

May 2, 1933.

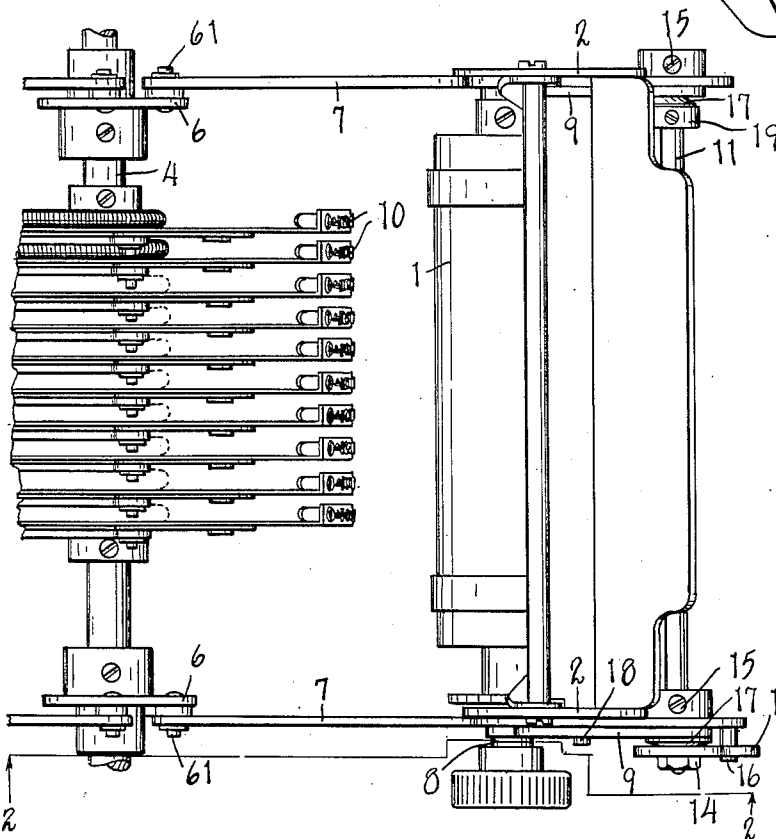
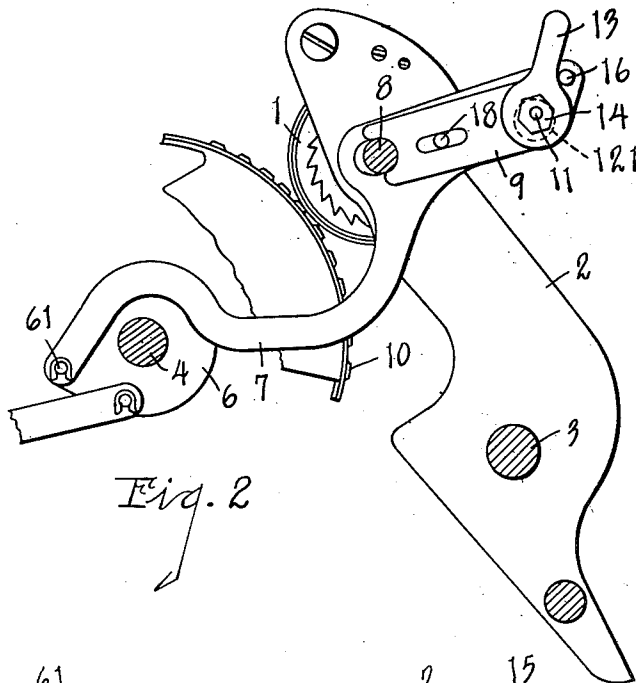
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1,906,304

PRINTING MECHANISM FOR LISTING ADDING MACHINES

Filed Oct. 23, 1931

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

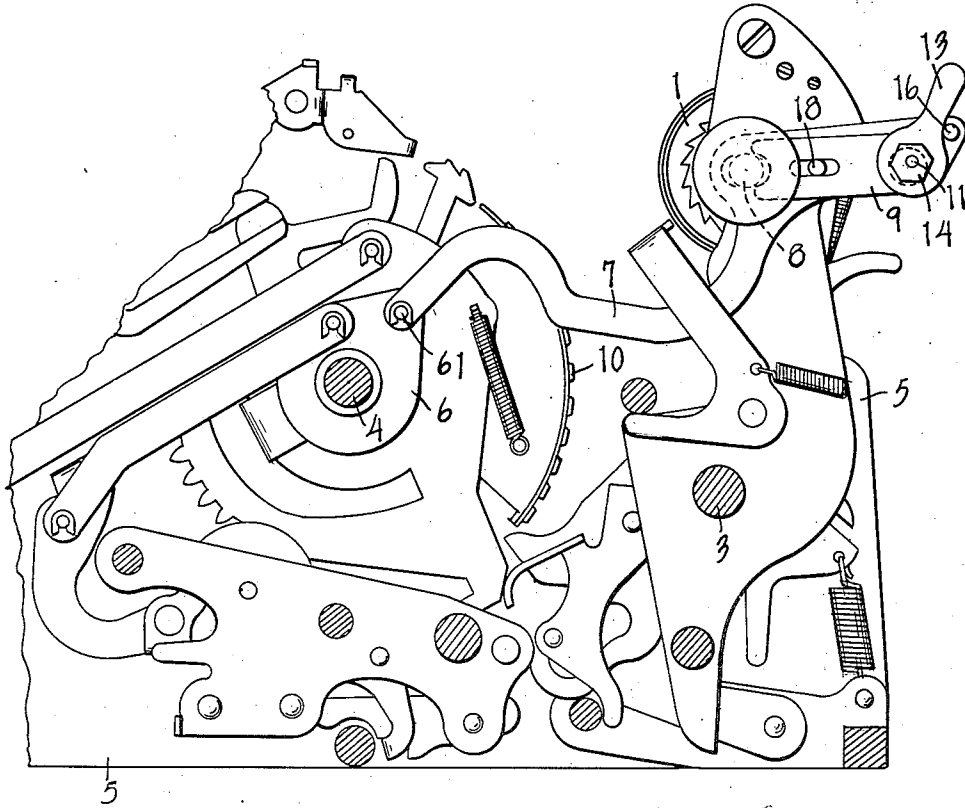


Fig. 3

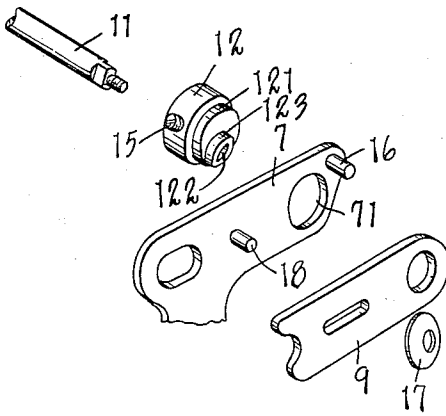
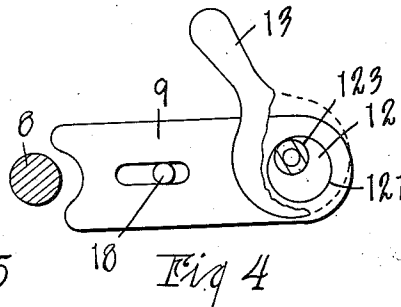


Fig. 4



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PRINTING MECHANISM FOR LISTING ADDING MACHINES

Application filed October 23, 1931. Serial No. 570,532.

The object of the invention is to provide a convenient manual means for adjusting the depth of the printing impression at the will of the operator.

Objects pertaining to details of operation and the economies of construction will appear in the following description. A preferred embodiment of my invention is illustrated in the accompanying drawings, in which:

Fig. 1 is a plan view of my invention as applied to a Corona adding machine together with cooperating parts.

Fig. 2 is a right side elevation view on line 2—2 of Fig. 1 of the impression mechanism of the Corona adding machine to which my invention is applied, other parts being omitted.

Fig. 3 is a right side elevation view on the same line as Fig. 2 of the rear portion of a Corona adding machine, the right side plate being removed to expose the details of its printing mechanism to which my invention is applied in its relation to the other parts of an adding machine, particularly the operating mechanism.

Fig. 4 is an enlarged detail elevation view showing a partial assembly of the adjustable feature of my invention, the contact member being drawn back to lessen the depth of the printing impression.

Fig. 5 shows details of the parts of the adjustable structure of my invention as seen in Fig. 4 along with the actuating supporting arm.

In the Corona adding machine to which I have preferred to apply my invention, items and totals are listed and printed upon a suitable tape or paper carried by a platen by causing said platen to swing forwardly until it impinges upon the type and records said items or totals. My invention relates primarily to the provision of convenient means for adjusting the depth of the impression of the type and the mechanism thus involved.

To this end I have provided a fixed, independent adjustment at each end of the platen in order to secure a uniform impression of all characters, and a manually operated

adjustment of the complete impression operable at one end of the platen but controlling the impressions at both ends of the platen in synchrony. An adjustment of this sort is highly desirable on adding machines like the Corona when it is desired to print numbers upon material of varying thickness, for instance, to accommodate manifold copies or to print in booklets or the like.

The parts will be identified by their numerals of reference.

1 is the platen of the Corona adding machine mounted in suitable supports 2 which are pivoted at 3 (see Figs. 2 and 3). 4 is the main operating shaft of the Corona adding machine journaled in side plates 5, the left plate of which is shown in Fig. 3. 6, 6 are two arms rigidly carried by said main driving shaft 4. The main operating shaft 4 in the Corona adding machine oscillates when driven by the operating mechanism as in other adding machines of similar design. To the upper extremities of these arms 6 at 61 are pivotally attached the printing links 7. These links 7 extend back to the platen frame 2 and through them passes the shaft or spindle 8 of the platen 1. For convenience the openings in the links 7 to receive the shaft 8 are made slightly oblong in order to permit the adjustment of my invention (see Fig. 2).

Said links 7 extend back beyond the platen shaft 8 and upon this rear portion I have mounted by adjustable contact pawls 9, the forward ends of which are adapted to contact against the platen shaft 8 as shown in Fig. 2.

Fig. 3 shows the parts of the Corona adding machine in normal position. When the main driving shaft 4 rocks under the actuation of the operating mechanism, the arms 6 swing to the position shown in Fig. 2. The adjustment of the position of the contact pawls 9 upon the links 7 determines the distance the movement of the arms 6 and the links 7 will move the platen 1 with relation to the type 10 which type, in the Corona adding machine, are mounted upon swinging type carriers.

11 is a shaft extending from one end of

the platen frame to the other. It is carried by the links 7. At the rear of said links 7 are holes 71 (see Fig. 5) large enough to admit the shoulders 121 of adjusting eccentric hubs 12. There is an opening 122 in said hubs to receive the shaft 11 which opening is eccentric with the periphery of said shoulder 121. About this opening 122 is a secondary shoulder 123 which serves as a bearing or mounting for the contact pawls 9 (see Figs. 2 and 5).

13 is an adjusting lever or handle attached to the adjusting shaft 11 by means of an elongated opening 131 and a milled portion on said shaft to fit the said opening 131. 14 is a nut which holds said lever 13 firmly secured to said shaft 11. Thus it will be readily seen that by moving said lever 13, a like movement will be imparted to said shaft 11. This mechanism, with the exception of lever 13, is duplicated at the opposite ends of the shaft 11.

Fig. 1 shows a plan view of my invention properly assembled. 15 are set screws to hold the eccentric hubs 12 firmly in their relative positions to the shaft 11. 16 is a stop pin in the rear end of the link 9 against which lever 13 normally rests.

The shoulder 121 is not quite as thick as the link 7 through which it passes. I place a spring washer 17 between the lever 13 and the contact pawl 9, the object of which is to cause a certain amount of friction between the lever 13, the contact pawl 9 and the link 7 sufficient to hold said lever 13 in any adjusted position.

To adjust the mechanism effectively, after assembling my invention as shown in Fig. 1, the set screws 15 are loosened, the lever 13 placed against the stop 16, and the shouldered hub 12 turned until the deepest impression of the platen 1 against the type 10 is secured when parts are in the position shown in Fig. 2, the desired impression so obtained being upon the left end of the platen. The adjusting screw in the hub 12 at the left end of the platen frame is then set firmly into the shaft 11, the lateral position of said shaft 11 having also been determined to get the best advantage from said spring washer 17. After this, the hub 12 upon the right hand end of the platen frame is turned until a like impression is obtained between the platen and the type upon the right hand end of the platen. The set screw 15 in the right hub 12 is then firmly set into the shaft 11. In obtaining this adjustment, the eccentricity of the hub 12 with reference to the shaft 11 is about as indicated by the dotted lines showing the shoulder 121 in Fig. 2.

If, after securing this maximum impression as above described, the lever 13 is moved forwardly to position shown in Fig. 4, both contact pawls 9 will be drawn rear-

wardly with reference to the shaft 8 so that during the operation of the adding machine, the arms 6 being placed in the position shown in Fig. 2, the platen 1 will not be forced far enough forward to make an impression. It will be readily seen that moving the lever 13 rearwardly again will cause the contact pawls 6 to force the platen further forward, thus any depth of impression may be had at the option of the operator by merely moving said lever 13. Thus, if the operator wishes to print upon some material of unusual thickness, the lever 13 may be drawn forwardly to a point where the impression of the platen 1 upon the type 10 will be satisfactory.

Fig. 5 shows a guide pin 18 operating in a slot in pawl 9 so that during the adjustment of the lever 13 the contact pawls 9 will advance or recede in a line approximately parallel with the base of the machine, and thus secure the proper cooperation with the platen shaft 8.

19 is a positioning collar placed toward the left end of the shaft 11. I have shown a friction washer 17 here which functions the same as the one upon the right end of the assembly and tends to hold the contact pawl 9 on the left side snugly against the link 7 at the left end of the platen frame.

My invention may be applied to any form of listing adding machine wherein the platen is drawn toward the type and an impression obtained by sufficient pressure. It can be adjusted from the deepest impression to nothing at all by merely manipulating the lever 13.

I desire to claim the specific structure and also to claim the invention broadly as pointed out in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In an adding machine having type positionable for printing, a main operating mechanism and a platen mounted in a swinging frame, the combination of vibrating arms attached to said main operating mechanism, suitable links connecting said vibrating arms and said swinging platen frame, contact members for contacting with said platen frame carried by said links, independent adjusting means for adjusting the point at which said contact members contact respectively with said platen frame, and a common means for adjusting said contact members with reference to said contact point in synchrony, consisting of shouldered hubs adapted to turn upon said shaft passing through said hubs at a point eccentric to said shouldered hubs and through said contact members, means for attaching said shaft to said shouldered hubs respectively, means for oscillating said shaft and said shouldered

hubs consisting of a suitable lever or finger piece attached to said shaft, and a friction connection between said shaft and said contact members.

for adjusting both of said contact connections with relation to said movable platen in synchrony, and means for holding said common means in any adjusted position.

In witness whereof I have hereunto set my hand.

GLENN J. BARRETT.

- | | | |
|----|--|-----|
| 5 | 2. In an adding machine having type positionable for printing, a main operating mechanism, and a platen mounted in a swinging frame, the combination of vibrating arms attached to said main operating | 75 |
| 10 | mechanism, suitable links attached to said vibrating arms and to said swinging frame, contact members between said links and said | |
| 15 | swinging frame movably mounted upon said links, an independent means for adjusting the contact point of each of said contact | 80 |
| 20 | members and said swinging frame, and a common means for adjusting both of said contact members with reference to said | |
| 25 | swinging frame comprising hubs rotatably mounted in said connecting links and supporting one end of said contact members | 85 |
| | at a point eccentric to the rotatable mounting in said links, a rigid connection between said rotatable hubs, and a finger piece for | |
| | rotating said hubs. | 90 |
| | 3. In an adding machine having type positionable for printing, a main operating mechanism, and a platen mounted in a | |
| 30 | swinging frame, the combination of vibrating arms attached to said main operating mechanism, suitable links attached to said | 95 |
| | vibrating arms and to said swinging frame, contact members between said links and said | |
| 35 | swinging frame, an independent means for adjusting the point of contact between said contact members and said swinging frame, | 100 |
| | and a common means for adjusting the point of contact of both of said contact members and said swinging frame in synchrony. | |
| 40 | 4. In an adding machine having type positionably mounted for printing, a main operating mechanism, and a movable platen | 105 |
| | actuated by said main operating mechanism to impinge upon said type, the combination | |
| 45 | of two adjustable contact members connected to said main operating mechanism and contacting with said movable platen, means | 110 |
| | for independently adjusting said contact relation of said contact members respectively | |
| 50 | and said movable platen, and a common means for adjusting both of said contact members in synchrony with relation to said | 115 |
| | movable platen. | |
| 55 | 5. In an adding machine having type positionably mounted for printing, a main operating mechanism, and a movable platen | 120 |
| | actuated by said main operating mechanism to impinge upon said type, the combination | |
| 60 | of an adjustable contact connection at each end of said movable platen and connections | 125 |
| | from the same to said main operating mechanism, independent means for adjusting each of said contact connections with relation to its respective cooperating portion | |
| 65 | of said movable platen, a common means | 130 |