M. W. HELTON.

Fare Register.

No. 29,274. Patented July 24, 1860.

Fig. 1

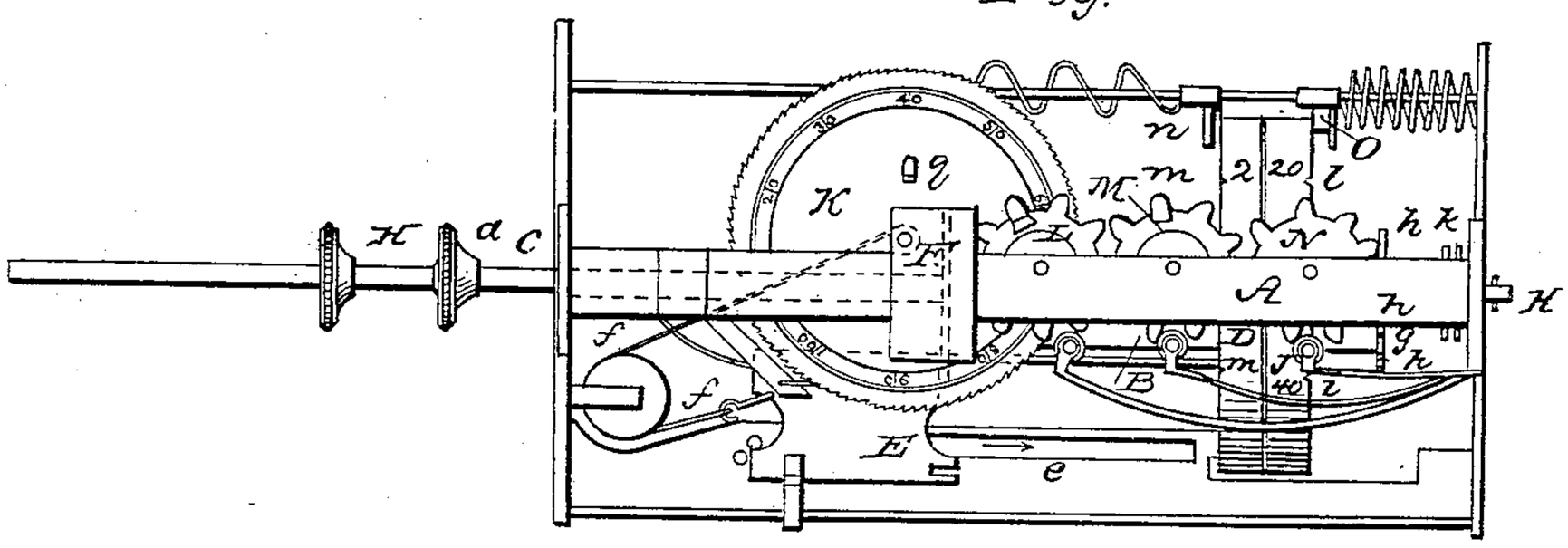
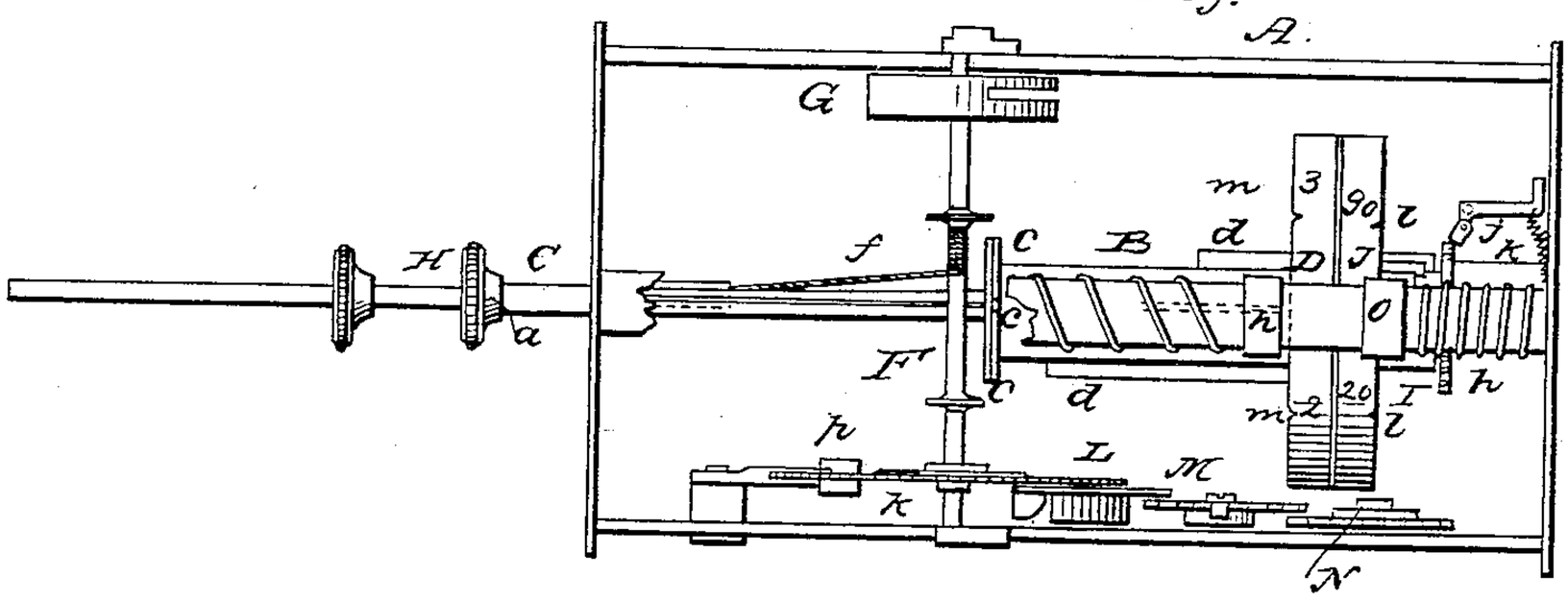


Fig. 2



Witnesses

W. Faulkner

B. Gaious

Inventor

M. W. Helton.

UNITED STATES PATENT OFFICE.

M. W. HELTON, OF BLOOMINGTON, INDIANA.

MACHINE FOR REGISTERING FARES.

Specification of Letters Patent No. 29,274, dated July 24, 1860,

To all whom it may concern:

Be it known that I, M. W. HELTON, of Bloomington, in the county of Monroe and State of Indiana, have invented a new and Improved Device for Registering Fares on Railroads, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 represents a front elevation of my invention. Fig. 2 is a plan or top view of the same.

Similar letters of reference indicate corresponding parts in both views.

This invention consists, first, in arranging a slide connected with a rotary shaft in such relation to a series of movable stops that by means of said stops the amount of motion given to the slide is regulated, thereby rotating the shaft for one or more or only for a part of a revolution; second, in combining with said slide two series of stops each to be operated independent from the other and one to indicate the number of cents from 1 to 10, and the other the number of the dollars in combination with a registering apparatus in such a manner that by adjusting said stops the motion given to the rotary shaft by means of the slide can be regulated to correspond to any given sum of money and to register the same.

To enable those skilled in the art to make and use my invention, I will proceed to describe it with reference to the drawing.

A represents a frame of brass or any other suitable material to receive the mechanism of my invention. This frame may be inclosed in a suitable case with openings, so as to expose the figures and the several dials. It is fitted up with a rotary drum B, which is secured to a hollow shaft C, which is operated by means of a button *a*. Secured to the end of the drum B, is the flanged disk D, numbered on its face with figures from 1 to 4, and the other flanged end of the drum is provided with four slots *c*, to correspond to a series of stops *d*, attached to the sides of the said drum. These stops are of different length, and they serve to regulate the motion of a slide E, which moves back and forward on a slotted bar *e* and which connects, by means of a cord *f*, with a rotary arbor F in such a manner that in moving the slide in the direction of the arrow marked near it in Fig. 1 said arbor is rotated for one or more or only for a portion of revolution, according to the amount of motion given to said slide. A spring inclosed in the drum G serves to carry the arbor, together with the slide, back to its original position. By turning the drum so as to bring one of the stops *d* under the slide E the amount of motion given to the slide is regulated, and the stops are so adjusted that on depressing the slide to the first or longest one the arbor F makes one revolution, on depressing the slide to the second stop the arbor makes two revolutions, with the third stop three revolutions, and on depressing the slide clear down to the bottom of the drum the arbor F makes four revolutions.

A solid shaft H passes clear through the tubular shaft C of the drum B, having its bearings in the top and bottom pieces of the frame A, and secured to this shaft is the drum I, with a flanged disk J, numbered on its face with figures from 10 to 100. The outer end of this drum is provided with a flange *g*, perforated with ten slots *h*, and secured to the sides of said drum are the stops *i*, of varying length. By turning the drum with the shaft the different stops can be brought over a dog *j*, and the drum is allowed to move in a longitudinal direction on the shaft H. A spiral spring *k*, forces it up against the disk D on the end of the drum B. If the slide E be now depressed until it strikes one of the stops *d* on the drum B, said drum bears against the drum I on the shaft H, and the latter moves in a longitudinal direction until one of the stops *i*, by coming in contact with the dog *j*, arrests the further motion of the slide. The stops *i* are so adjusted that the first or longest one of them corresponds to one tenth of a revolution of the arbor F, the second to two tenths, and so forth, so that if the longest stop of the drum B and the second stop of the drum I are brought in the proper position to govern the motion of the slide the arbor F will make one and two tenths of a revolution.

The flanges of the disks D and J are furnished with notches *l m* to receive spring dogs *n o*, that serve to prevent a spontaneous motion of the drums B and I.

The arbor F, carries a wheel K, which is provided with ratchet-teeth on its edge to receive a click *p*, that serves to prevent said wheel turning in the wrong direction. The

wheel is marked on its front side with figures 10, 20, 30 etc., to 100, and by means of a cam *q* it gives motion to a cog-wheel L, with ten cogs, which in its turn gives motion to a second cog-wheel M, also with ten cogs, and the wheel M gives motion to the wheel N, which has also ten cogs. These wheels are so arranged that for each revolution of the wheel K the wheel L moves one cog, and for each revolution of the wheel L the wheel M moves one cog, and so forth, so that if the wheel L indicate the units the wheel M will indicate the tenth and wheel N the hundreds. Suitable dials or indices are attached to the arbors of the several wheels, so that the number of revolutions made by each wheel can be ascertained.

If it is now desired to register a certain sum of money—such, for instance, as two dollars and fifty cents—the drum B is turned until the second stop *d* is brought under the slide E and the drum I is turned until the fifth stop *i* comes over the dog *j*, and the slide is now depressed. The arbor F makes thereby two and one-half revolutions, moving the wheel L two cogs and the wheel K, so as to bring the figure 50 in sight. In the same manner any other sum of money below five dollars can be indicated by this device; but it will be easily understood that it can be made large enough to suit larger sums than five dollars without making any alteration in the construction of the mechanism. Instead of using a slide and stops such as have been described, a wheel with suitable cams and operating on suitable stops might be employed but the principle would be the same.

The stops *i i* in a practically-operating machine are to be so constructed that they will, when they arrive at the dog *j* strike a pawl of a bell hammer and thus cause a signal to be given to the passenger that his fare is registered.

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

1. The arrangement of a slide E, or its equivalent in combination with a rotary shaft F, and stops *d*, or their equivalents constructed and operating substantially as and for the purpose described.

2. Combining with the slide E, two series of stops *d*, and *i*, and a series of registering wheels K, L, M, N, or their equivalents substantially as and for the purpose specified.

M. W. HELTON.

Witnesses:
M. M. LIVINGSTON,
B. GIROUX.