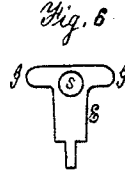
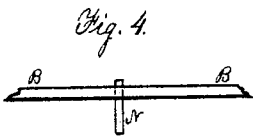
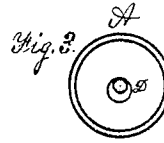
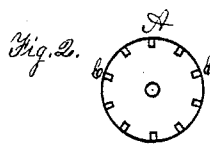
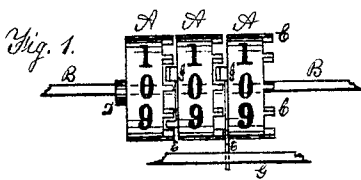


W. PARK.

Mechanical Movements.

No. 134,766.

Patented Jan. 14, 1873.



Witnesses.
Albert F. Park.
Solomon Head.

Inventor.
Webster Park

UNITED STATES PATENT OFFICE.

WEBSTER PARK, OF NORWICH, CONNECTICUT.

IMPROVEMENT IN MECHANICAL MOVEMENTS.

Specification forming part of Letters Patent No. **134,766**, dated January 14, 1873.

To all whom it may concern:

Be it known that I, WEBSTER PARK, of Norwich, in New London county, Connecticut, have invented certain Improvements in Mechanical Movements, of which the following is a specification:

My invention consists of a simple and novel mechanism, in a very compact form, to communicate a diminished motion or increased force between a series of wheels, especially adapted for registers of meters or counters for machinery of various kinds, but which may be used for raising weights and many other similar purposes.

Figure 1 is a side view, full size, of a series of three cylinders embodying my invention as arranged for a register or counter; Fig. 2 is a view of one end of the cylinders, showing the pins or teeth, and Fig. 3 shows the eccentric upon the opposite end of the cylinders and the hollow between the eccentric and rim, like the ordinary machine-pulley. Fig. 4 shows the shaft on which the cylinders revolve, with a pin fixed in the shaft; Figs. 5 and 6 show two forms of the T-plate in which the eccentric turns, and Fig. 7 shows the top edge of the T-plate and the form in which its arms are bent forward so as to engage with the teeth of the next cylinder.

A A are the wheels or cylinders turning loose upon the shaft B, which, when used for a counter, should be large enough to have the ten figures equidistant upon their surface. C C are pins or teeth projecting from one end of the cylinders, and D is the eccentric upon the opposite end. These cylinders are preferably cast of soft metal in one piece, with the pins, eccentrics, and figures upon them. E E are the T-plates having holes S S through their centers, in which the eccentric freely turns, thereby swinging the plate; and I I are the arms of the T, which are bent forward, as shown in Fig. 7, so as to engage fully with the pins of the next cylinder. The plates are prevented from revolving instead of or with the cylinders, either by forming a small slot, O, in the bottom of the plate, as shown in Fig. 5, so as to slide freely up and down upon the fixed pin N in the stationary shaft B, or by extending the bottom of the plate, as shown in Fig. 6, between and out-

side of the cylinders, where it may slide up and down through any stationary guide G; and the bottom of the plate, where it passes the ends of the pins on the cylinder, should be made wider than the space between the pins, as shown in Fig. 6, to prevent its catching on the pins, the object of this movement being to communicate motion from one cylinder by means of its eccentric operating through the non-revolving arms I I upon the pins of the next cylinder, so as to turn it one pin in the same direction with every revolution of the first cylinder, and in the same manner through any number of cylinders. This movement also forms a stop or check, so that no cylinder can be turned except through the agency of the first, as either one or both of the arms I I are at all times engaged with the pins.

It is evident that this movement may be made of any desired size and strength, and that there may be any desired number of pins or teeth, the throw of the eccentric being about half the distance between the teeth.

When this movement is used in a register or counter the ten figures should be arranged conspicuously upon the outside of each of a series of cylinders, all turning freely upon the same shaft, and each cylinder should have ten pins upon its right end, thus being a pin opposite each figure, the cylinder at the extreme right being connected with the meter or the machine, whose motion is to be counted by any ordinary wheel-work, so as to move the first cylinder one figure with each motion of the meter or machine, thus showing the units. The second cylinder is moved one figure by every revolution of the first by means of my movement hereinbefore described, thus showing the tens. The third shows the hundredths, the fourth the thousands, the fifth the ten thousands, and so on; the whole index being read from left to right as the figures turn opposite a given point.

If desired to increase force for raising weights or other like purposes, there need be no figures upon the cylinders, but the whole device should be made much larger and stronger, when, by applying any force to turn the first cylinder, the second is turned with a tenfold greater force, and so on, like an

ordinary train of wheel-work; my movement being precisely the same, except in size, for these various uses.

I claim as my invention—

1. The combination of the eccentric D, arms I I, and pins or teeth C C, substantially as described.

2. The cylinder A having the pins or teeth upon one end and the eccentric upon the other, all cast in one piece of metal, substantially as set forth.

3. The combination and arrangement of a series of cylinders, A, each having an eccentric, D, pins or teeth C C, and non-revolving arms I I, all arranged upon one shaft, B, and operating substantially as herein described.

WEBSTER PARK.

Witnesses:

ALBERT F. PARK,
SOLOMON LUCAS.