Nov. 19, 1929. A. G. F. KUROWSKI 1,735,870

TYPEWRITING MACHINE

Filed Nov. 12, 1925

Fig. 1.

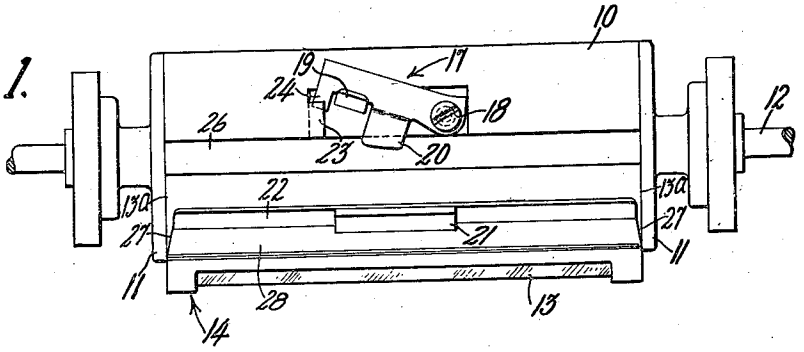


Fig. 2.

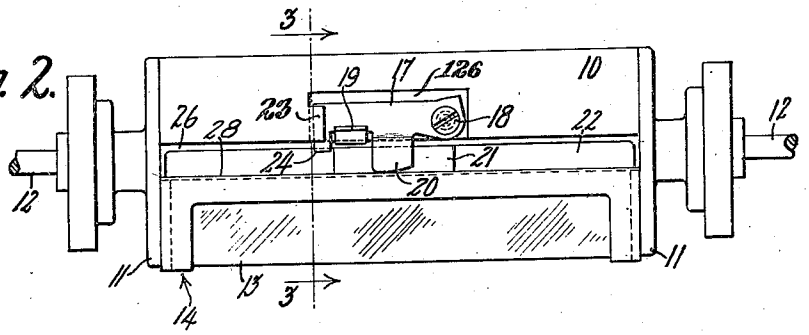


Fig. 3.

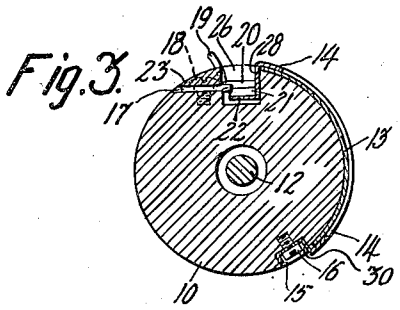


Fig. 4.

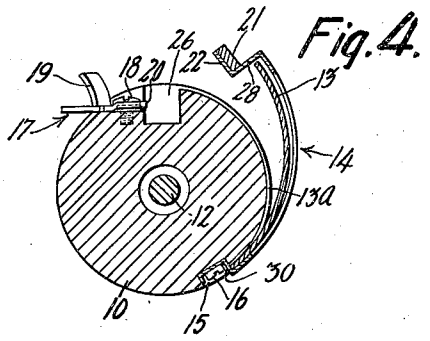
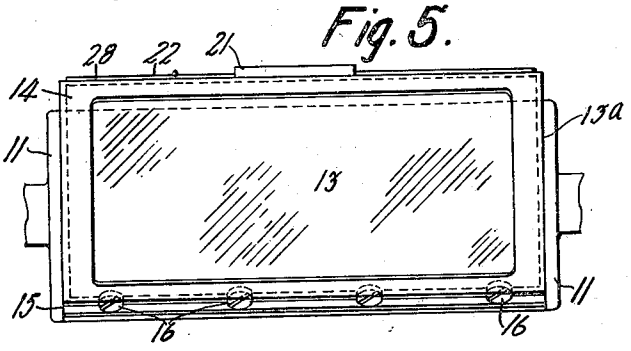


Fig. 5.



Inventor:
Alfred G. F. Kurowski
by D. C. Stickney
Attorney

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UNITED STATES PATENT OFFICE

ALFRED G. F. KUROWSKI, OF BROOKLYN, NEW YORK, ASSIGNOR TO UNDERWOOD ELLIOTT FISHER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE

TYPEWRITING MACHINE

Application filed November 12, 1925. Serial No. 68,532.

This invention relates to means for holding a celluloid backing around the platen of a typewriter stenciling machine, and is useful in connection with a machine disclosed in my pending application, Serial No. 43,492, filed July 14, 1925 (now Patent No. 1,625,321, dated April 19, 1927). In said application, a machine is shown in which a stencil-card-holder is arranged to reciprocate tangentially to a platen which is partly covered with a sheet of celluloid to provide a backing for the types and to facilitate the cutting of the stencil-sheet.

One of the objects of the present invention is to provide means for holding a celluloid plate which shall be easily manipulable and easy to clean, and which will hold the celluloid effectively upon the platen. Where the celluloid is slightly separated from the platen in spots, the stencil-cutting is impaired, and the typed stencils are inferior in those spots. In overcoming this difficulty, a frame is used, in the present invention, which pulls the plate tightly around the cylinder. The frame is an open rectangular piece of springy sheet-metal, which is fastened at one edge to the platen, along which the frame extends, the platen having a longitudinal slot cut therein to accommodate screws which hold one edge of the frame against the platen. This frame stands open and permits the insertion of the flat celluloid plate or sheet.

One of the advantages of this invention arises from the use of a flat backing or plate in place of the previously curved or formed kind. This flat plate is caught tightly at one of its long edges, and is then pulled down against the platen by means of the frame, the sides of which overlie the sides of the plate. The frame itself is flexible, and at its open end is drawn down into another longitudinal slot or recess in the platen, causing the celluloid plate to tighten upon the platen, so that it gives a solid resistance at all points in its area to the blows of the types. The frame is locked in its normal position by means of a manually-releasable latch, which is set in a recess in the platen. The closing of the latch tends to draw the frame more tightly upon the platen, hence to cause the plate to contact more firmly at all points with the platen. The latch is easy to open and close by a suitable manipulation, to release the frame so that the celluloid plate may be released and replaced by a fresh plate and readily tightened upon the platen and secured.

Other features and advantages will hereinafter appear.

In the accompanying drawings,

Figure 1 is a plan view of the improved platen, and shows the locking means in ineffective position.

Figure 2 is a similar view, but shows the locking means in effective position.

Figure 3 is a cross-sectional view through the line 3—3 of Figure 2.

Figure 4 is a cross-sectional view through the center of the platen, showing the celluloid frame in its released position.

Figure 5 is a front elevation of the platen.

A platen, designed to be used with the machine disclosed in said application, includes a cylinder 10 having end pieces 11 fast thereto, and is revolubly mounted, by means of an axle 12, in the side frames of a platen-frame, not shown.

According to certain features of this invention, there are provided a celluloid strip or plate 13 and a frame 14 for holding said strip against the periphery of the platen. Since it is not desired to impair the cylindricity of the platen when the celluloid strip is applied thereto, it is proposed to undercut the cylinder 10 at the point where it receives the celluloid backing a depth equal to the thickness of the celluloid, the undercut being indicated by the numeral 13a.

The frame 14 is designed to hold the borders of the celluloid, and is secured to the platen, in a groove 15 cut longitudinally into the platen, by means of screws 16. In Figure 4 the frame is shown in its normal position and is bent slightly, the celluloid strip being shown between the frame 14 and the cylinder 10. In order to hold the strip tightly stretched against the cylinder, said frame 14 is pressed down toward the platen to a position shown in Figure 3, and then by means of a latch in the form of an arm 17, pivotally mounted at 18, within a pocket-

forming lateral extension 126 of the middle part of the upper groove-like recess 26, the frame is locked upon the platen, thereby holding the celluloid strip in a perfectly smooth condition.

The latch 17 is made of a single piece of sheet-metal, and has a finger-piece 19, struck up therefrom, and a finger 20 preferably forming an integral part thereof, the finger 20 being designed to engage a hardened piece 21 secured to a reinforcing band or lip 22 forming an integral part of said frame and extending substantially the full width thereof.

In order to relieve the pivot or screw 18 from undue bending stress, it is proposed to provide a supporting or guiding piece 23 overlying an extension 24 of the latch 17, the supporting piece being effective to hold the latch down when the latch is in its effective position, as shown in Figures 2 and 3. The piece 23 may be formed by undercutting.

There is provided a groove-like recess 26 milled into the cylinder 10 for receiving the band 22. Said band is made slightly narrower than the width of the frame to which it is joined by a connecting piece 28 forming an integral part of the frame and of the band. In order to facilitate the locating of the frame 14 which fits snugly between the end pieces 11, the connecting piece 28 is tapered at the ends thereof, said tapered ends being indicated by the numeral 27. In this manner the band 22, which is narrower than the frame, first enters the slot 26 and then straightens the frame between the end pieces 11, preparatory to locking the frame in its effective position.

A feature of the present invention resides in having the frame 14 exert a transverse pull on the plate 13, as well as impose a degree of pressure thereon, in a direction radially of the platen when the frame is latched, as shown in Figure 3. In this connection and by reason of the slight bend, previously referred to, in the frame, the normal distance between the portion 28 in recess 26 and the angular-shaped extension 30 in recess 15 is less than the distance between adjacent side walls of said recesses, so that, in flexing the portion 28 incidental to springing the same into recess 26, a transverse pull is exerted on the frame, and this pull is transmitted to the plate 13 through frictional contact with the frame. It is to be further noted, in this connection, that the angular-shaped extension 30 directs the transverse pull by the frame, upon a side wall of recess 15, which provides a generous anchorage and prevents a transverse pull by the frame upon the screws 16.

Variations may be resorted to within the scope of the invention, and portions of the improvements may be used without others.

Having thus described my invention, I claim:

1. The combination with a cylindrical platen for a typewriting machine, of means for releasably securing a strip of backing material to the typing surface of said platen, for stencil-cutting, said means including two groove-like recesses extending longitudinally over the platen at two different parts of its circumference, a rectangular frame which presses the strip against the platen-surface, an angle-shaped anchoring prolongation at the lower end of the frame extending into the lower groove-like recess, means for fixing said anchoring prolongation within the last-mentioned recess, an angle-shaped front prolongation at the upper end of the frame and being insertable into the upper groove-like recess, and means for releasably securing said front prolongation within said upper groove-like recess.

2. The combination with a cylindrical platen for a typewriting machine, of means for releasably securing a strip of backing material to the typing surface of the platen, for stencil-cutting, said means inculding two groove-like recesses extending longitudinally over the platen at two different parts of its circumference, a rectangular frame which presses the strip against the platen-surface, an angle-shaped anchoring prolongation at the lower end of the frame extending into the lower groove-like recess, means for fixing said anchoring prolongation within the last-mentioned recess, an angle-shaped front prolongation at the upper end of the frame and being insertable into the upper groove-like recess, a pocket-forming lateral extension of the middle part of said upper groove-like recess, and a latch-piece mounted in the pocket but being movable into the adjoining groove-like recess, so as to lock the front prolongation of the frame within this recess.

3. The combination with a cylindrical platen for a typewriting machine, of means for releasably securing a strip of backing material to the typing surface of said platen, for stencil cutting, said means including a rectangular frame which presses the strip against the platen-surface, the lower portion of said frame being secured in a longitudinal recess in said platen, the upper portion of said frame being insertable into a second longitudinal recess in the platen, a pocket extending across the platen and merged with said second recess, an arm pivoted in said pocket, a finger carried by said arm and movable therewith into or away from the second recess whereby to respectively engage or disengage said upper portion of the frame, a guide assoicated with the free end of said arm to hold said free end down into the pocket, and a finger-piece carried by the arm for operating the same.

4. The combination with a cylindrical

platen for a typewriting machine, of means for releasably securing a strip of backing material to the typing surface of said platen, for stencil cutting, said means including a rectangular frame which presses the strip against the platen-surface, the lower portion of said frame being secured in a longitudinal recess in said platen, the upper portion of said frame being insertable into a second longitudinal recess in the platen, a latch including an arm pivoted in a pocket below the platen-surface, a finger carried by said arm and swingable into the second recess or away therefrom to respectively engage or disengage the upper portion of the frame, a guide engaging the upper surface of said arm to hold said finger down against the frame when engaged therewith, and a stop for limiting the swing of said arm.

5. A platen for a typewriting machine designed to be used for typing stencil-cards, means for securing a strip of hard material to a portion of said platen, to serve as a backing for cutting stencil-sheets in said cards, said means including a sheet-metal frame having an opening slightly smaller than the strip, and means for securing the frame to the platen, said last-mentioned means including screws for securing one edge of the frame to the platen, a latch effective to lock the other edge of the frame, said latch being pivotally mounted and sunk into an opening in the platen, and means for operating said latch.

6. A platen for a typewriting machine designed to be used for typing stencil-cards, means for securing a strip of hard material to a portion of said platen, to serve as a backing for cutting stencil-sheets in said cards, said means including a sheet-metal frame having an opening slightly smaller than the strip, and means for securing the frame to the platen, said last-mentioned means including screws for securing one edge of the frame to the platen, a latch effective to lock the other edge of the frame, said latch being effective to engage with a hardened piece fast to a reinforcing band forming an integral part of said frame, and means for manually operating the latch.

7. A platen for a typewriting machine designed to be used for typing stencil-cards, means for securing a strip of hard material to a portion of said platen, to serve as a backing for cutting stencil-sheets in said cards, said means including a sheet-metal frame having an opening slightly smaller than the strip and overlying the same, and means for securing said frame to the platen, said last-mentioned means including screws for securing one of the broad edges of the frame to the platen, and a latch for locking the other broad edge, said latch being pivotally mounted at one end thereof and having at the other end means for relieving the pivot of said latch of undue bending strain.

8. The combination with a cylindrical platen for a typewriting machine, of means for securing a strip of backing material to the typing surfaces of the platen, said means including a rectangular frame of resilient material extending along the platen, the lower longitudinal edge of said frame being formed to be secured within a recess extending lengthwise in the platen, the upper portion of said frame having the side edges thereof tapering so as to be readily received within a second recess extending lengthwise in the platen, said upper portion of the frame including a lip fitting within said second recess, and a latch movable into engagement with the lip to hold the frame with the backing strip gripped against the platen, the latch being releasable to free said upper edge and thereby permit the frame to spring away from the platen to facilitate introduction and removal of the backing strip and to admit of easy access to the frame.

9. The combination with a cylindrical platen for a typewriting machine, of means for releasably securing a strip of backing material to the typing surface of said platen, for stencil cutting, said means including a rectangular frame which presses the strip against the platen-surface, the lower portion of said frame being secured in a longitudinal recess in said platen, the upper portion of said frame being insertable into a second longitudinal recess in the platen, a latch in the form of an arm swingable toward and away from said second recess, and a finger carried by the arm and engageable with the upper portion of the frame, the free end of said arm being movably confined beneath an under-cut formed in the platen, the portion of the platen formed by the under-cut providing a guide for holding the free end of said arm down within the recess and thereby preventing the finger from springing away from the upper edge of said frame when engaged therewith.

10. The combination with a cylindrical platen for a typewriting machine, of a frame for holding a backing strip against the typing surface of said platen, said frame having the lower edge thereof secured within a recess extending longitudinally in the platen, the upper side edges of said frame being tapered, said platen having a second longitudinal recess into which the upper portion and the tapered side edges of the frame are received.

11. A platen for a stencil-card typewriting machine, having oppositely-disposed longitudinal recesses, a normally flat plate of hard resilient material disposed between said recesses, and a resilient frame surrounding the plate and having oppositely-disposed shouldered portions, one of which is fixedly secured within one of the recesses, and the other of which is sprung into the other of said re-

cesses, and releasably secured therein under pressure.

12. A platen for stencil-card typewriting machines, having oppositely-disposed longitudinal recesses together with a normally flat plate of hard resilient material disposed between said recesses, and a resilient frame surrounding the plate and having oppositely-disposed shouldered portions spaced apart for a distance less than the distance between the recesses and effective for tensioning the frame and causing the same to exert a transverse pull on the plate by being secured within the recesses.

13. A platen for stencil-card typewriting machines, having oppositely-disposed longitudinal recesses, a normally flat plate of hard resilient material disposed between said recesses, and a resilient frame surrounding the plate and effective for tensioning and exerting a transverse pull upon the plate by having oppositely-disposed portions thereof secured within the recesses, and other portions spaced apart for a distance less than the distance between the recesses, and bearing upon side walls thereof, and effective for transmitting the transverse pull of the plate to said side walls.

14. A platen for stencil-card typewriting machines, including a cylinder being provided with an undercut extending over a part of its circumference, two groove-like recesses extending longitudinally over the cylinder at two different parts of its circumference and limiting two sides of the undercut on the circumference of the cylinder, two shield-plates arranged at the two ends of the cylinder and having on their whole circumference a diameter greater than the undercut part of the cylinder, so as to border the two circumferential sides of the undercut, a normally flat plate of hard resilient material, corresponding in its size to the undercut part of the circumference of the cylinder, and a frame corresponding to the undercut on the cylinder, with two end prolongations to be anchored in the two groove-like recesses, said frame surrounding and bearing upon said plate.

15. A platen for stencil-card typewriting machines, including a cylinder being provided with an undercut extending over a part of its circumference, two groove-like recesses extending longitudinally over the cylinder at two different parts of its circumference and limiting two sides of the undercut on the circumference of the cylinder, two shield-plates arranged at the two ends of the cylinder and having on their whole circumference a diameter greater than the undercut part of the cylinder, so as to border the two circumferential sides of the undercut, a normally flat plate of hard resilient material, corresponding in its size to the undercut part of the circumference of the cylinder, and a slightly curved frame corresponding in its size to the undercut on the cylinder and having two angle-shaped anchoring prolongations insertable into the aforesaid groove-like recesses, the lower anchoring prolongation being fixed within the lower groove-like recess, while the adjoining part of the undercut circumferential surface of the cylinder together with the two shield-plates and with the lower part of the frame form a kind of wedge-like pocket, to facilitate the entering and adjusting of said plate of resilient material.

ALFRED G. F. KUROWSKI.