

No. 629,381.

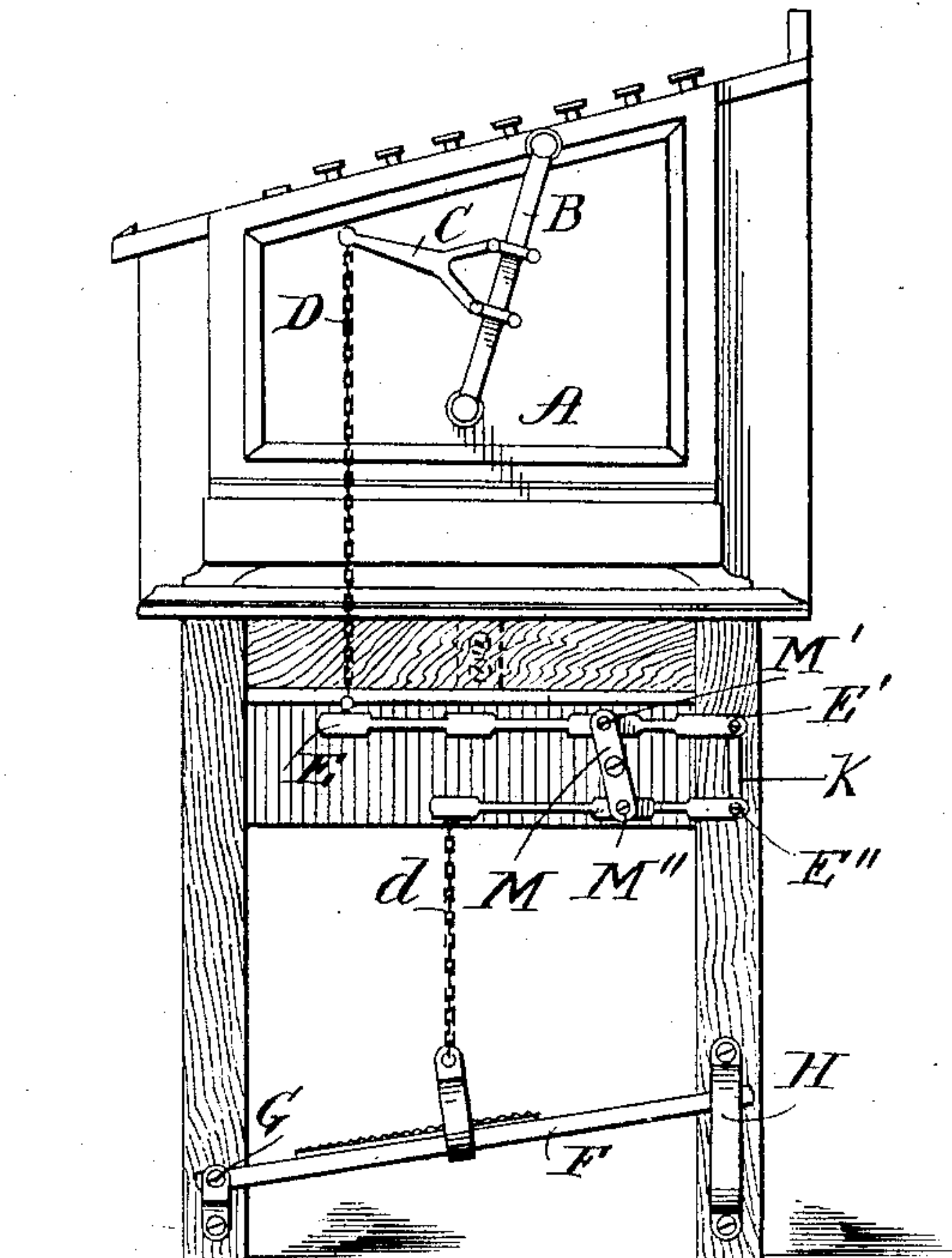
Patented July 25, 1899.

J. H. LOVERING.

DEVICE FOR OPERATING ADDING MACHINES.

(Application filed July 25, 1898.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN H. LOVERING, OF MALDEN, MASSACHUSETTS.

DEVICE FOR OPERATING ADDING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 629,381, dated July 25, 1899.

Application filed July 25, 1898. Serial No. 686,809. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. LOVERING, a citizen of the United States, residing at Malden, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Devices for Operating Adding-Machines, of which the following is a specification.

My invention relates to a foot-power appliance for use upon certain machines requiring the movement of a lever, and is especially adapted for use in throwing the lever used in the machine called the "Burroughs adding-machine." In these machines the operator's fingers press down keys to register the desired figures, and when it is desired to add the amounts and record their sum this is done by a forward movement of the operating-lever. This lever is made to return to its original position by means of certain springs inside the machine. As the machine is a present operated the person using it must take his right hand away from the keyboard, which is on top of the machine, and reach around to the back part of the right side of the machine to find the lever and pull it forward and downward. This operation causes delay and some skill in the operator and considerable physical exertion, since the lever must be pulled against the force of the springs inside the machine. This machine is used in most cases by young women, and the physical exertion of pulling the lever so often is very tiresome and often injurious to the operator. On account of the construction of this machine and the peculiar action of the spring which acts upon the operating-lever a special movement of the lever is required. The lever B is pivoted at its lower end, and when it has been pulled forward for the purpose of operating the machine it is returned to its initial position, as shown in the drawing, by springs within the body of the machine. I have found by trial that no one of the treadles now in use will perform the operation of throwing the lever in this machine. My appliance may be adapted for use upon other machines; but it is constructed especially for the requirements of the Burroughs adding-machine. I have attained these objects by means of the mechanism illustrated in the accompanying drawing.

A represents the adding-machine, mounted upon a table, as usual when in use, and B the operating-lever on the right-hand side of the machine. All the other parts indicated by letters in the drawing are parts of my attachment.

C is an arm attached to the lever B.

D and *d* are connecting-chains which secure a flexible connection between the compound lever E and the arm C and the treadle. The compound lever E is composed of the horizontal parts E' and E'', the link K, and the cross-arm M. The cross-arm M is pivoted in the center, and the pivot is connected with the table on which the machine rests. This arm M is pivoted to the lever E' at M' and to the lever E'' at M''. The ends of the link K are pivoted to the ends of the arms E' and E''. The treadle F is preferably pivoted at G to the leg of the table, and the other end of F moves within the guard H, which keeps it against another leg of the table; but any other means of holding the treadle to the table on which the machine rests may be used. For convenience of use the chain *d* is attached to a stirrup which is fastened to the treadle F and the operator places his foot within the stirrup. In place of the chain *d* a rod may be used to connect the treadle with the lower part E'' of the compound lever.

When the operator has made certain figures and desires to record their sum, he moves the treadle F, and the compound lever, with its connections, produces such a movement of the arm C that the operating-lever B is pulled forward in such manner as to make the machine do its work of recording the sum of the figures made.

As the operating-lever has to be moved very frequently, need has been found of some appliance for working it other than the hand of the operator; but many appliances that have been tried have failed to secure the peculiar motion of the operating-lever needed in the Burroughs adding-machine.

I am aware that there are a great many kinds of pedals having levers adapted for operating certain parts of machines, and I do not claim, broadly, a combination of a treadle with a compound lever.

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

1. In combination with a machine operated by a movable bar the arm C, the connecting-chains D and *d*, the compound lever E and the treadle F substantially as shown or described. 5
2. In combination with an adding-machine operated by a swinging lever, the arm C, the compound lever E and a treadle, with means for attaching the treadle to the lever and the lever to the arm C, so that the motion of the treadle will be communicated to the arm C, substantially as shown or described. 10
3. In combination with an adding-machine operated by a swinging lever, the arm C, the compound lever E, the treadle F, and means 15

for connecting the arm C with the lever E, and the lever E with the treadle F so that a forward movement of the treadle shall cause the lever B to operate the machine, substantially as shown or described. 20

4. In combination with an adding-machine, the lever B, the arm C, and treadle F and means to connect the arm and treadle and to automatically operate the lever B when the treadle is moved, substantially as shown or described. 25

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