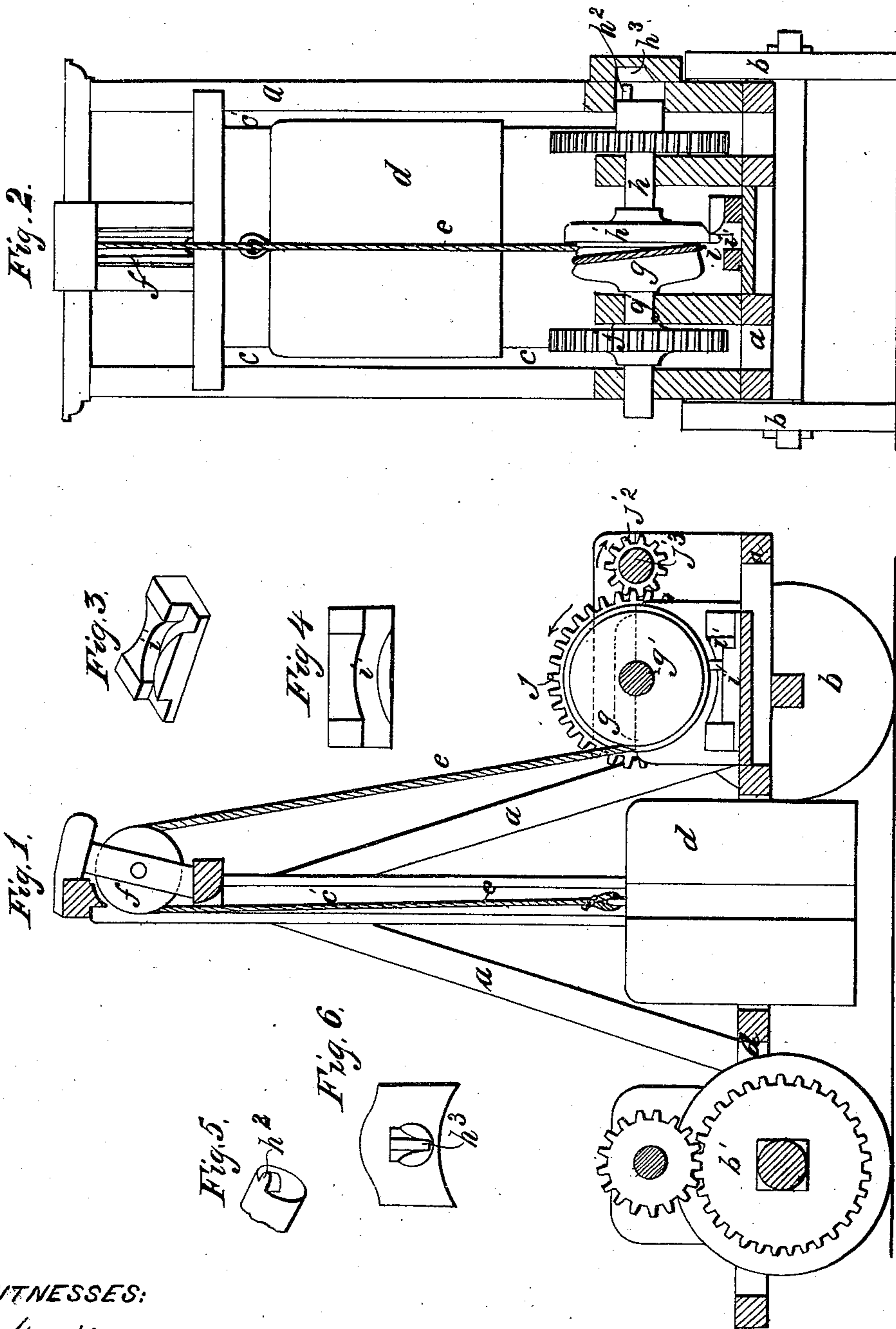


*H. Sandhop.*

*Road Rammer.*

*N<sup>o</sup> 42,022.*

*Patented Mar. 22, 1864.*



WITNESSES:

*C. Morrill*  
*Geo. H. H. Mann*

INVENTOR:

*Henry Sandhop*

# UNITED STATES PATENT OFFICE.

HENRY SANDHOP, OF NEW YORK, N. Y.

## IMPROVEMENT IN PAVEMENT-DRIVERS.

Specification forming part of Letters Patent No. 42,022, dated March 22, 1864.

*To all whom it may concern:*

Be it known that I, HENRY SANDHOP, of the city, county, and State of New York, have invented a new and useful Pavement-Driver; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification.

My invention consists of a portable and simple contrivance for driving or ramming the cobble-stones used in street-paving, and is intended to take the place of the wooden mauls now used by hand. I accomplish this purpose by means of a heavy drop-weight or rammer traveling on vertical rails attached to an upright frame, the weight being raised by means of a rope passing over a conical drum, on which the rope is retained by a movable flange, and from which the flange is detached so as to permit the rope to slip off and the weight to drop at the proper time, the whole machine being mounted on wheels, so that it can be easily moved from place to place, as required.

Figure 1 is a longitudinal vertical section of the machine; Fig. 2, an end view, showing the frame-work in section, through the line  $xx$  in Fig. 1. Figs. 3, 4, 5, and 6 are detailed views of some of the parts.

Similar letters of reference denote corresponding parts in all the views.

I mount a strong frame,  $a$ , upon wheels  $b$  and  $b'$ . This frame has two uprights, framed and traced as shown in the drawings, and upon the inside of each upright is a vertical rail,  $c$  and  $c'$ , fitting into corresponding grooves in the sides of the rammer  $d$ . One end of the rope  $e$  is fastened to the center of the rammer and passes over a pulley,  $f$ , at the upper extremity of the uprights, and the other end is attached to the conical drum  $g$ , mounted on the end of the shaft  $g'$ , and another shaft,  $h$ , having a coincident axis with the shaft  $g'$ , carries a circular disk,  $h'$ , which, being pressed against the end of the drum, serves as a flange to keep the rope from slipping off. To press this disk against the drum

a sliding motion is imparted to the shaft  $h$  by means of the projecting cam  $h^2$  on the outer end of the shaft, which strikes against a guide-piece,  $h^3$ , which is fastened to the frame. The disk is released from the drum at the proper time by means of the pin  $i$  on its periphery, which strikes into the slotted guide  $i'$ , fastened to the frame underneath, and thereby slides the shaft  $h$  outward. The shafts  $g'$  and  $h$  carry toothed wheels  $j$  and  $j'$ , which mesh into pinions  $j''$  upon the crank-shaft  $j'''$ .

The operation of these parts, supposing the rammer to be down, is as follows, viz: The crank-shaft being turned, and the shafts  $g$  and  $h$  thereby made to revolve, the projecting cam  $h^2$  strikes against the guide-piece  $h^3$ , forcing the shaft in and pressing the disk upon the drum. As the drum turns it winds up the rope  $e$ , which is prevented from slipping off by the disk until the rammer has obtained the proper altitude, when the pin  $i$  strikes in the guide-piece  $i'$  and detaches the disk from the drum, and the conical shape of the latter causes the rope  $e$  to instantly slip off and permits the rammer  $d$  to fall freely by its own weight. At the next instant the cam  $h^2$  strikes the guide-piece  $h^3$ , throwing the disk up to the drum, holding the rope thereon, and again raising the rammer, as before, and so on as long as the crank-shaft is kept turning. At the same time the whole machine, being on wheels, is readily moved from place to place, so as to bring the rammer down on the particular point desired.

In constructing the carriage, if four wheels are used, it should be built like an ordinary wagon with an oscillating forward axle, so that it can be turned. I have found it convenient to mount the machine on three wheels—two on one axle and the third or forward wheel suspended in a vertical oscillating shaft—as by this means I am enabled to turn the machine more readily.

To further facilitate the moving of the machine, the forward or steering wheel may carry a spur-wheel, meshing into a pinion on

a shaft, with a crank to be turned by hand, the whole being so mounted as to oscillate upon a vertical axis.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A rammer so constructed as to be alternately raised and dropped by the action of a continuously revolving shaft, substantially as described and for the purpose set forth, when

the whole mechanism is mounted on a carriage, substantially as set forth.

2. A conical drum having amovable flange for the purpose of holding a rope upon the drum and subsequently permitting it to slip off, substantially as described.

Witnesses: HENRY SANDHOP.

C. MORRILL,

G. KUHLMANN.