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COPY HOLDER

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FIG. 2

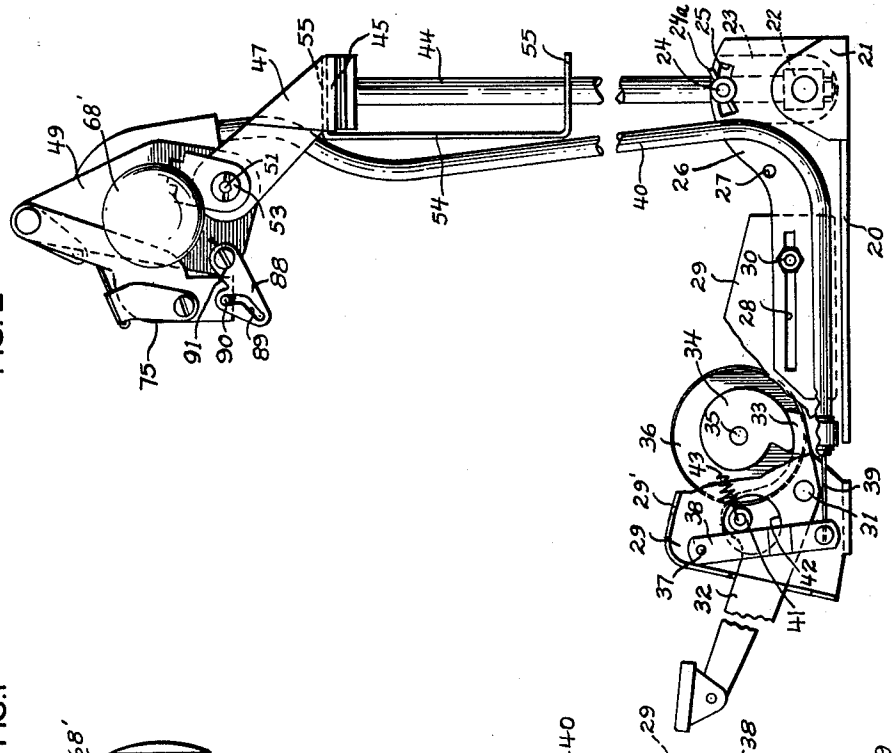
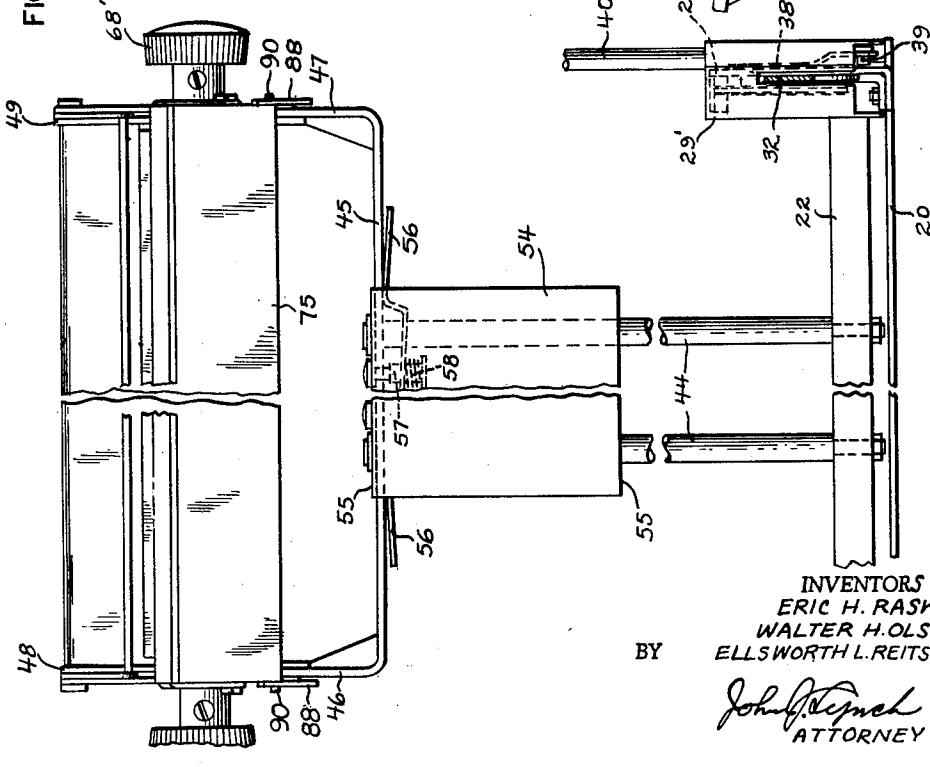


FIG. 1



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COPY HOLDER

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FIG.4

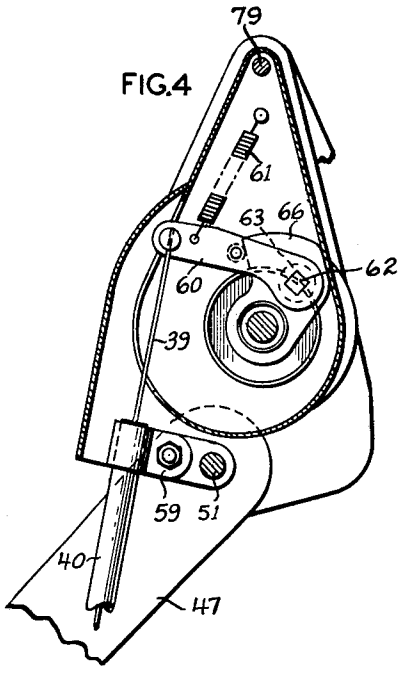


FIG.3

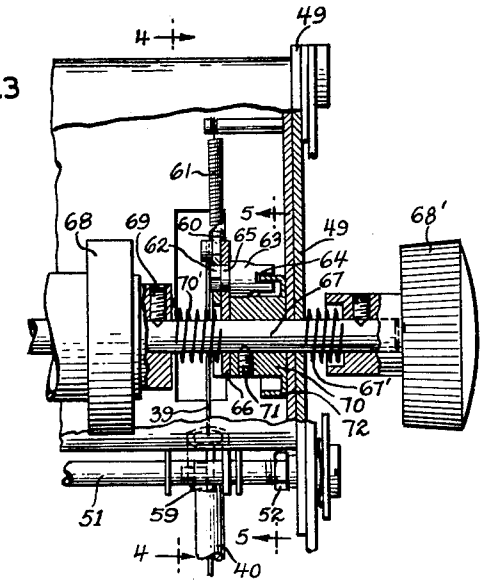


FIG.5

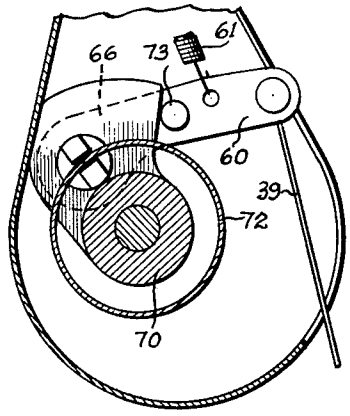
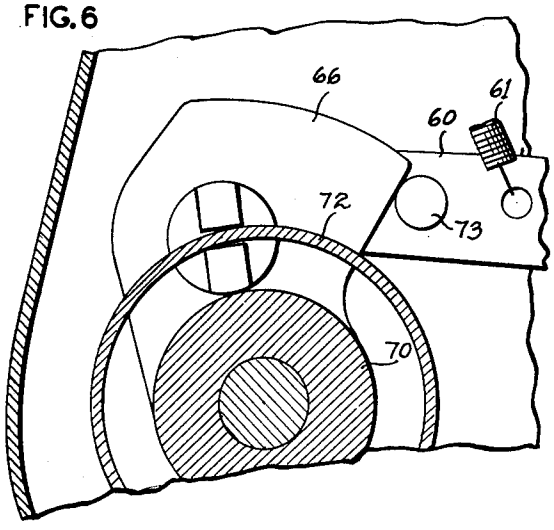


FIG.6



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COPY HOLDER

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FIG. 7

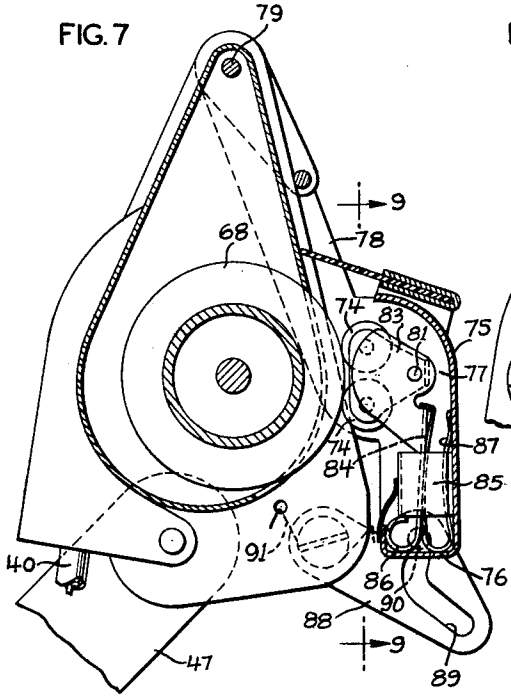


FIG. 8

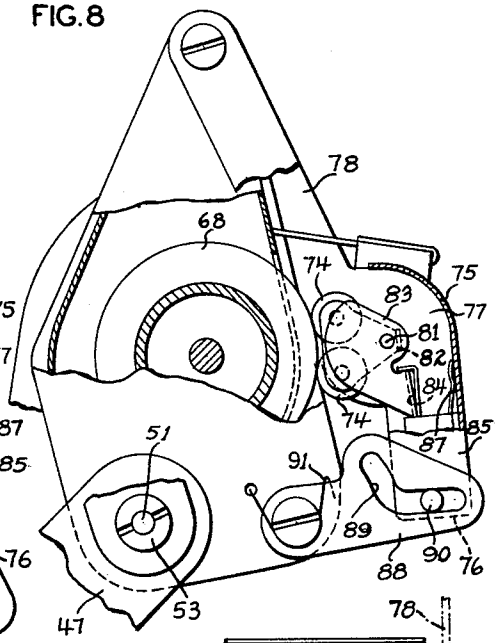


FIG. 9

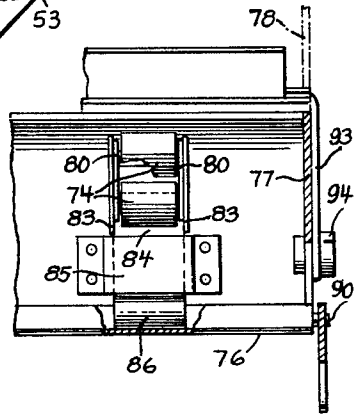


FIG. 10

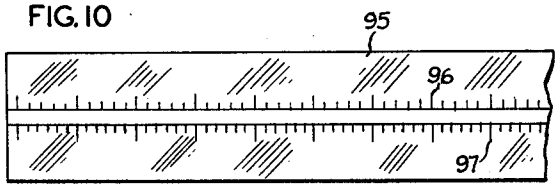
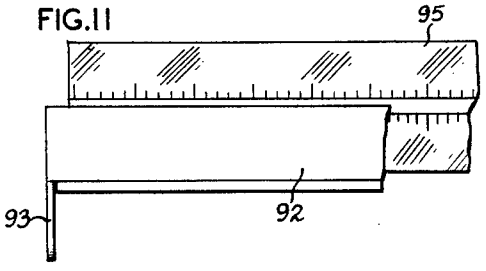


FIG. 11



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United States Patent Office 3,152,579 Patented Oct. 13, 1964

3,152,579
COPY HOLDER

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Original application June 27, 1958, Ser. No. 745,022, now Patent No. 2,956,545, dated Oct. 18, 1960. Divided and this application Feb. 17, 1960, Ser. No. 9,234
10 Claims. (Cl. 120—32)

This invention relates to new and useful improvements in copy holders especially those which are to be used in close association with a typewriter and operated by the typist.

The main object of the invention is to provide a copy holder which is simple in construction, efficient, economically manufactured, ornamental in appearance, permits wide variation in paper feed with substantially no back lash and is adaptable for use with paper sheets and stenographer's notebooks.

In brief and general terms, the invention comprises a stand including a base plate on which the rear portion of the typewriter rests. Upright legs extend from the base portion and support a casing in which is disposed a paper platen, a platen drive member, and a pressure roller housing.

This assembly is pivotally connected to the base so that it may be folded down substantially flat with the base for convenience in storing and shipping.

A manually operated lever is disposed on the base and is connected to operate a Bowden wire extending to the platen to operate a friction clutch mechanism to turn the platen without any back lash or lost motion. An adjustable cam associated with a hand wheel on the base may be adjusted to interrupt the depression of said lever so that the platen feed may be finely adjusted over a fairly wide range of movement.

The paper or the covers of a notebook may be pressed against the platen by pressure rollers disposed in a housing. This housing is pivoted and may assume two positions. The rollers are backed by springs and in one position of the roller casing the pressure of the rollers is normal and in another position thereof the pressure of the roller casing can be achieved by manipulation of it around a pivot axis and when it is moved to the position of greatest pressure simple latches automatically engage to hold it in this position. These latches can be readily released by the finger whereupon the roller casing springs back to said position wherein the pressure of the rollers is normal.

There is also provided a line guide plate having two scales thereon with different spacing and this guide is insertable in a slot in a pivoted housing to be moved close to the paper when in use. The guide may be removed and reversed to present the other scale to view when desired.

Simple means is also provided whereby the platen and drive assembly may be readily adjusted vertically on the upright legs as may be desired by the operator. The manual lever and cam assembly also may be adjusted easily to and from the operator's hand for her convenience.

The present preferred form which the invention may assume is illustrated in the drawings of which,

FIG. 1 is a partial front elevation of the device with parts broken away and some parts in section;

FIG. 2 is a side elevation with some parts broken away;

FIG. 3 is an enlarged partial longitudinal cross section showing the construction of the platen drive;

FIG. 4 is a vertical transverse section taken on the line 4—4 of FIG. 3.;

FIG. 5 is an enlarged vertical transverse section taken on line 5—5 of FIG. 3 showing the parts in normal position;

FIG. 6 is a section similar to FIG. 5, but enlarged, showing the parts in position to turn the platen;

FIG. 7 is a vertical transverse section enlarged to show the paper pressure rollers in a position of increased pressure;

FIG. 8 is a similar view showing the rollers in a position of reduced pressure;

FIG. 9 is a longitudinal section taken on the line 9—9 of FIG. 7;

FIG. 10 is a partial elevation of an improved line guide; and,

FIG. 11 is a partial elevation of the line guide in position in its holder.

This application is a division of application Serial No. 745,022 filed June 27, 1958, now Patent No. 2,956,545, October 18, 1960.

Referring to the drawings there is a base plate **20** which extends across the rear of the device and rests on a suitable support such as a typewriter table. At its ends this plate **20** has turned up flanges **21** acting as journals for a cross bar **22** disposed across and above the base plate **20**. On one end an elongate plate **23** is fixed to the bar **22** and has thereon a bolt **24** which extends through a slot **25** in a supporting plate **26** fixed to the base plate just inside the flange **21** as shown in FIG. 2 The bolt **24** has a wing nut **24***a* thereon whereby the position of the plate **23** may be adjusted as desired within the limits of the slot **25**. The supporting plate **26** has another hole **27** therein disposed along the arc of curvature of the slot **25** so that when the bolt **24** and the wing nut **24***a* are removed, the plate **23** with its associated elements may be swung down and the bolt and nut reengaged in the hole **27**. This will permit the upper portion of the copy holder to be folded down for convenience in shipping and packing.

Platen Feed Adjustment

The supporting plate **26** has a horizontal elongate slot **28** therein. Disposed alongside the supporting plate **26** and slidable on the base plate **20** is a bracket **29** having a bolt and nut connection **30** with the slot **28** so that the casing **29'** surrounding the bracket **29** can be adjusted back and forth for reasons later described. Pivoted on a shaft **31** within and between the walls of the casing **29'** is a lever **32**, preferably manipulated by the operator of the typewriter. The forward end **33** of this lever lies beneath a cam **34** fixed to a shaft **35** journalled between the side walls of the casing **29'**. A hand wheel **36** is fixed to the shaft **35** and its top portion extends slightly above the top of the casing through a slot (not shown) so that the operator may manipulate the wheel and thus position the cam **34**. The curvature of the cam is such that as it is turned by the wheel the front end of the lever **32** may be moved variable distances before being stopped by contact with the surface of the cam. Pivoted at **37** to a side wall of the bracket **29** is an arm **38** to the lower end of which is connected a Bowden wire **39** which then extends into and through a sheath **40** which extends upwardly towards a platen later described. The previously mentioned adjustment of the casing **29'** will permit the operator to position the forward end of the lever **32** most conveniently to her hand while seated at the typewriter. A stud **41** fixed to the side of the lever **32**, projects through an opening **42** in a wall of the bracket **29** and is adapted to bear against the adjacent edge of the arm **38**. A spring **43** is connected at one end to the stud **41** and at the other end to the bracket (not shown) to restore the lever **32** to normal position. It is clear that when the

lever 32 is depressed by the operator, the arm 38 is swung clockwise to pull the Bowden wire forward.

Paper Platen Support

Rising from the cross bar 22 and fixed thereto at their lower ends are two spaced rods 44 the upper ends of which pass through holes (not shown) in the base portion 45 of a U-shaped frame the legs of which 46 and 47 extend upwardly and forwardly as shown in FIG. 2. To the upper ends of these legs 46 and 47 are pivotally connected the side walls 48 and 49 of a casing which acts as a housing for a platen 50 and a drive mechanism for the platen subsequently described. As shown in FIG. 2, a tie rod 51 extends between the walls 48 and 49 of the casing and is threaded on each end and has a sleeve nut 52 adjustably disposed thereon to bear against the inner face of the walls 48 and 49. The rod extends through the walls and a tightening nut 53 (FIG. 8) is adjustable to hold the casing and its enclosed elements in any desired position on the legs 46 and 47.

In order to dispose the casing and the platen at the desired level, there is provided a U-shaped plate having a vertical base portion 54 and horizontal leg portions 55. These leg portions are apertured (not shown) to slide the plate up and down on the rods 44. The upper leg 55 is welded to the base frame portion 45. To latch the plate in a desired vertical position, latch plates 56 are apertured to receive the rods 44 and one end of each is apertured to slide on a stub shaft 57 and is normally held upwardly by a spring 58. In this normal position of the latch plates bite onto the rods 44 and hold the plate 54 in any desired position. When the other ends of the latch plates are pulled up by the operator's fingers the bite is removed and the plate 54 may be moved along the rods 44 to the desired position when the latch plates are released to assume their biting position.

Platen Operating Mechanism

The upper end of the sheath 40 (FIGS. 3 and 4) is clamped to the tie rod 51 by any suitable bracket clamp 59. The upper end of the wire 39 is connected to the outer end of an arm 60 which is pulled down when the lever 32 is depressed by the operator. A spring 61 is connected to the arm to restore the arm to normal position and to return the wire 39 to normal. The other end of the arm 60 is provided with an aperture into which fits the squared rear stem 62 of a bushing 63 the outer end of which has a slot 64 therein. Adjacent the squared portion of the stem 62 there is a circular portion 65 thereof which passes through an opening in a plate 66 which is freely rotatable on the shaft 67 of the copy holding platen 68. The platen 68 is fixed to the shaft 67 by a set screw 69. A block 70 is fixed to the platen shaft by a set screw 71. The right side of this block is provided with a circular cup-shaped flange 72 which passes through the slot 64 of the bushing 62. In the normal position of the parts shown in FIG. 5 the walls of the bushing slot are substantially tangent to the curvature of the flange 72. However when the Bowden wire is pulled down as described the bushing 63 is turned and the walls of the slot thereon bite against the flange 72 and turn it and with it the platen shaft to which the block 70 is fixed. The amount to which the shaft is thus turned depends upon the position of the cam 34 which has been pre-set by the operator. Referring to FIG. 3, it will be seen that there is a coiled spring 70' disposed around the shaft 67 between the end of the platen 68 and the plate 66 to hold the plate 66 firmly against the adjacent face of the block 70. There is also a coiled spring 67' around the shaft 67 between the outer face of the side wall 49 and the operating knob 68' on the outer end of the shaft 67. The spring 67' will tend to keep the entire assembly associated with the shaft 67 to the right and hold the right face of the block 70 firmly against the inner face of the side wall 49 so that the platen cannot turn too freely.

The arm 60 has thereon a stud 73 which, in the normal position of the parts (FIG. 5), bears against a side edge of the plate 66, under the influence of spring 61 to hold the plate 66 against the wall of the casing. As the bite of the flange is effected the flange turns and the bushing and the plate 66 revolve with it around the shaft 67, until the lever 32 is released and the spring 61 returns the parts to normal. The setting of the cam 34 will permit movement of the platen surface over a range of from 0 to five-eighths of an inch in one preferred arrangement of the parts. The action is even and smooth and there are no ratchets or pawls involved to give an intermittent motion to the parts, and no back lash.

Paper Pressure Roller Adjustment

The paper pressure rollers 74 are disposed within a casing 75 separate from the casing enclosing the platen and the platen drive mechanism. This casing 75 has a bottom wall 76 and side walls 77 which are upwardly extended in the form of arms 78 which at their upper ends are pivotally mounted on a rod 79 which extends across the main casing between the side walls 48 and 49 thereof. This permits the casing 75 to be toward and away from the platen so that the pressure of the rollers thereon may be varied at will. When paper of light weight is passing between the platen and the rollers the pressure of the rollers on the paper need only be light but when several layers of paper are thus disposed or when the cover plates of a stenographer's note book are thus disposed the pressure of the rollers must be increased considerably.

There are a plurality of parts of rollers and they are mounted in pairs one above the other between triangular plates 80. These plates 80 are cross connected at their inner ends at 82. These pairs of plates 80 are pivoted on pins 81 between spaced plates 83 which are cross connected at their lower edges by a dependent plate 84 which extends down through a channel guide bracket 85 and the lower end of this plate 84 is curved around as at 86 and rests on the bottom wall 76 of the casing 75 to permit a free pivotal movement of the entire roller unit to and from the platen 68. In this channel guide bracket 85 there is also disposed a U-shaped spring plate 87 the base of which rests upon the bottom wall 76. One leg of this spring plate 87 is bent over the top of the plate 84 and the upper end of the other leg of this spring plate 87 bears against the wall of the casing 75. This spring plate 87 tends to keep the roller pairs firmly against the platen to give a light pressure on the rollers when they are disposed in the position shown in FIG. 8 and a heavier pressure thereon when they are in the position shown in FIG. 7.

To adjust the roller casing in one position or the other there are provided latch plates 88 pivoted to the outer sides of the main casing walls 48 and 49. These latch plates are provided with bayonet slots 89 and these are adapted to receive pins 90 extending from the lower side walls 77. By manual pressure on the lower portion of casing 75 the casing can be pivoted inwardly to the position shown in FIG. 7, with the latch plates 88 positioned as shown. A spring 91 associated with each latch plate will tend to move it down to the position shown in FIG. 7 to hold the casing in this inwardly pivoted position wherein the roller pressure is greatest. By merely pulling up with the finger on the ends of the latch plates 88 the pressure of the spring 87 will force the casing to the position shown in FIG. 8 in which the roller pressure is normal and adapted for a lighter weight of material between the rollers and the platen.

There is also provided a channel member 92 pivoted by side arms 93 through screws 94 to the sides of the casing 75 and this channel member is adapted to receive a line guide element 95 which along its median longitudinal portion provided with spaced scales 96 and 97 graduated to different scales of length. For instance, one scale may have graduations ten to the inch whereas the other one is graduated twelve to the inch. This is for

the purposes of associating the scale with typed matter which may be formed in one or another kind of type such as pica or elite. As shown in FIG. 11 the desired scale is disposed above the top of the channel member by inserting the guide in the slot and when the other scale is to be exhibited the guide is withdrawn and reversed with the desired other scale presented to view.

While we have described what we consider to be a highly desirable embodiment of our invention, it is obvious that many changes in form could be made without departing from the invention, and we, therefore, do not limit ourselves to the exact form shown and described, nor to anything less than the whole of our invention as hereinbefore set forth, and as hereinafter claimed.

What we claim is:

1. A copy holder; comprising
(*a*) a paper platen adapted to receive copy thereabout;
(*b*) a clutch mechanism coacting with said platen to operate the same and thereby effect a movement of said paper, platen and copy;
(*c*) a movable key lever having an arcuate seat portion;
(*d*) a connection between said lever and said clutch mechanism for transmitting the motion of said key lever to said clutch mechanism and thereby to said paper platen and copy;
(*e*) a manually adjustable cam having a curved portion disposed in the path of movement of said arcuate seat portion of said key lever and adapted to arrest the movement of said key lever; and
(*f*) hand wheel means for adjusting the cam to define the amount of movement of said key lever, and thereby said clutch mechanism, paper platen, and copy.

2. The copy holder of claim 1; including a shaft mounting said paper platen for rotary movement, said clutch mechanism comprising
(*a*) a bushing mounted for rotary movement about said shaft and having formed therein a slot defined by spaced wall members; and
(*b*) a cup shaped member fixed on said shaft and having formed thereon a flange, disposed in said slot and adapted to be gripped by said spaced wall members during rotary movement of said bushing about said shaft;
(*c*) said connection between said key lever and said clutch mechanism being to said bushing.

3. The copy holder of cailm 2, including
(*a*) a casing, defined by a plurality of spaced walls, for enclosing said paper platen;
(*b*) said shafe extending through one of said spaced walls and beyond said casing;
(*c*) said cup shaped member being disposed adjacent said one of said spaced walls;
(*d*) said bushing being disposed adjacent said cup shaped member; and
(*e*) a spring disposed between the platen and said bushing urging same against said cup shaped member and preventing axial movement of said bushing along said shaft.

4. The copy holder of claim 3; including
(*a*) a knob attached to the end of said shaft which extends through said one of said spaced walls of said casing; and
(*b*) a spring mounted on said shaft between said knob and said one of said spaced walls of said casing and urging said cup shaped member into frictional contact with said one of said spaced walls of said casing.

5. A copy holder intended during use to be disposed closely adjacent the back of a typewriter; comprising
(*a*) a base member adapted to be disposed between the rear part of a typewriter;

(*b*) a platen casing mounted on said base member so as to overlay the upper rear edge of the typewriter;
(*c*) a platen shaft rotatably mounted in said platen casing;
(*d*) a friction clutch mechanism disposed in said platen casing for coaction with said platen shaft to effect rotation thereof;
(*e*) a key finger lever for operating said friction clutch mechanism;
(*f*) means flexibly interconnecting said key finger lever to said fritcion clutch mechanism;
(*g*) bracket means pivotally mounting said key finger lever;
(*h*) an arcuate seat portion formed on said key finger lever;
(*i*) a manually adjustable cam carried by said bracket means and having a curved portion formed thereon and disposed in the path of movement of said key finger lever for sliding engagement with said arcuate seat portion thereof to govern the extent of pivotal movement thereof and thereby of said clutch mechanism and said paper platen;
(*j*) a flange formed on said base member; and
(*k*) means adjustably mounting said bracket means to said flange for movement with respect thereto to facilitate disposition and operation of said key finger lever.

6. The copy holder of claim 5 wherein said clutch mechanism includes
(*a*) an arm rotatable on said platen shaft;
(*b*) a bushing carried by said arm and having formed therein a slot defined by a pair of spaced walls;
(*c*) a block fixed to said platen shaft in juxtaposition to said arm;
(*d*) a cup shaped flange formed on said block and adapted to be disposed in said slot between said pair of spaced walls thereof;
(*e*) said flexible interconnecting means extending between said key finger lever and said arm.

7. The copy holder of claim 5 including knobs on said platen shaft for rotating same irrespective of the operation of said clutch mechanism.

8. The copy holder of claim 5; including
(*a*) upright legs carried by said base members and mounting said platen casing; and
(*b*) spring actuated latch plates mounted on said platen casing and engaging said upright legs for vertically adjusting the position of said platen casing with respect to said base member.

9. The copy holder of claim 5; including
(*a*) legs pivotally mounted to said flange;
(*b*) platen casing supporting plates extending from said legs and supporting said platen casing; and
(*c*) arcuate adjustment means on said flange for setting the pivotal position of said legs with respect to said base member.

10. The copy holder of claim 9 wherein said supporting plates are pivoted on said platen casing for eye level viewing adjustment.

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