M. W. CLAY.
Adding-Machine.

No. 207,255.   Patented Aug. 20, 1878.
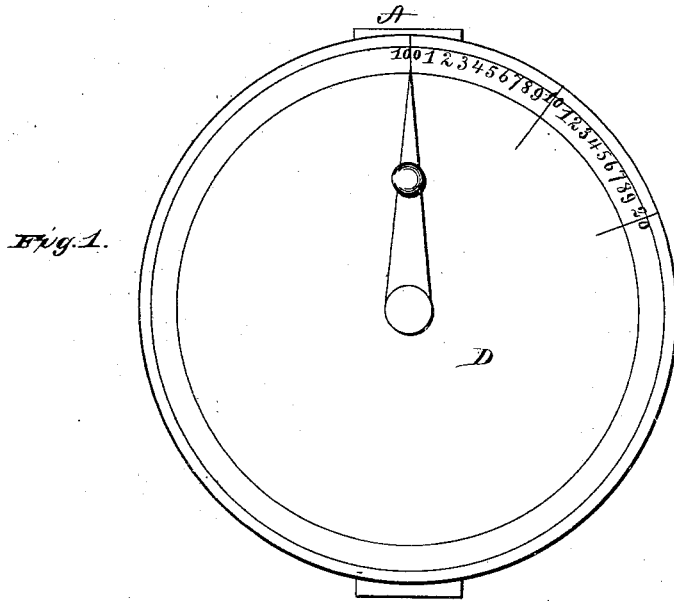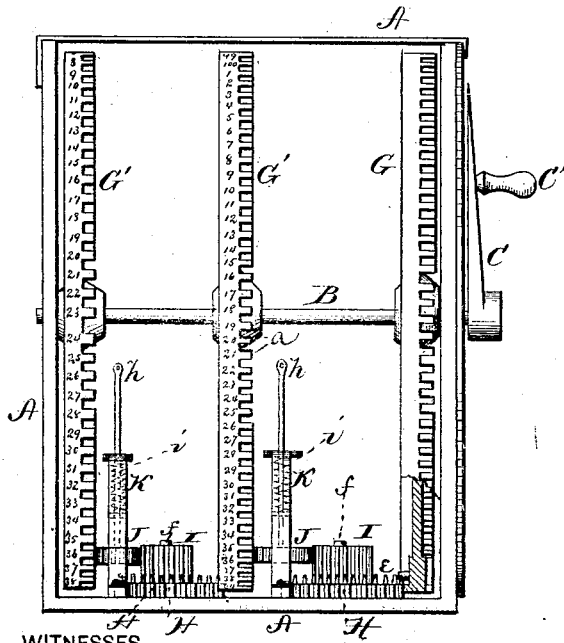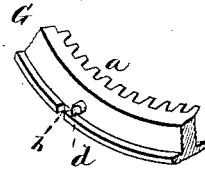

Fig.1.

Fig.2.

Fig.3.

WITNESSES

F. L. Ourand

Frank Galt

INVENTOR

Mark W. Clay

Alexander Mason

ATTORNEYS

UNITED STATES PATENT OFFICE.

MARK W. CLAY, OF ORONOCO, MINNESOTA.

IMPROVEMENT IN ADDING-MACHINES.

To all whom it may concern:

Be it known that I, MARK W. CLAY, of Oronoco, in the county of Olmsted, and in the State of Minnesota, have invented certain new and useful Improvements in Adding-Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of an adding-machine, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a front view of my machine. Fig. 2 is a side elevation of the same, and Fig. 3 is a detailed view of a part of one of the wheels.

A represents a frame, through which passes a horizontal shaft, B, with a pointer, C, on its front end. This pointer is provided with a knob or handle, C', for turning the same, and the pointer works on a dial, D, on the front of the frame. On the shaft B is securely fastened one wheel, G, and loosely placed one or more wheels, G'. These wheels are all constructed alike, their rims being T-shaped. On one side the rim is formed with one hundred cogs, a, and on the other side is a notch, b, in the rim, as well as a projecting pin, d, immediately in advance of said notch.

For each revolution of the first wheel, G, its pin d strikes a pin, e, projecting from a pinion, H, placed upon a vertical stud, f, and this causes one of the cogs of said pinion to take into the notch b, and the pinion will thus be turned the distance of one of its cogs.

The pinion H has a pin, e, for each of its teeth or cogs, and it is also provided with a smaller pinion, I, which turns with it. This latter pinion, I, meshes with a pinion, J, which, in turn, gears with the cogs a on the first loose wheel, G'. This wheel is in like manner connected with the second loose wheel, and so on as many wheels as may be desired.

The parts are so arranged that for every revolution of the wheel G the first loose wheel, G', will be turned the distance of one of its cogs, and for every revolution of the first loose wheel the second loose wheel will be turned the distance of one of its cogs, and so on throughout the series.

The dial D is numbered from 1 to 100, and the peripheries of the loose wheels are numbered in like manner, these latter numbers being seen, one by one, through suitable openings in the top of the frame A.

The pinion J is mounted on a vertical rod, h, which is placed in a frame, K, and arranged with a spring, i, to hold the pinion J down in gear with the pinion I and the adjacent wheel.

By lifting the rod h the pinion J is also lifted out of gear, when the wheel can be set at once as required to commence a calculation. This is of great importance, as it saves considerable time.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an adding-machine, the combination of the wheel G, provided with the notch b and pin d, the pinion H, with pins e, the pinions I J, and the wheel G', substantially as and for the purposes herein set forth.

2. The combination of the frame K, rod h, pinion J, and spring i with the pinion I and wheel G', substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 22d day of November, 1877.

MARK W. CLAY.

Witnesses:
    WM. D. ALEXANDER,
    I. F. CLARK.