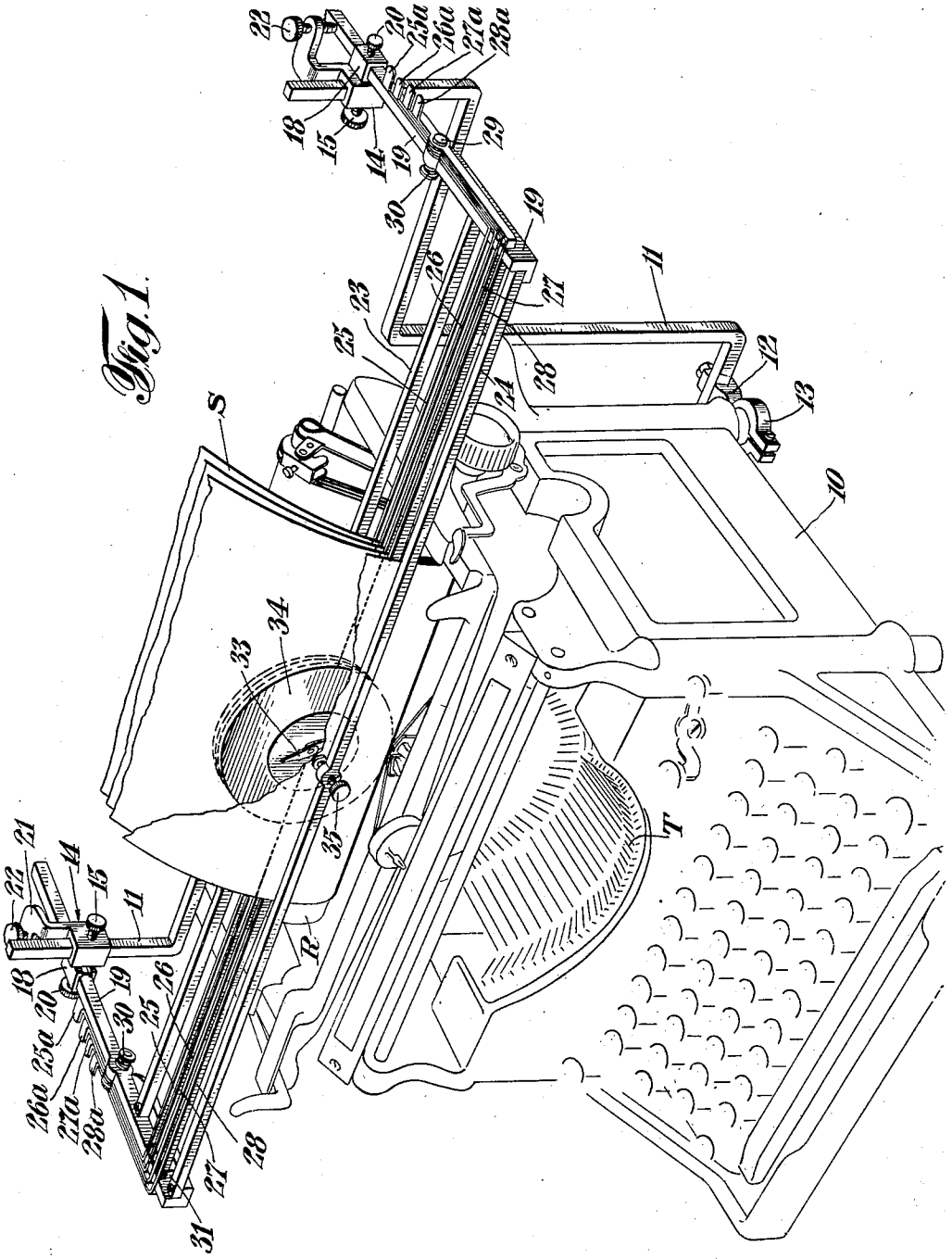
May 15, 1934. L. C. ANTRIM 1,958,688

ATTACHMENT FOR TYPEWRITERS

Original Filed Nov. 29, 1929 2 Sheets-Sheet 1

Fig. 1.

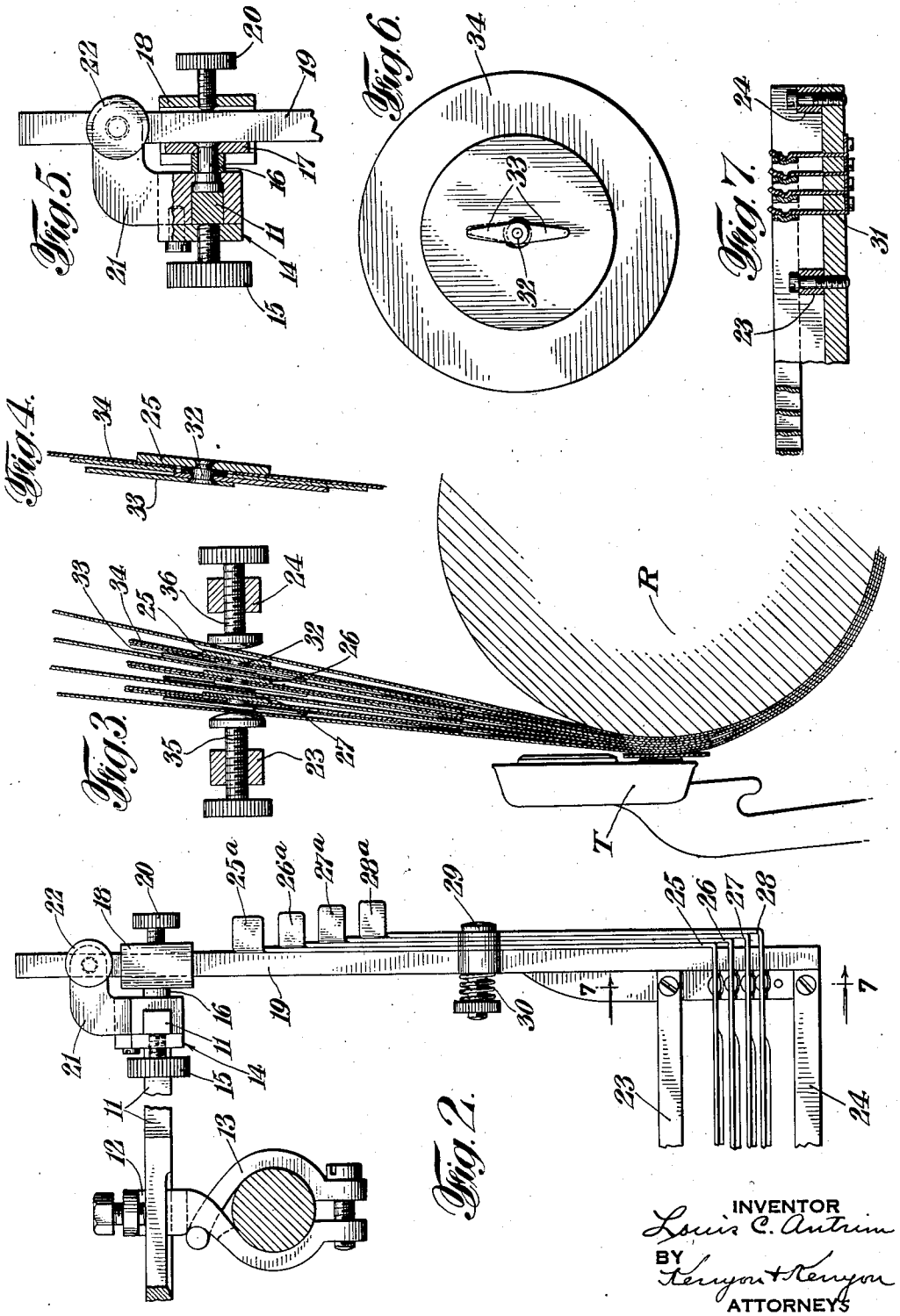


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ATTORNEYS.

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UNITED STATES PATENT OFFICE

1,958,688

ATTACHMENT FOR TYPEWRITERS

Louis C. Antrim, Springfield Gardens, N. Y.

Application November 29, 1929, Serial No. 410,477
Renewed October 6, 1933

32 Claims. (Cl. 197—126)

This invention relates to attachments for typewriters or the like.

In many instances, invoice forms, order blanks and the like are printed in long strips with perforated lines between successive blanks. Several of these strips, one for the ribbon copy and the rest for carbon copies are fed through the typewriter together. After the desired data has been typed on a set of forms or blanks, the strips are advanced by turning the roller in the usual manner to bring a new set into typing position. The completed set is then torn off. Heretofore, it has been customary to insert transfer or carbon paper between the blanks and to remove the same after the typing of the forms has been completed. The insertion and removal of the carbon paper generally has consumed as much or nearly as much of the typists time as is necessary for the actual typing of the forms.

An object of this invention is a typewriter attachment constituting a support for holding transfer or copying members between the strips and permitting advancement of the strip without corresponding movement of the copying members. This invention overcomes the difficulties above referred to inasmuch as it obviates the manual insertion and removal of carbon paper. When the strips are advanced to the position for tearing off the finished set of forms, the next set of forms is automatically brought into proper relation to the transfer members and the typing mechanism of the machine and the typed forms, as they are torn off, slide over and are separated from the copying members. Preferably, the copying members are in the form of disks rotatably supported above the roller by means of fixed pins. The edges of the disks extend below the ribbon and are caused to rotate upon movement of the carriage due to the frictional contact between the paper and the disks. In this way, the copying disk is rotated between the successive blows of the type, thus utilizing a substantial arc of the copying member and distributing the wear.

Other objects, novel features and advantages of the invention will be apparent from the following specification and accompanying drawings, wherein:

Fig. 1 is a perspective view of a typewriter equipped with the attachment.

Fig. 2 is a plan view partially broken away.

Fig. 3 is an enlarged partial vertical section through the transfer members.

Fig. 4 is a still further enlarged section through a single transfer member.

Fig. 5 is an enlarged detail partially in section.

Fig. 6 is a face view of a copying member, and

Fig. 7 is a section on the line 7—7 of Fig. 2.

The typewriter 10 is of any standard type having swinging type bars and a traveling carriage provided with the usual roller. At the rear of the typewriter there is provided a bar 11 which is supported by clamps 12 having portions 13 surrounding and gripping the rear feet of the typewriter. The portions 13 are so designed as to be capable of gripping feet of different sizes, so that the attachment may be used with different makes of typewriters. The rods 11 are made with vertical portions rising near the ends of the typewriter frame, horizontal portions extending lengthwise and terminating in further vertical portions. On the last named vertical portions are provided vertically adjustable clamping members 14 which are held in adjusted position by screws 15. Each clamping member is provided with a pivot 16 which is provided with a head 17. The head 17 fits within a slotted tubular member 18 which also receives a horizontal bar 19. The horizontal bar 19 is slidable in the tubular member 18 toward the front and back with relation to the rod 11 and the typewriter and is held in any desired position by the screw 20. The member 14 is provided with a bracket 21 in which is threaded a screw 22, the lower end of which engages the rear end of the bar 19 and limits its upward movement, and this determines the limit of downward movement of the front end of the bar 19.

The front ends of the bars 19 are connected by longitudinal rods 23 and 24 to form a frame. This frame may be adjusted vertically or horizontally by proper manipulation of the clamping members 14 and also may be swung about the pivots 16 as centers upwardly and entirely away from operative position. A plurality of bails 25, 26, 27 and 28 are supported by pivots 29 provided with friction producing springs 30. The bails are equipped with buttons or keys 25*a*, 26*a*, 27*a* and 28*a* by means of which they may be swung individually about their pivots upwardly and away from operative position. The bars 19 are provided with slots within which the bails are received and in which there are provided springs 31 forming detents for impositively holding the bails in the slots and in operative position. Each bail is provided at its midpoint with a stud 32 having arms 33 pivotally attached to the end thereof.

The transfer or copying members comprise disks 34 of carbon paper or the like which are reinforced centrally with disks of stiff material,

preferably thick paper. A transfer disk is mounted on each stud 32 and is held in place by the arms 33. When a carbon disk is to be placed or removed from a pin, the arms 33 are made to coincide and the disk is slipped over them. With a disk in position, the arms are arranged in the position shown in Fig. 6 to prevent accidental removal thereof. The transfer disks are of such diameter and the studs 32 are so located above the printing point that the periphery thereof extends below the printing point of the type T and platen R. The longitudinal sections of the bails are preferably inclined to each other so that the transfer disks converge downwardly.

A typewriter equipped with this atttachment is adapted more particularly for the typing of invoices, orders and the like on blank forms arrangerd in long strips with lines of perforations separating successive blanks. These strips are fed into typing position around and by means of the platen R and the transfer disks are arranged between successive strips. When the strips are being introduced into the machine, the transfer disks may be supported above their normal position, this being effected by pressing on the buttons to elevate the bails. Also, the bails may be raised to this position when it is desired to change the transfer disks. Assuming that the disks are in the position shown in Figs. 1 and 3, the typewriter is operated in the normal manner. As the carriage moves from right to left, the transfer disks are caused to rotate due to the friction produced traction between the paper and the disks, thus bringing successively adjacent segments of the transfer disks into the printing point and in operative relation to the type. Likewise on the return movement of the carriage, the disks are rotated in the opposite direction. After a disk has become worn so that it no longer gives a distinct impression, a fresh surface of the disk may be brought into operative position merely by grasping the disk and rotating the same through an arc of 180° more or less depending on the average length of the lines of writing. Also, fresh annular sections of the transfer disks may be brought into operation by adjusting the screw 22. Adjustment of this screw will elevate or depress the frame comprising the bars 19, 23 and 24 and thus raise or lower en bloc the carrier bars 26 and the supporting points of the disks.

After one set of blanks has been typed, the strips of paper are advanced by rotating the platen or other feed mechanism until the transverse perforations between sheet lengths are substantially in alignment with the bails or at least above the line of writing. The top edges of the strips are then gripped and the typed set of blanks torn off. The next set of blanks is now in position to be typed with the transfer disks in position. Also the set of typed blanks is free from carbon paper. No time is lose by reason of inserting or removing transfer paper. The manual insertion and removal of transfer paper is entirely eliminated.

Screws 35 and 36 are threaded in the longitudinal rods 23 and 24. The inner ends of these screws engage the outer strips of paper to hold the same against the carbon disks and act as a guide for the strips. The entire frame and the carbon carriers 26 may be swung en bloc about the pivots 16 upwardly and out of the way, thus making it possible to use the typewriter in the ordinary way. This feature makes it possible to change from one kind of work to another, such as from continuous billing to letter writing without delay or any rearrangement of the parts of the machine.

It will be noted that the bails or carbon carriers 26 are so arranged that the transfer disks 34 extend substantially tangentially to the platen at the line of writing, and that the peripheries of the transfer disks are located in close proximity to the line of writing. By this arrangement, smudging of the worksheets by the relative arcuate movement between the carbon disks 34 and the worksheets as the platen R travels is avoided.

The brackets 14 which contain the screws 22 are so shaped that when the frame, comprising the arms 19 and the transverse bars 23 and 24 and the transfer disk carrying bails 25, is swung upwardly, portions of the bars 19 will engage the offset portions of the brackets 14 and hold the frame inclined slightly rearwardly out of the way, so that the typewriter may be used without the carbon disks or their supporting means interfering with the free access to the platen.

It is to be understood that the word "typewriter" is used in the specification and claims to mean any form of machine which produces an impression on paper by means of the impact of a type member against an inking member and includes in addition to the standard typewriter, accounting machines, billing machines and the like. Moreover, it is apparent that various modifications may be made in the structure above described, without in any way departing from the spirit of the invention as defined in the appended claims.

I claim:

1. In a typewriting machine, a platen; type mechanism; a transfer disk; and means for supporting said transfer disk between worksheets superposed on the platen for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing.

2. In a typewriting machine, a platen; type mechanism; a transfer disk; means for supporting said transfer disk between worksheets superposed on the platen for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; an adjustable frame carrying said means in predetermined relation thereto; and a pivotal connection between said frame and said means to permit the means to be removed temporarily from the line of writing without disturbing the position of said adjustable frame.

3. In a typewriting machine, a platen; type mechanism; a transfer disk; means for supporting said transfer disk between worksheets superposed on the platen for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said worksheets in the line of writ-

ing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; an adjustable frame carrying said means in predetermined relation thereto; a pivotal connection between said frame and said means to permit the means to be removed temporarily from the line of writing without disturbing the position of said adjustable frame; and a detent for holding said means in said predetermined relation to said adjustable frame.

4. In a typewriting machine, a platen; type mechanism; a transfer disk; means for supporting said transfer disk between worksheets superposed on the platen for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a fixed support; a frame mounted on said support and carrying said means; a pivotal connection between the frame and said fixed support; and means for moving the frame on said pivotal connection relative to the said fixed support to change the position of the frame and transfer disk and supporting means therefor relative to the platen.

5. In a typewriting machine, a platen; type mechanism; a transfer disk; means for supporting said transfer disk between worksheets superposed on the platen for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a fixed support; a frame mounted on said support and carrying said means; a pivotal connection between the frame and said fixed support; means for moving the frame on said pivotal connection relative to the said fixed support to change the position of the frame and transfer disk and supporting means therefor relative to the platen; and a pivotal connection between the frame and the transfer disk supporting means about which the latter may be swung to remove temporarily the transfer disk from the line of writing without changing the position of said frame relative to its said support.

6. In a typewriting machine, a platen; type mechanism; a transfer disk; means for supporting said transfer disk between worksheets superposed on the platen for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a fixed support; a frame mounted on said support and carrying said means; a pivotal connection between the frame and said fixed support; and means for moving the frame on said pivotal connection relative to the said fixed support to change the position of the frame and transfer disk and supporting means therefor relative to the platen, said fixed support comprising a vertically adjustable member whereby the frame and the means carrying the transfer disk may be adjusted vertically with relation to the platen.

7. In a typewriting machine, a platen for supporting a plurality of worksheets; type mechanism; a plurality of transfer disks; and a separate carrier for each transfer disk, one carrier between each adjacent pair of worksheets, each transfer disk being mounted on its carrier for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said pair of worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing.

8. In a typewriting machine, a platen for supporting a plurality of worksheets; type mechanism; a plurality of transfer disks; a separate carrier for each transfer disk, one carrier between each adjacent pair of worksheets, each transfer disk being mounted on its carrier for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said pair of worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; an adjustable frame supporting said carriers in predetermined relative positions thereto; and a pivotal connection about which each carrier may be swung on said frame to permit a carrier and its transfer disk to be removed from the line of writing without disturbing the other carriers or the position of the adjustable frame.

9. In a typewriting machine, a platen for supporting a plurality of worksheets; type mechanism; a plurality of transfer disks; a separate carrier for each transfer disk, one carrier between each adjacent pair of worksheets, each transfer disk being mounted on its carrier for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said pair of worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; an adjustable frame supporting said carriers in predetermined relative positions thereto; a pivotal connection about which each carrier may be swung on said frame to permit a carrier and its transfer disk to be removed from the line of writing without disturbing the other carriers or the position of the adjustable frame; and detents for holding the carriers in operative position relative to the frame.

10. In a typewriting machine, a platen for supporting a plurality of worksheets; type mechanism; a plurality of transfer disks; a separate carrier for each transfer disk, one carrier between each adjacent pair of worksheets, each transfer disk being mounted on its carrier for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said pair of work-

sheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a frame supporting said carriers in predetermined relative positions thereto; and a pivotal connection about which each carrier may be swung on said frame to permit a carrier and its transfer disk to be removed from the line of writing without disturbing the other carriers.

11. In a typewriting machine, a platen for supporting a plurality of worksheets; type mechanism; a plurality of transfer disks; a separate carrier for each transfer disk, one carrier between each adjacent pair of worksheets, each transfer disk being mounted on its carrier for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said pair of worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a frame supporting said carriers in predetermined relative positions thereto; a pivotal connection about which each carrier may be swung on said frame to permit a carrier and its transfer disk to be removed from the line of writing without disturbing the other carriers; and a finger-piece on each carrier by means of which it may be manipulated.

12. In a typewriting machine, a platen for supporting a plurality of worksheets; type mechanism; a plurality of transfer disks; a separate carrier for each transfer disk, one carrier between each adjacent pair of worksheets, each transfer disk being mounted on its carrier for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said pair of worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a fixed support in normally fixed position; a frame mounted on said support and supporting said carriers; a pivotal connection between the frame and the fixed support; and means for adjusting the frame and the plurality of carriers supported thereby en bloc to change the position of the same relative to the platen.

13. In a typewriting machine, a platen for supporting a plurality of worksheets; type mechanism; a plurality of transfer disks; a separate carrier for each transfer disk, one carrier between each adjacent pair of worksheets, each transfer disk being mounted on its carrier for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said pair of worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a fixed support in normally fixed position; a frame mounted on said support and supporting said carriers; a pivotal connection between the frame and the fixed support; means for adjusting the frame and the plurality of carriers supported thereby en bloc to change the position of the same relative to the platen; and a pivotal connection between each carrier and the frame to permit each carrier and its carbon disk to be removed temporarily from the line of writing without changing the position of said frame relative to its said support.

14. In a typewriting machine, a platen for supporting a plurality of worksheets; type mechanism; a plurality of transfer disks; a separate carrier for each transfer disk, one carrier between each adjacent pair of worksheets, each transfer disk being mounted on its carrier for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said pair of worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a fixed support in normally fixed position; a frame mounted on said support and supporting said carriers; a pivotal connection between the frame and the fixed support; and means for adjusting the frame and the plurality of carriers supported thereby en bloc to change the position of the same relative to the platen, said fixed support comprising a vertically adjustable member carrying the frame whereby the frame and the carriers and the transfer disks carried thereby may be adjusted en bloc vertically with relation to the platen.

15. In a typewriting machine, a platen for supporting a plurality of worksheets; type mechanism; a plurality of transfer disks; a separate carrier for each transfer disk, one carrier between each adjacent pair of worksheets, each transfer disk being mounted on its carrier for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said pair of worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a frame supporting said carriers in predetermined relative positions thereto; a pivotal connection about which each carrier may be swung on said frame to permit a carrier and its transfer disk to be removed from the line of writing without disturbing the other carriers; a relatively fixed support; and a pivotal connection between the frame and the relatively fixed support about which the frame and the transfer disk carriers may be swung en bloc upwardly and away from the platen out of operative position relative to the platen.

16. In a typewriting machine, a platen; type mechanism; a transfer disk; means for supporting said transfer disk between worksheets superposed on the platen for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a fixed support; a frame mounted on said support and carrying said means; a pivotal con-

nection between the frame and said fixed support; and means for limiting the downward movement of the frame and the means carrying the transfer disk toward the line of writing so as to control the position of the annular margin of the transfer disk relative to the line of writing.

17. In a typewriting machine, a platen for supporting a plurality of worksheets; type mechanism; a plurality of transfer disks; a separate carrier for each transfer disk, one carrier between each adjacent pair of worksheets, each transfer disk being mounted on its carrier for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said pair of worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a fixed support in normally fixed position; a frame mounted on said support and supporting said carriers; a pivotal connection between the frame and the fixed support; means for adjusting the frame and the plurality of carriers supported thereby en bloc to change the position of the same relative to the platen; and means for adjusting the frame horizontally, forwardly and backwardly with relation to the support to shift the transfer disks and the frame en bloc relatively to the platen.

18. In a typewriting machine, a platen for supporting a plurality of worksheets; type mechanism; a plurality of transfer disks; a separate carrier for each transfer disk, one carrier between each adjacent pair of worksheets, each transfer disk being mounted on its carrier for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said pair of worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a frame supporting said carriers in predetermined relative positions thereto; a pivotal connection about which each carrier may be swung on said frame to permit a carrier and its transfer disk to be removed from the line of writing without disturbing the other carriers; a relatively fixed support; a pivotal connection between the frame and the relatively fixed support about which the frame and the transfer disk carriers may be swung en bloc upwardly and away from the platen out of operative position relative to the platen; and means on the fixed support for engaging the frame when swung upwardly away from the platen to support the frame in substantially vertical position.

19. In a typewriting machine, a platen; type mechanism; a transfer disk; means for supporting said transfer disk between worksheets superposed on the platen for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a fixed support; a frame mounted on said support, and carrying said means; a pivotal connection between the frame and said fixed support; means for limiting the downward movement of the frame and the means carrying the transfer disk toward the line of writing so as to control the position of the annular margin of the transfer disk relative to the line of writing; and adjustable means for limiting the downward movement of the frame and the means carrying the transfer disk toward the line of writing so as to vary the position of the transfer disk relative to the line of writing and permit different concentric annular portions of the transfer disk to be utilized.

20. In a typewriting machine, a platen; type mechanism; a transfer disk; means for supporting said transfer disk between worksheets superposed on the platen for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a fixed support; a frame mounted on said support and carrying said means; and means for adjusting the frame horizontally, forwardly and backwardly with relation to said support to locate the transfer disk in desired position relative to the platen.

21. In a typewriting machine, a platen; type mechanism; a transfer disk; means for supporting said transfer disk between worksheets superposed on the platen for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a fixed support; a frame mounted on said support and carrying said means; and means for adjusting the frame vertically relative to the support to locate the frame and the transfer disk and supporting means therefor in desired position relative to the platen.

22. In a typewriting machine, a platen; type mechanism; a transfer disk; means for supporting said transfer disk between worksheets superposed on the platen for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a fixed support; a frame mounted on said support and carrying said means; and means for adjusting the frame and the transfer disk supporting means vertically and horizontally with relation to the support to cause different annular bands on the transfer disks to be located in the line of writing.

23. In a typewriting machine, a platen; type mechanism; a transfer disk; means for supporting said transfer disk between worksheets superposed on the platen for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll

between said worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a fixed support; a frame mounted on said support and carrying said means; and means for adjusting the frame relative to said support to change the position of the frame and transfer disk and supporting means therefor relative to the platen.

24. In a typewriting machine, a platen; type mechanism; a transfer disk; means for supporting said transfer disk between worksheets superposed on the platen for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a fixed support; a frame mounted on said support and carrying said means; a pivotal connection between the frame and said fixed support; and means for moving the frame on said pivotal connection relative to the said fixed support to change the position of the frame and transfer disk and supporting means therefor relative to the platen, said fixed support comprising a member engaging the frame and with relation to which the frame may be adjusted horizontally, forwardly and backwardly of the platen.

25. In a typewriting machine, a platen; type mechanism; a transfer disk; means for supporting said transfer disk between worksheets superposed on the platen for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a fixed support; a frame mounted on said support and carrying said means; a pivotal connection between the frame and said fixed support; and means for moving the frame on said pivotal connection relative to the said fixed support to change the position of the frame and transfer disk and supporting means therefor relative to the platen, said fixed support comprising a vertically adjustable member whereby the frame and the means carrying the transfer disk may be adjusted vertically with relation to the platen, and also comprising a member engaging the frame and with relation to which the frame may be adjusted horizontally, forwardly and backwardly of the platen.

26. In a typewriting machine, a platen; type mechanism; a transfer disk; a bar carrying said transfer disk, the transfer disk having a bearing aperture; a stud on the bar for receiving said bearing aperture and rotatably supporting the transfer disk; and a finger rising vertically from the outside of the stud for holding the transfer disk on the stud.

27. In a typewriting machine, a platen; type mechanism; a transfer disk; a bar carrying said transfer disk, the transfer disk having a bearing aperture; a stud on the bar for receiving said bearing aperture and rotatably supporting the transfer disk; and a pair of fingers on the outside of the stud for holding the transfer disk on the stud.

28. In a typewriting machine, a platen; type mechanism; a transfer disk; a bar carrying said transfer disk, the transfer disk having a bearing aperture; a stud on the bar for receiving said bearing aperture and rotatably supporting the transfer disk; and a pair of fingers on the outside of the stud for holding the transfer disk on the stud, at least one of said fingers being rotatably mounted on the stud and being movable to coincide with the other finger to permit the disk to be removed from the stud and to hold the disk on the stud against removal when they are located away from each other.

29. In a typewriting machine, a platen; type mechanism; a transfer disk; and means for supporting said transfer disk between worksheets superposed on the platen for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing, said means supporting the transfer disks in a plane substantially tangential to the platen at the writing line.

30. In a typewriting machine, a platen; type mechanism; a transfer disk; means for supporting said transfer disk between worksheets superposed on the platen for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a frame comprising a pair of arms extending parallel with the transfer disk supporting means, one arm in front of and one arm behind the worksheets; and means on said arms for holding the worksheet strips together.

31. In a typewriting machine, a platen; type mechanism; a transfer disk; means for supporting said transfer disk between worksheets superposed on the platen for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said worksheets in the line of writing thereof during the letter-space relative movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a frame for supporting said transfer disk carrying means comprising an arm extending parallel with the transfer carrying means and located in front of the worksheet strips; and means on the arm for engaging the worksheet in the vicinity of the transfer disks to keep the same from falling over forwardly.

32. In a typewriting machine, a platen; type mechanism; a transfer disk; means for supporting said transfer disk between worksheets superposed on the platen for rotation about an axis above the printing point of the type mechanism so that the annular margin of the disk will roll between said worksheets in the line of writing thereof during the letter-space relative

movement between the platen and the type mechanism as a result of the tractive engagement of the annular margin of the disk with the portion of the worksheets at or adjacent the line of writing; a frame for supporting said transfer disk carrying means comprising an arm extending parallel with the transfer disk carrying means and located behind the worksheet strips; and means for engaging the back worksheet strip in the vicinity of the transfer disks for holding the worksheets from falling over backwardly.

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