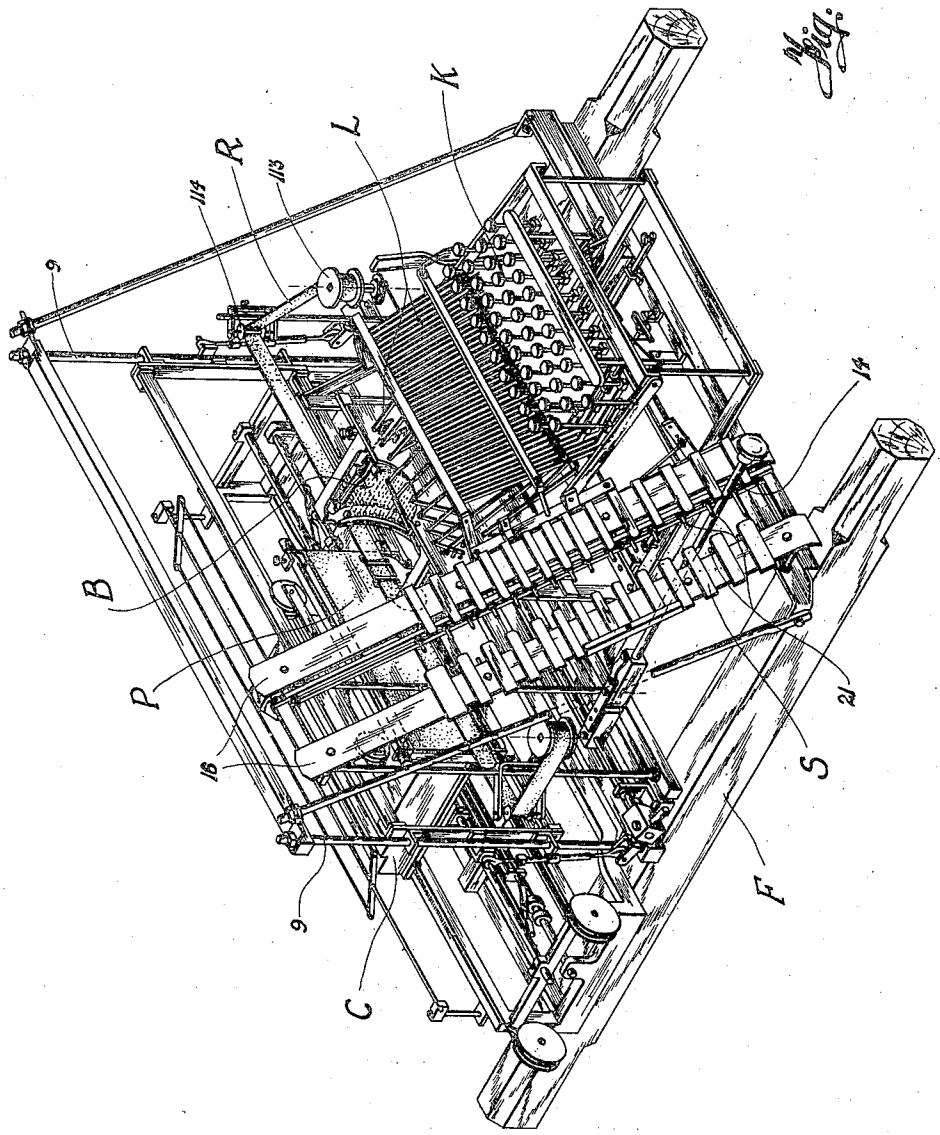
Jan. 10, 1950 J. M. PARKER 2,494,192

MUSIC PRINTING OR TYPEWRITING MACHINE

Filed Sept. 13, 1946 6 Sheets-Sheet 1

Fig. 1



INVENTOR
JAMES M. PARKER
By Young, Emery & Thompson
ATTYS.

Jan. 10, 1950 J. M. PARKER 2,494,192

MUSIC PRINTING OR TYPEWRITING MACHINE

Filed Sept. 13, 1946 6 Sheets-Sheet 2

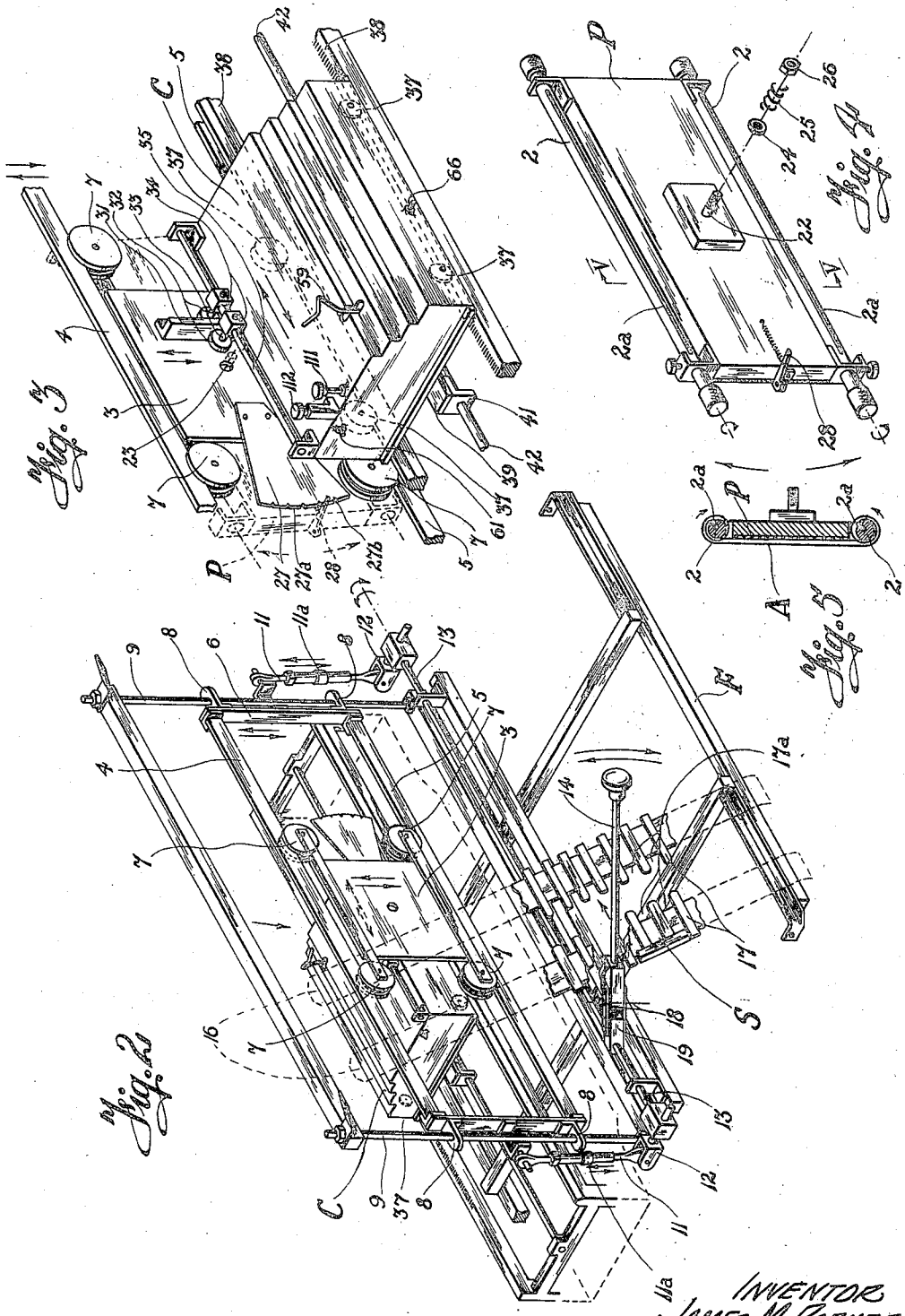


Fig. 2

Fig. 3

Fig. 4

Fig. 5

INVENTOR
JAMES M. PARKER
By Young, Emery & Thompson
ATTYS.

Jan. 10, 1950 J. M. PARKER 2,494,192

MUSIC PRINTING OR TYPEWRITING MACHINE

Filed Sept. 13, 1946 6 Sheets-Sheet 3

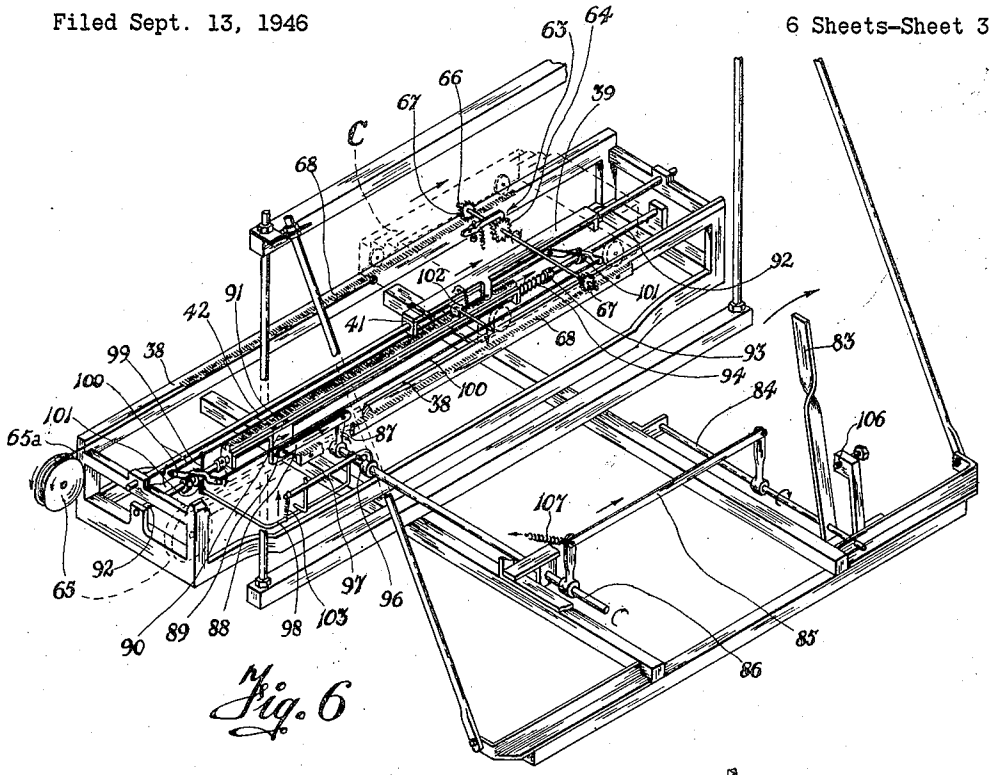


Fig. 6

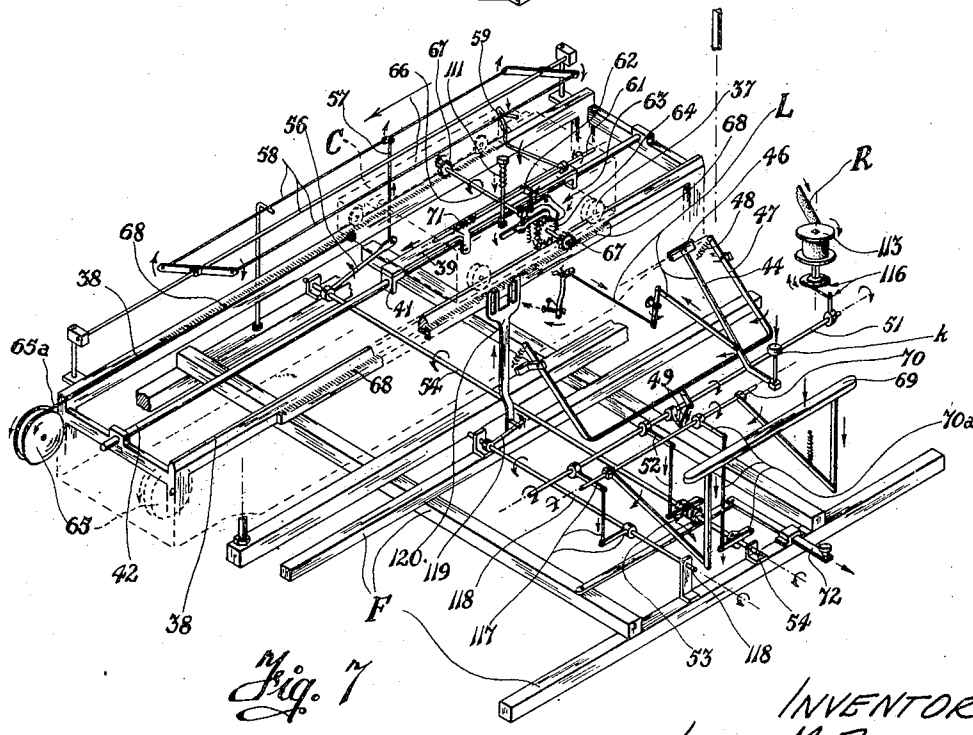


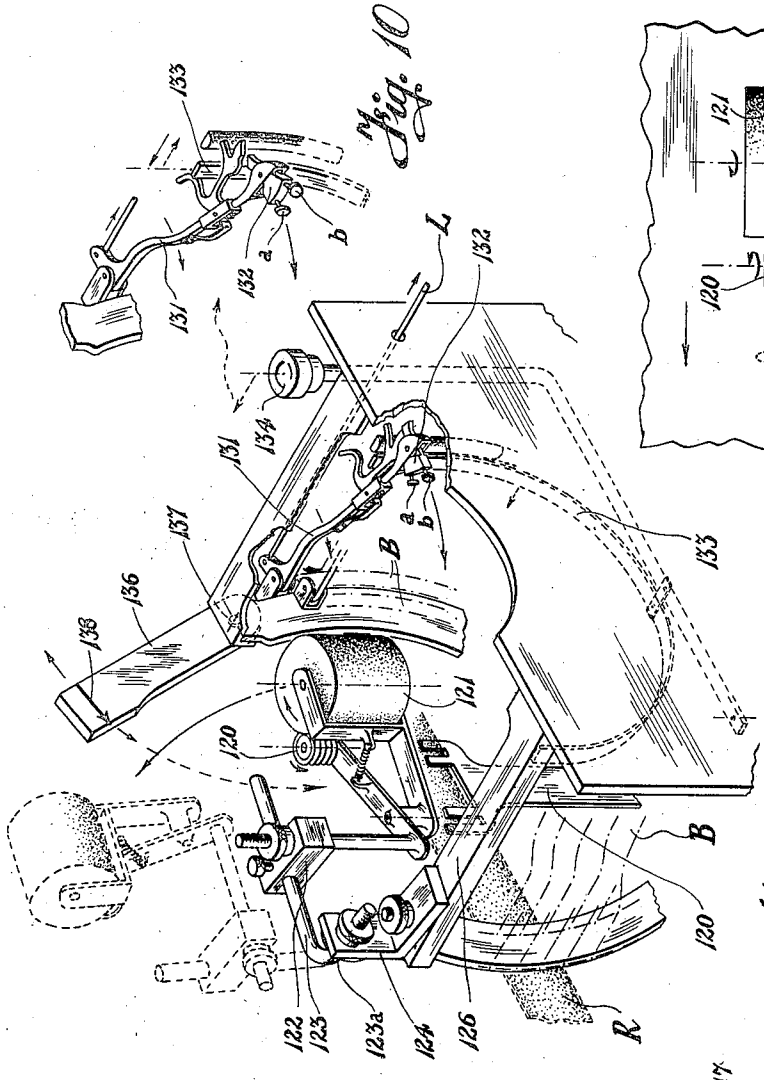
Fig. 7

INVENTOR
JAMES M. PARKER
By Young, Emery & Thompson
Attys

Jan. 10, 1950 J. M. PARKER 2,494,192

MUSIC PRINTING OR TYPEWRITING MACHINE

Filed Sept. 13, 1946 6 Sheets-Sheet 4



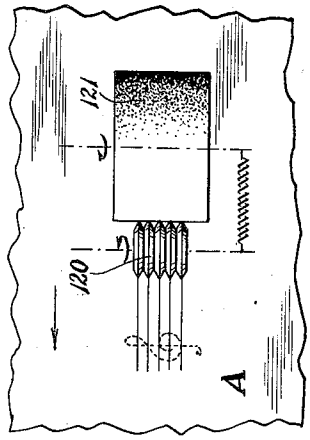
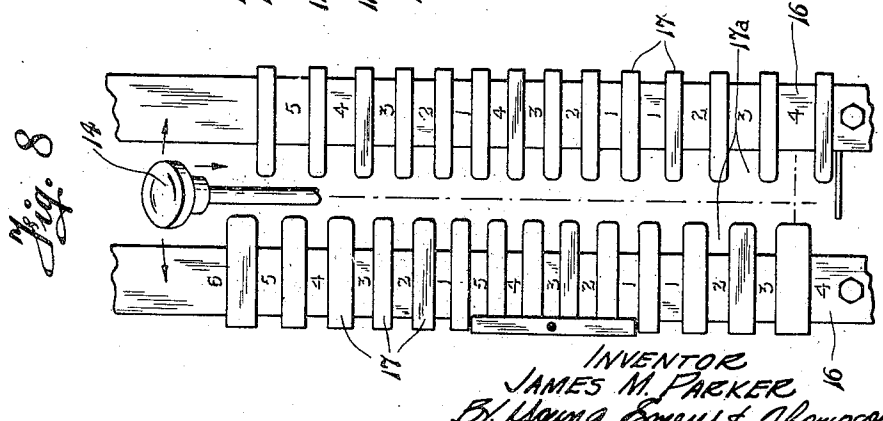


Fig. 11

Fig. 9



INVENTOR
JAMES M. PARKER
By: Hawley, Emery & Thompson Attys

Jan. 10, 1950 J. M. PARKER 2,494,192

MUSIC PRINTING OR TYPEWRITING MACHINE

Filed Sept. 13, 1946 6 Sheets-Sheet 5

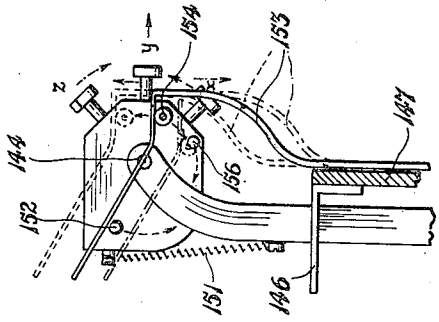


Fig. 15

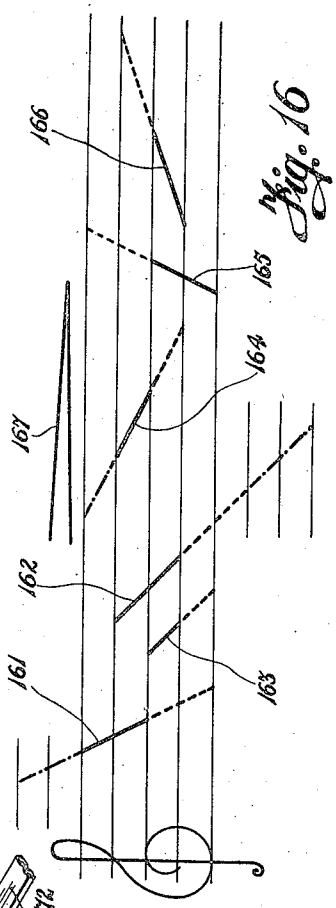


Fig. 16

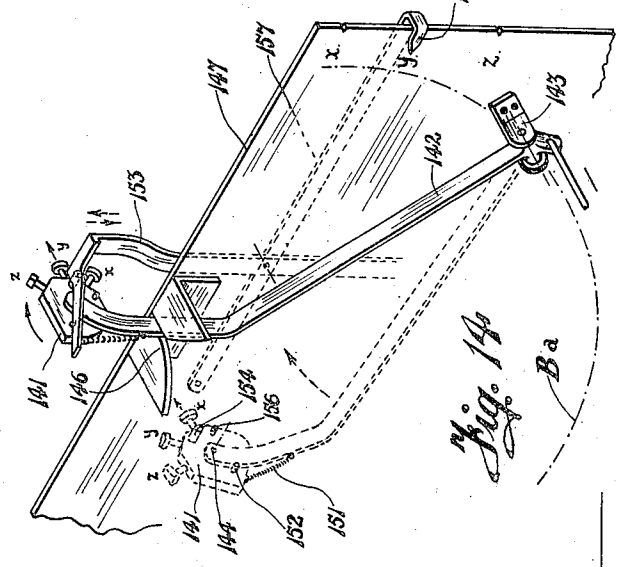


Fig. 14

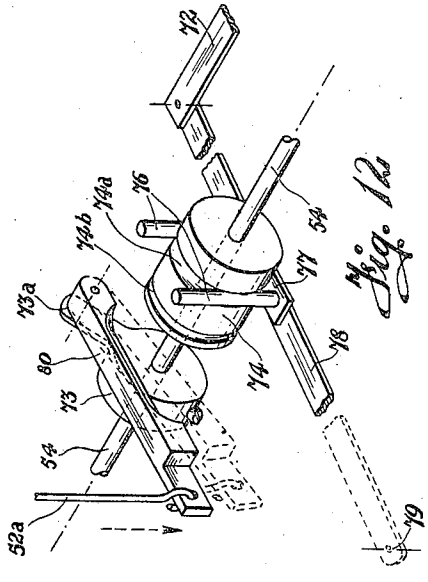


Fig. 12

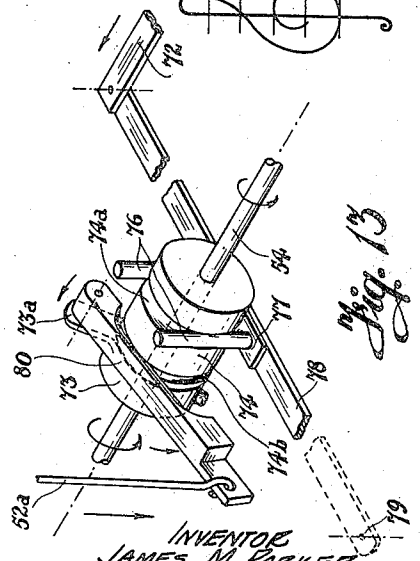


Fig. 13

INVENTOR
JAMES M. PARKER
By: Young, Emery & Thompson Atty's

Jan. 10, 1950 J. M. PARKER 2,494,192

MUSIC PRINTING OR TYPEWRITING MACHINE

Filed Sept. 13, 1946 6 Sheets-Sheet 6

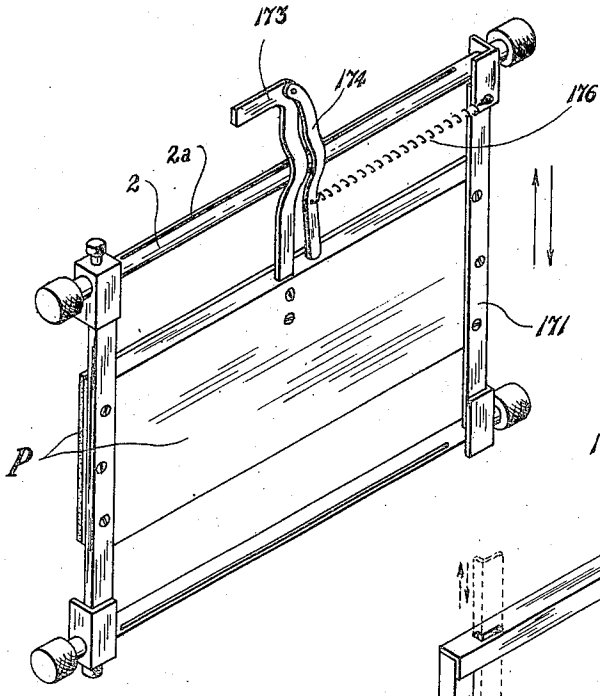


Fig. 17

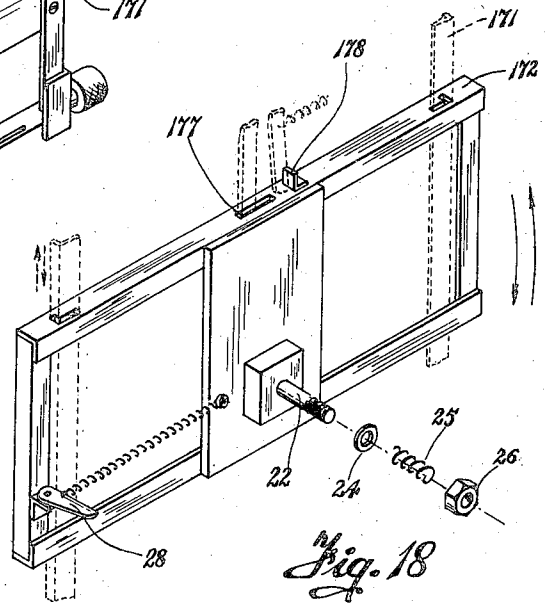


Fig. 18

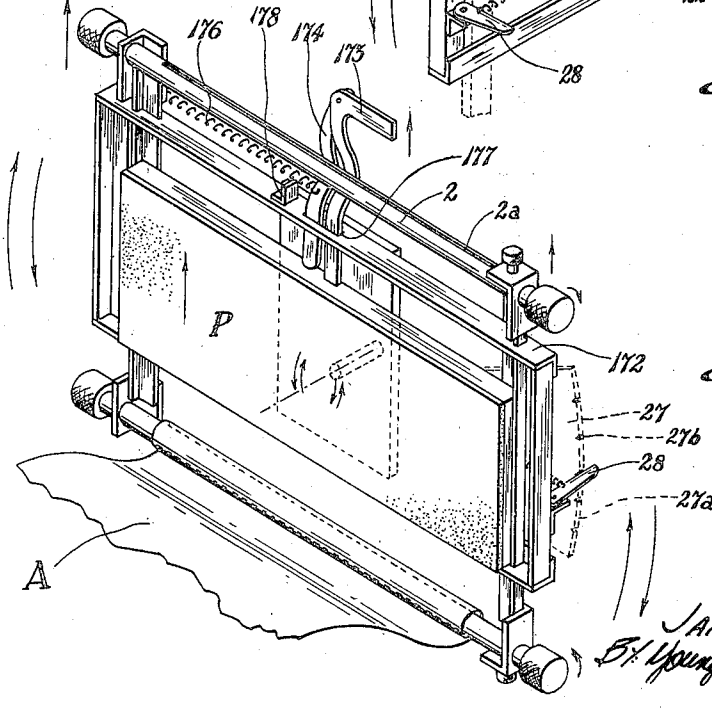


Fig. 19

INVENTOR
JAMES M. PARKER
By Young, Emery & Thompson
Attys.

Patented Jan. 10, 1950

2,494,192

UNITED STATES PATENT OFFICE

2,494,192

MUSIC PRINTING OR TYPEWRITING MACHINE

James Murray Parker, Glenbuntly, Victoria, Australia

Application September 13, 1946, Serial No. 696,805
In Australia October 23, 1945

5 Claims. (Cl. 197—8)

1

This invention relates to the printing or typewriting of music and has for its general object to provide a machine whereby music may be printed or type-written in a most accurate and legible manner and with the utmost speed and convenience.

Hitherto, where a relatively small number of copies is required, music script has generally been copied by hand or, perhaps, reproduced by photographic process. In any event, the production of copies in such manner is relatively lengthy, tedious and costly while the copies often suffer partial illegibility.

In cases where a relatively large number of copies is required, a master or original is frequently prepared by hand whereupon a photolithographic plate is produced from the original although in some cases the master or original script is initially engraved upon a copper or pewter plate by hand. In other cases, a special "music type" is set up and utilized for printing the copies. All of these methods and procedures have been found to be unsatisfactory for one reason or another. Generally speaking, they are difficult, tedious and expensive to follow and the reproduced copies are often found to be faulty and lacking in clarity.

I am aware that various attempts have hitherto been made to devise a music printing or typewriting machine but to the best of my knowledge none of such prior proposals have been found to be practicable or capable of yielding satisfactory results due to their being too slow in operation, excessively difficult or inconvenient to manipulate and imposing considerable strain upon the vision of the operator.

The present invention, which is the result of years of study, research and experiments, provides a machine which I believe to be satisfactory from every point of view and from which I have obtained surprisingly good results in experiments.

The above and various other objects of the invention and the salient features thereof will be more readily appreciated from the following description and accompanying drawings relating to a machine which at present is preferred although it is susceptible to various modifications, refinements and/or additions as will occur to those versed in the art after having considered this specification.

In the drawings—

Figure 1 is a perspective view of a machine according to one form of the invention.

Figure 2 is another perspective view but omitting certain parts so that the platen and associated parts towards the rear may be more clearly shown.

2

Figure 3 is a rear view showing the platen, the back plate and the carriage.

Figure 4 is a rear view of the platen and associated parts.

Figure 5 is a sectional view on line V—V of Figure 4.

Figure 6 is a perspective view showing back spacing traversing means for the platen carriage.

Figure 7 is a somewhat diagrammatic perspective view showing linkage and control devices, operable from the front of the machine, and illustrating the action of various parts of the machine.

Figure 8 is a front elevation of a shift lever and scale device for manipulating the platen up and down into predetermined positions.

Figure 9 is a perspective view showing a symbol striking finger and head and also a device for marking stave lines upon the paper.

Figure 10 is a perspective view of the variable symbol striking finger and head as seen in Figure 9 but in which the striking head has been adjusted into an alternative position.

Figure 11 is a diagrammatic view of part of the stave printing device.

Figure 12 is a perspective view of a clutch device, shown in the disengaged position, as incorporated in the linkage seen in Figure 7.

Figure 13 is a perspective view of the said clutch device in an engaged position.

Figure 14 is a perspective view of a modified form of symbol striking finger and head combined with a "Vee" guide.

Figure 15 is an enlarged side view of the variable striking head of Figure 14, showing the control member in three different positions.

Figure 16 is a diagram indicating certain operational properties of the machine.

Figure 17 is a rear perspective view of a modified form of platen and supporting means.

Figure 18 is a rear perspective view of the platen carrier.

Figure 19 is a front perspective view of the modified platen assembly.

The machine comprises a framework F for supporting various parts which include a key board K, a bank B of fingers carrying striking heads, linkage L between the key board and the bank of fingers, an inked ribbon R, a platen P for supporting the paper to be printed on, mechanism for traversing the platen horizontally, and mechanism for raising and lowering the platen and also for swivelling it in a vertical plane into

predetermined positions, as will be hereinafter fully described.

The platen P is generally in the form of a rectangular board of appropriate area and of sufficient thickness as to render it relatively rigid. This platen may have rollers 2, with longitudinal slots 2*a*, extending transversely along its top and bottom edges for the purpose of retaining the paper A in position with ability to wind up the paper as writing of the music proceeds. In some cases, especially when writing music or orchestral scores, a larger platen may be employed and the paper may be pinned or otherwise fastened thereto.

The platen may be secured to a back plate 3 adapted to move along upper and lower rails 4, 5, of a vertically adjustable frame 6 as best seen in Figure 2. For this purpose, the back plate 3 may be provided at its four corners with flanged rollers 7 which track along the upper and lower rails 4, 5.

Reference will now be made to the mechanism for vertical adjustment of the platen. According thereto, the said vertically adjustable frame is provided with end brackets 8 capable of sliding up and down around vertical pillars 9 upstanding from the main frame work. The adjustable frame is connected at each side by connecting rods 11 to arms 12 outstanding from transverse shaft 13 to which a shift lever 14 is connected, this lever projecting forwardly at one side of the machine, preferably the left hand side, and being adapted to co-operate with a scale device S as hereinafter described.

In order to permit of fine adjustment of the platen so that it may be set in precisely the desired alignment, screw turnbuckles 11*a* may be interposed in the connecting rods 11 to enable their effective lengths to be varied and thus raise or lower the frame at either side as may be found necessary.

The scale device S (see particularly Figure 8) may comprise two rearwardly and upwardly inclined bars 16 to each of which is attached a series of horizontal transverse strips 17 so arranged as to leave a continuous vertical path between their inner ends and slots 17*a* between the strips. The strips at one side are staggered in relation to the strips at the other side. The shift lever 14 is adapted to move with a swinging motion about shaft 13 through the vertical path and is also capable of slight movement to the right and to the left by medium of the rear end of the lever having a pivotal connection as at 18 to arm 19 outstanding from the transverse shaft 13. Thereby it becomes possible to move the shift lever into any one of the slots 17*a* and thus adjust the platen P vertically into any desired position.

The groups of the opposed staggered strips may be numbered 1, 2, 3, 4, 5 and 1, 2, 3, 4 respectively, or otherwise marked, so as to denote respectively the five lines and the four intervening spaces of musical staves.

It is a simple matter for the operator, by upward or downward swinging of the shift lever 14 followed by slight movement to the right or to the left, to adjust the platen into such a position that upon striking any one of the keys of the key board K, a musical note or other symbol as used in music will be written or typed in the precise position where it is desired.

In order to relieve the staggered strips 17, which may be relatively fragile, from being repeatedly engaged by the shift lever, two series of pins or studs 21, Figure 1, may project in staggered relationship immediately behind the respective strips to form abutments against which the shift lever can bear when moved into its adjusted positions.

The platen P is preferably swivel mounted so that it may be tilted to the right and the left while remaining in a vertical plane and thus enable inclined lines, indicating for instance crescendo, diminuendo and other side markings as used in music, to be built up by relatively short strokes extending in continuation of each other. For such purpose, the platen P (see Figures 3 and 4) has a centrally located pin 22 projecting horizontally and rearwardly through bearing hole 23 in the back plate 3. The pin may be screw threaded at its rear end and receive a washer 24, spring 25 and a nut 26.

In order to facilitate retention of the platen in any desired position of adjustment, a quadrant 27 is applied to the back plate and has its peripheral edge 27*a* concentric with bearing hole 23 and provided with notches 27*b* into any one of which a springy finger 28, carried by the platen, will enter and thus temporarily retain the platen in any swivel adjusted position.

The platen and its back plate are traversed horizontally by medium of a carriage C and various operative connections which will be described, and provision is made whereby the platen and the back plate are connected to the carriage in such manner that the platen and plate may be moved vertically without affecting their horizontal traversing, and vice-versa. For this purpose, the back plate may be provided at its rear with a vertical guide rail 31 (Figure 3), which is engaged at opposite sides by two rollers 32 appropriately mounted on the carriage. Spindles 33 carrying the rollers 32 may project from blocks 34 which are slidable along a transverse shaft 35 supported by carriage C, so that lateral adjustments may be made between the back plate and the carriage.

Traversing of the carriage C (carrying the back plate 3 and platen P) may be effected by any suitable means but should preferably include provision for

(*a*) automatic movement of the carriage one space to the left after each note, symbol or the like has been written on the paper,

(*b*) step by step spacing to the left without actuating the keyboard,

(*c*) manually operable means to put (*a*) temporarily out of action so as to facilitate the building up of musical chords, arpeggio signs and other musical markings or lines which require vertical alignment or continuity,

(*d*) back spacing of the carriage, and

(*e*) continuous or uninterrupted movement for quick traversing of the carriage.

Before describing how these actions can be brought about it will be convenient to refer to the mounting of the carriage C. As better seen in Figures 3, 6 and 7, the carriage may conveniently take the general form of an inverted box-like structure within which certain escapement mechanism is housed as will be hereinafter described. In any event, the carriage may be provided at or near its four corners with wheels 37 adapted to track along horizontal rails 38 supported upon the main frame work F. In addition, a bar 39 secured to the bottom of the carriage may have end brackets 41 apertured to slide along a guide rod 42.

Referring now to Figure 7 which illustrates traversing action (*a*), one of the keys *k* of the keyboard K is shown upstanding from the forward end of a rod 44, which is pivoted about the bear-

ing 46. When the said key *k* is depressed in order to bring the appropriate striking finger into operation, a yoke 47 of U form which is normally maintained in contact with the rod 44 by springs 48 is also depressed and imparts turning motion through the linkage 49 to transverse shaft 51. Shaft 51 is connected as by linkage 52 through medium of a clutch device 53 to a spindle 54 extending from front to rear. At its rear end, spindle 54 has an arm 56 connected by link 57 to a transversely elongated rotary frame 58 which, when turned in the appropriate direction through medium of the aforesaid mechanism, acts upon an appropriately shaped end portion of a rod 59 outstanding from a spindle 61 which extends transversely within the carriage housing.

Spindle 61 has a spur 62 with depending fingers connected at its lower end to an escapement device denoted generally by numeral 63 and which may be of known form as incorporated in conventional type-writing or similar machines. For example, such device may include a double pawl acting upon a ratchet wheel 64 mounted on spindle 66 borne by carriage C and provided at its opposite ends with toothed pinions 67 for cooperation with toothed racks 68 extending along the guide rails 38. It will be appreciated that the escapement device 63 permits the carriage, by means of the pinions and racks and by the pull exerted by spring tension pulleys 65 and the flexible lines 65*a* to be moved to the left for one space, equivalent to the pitch of the ratchet teeth 64, automatically upon the aforesaid depression of key *k*. Rod 59 is maintained in engagement with the rotary frame 58 by means of a spring 71 associated with spindle 61 and engagement between the frame and the said rod occurs irrespective of the position of the carriage brought about by its traversing movements.

Traversing action (*b*) can be readily effected by operation of a conventional space bar 69 pivotally supported from shaft 70 from which linkage 70*a* extends to shaft 54 as seen in Figure 7.

In the description relating to traversing action (*a*), it has been assumed that the aforesaid clutch 53 is engaged. When it is desired to obtain traversing action (*c*), the clutch 53 disengaging lever 72 is operated in the direction of the arrows in Figure 7. Referring to Figures 12 and 13, the clutch comprises two collars, one of which 73 is fixed to spindle 54, while the other 74 is slidable lengthwise along the spindle and for that purpose may be provided with a peripheral groove 74*a* engaged at opposite sides by studs 76 upstanding from floating plate 77 which rests upon the arm 78 pivoted at 79 and connected at its other end to the rear end of lever 72. The fixed collar has an outstanding lug 73*a* to which one end of a link 80 is pivoted, the other end of the link being connected by a member 52*a* of the linkage 52 to the operating shaft 51 (Figure 7).

In the disengaged position of the clutch, as seen in Figure 12, the sliding collar 74 is moved away from the fixed collar 73 with the result that during downward movement of link 52*a* arising out of the depression of key *k*, link 80 swings freely about its pivot on lug 73*a* into the dotted line position and consequently no turning motion is imparted to the spindle 54. When the sliding collar 74 is moved towards the fixed collar 73 as shown in Figure 13, so that the periphery of the sliding collar comes beneath the intermediate portion of link 80, and the link 52*a* is depressed, then the fixed collar will be turned in the direction of the arrow by co-operation of link 80 with the lug 73*a* and thus turn the spindle 54.

To ensure maintained engagement of the intermediate portion of the link 80 with the sliding collar 74 when the latter is in the clutched position, a second peripheral groove 74*b* may be formed in the sliding collar so as to register with the adjacent portion of the link 80.

It will be appreciated from the foregoing that with the clutch 53 disengaged, the operator by vertical adjustment of platen P between the successive striking of the same key, or different keys, of the key board K can produce markings in vertical alignment or vertical continuity upon the paper.

Referring now to transversing action (*d*) of the carriage, (i. e. back spacing), this may be brought about by manipulation of lever 83 in the direction of the arrow in Figure 6 which turns shaft 84 and moves link 85 to the right which, in turn, causes spindle 86 to be turned in the direction of the arrow. This action, through medium of arm 87, moves link 88 in the direction of the arrow. Link 88 has a pin and slot connection 89 with bracket 90 secured to a toothed rack assembly 91 slidably supported upon a rod 92. This rod carries a collar 93 between which and the adjacent end of the rack assembly is a coiled spring 94.

The shaft 86 carries a collar 96 from which projects an arm 97 which has supported thereon a yoke 98 connected at its remote extremity by link 99 to a second rotary frame 100. This rotary frame is mounted upon the rod 92 by means of collars 101. This frame will rotate in the direction of the arrows shown in Figure 6 and depress a spring influenced detent member 102 pivoted on the carriage bar 39 so that it engages with the rack assembly 91. The arm 97 is resiliently connected as by spring 103 to yoke 98 for the purpose of relieving detent member 102 of excess pressure which might otherwise arise from pull on lever 83, it being understood that once member 102 is engaged in the rack 91, the latter is traversed and takes the carriage bar and carriage with it. Continued movement of arm 97 is compensated by expansion of spring 103.

The operation of the escapement device 63 in the carriage housing has previously been described and it will be appreciated that when the back space lever 83 is operated, the carriage is accordingly traversed and the extent of the traversing movement is governed by the pitch of the ratchet wheel 64, one tooth only being released by the respective pawl. In Figure 6, a portion only of the escapement device is shown and is displaced lengthwise along shaft 66 for convenience of illustration.

When the back space lever is released, it and all parts actuated thereby will return to the normal position under influence of spring 107, the detent member 102 being withdrawn by its associated spring from rack 91.

An adjustable stop 106 is associated with back space lever 83 in order to limit its outward movement.

In order to obtain traversing action (*e*) so that the carriage C may be quickly traversed in either direction, control member 111 (Figures 3 and 7) is actuated as by being depressed against spring influence in order to operate upon the ratchet pawl of the escapement device 63 and throw the latter out of action. With the parts in that condition, it will be apparent that there

is no restraint upon traversing movement of the carriage so that it may be quickly moved to the left by hand pressure supplemented by the pull of the spring tension pulleys 65, or to the right by hand operation against the pull of pulleys 65. Manual traversing of the carriage may be facilitated by providing it with a suitably shaped and disposed hand grip 112 somewhat as indicated in Figure 3.

The inked ribbon R may, as in conventional typewriting machines, be coiled at opposite ends around two spools 113 (Figure 1) suitably supported at opposite sides of the machine, the ribbon being guided by guide rollers 114. Automatic feeding of the ribbon may be effected by connecting the spindle of one of the reels 113 (Figure 7) by linkage 116 to shaft 51.

If desired, provision may be made for progressively inking the ribbon by causing it to pass between ink impregnated felt or like covered rollers (not shown).

Any suitable means may be provided to automatically raise that portion of the ribbon through which the typing impressions are made, simultaneously with depression of the keys *k* of the key board K. Thus, as will be apparent from Figure 7, shaft 51 is connected by linkage 117 to shaft 118 having an outstanding arm 119 engaging a finger projecting from the lower extremity of a vertically reciprocable fork member 120, between the prongs of which the ribbon travels.

Stave lines may be produced by repeated operation of a suitable key on the keyboard K, but, for the purposes of speed, it is preferred that such lines should be produced by a printing roller 120 (Figures 9 and 11) arranged about a vertical axis and having a set or sets of five appropriately spaced circumferential peaks which bear by spring pressure against an inking roller or pad 121 at one side and, at the other side, bear against the face of the paper A (Figure 11). Thus, with traversing action (e), continuous stave lines can be produced with the utmost speed, clarity and uniformity.

The stave lines producing device 120, 121, may be mounted upon a member 122 carried by a rod 123 having a portion 123*a* pivoted to a bracket 124, which itself is pivotally retained to a suitable stationary part 126, so that when not required for use the device may be swung into an out of the way position as indicated by dotted lines in Figure 9.

The bank of fingers B may be arranged in approximately semi-circular formation as indicated in Figure 1, and the fingers are adapted through the linkage L individually to strike through ribbon R onto the paper. Such linkage may be of conventional form as embodied in typewriting machines and therefore does not call for detailed description but can readily be seen in Figure 7 as connected to rod 44 operated by one of the Keys *k* of the keyboard K.

According to the embodiment illustrated in Figures 9 and 10 each finger 131 is of well known kind having a variable striking head 132, either symbol (*a*) (*b*) of which may be brought into operative condition by appropriate movement of a semi-circular member 133 which is common to all of the striking heads. A control lever for actuating member 133 is diagrammatically indicated at 134. As will appear from Figure 9, symbol (*b*) is in a condition for striking, whereas in Figure 10 the finger 131 is assumed to be moving inwardly in order that symbol (*a*) will strike.

In order to indicate to the operator the position at which any symbol will be produced upon the paper, an indicator, advantageously in the form of a strip 136 of transparent material may be pivoted as at 137 and provided near one end with an arrow or like marking 138, which, when the indicator has been swung into operative position, will be located in vertical alignment with the zone of impression or striking.

A new and preferred form of variable striking head which permits of co-operation with a "Vee" guide is illustrated in Figures 14 and 15, according to which each striking head 141 is provided with three symbols, *x*, *y* and *z*, and provision is made whereby the head can be selectively adjusted to bring any one of the symbols into operative condition. Each finger 142 is pivoted at its outer end to a bearing bracket 143, and the respective striking head is pivoted as at 144 to the outer end of the finger which co-operates with "Vee" guide 146 attached to supporting plate 147 for the bank of fingers represented at B*a*.

Striking head 141 is normally retained in the "*x*" striking position by means of spring 151 and by limit stop 152. When it is desired to adjust the head into the "*y*" striking position, control member 153, shown as a vertically reciprocable arm, is lowered from the normal position, indicated by dotted lines in Figure 15, into the unbroken line position and, in so doing, engages a roller 154 projecting from the striking head and causes the latter to be turned about its pivot 144 so that symbol "*y*" comes into the striking position. To bring symbol "*z*" into the striking position, downward movement of control member 153 is continued to the position indicated by chain lines in Figure 15, stop 156 preventing turning of the head beyond the "*z*" position.

The control member 153 may be conveniently actuated by lever 157 pivoted to plate 147 and terminating in an index pointer 157*a* associated with scale markings corresponding to the striking positions of head 141.

Figure 16 illustrates by way of example, some possible ways of producing continuous inclined markings in a simple and convenient manner. Thus assuming that one of the symbols is an inclined line 161 of the height of two spaces of the stave, then to obtain a precise downward continuation of the marking, the platen would be traversed one space to the left and raised two spaces, whereupon the same key would be again actuated to give the desired result as indicated by broken lines. For inclined markings 162 of lesser angles, the platen would be traversed two spaces to the left and raised two spaces between consecutive actuations of the same key. Other possibilities as to the production of different inclined markings will be apparent from the lines indicated at 163, 164, 165 and 166.

Figure 16 also depicts a diminuendo sign 167 that may be produced by swivelling the platen P from its normal position followed by repeated markings of a horizontal line symbol.

Figures 17, 18 and 19 relate to a preferred platen assembly which enables rapid vertical adjustment of the platen from treble (upper) to bass (lower) staves and vice-versa without having to operate shift lever 14. According thereto the platen P itself is carried by a rectangular frame 171 (Figure 17) which is adjustable vertically in a carrier 172 (Figure 18) which may be swivel connected to back plate 3 by elements 22, 23, 24, 25 and 26 similar to those described with refer-

ence to Figures 3 and 4. The slotted rollers 2 for supporting the paper are mounted at the bottom and top of the platen frame 171.

In Figure 19 the platen and its frame are shown in a lowered position within the carrier 172 in which condition music will be written in or adjacent the treble stave. To change over to the base stave it is merely necessary to raise the platen by upward movement of finger piece 173 attached to the platen. A trip lever 174 is pivoted to finger piece 173 and is connected with a spring 176 which tends to pull the trip lever away from the finger piece. The trip lever extends through a slot 177 in the carrier 172. When the platen reaches its raised (base) position, the trip lever is freed from slot 177 and is moved sidewise, against stop 178, so that its lower extremity rests upon the top of the carrier, thereby maintaining the platen in the raised position.

To permit lowering of the platen, the operator merely applies side pressure against the trip lever 174 so that it may re-enter slot 177, downward movement of the platen being limited by the lower part of the frame 171 contacting with the carrier.

It will be apparent from the foregoing that I have produced a machine, by which music can be written in a most expeditious and convenient manner without imposing any undue strain upon the operator and without requiring any special skill on his or her part.

A particular advantage is the ease by which the platen can be vertically adjusted into predetermined positions by the shift lever 14, and the visibility afforded by the scale device S. In this connection, it may be mentioned that greater convenience will be obtained if the markings denoting stave lines (at the left of Figure 8) are displayed in white upon a black or dark background and the markings denoting spaces at the right are displayed in black upon a white background.

For similar reasons, the strips 17 at the left may be coloured white and those at the right coloured black.

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

1. In a music writing machine, a platen for supporting paper to be written upon, and means for vertically adjusting the platen into predetermined positions including a scale or indicator device having upstanding laterally spaced bars providing a continuous pathway between them, the adjacent or inner faces of the bars having staggered horizontal slots spaced apart in conformity with the lines and the intervening

spaces of a musical stave, a lever adapted to be moved with a swinging motion lengthwise through said pathway and having capacity for limited sidewise movement into any of said slots, and operative connections for translating said swinging motion of the lever into vertical movement of said platen.

2. In a music writing machine, a combination according to claim 1, wherein said operative connections extend between said lever and a vertically adjustable frame by which said platen is carried.

3. In a music writing machine, a combination as claimed in claim 1, wherein said operative connections comprise an arm having a pivotal connection about a vertical axis to the rear end of said lever, said arm outstanding from and turning with a transverse shaft which is connected at each end to opposite sides of a vertically adjustable frame by which said platen is carried.

4. In a music writing machine, a combination according to claim 1 and including secondary means operable independently of said swinging lever for rapid vertical adjustment of said platen into corresponding positions of upper (treble) and lower (bass) staves, said secondary means including a frame in which said platen is mounted, a carrier in which said frame and platen are vertically slidable through a distance corresponding to the spacing of the staves, and trip mechanism for retaining said frame and platen in a raised position in relation to said carrier.

5. In a music writing machine, a combination according to claim 1, and including secondary means operable independently of said swinging lever for rapid vertical adjustment of said platen into corresponding positions of upper (treble) and lower (bass) staves.

JAMES MURRAY PARKER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
650,447	Beals	May 29, 1900
661,097	Winn	Nov. 6, 1900
1,001,359	Crowell	Aug. 22, 1911
1,073,976	Fortoni	Sept. 23, 1913
2,103,668	Fowler	Dec. 28, 1937

FOREIGN PATENTS

Number	Country	Date
392,820	France	of 1908