H. LANDSIEDEL.

ADDING AND RECORDING MACHINE.

APPLICATION FILED FEB. 1, 1912.

1,138,875. Patented May 11, 1915.

Fig. 2.

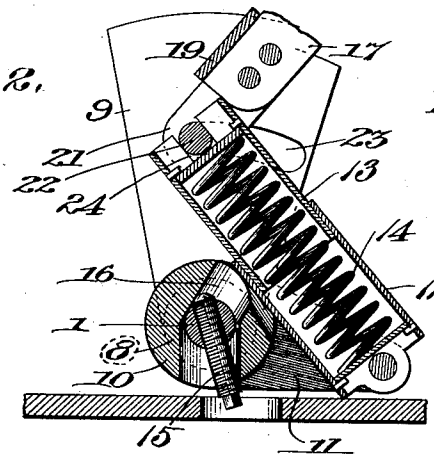


Fig. 1.

Fig. 3.

Fig. 4.

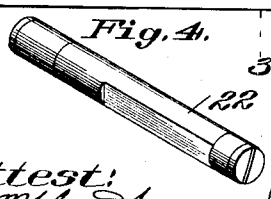
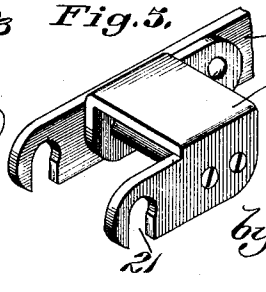


Fig. 5.



Attest:
Wm. H. Scott.
Fred Dehafer.

Inventor:
Harry Landsiedel,
by J. D. Rippey
Atty.

UNITED STATES PATENT OFFICE.

HARRY LANDSIEDEL, OF POPLAR BLUFF, MISSOURI, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE DALTON ADDING MACHINE COMPANY, OF CINCINNATI, OHIO, A CORPORATION OF OHIO.

ADDING AND RECORDING MACHINE.

1,138,875. Specification of Letters Patent. Patented May 11, 1915.

Application filed February 1, 1912. Serial No. 674,755.

To all whom it may concern:

Be it known that I, HARRY LANDSIEDEL, a citizen of the United States, residing at Poplar Bluff, county of Butler, and State of Missouri, have invented a new and useful Adding and Recording Machine, of which the following is a specification.

This invention relates to improvements in adding machines, and it has for its prime object the provision of a yielding and adjustable connection between the main shaft of an adding machine, and the operated mechanism thereof, whereby the said mechanism will be relieved of vibration from the careless or too forceful operation of the handle; and which vibration is so detrimental to maintaining the mechanism in accurate adjustments.

To this and other ends I have combined and arranged the several elements in the novel manner hereinafter described and illustrated in the accompanying drawings, and in which—

Figure 1 is a sectional view of a part of an adding machine embodying my invention, and is substantially on the line 1—1 of Fig. 3. Fig. 2 is a sectional view substantially on the line 2—2 of Fig. 3, showing the yielding connection more in detail. Fig. 3 is a front view of my improvement, only a fragment of certain of the parts being shown. Fig. 4 is a detail view of the pin over which the yoke shown in detail in Fig. 5 engages, these two parts forming a coupling device.

A rock-shaft 1 is provided with a handle 2, whereby said shaft may be manually rocked. A support 3 rigid with the base 4 of the machine supplies a bearing in which the shaft 1 is journaled, the other end of said shaft being suitably supported by a bearing (not shown) near the opposite side of the machine, so that it may be rocked freely when the handle is manipulated. A collar 5 is rigid on the shaft 1, said collar being provided with arms 6 and 7. The arm 6 is a part of a full stroke mechanism not connected with the present invention. The shaft 1 also carries rigidly mounted thereon, a second sleeve or collar 8, which is provided with an arm 9. Intermediate the two collars 5 and 8, and loosely mounted on the shaft 1 is a third collar 10 carrying two rearwardly extending arms 11, between which is pivotally supported a tubular member 12. A second tubular member 13 fits within the member 12, thus forming an adjustable housing for the strong spring 14 of the expansion type.

A set-screw 15 passes through an oblique threaded hole in the shaft 1, and is accessible through an opening in the base of the machine thereby permitting the manipulation of the set-screw 15 from the exterior of the machine, without removal of the case. The upper portion of the set-screw 15 is beveled, and is adapted to cam against the inclined surface of an opening 16 in the sleeve 10, thus raising and lowering the arms 11, as the set-screw 15 is manipulated. It is apparent that spring 14 will be compressed or expanded as the arms 11 are raised or lowered, thereby varying the resiliency of the yielding connection, comprising the spring 14 and its housing.

The adding and recording departments of the machine are controlled by mechanism including the link 17, whose operation is essential to permit operation of any of the mechanism. The manipulation of the handle 2 rocks the main shaft and carries the parts to the position shown in dotted line in Fig. 1, which parts are returned to idle position by any suitable mechanism or devices for that purpose. The vibration and jar incident to the return operation of the parts are avoided by means of a dashpot 18 of usual and well known construction, connected to the link coupling or yoke 19 and having a piston rod 20 which is connected to the frame of the machine. The yoke 19, in which the link 17 terminates, is provided with hooks 21, which are arranged to engage over a pin 22. The pin 22 also passes through registering slots 23 in the arms 7 and 9, which slots act as bearings and guides for the said pin 21. The member 13 is provided with notches 24 in which the pin 22 is seated. The spring 14 actuates the member 13 outwardly, thereby preventing the pin 22 from becoming unseated.

It is apparent that as the shaft 1 is rocked the arms 11 will be raised carrying the yielding connection forward. The tension of the spring 14 is so adjusted that in normal operation of the machine the tension will be sufficient to carry the link 17 forward when the arms 11 are raised without compression

of the spring. The force from the sudden or abnormal operation of the handle will be absorbed by the spring 14 and will not be imparted to the delicate mechanism of the machine.

From the foregoing it will be seen that a rigid connection between the shaft and the adding and recording mechanism of the machine is avoided and a simple, effective and durable yielding connection is provided.

I am aware that several changes in details of construction and arrangement may be made within the limits of the spirit and scope of my invention. I do not restrict myself, therefore, to exact details, but what I claim and desire to secure by Letters-Patent is—

1. In an adding machine, the combination with a main operating shaft, and mechanism to be operated, of a yielding connection between said shaft and said mechanism comprising a spring, a support carried by said shaft constituting an abutment for said spring and an element mounted in said shaft operable to adjust and hold said abutment in different positions with respect to said shaft, substantially as described.

2. In an adding machine, the combination with a main operating rock shaft, means for operating said shaft, and parts operated by said shaft, of an adjustable support carried by said shaft, a spring mounted on said support and acting as an abutment for said parts operated by said shaft and a manipulative device for adjusting said support in different positions with respect to said shaft, substantially as described.

3. In an adding machine, the combination with a main shaft, and means for operating said shaft, of a support carried by said shaft, a spring having one end mounted on said support, an abutment for the opposite end of said spring, and means for adjusting and holding said support in different positions with respect to said shaft and said abutment, substantially as described.

4. In an adding machine, the combination with a shaft, and means for operating said shaft, of a support on said shaft, a spring having one end mounted on said support, an abutment for the opposite end of said spring, means holding said spring between said support and said abutment in whatever position said support may be, and an element supported by said shaft operable to adjust and hold said support in different positions with respect to said shaft and said abutment, substantially as described.

5. In an adding machine, the combination with a shaft, and means for operating said shaft, of a support on said shaft, a spring having one end mounted on said support, an abutment for the opposite end of said spring, a screw operating in said shaft and operable to adjust and hold said support in different positions with respect to said abutment, and members holding said spring between said support and said abutment in any position of said support, substantially as described.

6. In an adding machine, the combination with a shaft and means for operating said shaft, of a support pivotally mounted on said shaft, a screw mounted in said shaft and operable to adjust and hold said support in different positions with respect to said shaft, a spring having one end mounted on said support, an abutment for the opposite end of said spring movable to and from said support, an incasing member holding said spring on said support, and another incasing member holding said spring in proper position with respect to said abutment, substantially as described.

7. In an adding machine, a main operating shaft, means for operating said shaft, mechanism arranged to be operated by said shaft, a spring cushioning the operation of said mechanism, an arm connected to said spring and a manipulative device operable to change the position of said arm effectively to vary the tension of said spring, substantially as specified.

8. In an adding machine, the combination with a main operating rock shaft, means for operating said shaft, and parts operated by said shaft, of a spring, means for supporting said spring as an abutment between said parts and said rock shaft and means supported by said shaft for varying the tension of said spring independently of any movement of said shaft.

9. In an adding machine, the combination with a main operating rock shaft, means for operating said shaft, and parts operated by said shaft, of a support mounted on said shaft, a spring mounted on said support and actuating said parts away from said shaft, and a device supported by said shaft for holding said support in any desired position with respect to said shaft to vary the tension of said spring.

10. In an adding machine, the combination with a main operating shaft, means for operating said shaft, and a part to be moved by said shaft, a support on said shaft, a spring mounted on said support and engaging said part to be operated, and an adjustable device supported by said shaft and engaging said support for moving and holding said support in different adjustments with respect to said shaft, substantially as described.

11. In an adding machine, the combination with a main shaft, and means for operating said shaft, of a support on said shaft, a spring mounted on said support, and a screw mounted in said shaft for adjusting and holding said support in different positions with respect to said shaft.

12. In an adding machine, the combination with a main operating shaft, and mechanism to be operated, of a yielding connection between the said shaft and the said mechanism comprising a spring, a yielding case wherein said spring is operatively mounted, a support carried by the main shaft whereby said case is supported in an inclined position with relation to said shaft, and an adjustable screw accessible from the exterior of the machine for varying the inclination of said case and thereby the tension of said spring, substantially as specified.

13. In an adding machine, an adjustable connection between the main shaft, and the mechanism to be operated comprising a spring, a housing for said spring, a support for one end of said housing carried rigidly by the main shaft, means in the opposite end of said housing for effecting the connection with the operated mechanism, and a manipulative device for varying the tension of said connection, substantially as specified.

14. In an adding machine, a connection between the main shaft, and the mechanism to be operated comprising two parallel arms provided with registering slots, said arms being carried by the main shaft, a pin supported transversely of said arms extending into said slots, a spring, a telescoped housing for said spring, a support carried by the main shaft, pivot connection between said housing and said support, yielding connections between said housing and said pin, and manipulative means for changing the angle of inclination of said housing with respect to the main shaft and thereby varying the tension of said spring, substantially as specified.

In witness whereof, I have signed this specification in the presence of two subscribing witnesses.

HARRY LANDSIEDEL.

Witnesses:
SAM G. DORMAN,
B. C. HARRISON.