

(No Model.)

H. M. GEIGER.
ACTUATING DEVICE FOR MANUAL RECORDERS.

No. 519,253.

Patented May 1, 1894.

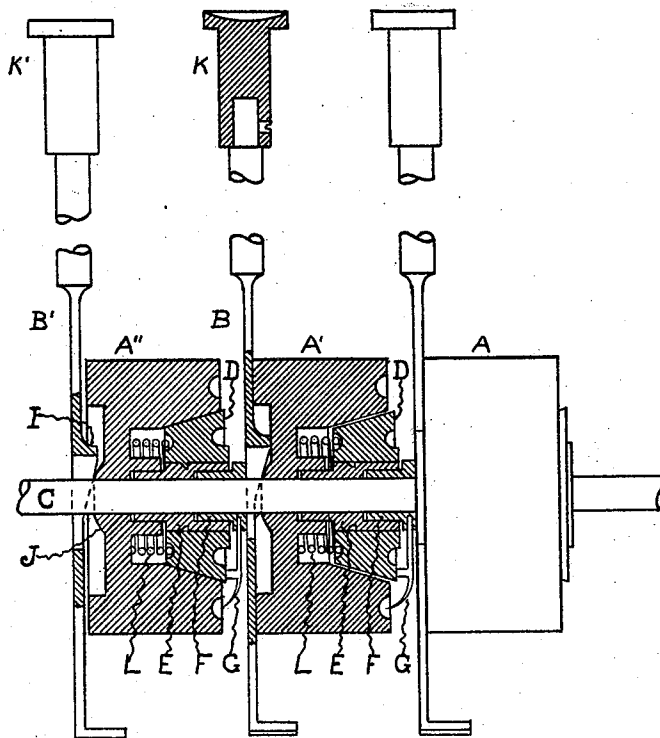
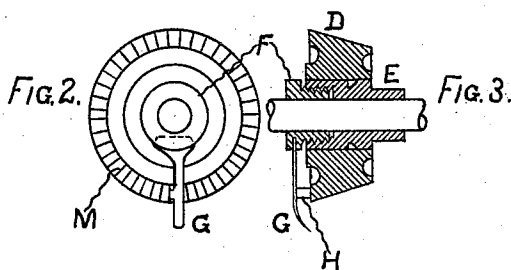


Fig. 1.



WITNESSES

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HARRY M. GEIGER, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO THE
CHAMPION CASH REGISTER COMPANY, OF SAME PLACE.

ACTUATING DEVICE FOR MANUAL RECORDERS.

SPECIFICATION forming part of Letters Patent No. 519,253, dated May 1, 1894.

Application filed November 25, 1893. Serial No. 491,984. (No model.)

To all whom it may concern:

Be it known that I, HARRY M. GEIGER, a citizen of the United States, residing at the city of Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Manual Recorders and Cash-Drawers, of which the following is a specification.

My invention relates to certain new and useful improvements in manual recorders and cash-drawers, and is intended as an improvement upon the cash-drawer allowed on my application filed December 27, 1892, Serial No. 456,403, and patented to myself and Daniel E. Corbitt, which patent is numbered 496,733, and bears date May 2, 1893; and the objects of my invention are to facilitate the operation of said machine and to form an accurate adjustment whereby the paper rolls may be readily operated individually by means of a plurality of keys, one key acting upon one roller whereby the roller to be operated is temporarily attached to a revolving shaft, which shaft supports a plurality of rollers, the object being to move forward one roller and the paper thereon by the depression of its corresponding key. These objects I accomplish by means of the mechanism illustrated in the accompanying drawings, in which—

Figure (1) shows a front elevation of a shaft with a plurality of rollers supported thereon; the keys, one of which is depressed, showing the connecting mechanism which connects its corresponding roller to the revoluble shaft, parts being cut away showing the cone and attachment and the means of attaching the roller to the cone and thereby to the shaft. Fig. (2) is an end view of the cone and adjusting nut and the arm whereby the nut is adjusted to the proper position to hold the key in position to operate its corresponding roller. Fig. (3) is a side elevation of the cone with parts cut away showing the adjusting nut and lever attachment whereby the nut is operated.

Similar letters refer to similar parts throughout the several views.

A—A' and A'' are rollers upon which the paper or other suitable material is wound,

said rollers being supported upon the main shaft.

B and B' represent the keys; two or more may be used.

K and K' represent the buttons or finger pieces upon the keys.

C represents the supporting shaft which is revolved by suitable mechanism, not illustrated in the drawings, but fully illustrated and described in the previous patent above referred to.

D is a friction cone rigid with the shaft and adapted to rigidly connect, temporarily, with its corresponding roller.

E is a bushing rigid with the cone, intended to give a larger bearing for the roller in order that the roller may be supported firmly in a position perpendicular to the shaft.

F is a screw-nut or threaded adjustment whereby the key may be held securely in position to operate upon its corresponding roller.

G is an arm secured to the adjusting nut extending outwardly and engaging in proper notches or catches in order to hold the nut in proper adjustment.

H is a projection on G serving as a catch, engaging with the notches of the cone, which notches are shown by M.

I is a wedge shaped projection on the key which, as the key is depressed, moves the paper roller upon its corresponding cone, making a temporary attachment between the roller and the cone and thereby between the roller and the shaft,—it being understood that the cone is always rigid with the shaft and always revolving therewith and that the rollers are loosely mounted upon the cone and shaft except when temporarily connected by the depression of the key.

J is an abutting surface on the spool with which the wedge-shaped projection on the key engages in its downward movement.

L is a spring which by its tension or pressure disconnects the roller from engagement with the cone when the key is raised. Any suitable mechanism may be used for raising the key automatically, such as a spring, &c.

The operation of my invention is as follows: When the key is depressed the incline or wedge-shaped part I comes in contact with

the abutting surface on the spool A and presses the roller as A'' into engagement with its corresponding cone, thereby attaching the roller to the shaft C and causing the same to revolve or move a short distance with the shaft C thereby moving forward the paper upon which the entry has been made. As soon as the pressure is released from the key it is automatically raised to its normal position. In the drawings I have shown the key B' depressed, and the roller A'' connected to its corresponding cone, while I have shown the key B raised and the roller A' disconnected from its cone. The bushing E as shown in Figs. 1 and 3 is a tubular projection rigid with the cone, and preferably made integral therewith. The nut F is provided with a screw-thread which engages with a screw-thread on the cone, and by turning this adjusting nut it may be adjusted to the required position, while the lever or arm G is rigid with this nut and is provided with a projection, which, engaging with the notches M, will retain the adjusting nut in the required position in order to take up any wear upon the key or upon the adjusting nut. By means of this construction the key is always held in position to operate upon its corresponding roller, and the adjustment can be made so that the key will work easily and effectually, always making the connection when depressed. I prefer to make the bearing surface J on the roller, inclined or conical, in order that the inclined surfaces on the key will act more readily upon the spool when the key is depressed.

Having thus described my invention, what I claim to have invented, and desire to secure by Letters Patent, is—

1. In a manual recorder and cash-drawer the combination of a revolving shaft, a plurality of rollers supported thereon, a plurality of cones, one for each roller, rigid with the shaft,

a plurality of adjusting nuts, one for each cone, a plurality of keys, each key provided with a wedge-shaped projection and an abutting surface on each roller with which the incline or wedge-shaped portion of the key engages, all so combined that the depression on each key will attach its corresponding roller to its corresponding cone and thereby to the shaft, substantially as and for the purpose described.

2. The combination of a shaft, a plurality of rollers supported on said shaft, a plurality of cones rigid with the shaft, one for each roller, an adjustable nut for each cone, suitable mechanism for adjusting such nut, a plurality of keys, each having a wedge-shaped projection, an abutting surface on each roller with which the key engages in its downward stroke, whereby the downward movement of the key attaches its corresponding roller to its corresponding cone and thereby to the shaft, substantially as described.

3. The combination of a shaft, a plurality of rollers supported on said shaft, a plurality of cones attached to the shaft, an adjusting nut on each cone, a plurality of keys each provided with a wedge-shaped projection, an abutting surface on each roller with which its corresponding key engages in its downward stroke, an arm or lever connected to the adjusting nut, and a series of stops or notches adapted to engage said lever and retain the same in its adjustment, substantially as described.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

HARRY M. GEIGER. [L. s.]

Witnesses:

EDWARD TAGGART,
ARTHUR C. DENISON.