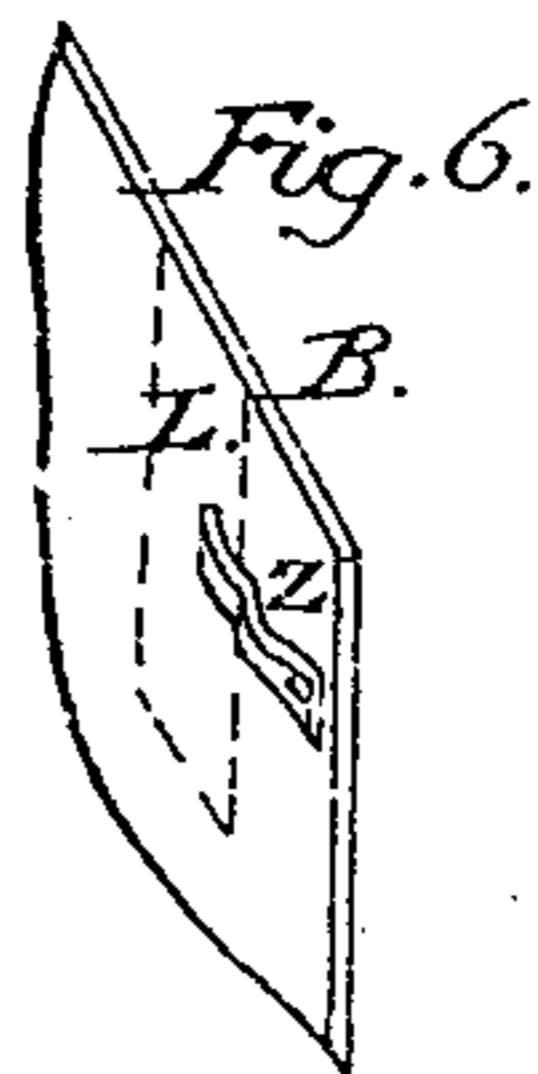
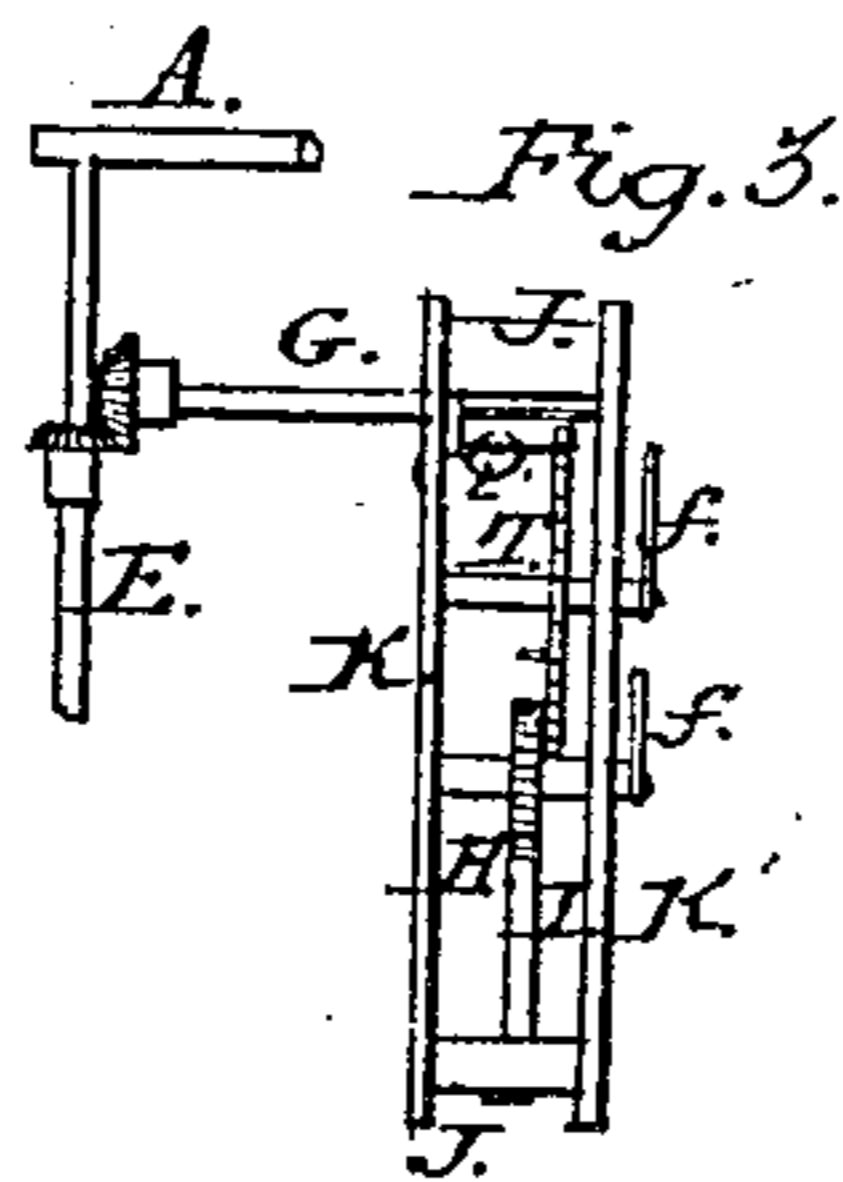
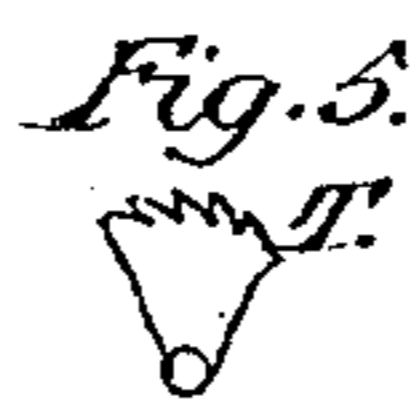
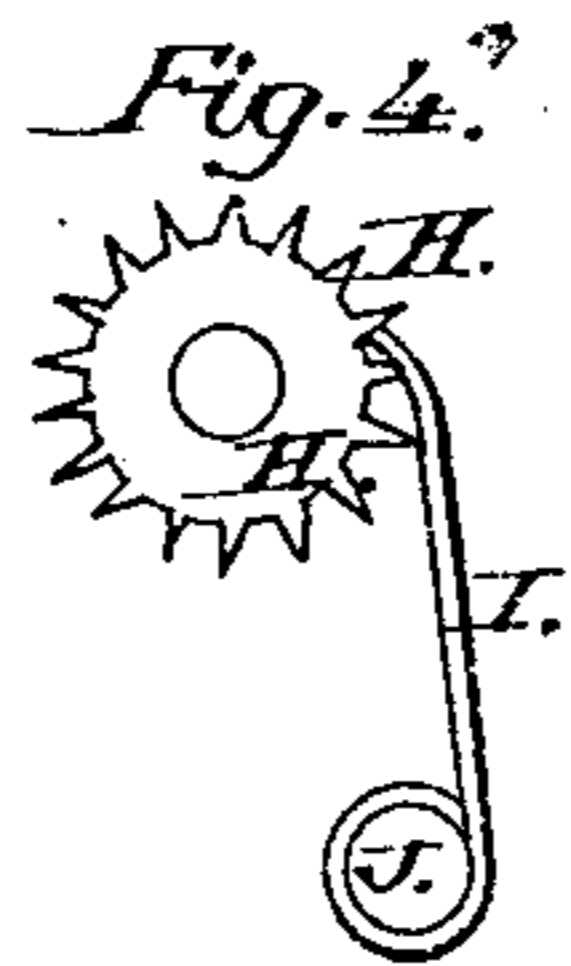
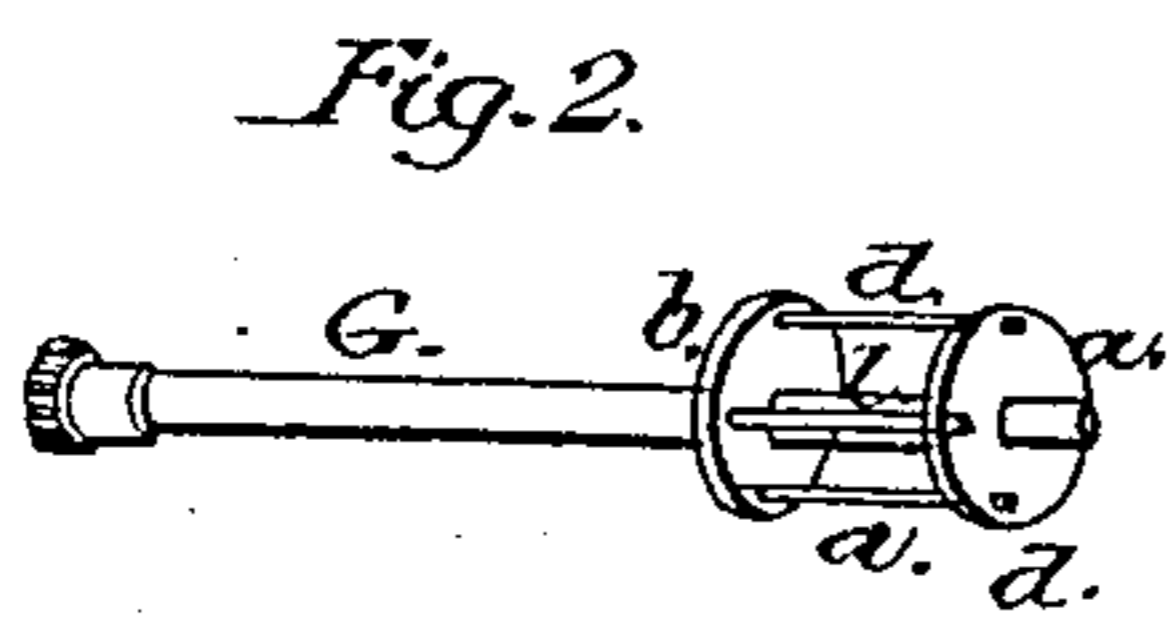
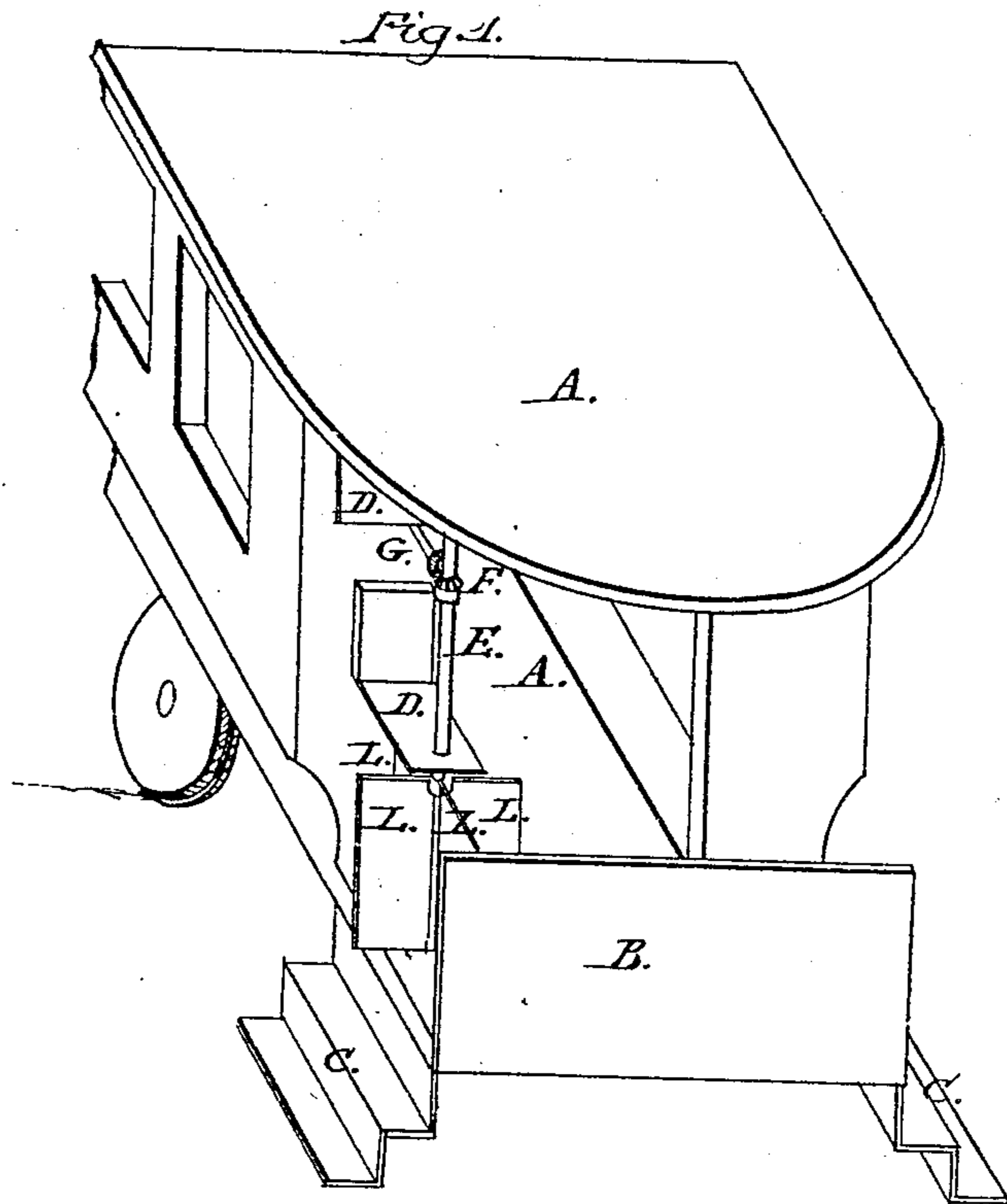


W. W. WILLIS.
PASSENGER REGISTER FOR STREET CARS.
No. 96,526. Patented Nov. 2, 1869.



WITNESSES:
G. H. Chapin
E. E. Gibson

INVENTOR:
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United States Patent Office.

WILLIAM W. WILLIS, OF CHICAGO, ILLINOIS.

Letters Patent No. 96,526, dated November 2, 1869; antedated October 30, 1869.

IMPROVEMENT IN PASSENGER-REGISTERS FOR STREET-CARS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM W. WILLIS, of Chicago, in the county of Cook, and State of Illinois, have invented an Improved Car-Register; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, and letters marked thereon, in which—

Figure 1 is a perspective representation of one end of a street-railroad car with my improved register in position for use.

Figure 2, a perspective view of the horizontal shaft and pinions which drive the register, inside of the car.

Figure 3, an elevation of the register removed from the car.

Figure 4, a side elevation of the ratchet-wheel and pawl, which prevent the register from being turned backward.

Figure 5, a broken segment of the wheel which is driven by the pinion on the horizontal shaft.

Figure 6 represents the spring-catch on the dash-board, which prevents the rod from turning by the motion of the car.

The present invention relates to an improvement in that class of registers which is designed to indicate the number of passengers who get on a car, omnibus, &c., and thus prevent the practice of fraud.

E represents a vertical shaft, which has bearings in the floor of the platform and in the roof, and which supports four wings, L, forming a reel or gate, and nearly filling the space between the dash-board B and vertical end of the car, as shown at fig. 1.

At a suitable place on the shaft E is fastened a bevelled pinion, F, which drives a horizontal shaft, G, figs. 1, 2, and 3, having a pinion on one end meshing into the pinion F, and a peculiar-shaped spring-pin on the other end, meshing into and driving a toothed wheel, T, figs. 3 and 5.

The peculiarity of the last-mentioned pinion consists in the springs d, which are rigidly fastened to the head b, and so operate in radial slots made in the pe-

riphery of the head a as to spring in and pass over the teeth of the wheel T when the reel or gate L is turned backward, as when passengers leave the car, and at the same time spring out and cause the wheel T to register when passengers enter the car.

An ordinary metal frame, K K, supports the shaft G, the journals of the wheels T H, and a stud or post, J.

The latter supports a pawl, I, figs. 3 and 4, which locks into the ratchet-wheel H when the spring-pinion d b a is turning backward.

The shafts of the wheels T H support hands f f, which may indicate on any ordinary dial-plate, which is to be engraved or printed on the inside face of that part of the frame shown at K', fig. 3, the numbers being multiplied by additional wheels, if required.

Z, fig. 6, represents a spring-catch, which is fastened to the inside of the dash-board, and is so formed, with a notch in its middle part, as to hold to any one of the wings L, yet in such a manner as to loosen from it without further trouble than to press gently against the reel.

It will be seen, from this description, that a passenger cannot pass through the reel or gate L without it registering one, and that a reverse turn of the reel will not change the correctness of the register.

A register consisting of dials, wheels, hands, &c., is known to be an old device; therefore I do not claim to have discovered anything new in this respect. The reel or gate L has been also used.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent of the United States, is—

1. The spring-pinion a b d, as and for the purpose set forth.

2. The combination of the spring-pinion a b d, wheels T H, hands f, ratchet and pawl I, shafts E, G, gate L, and spring Z, as described.

WM. W. WILLIS.

Witnesses:

G. L. CHAPIN,
E. E. GIBSON.