United States Patent [19]

Omi et al.

[11] **3,791,903**

[45] **Feb. 12, 1974**

[54] **MICROFILM MOUNTER**

[75] Inventors: **Kokichi Omi; Toshio Arai,** both of Tokyo, Japan

[73] Assignee: **Canon Kabushiki Kaisha,** Tokyo, Japan

[22] Filed: **July 1, 9171**

[21] Appl. No.: **158,810**

[30] **Foreign Application Priority Data**

July 11, 1970 Japan 45-60739

[52] **U.S. Cl.** **156/517,** 156/108, 156/256, 156/514

[51] **Int. Cl.** **B32b 31/18,** B31b 1/24

[58] **Field of Search** ... 156/514, 517, 521, 256, 264, 156/108

[56] **References Cited**

UNITED STATES PATENTS

3,310,450	3/1967	Dedona et al.	156/514
2,591,519	4/1952	Decker	156/514 X
2,643,786	6/1953	Baker	156/514 X
2,666,543	1/1954	Standish	156/514
2,819,656	1/1958	Patterson	156/514 X
3,164,510	1/1965	Stoothoff et al.	156/514
3,194,709	7/1965	Bondhus	156/108 X
3,197,353	7/1965	Williams et al.	156/521 X
3,707,422	12/1972	Helm	156/514 X
3,707,424	12/1972	Artelt	156/521

Primary Examiner—Harold Ansher

Attorney, Agent, or Firm—Berman, Bishoff & Platt

[57] **ABSTRACT**

A film mounter for cutting a long film such as pre-recorded microfilm or the like into pieces of a predetermined size and mounting such pieces of film onto apertured cards. The film mounter is equipped with a cutter device which normally consists of a movable cutter member and a pair of stationary cutter members. The movable cutter has a pair of cutting edges and the stationary cutter has a wedge-shaped transverse slot having a cutting edge, the film being cut by their cooperation. The stationary cutter is pivotally supported on a frame so that the resilient and forceful contacts between the cutting edges of the movable cutter and the stationary cutter are assured. Furthermore the relative movement between the movable and stationary cutters provide self-sharpening due to the close contact between them. Accordingly an excellent cutting performance can be always expected.

10 Claims, 11 Drawing Figures

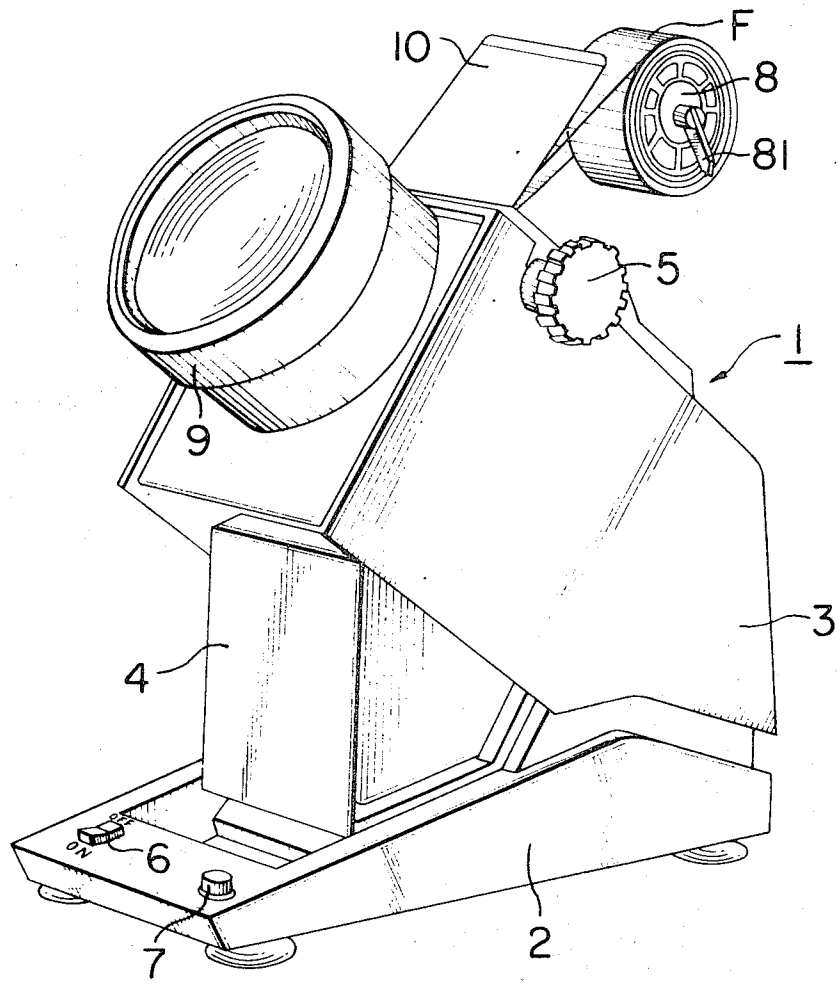


FIG. 1

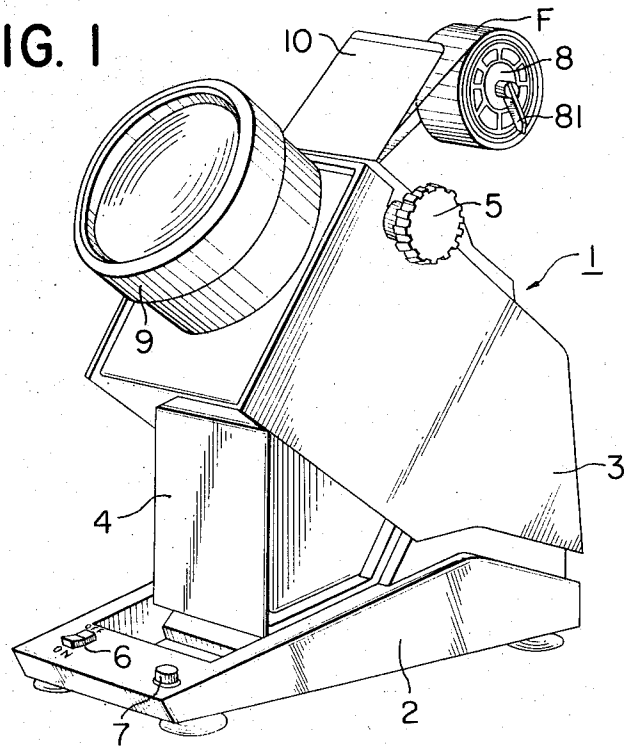

F
10
8
81
5
1
9
3
4
6
7
2

FIG. 5

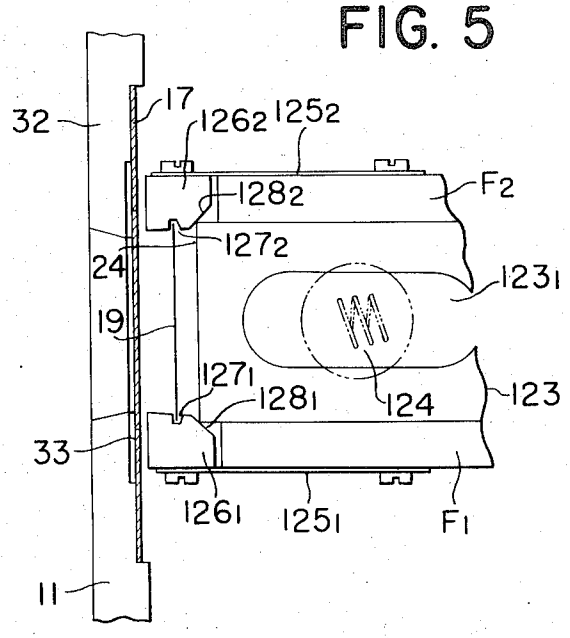

32
17
1262
1252
1282
F2
1272
24
1231
19
1271
1281
124
123
33
1261
1251
F1
11

FIG. 2

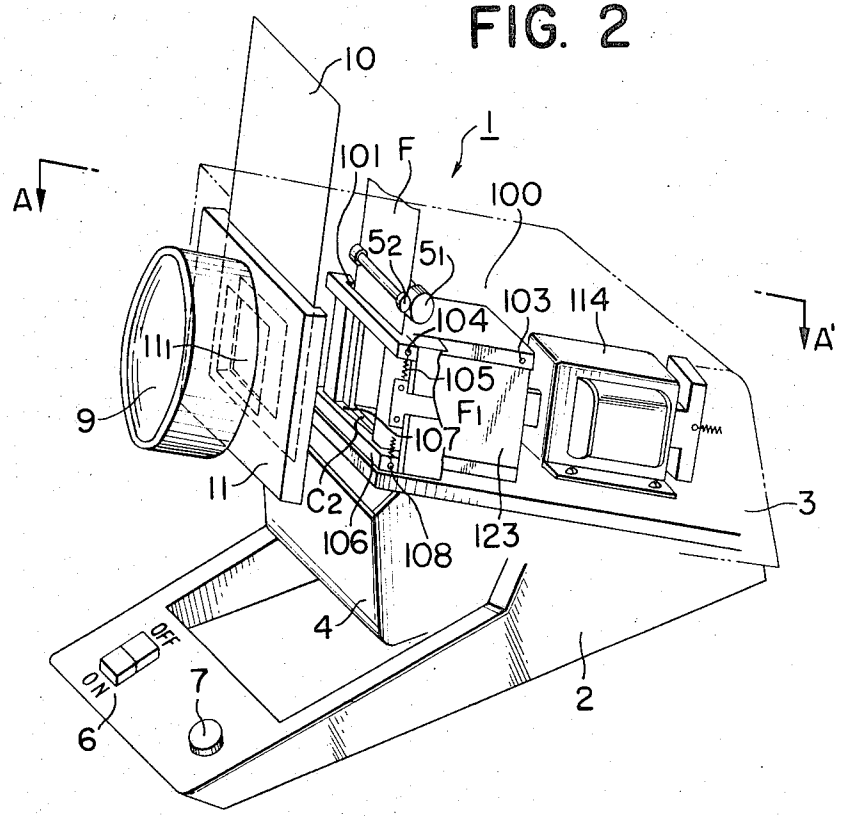

10
1
101
F
100
A
A'
52
51
104
103
114
111
105
9
F1
107
11
C2
106
108
123
3
4
OFF
ON
7
6
2

FIG. 6

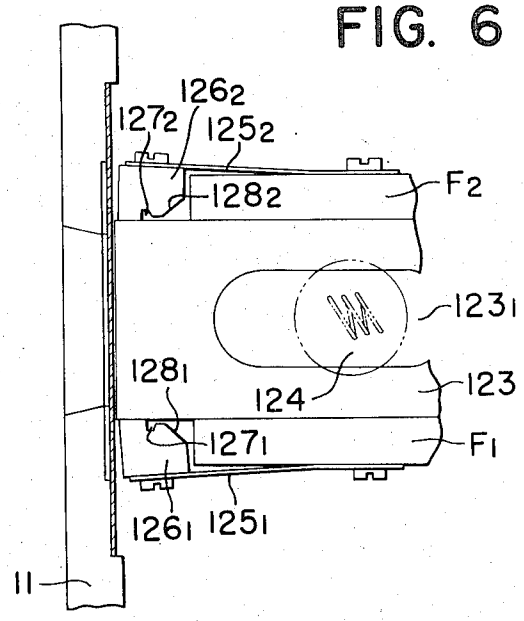

1262
1272
1252
1282
F2
1231
1281
124
123
1271
F1
1261
1251
11

FIG. 3

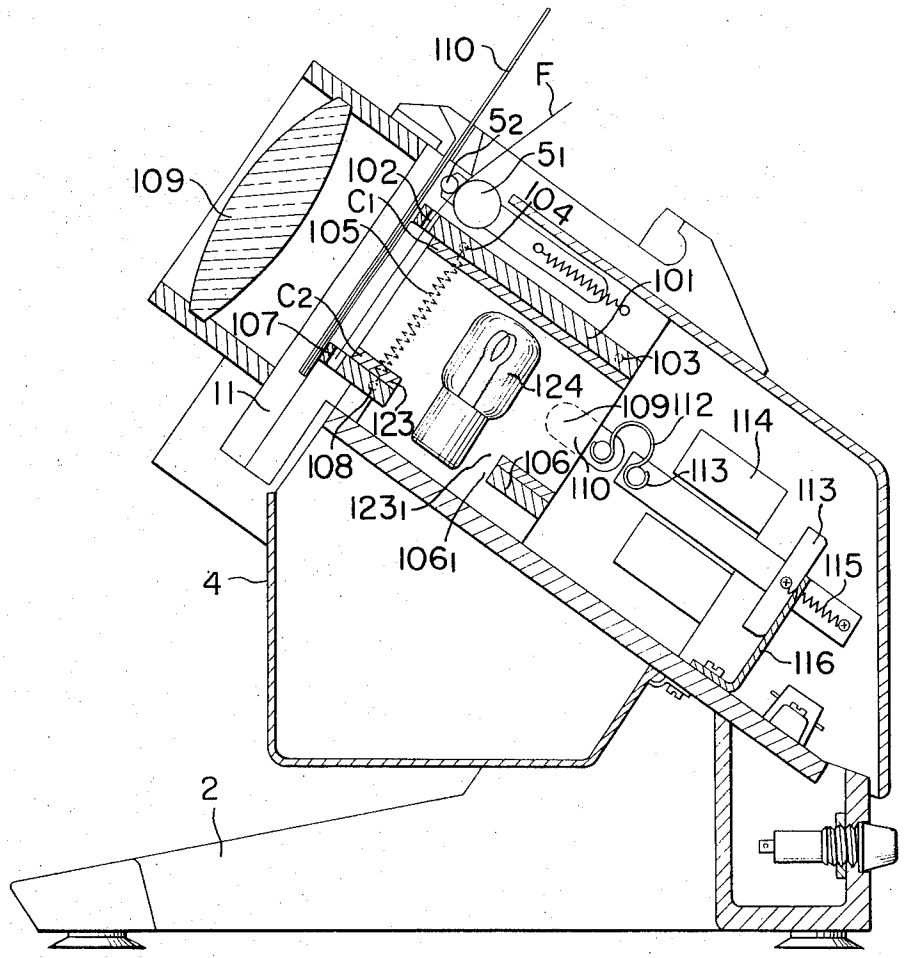

110
F
52
51
102
C1
104
109
105
101
C2
107
103
124
11
123
109
112
114
108
106
110
113
113
1231
115
1061
4
116
2

FIG. 4

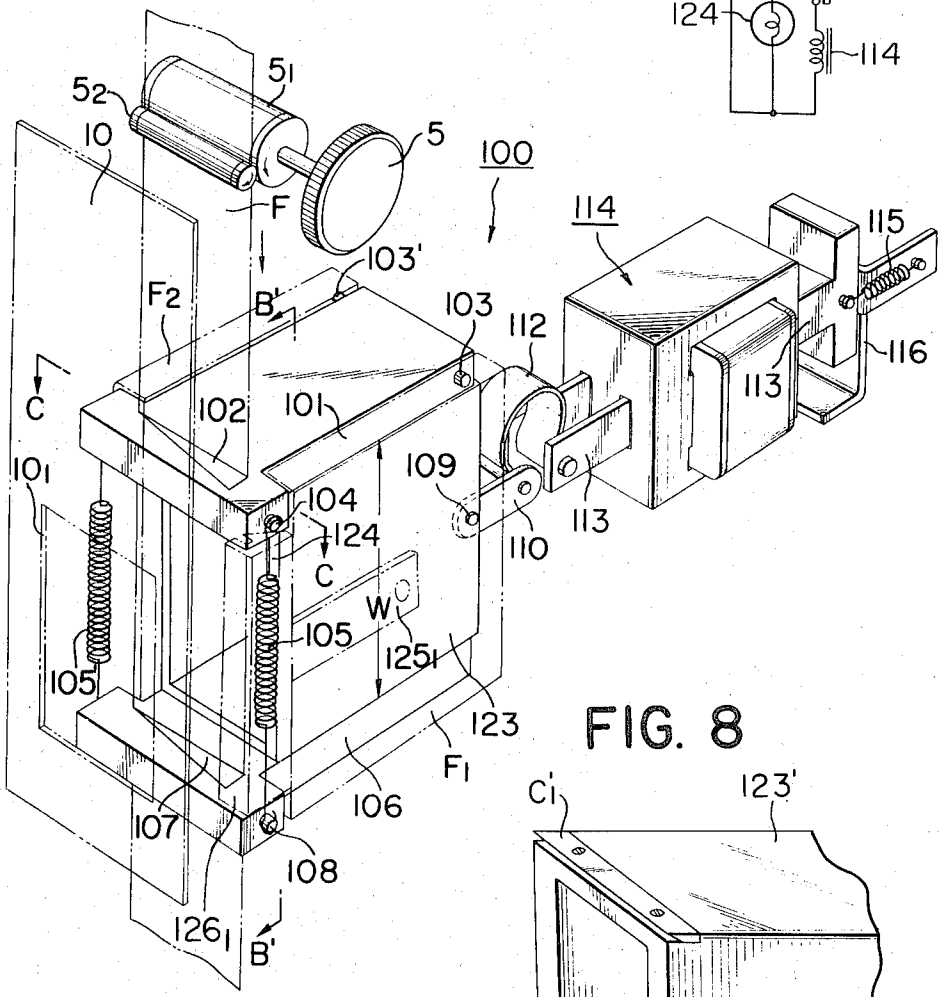


FIG. 9

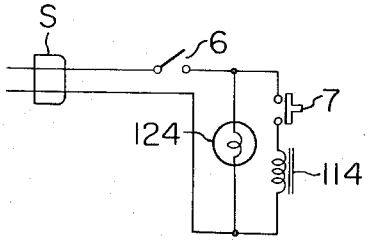


FIG. 8

FIG. 7A

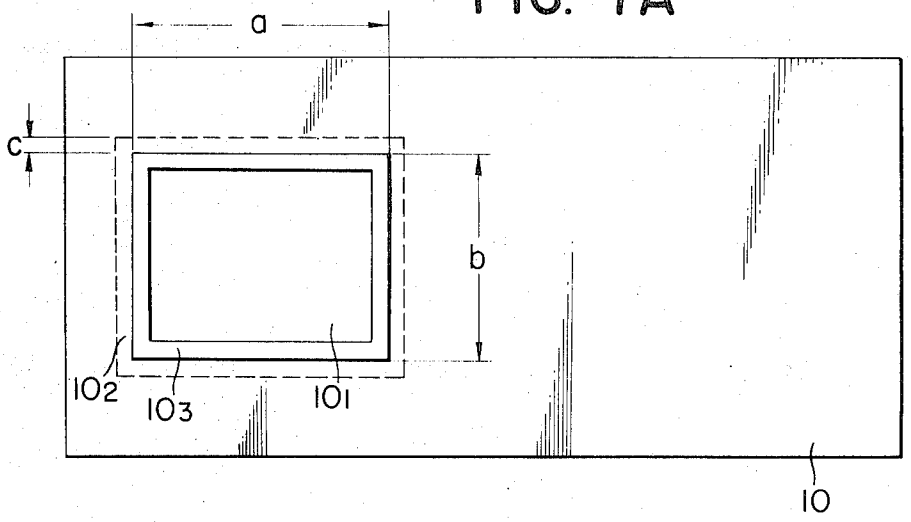
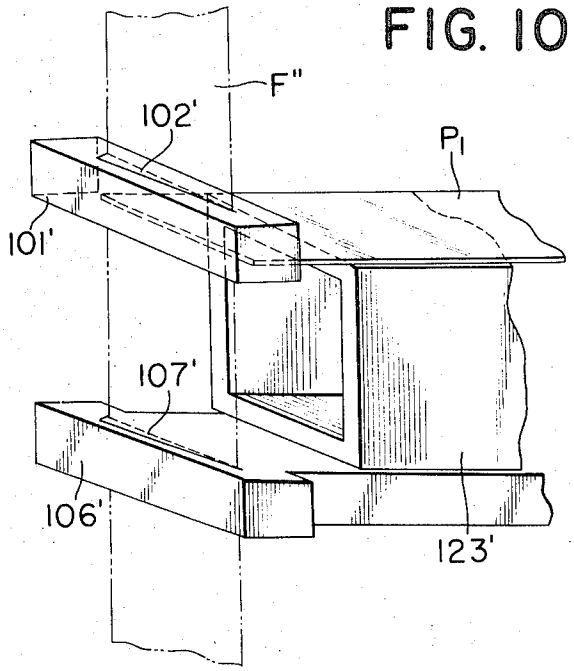


FIG. 7B



FIG. 10



MICROFILM MOUNTER

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to a film mounter, and more particularly to a film mounter for cutting a long film into pieces of a predetermined size and mounting such pieces of film onto apertured cards.

2. Description of the Prior Art

In recent years, microfilm having predetermined small frames for recording a number of information images has been finding a wider use because of its capability of storing a high density of information. Above all, microfilm in the form of a roll having a great length to provide a great number of successive recording frames in a line is most preferred because such microfilm enables a number of information images to be continuously photographed thereon and continuously developed and fixed.

In use, however, such a roll of film involves a cumbersome procedure of locating a particular frame containing desired information by examining the film from its first to its desired frame, and such procedure is very much time-consuming because the film is very long.

For this reason, in making effective use of the information recorded on such a roll of microfilm it is usual to prepare a card such as that used for statistical purposes, provide the card with apertures for mounting a predetermined number of particular frames of the film and to mount particular frames onto the apertures in the card, thereby keeping the film-recorded information ready for use at all times. Such a card is commonly known as "apertured card," and is disclosed in U. S. Pat. No. 2,511,859, for example. As disclosed therein, an apertured card has an aperture or apertures and a layer of bonding agent provided on a marginal area surrounding the aperture. Any desired frame of the pre-recorded film may be disposed over the aperture and bonded to the card by means of the bonding layer, thus providing a complete card for use in filing. A number of such cards may be prepared to contain therein various desired frames of a roll of pre-recorded microfilm. Such cards may be used as statistics cards or cards provided with index codes which identify the frames of the film, thus readily enabling the automatic search of recorded information.

Various film mounters have been proposed and marketed which can cut off the desired frames in a roll of film and mount the severed frames onto cards. These conventional film mounters have their own merits nd demerits and none of them is fully satisfactory. Any of the known film mounters incorporates therein a cutter device for cutting a rolled or long film. The cutter device comprises a stationary cutter having two parallel stationary cutting edges spaced apart a distance equal to the longitudinal dimension of one frame of the film to be mounted wherein the film is fed perpendicularly to the cutting edges, and a movable cutter having parallel movable cutting edges spaced apart a distance approximately equal to the distance between the two cutting edges of the stationary cutter. The movable cutter is driven by a plunger or by manual power so that the movable cutter edges cooperate with the stationary cutter edges to cut the film. (See U. S. Pat. No. 3,310,450, for example)

Such a cutter device incorporated in the conventional film mounters is possessed of the disadvantages as described below.

A. Even the slightest wear of the stationary and movable cutter edges may adversely affect their cutting performance because the thin film to be cut and mounted has a great hardness due to the material used as its base, such as acetate or polyester resin, especially the latter. This leads to the necessity of frequently sharpening the cutter edges to ensure the smooth film cutting and mounting.

B. The design of the known cutter device in which the film is held and forcibly cut by and between the stationary and movable cutter edges presupposes that the parallelism and clearances between the movable cutter edges and the stationary cutter edges must always be close enough to ensure the smooth cutting of the work. For example, any non-parallelism or excessive clearance between the cutting edges of the two cutters would result in a failure to cut the film. Conversely, too close contact, or insufficient clearance, between these cutter edges would result in an unsmooth movement of the movable cutter thus causing an unnecessarily great friction between the two cutters which in turn would cause rapid wear of the cutter edges and accordingly poorer cutting performance.

C. In view of the fact that the frame of film cut off must be mounted onto an apertured card, such frame of film must be kept parallel to the plane of the card during and after the cutting operation in order that the frame of film may be properly pressed for mounting against the card. To that end, the stationary cutter has heretofore been formed with arcuate cutting edges concave in the direction for mounting the film and the movable cutter has been moved to cooperate with the stationary cutter so as to cut the film from its opposite side edges toward its center and finally sever the center of the film. The cutter edges so formed are apt to show a poor cutting performance at the center portion of the film which is subjected to the final cutting action. It is often the case that the film is not cut into a proper shape of frame, i.e., a predetermined rectangular shape, thus resulting in a shape of frame whose longitudinal dimension is gradually reduced toward the center axis thereof.

In order to compensate for these disadvantages, it has been necessary with such conventional film mounters frequently to carry out the positional adjustment and sharpening of the cutter edges and this has raised the problems such as difficulties in manipulation and poor durability as well as te requirement for skill in the adjustment.

SUMMARY OF THE INVENTION

It is a primary object of the present invention to provide an improved film mounter which eliminates the above-described various disadvantages existing in the film mounters of the prior art.

It is another object of the present invention to provide a film mounter equipped with a cutter device in which two stationary parallel cutters, one of them being pivotally mounted, are urged into forced contact with a movable cutter so that the cutting edges of the stationary cutters are sharpened by the movable cutter to provide an excellent cutting effect at all times, and which eliminates the need to adjust the relative position of the cutters.

Other objects and features of the present invention will become fully apparent from the following detailed description of embodiments thereof in connection with the accompanying drawings.

To achieve the above-described objects, the film mounter of the present invention is provided wth a cutter device which comprises a movable cutter slidable in the direction perpendicular to the path of a film to be mounted, the movable cutter having a pair of parallel cutting edges extending transversely of the film and spaced apart a distance substantially corresponding to the longitudinal dimension of the film frame to be mounted, and two stationary cutters, at least one of them being pivotally supported and being disposed in parallel relationship with the cutting edges of the movable cutter, said stationary cutters each cutting edges uniformly urged into forced contact with the cutting edges of the movable cutter.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view showing the entire film mounter according to the present invention.

FIG. 2 is a schematic perspective view showing the essential portion of the film mounter of FIG. 1.

FIG. 3 is a sectional view taken along line A—A' of FIG. 2.

FIG. 4 is a perspective view showing the construction of the cutter device incorporated in the film mounter of FIG. 1.

FIGS. 5 and 6 are sectional views for illustrating the manner in which a frame of film is mounted.

FIGS. 7A and 7B are front and cross-sectional side views of the apertured card, respectively, used with the film mounter of the present invention.

FIG. 8 is a perspective view showing a modified form of the movable cutter according to the present invention.

FIG. 9 is a diagram of the electric circuit in the film mounter shown in FIG. 1.

FIG. 10 is a schematic perspective view showing a modified form of the stationary cutter according to the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

General Description of the Inventive Film Mounter

Referring to FIG. 1, there is shown the film mounter of the present invention which comprises a mounter body generally designated by numeral 1. The film mounter body 1 includes a mounter base 2, a mounter casing 3 fixed on the base 2, and a dust case 4 for receiving dust such as film chips, the dust case being removably mounted on the front lower surface of the mounter casing 3 in a manner to be described. The mounter casing 3 carrier thereon a manually operable film feed dial 5. A power switch 6 and a plunger actuating switch 7 are provided on the front panel of the base 2. A reel core 8 is rotatably mounted on a support arm extending from the upper wall of the casing 3 and has a retaining click pawl 8_1. Over the reel fitted on the reel core 8, there is a lengthy microfilm F wound in the form of a roll and having a number of pre-recorded frames. A viewing magnifier lens 9 is mounted on the front wall of the casing 3 and designed for viewing therethrough any given frame of the film F with the aid of illumination from a light source within the casing 3. The film may be fed to a predetermined position as will be further described later. An apertured card 10 may be inserted through a slit not shown formed in the upper wall of the casing 3. The apertured card 10 per se is shown more fully in FIGS. 7A and 7B. As seen therein, the apertured card 10 has an aperture portion 10_1 dimensioned transversely *a* and longitudinally *b* and surrounded by a stepped portion 10_2 having a width *c*. Within the stepped portion 10_2 there is attached a transparent sheet 10_3 having an aperture dimensioned slightly smaller than those of *a* and *b* and having a bonding layer on its marginal area (shown within the dashed portion in FIG. 7A). Such an apertured card is disclosed in U. S. Pat. No. 2,587,022 and its further description is omitted herein.

Turning to FIG. 2, there is schematically shown the interior construction of the casing 3 of the mounter shown in FIG. 1. The dial 5 is secured to the shaft of a driving roller 51. A pitch roller 52 is provided which is urged into contact with the roller 5_1 by spring means (not shown). Numeral 100 generally designates a cutter device used with the film mountr 1 according to the present invention. The cutter device 100 includes stationary cutters 101 and 106, and a movable cutter 123 connected to the actuator of a plunger 114. The cutter device will be described in further detail later, and its detailed description is omitted here except that the film F is fed by the nip between the rollers 5_1 and 5_2 so as to travel along a path in the stationary cutters 101 and 106. An apertured card guide plate 11, which will also be described in detail later, is provided behind the lens 9 and formed with an opening 11_1 corresponding to the aperture in the card 10 to be inserted.

In using the above-described film mounter 1, the roll of film F is initially mounted on the reel core 8, then the reel is retained on the reel core 8 by cocking down the click 8_1 and the leading edge of the film F is inserted through the slit (not shown) in the upper wall of the casing 3 until it reaches the nip between the rollers 5_1 and 5_2. The dial 5 is manually rotated to thereby guide and transport the film into the cutters within the cutter device 100. The power switch 6 is closed to turn on an illuminating lamp which is provided in the cutter device. Thus, the film F as it is transported can be viewed through the lens while the dial 5 is manually operated until the film reaches a predetermined position. The card 10 is then inserted through the upper surface of the casing 3 and the switch 7 is depressed to actuate the plunger 114 and cause the cutter device 10 to cut the film F. A piece of film provided by such cutting is attached to the transparent sheet 10_3 pre-attached to the aperture portion 10_1 of the card 10, by means of the bonding layer provided on the marginal area of the transparent sheet.

Cutter Device

The cutter device 100 which has been shown schematically in FIG. 2 is illustrated in detail in FIGS. 3 and 4. Referring to FIG. 4, stationary cutters are designated by 101 and 106. The stationary cutter 101 has pivot shafts 103 and 103' studded at one end thereof and is pivotally mounted to frame members F_1 and F_2 in the casing 3 by means of such pivot shafts. The stationary cutter 101 also has fixed pins 104 and 104' studded at the other end thereof. The other stationary cutter 106 is fixed to a frame member in the casing 3 and has fixed pins 108 and 108' formed thereon. Coil springs 105 and 105' are extended between the pins 104, 104' of the stationary cutter 101 and the pins 108, 108' of the

stationary cutter **106**, respectively. The two stationary cutters **101** and **106** are vertically spaced apart from each other at a distance slightly greater than the longitudinal dimension of each one frame of the film F to be cut off. The stationary cutters **101** and **106** are fomred with wedge-shaped cutting slots **102** and **107** which are so dimensioned as to allow the passage of the film F therethrough.

The movable cutter **123** having a rectangular cross section is disposed for horizontal sliding movement between the two stationary cutters **101** and **106**. The front ends of the upper and lower walls of the movable cutter **123** are so formed to provide cutting edges C_1 and C_2 respectively (see FIG. 3 and FIG. 8), which are spaced apart at a distance exactly equal to the longitudinal dimension of each one frame of the film F. The two stationary cutters **101, 106** and the movable cutter **123** may preferably be made of stainless steel, and the cutting edges C_1 and C_2 of the movable cutter **123** as well as the edge portions of the cutting slots **102** and **107** in the stationary cutters **101** and **106**, respectively, must be sufficiently sharpened to provide a good cutting function. The movable cutter **123** has a fixed pin **109** (FIG. 4) for connecting the cutter **123** through a connecting plate **110** and a plate spring **112** to the actuator **113** of the plunger **114**, which is fixed to a frame member in the casing **3** (not shown). The opposite end of the actuator **113** which is remote from the movable cutter is mormally biased by a return spring **115** into abutment with a stopper **116.**

In the inoperative position of the movable cutter **123**, as shown in FIG. **3**, the stationary cutter **101** is tightly tilted counter-clockwise about the shafts **103** and **103'** so that the inner side thereof forcedly contacts the upper cutting edge C_1 of the movable cutter **123** while the inner side of the other stationary cutter **106** forcedly contacts the lower cutting edge C_2 fo the movable cutter **123.** This is accomplished by the coil springs **105** and **105'** extended between the two stationary cutters. The lower stationary cutter **106** and the bottom wall of the movable cutter **123** are formed with elongated slots 106_1 and 123_1 superposed with each other, and an illuminating lamp **124** is provided within these slots.

In the path of the film F between the stationary cutters **101** and **106**, movable guides 126_1 and 126_2 are provided on plate springs 125_1 and 125_2 fixed to the frame members F1 and F2, respectively, as shown in FIGS. **5** and **6.** These guides 126_1 and 126_2 have film guide grooves 127_1, 127_2 and sloped surfaces 128_1, 128_2, respectively. Such film guides are disclosed in U. S. Pat. 3,310,450 and further description thereof is not necessary.

By the manual operation of the dial **5**, the film F is moved to travel through the cutting slot **102** (FIG. 5) in the stationary cutter **101** and along the guide grooves 127_1, 127_2, of the opposite guides 126_1, 126_2 into the cutting slot **107** in the lower stationary cutter **106.** Thereupon, the plunger **114** is actuated to cause the movable cutter **123** (FIG. **6**) to slide forwardly (or leftwardly facing to the drawings) so that the opposite side edge portions of the movable cutter **123** adjacent to the cutting edges C_1 and C_2 slide along the sloped surfaces 128_1, 128_2 of the opposite guides 126_1, 126_2 while displacing these guides outwardly. As a result, the guides 126_1 and 126_2 are forced outwardly against the force of the plate springs 125_1 and 125_2 so as to allow the opposite side edges of the film F to be disengaged from the guide groves 127_1 and 127_2, and at the same time the cutting edges C_1 and C_2 of the movable cutter **123** reach the cutting slots **102, 107** of the stationary cutters **101, 106** and cut the film F from its left-hand to its right-hand side as viewed in FIG. **4** facing to the front, although only one of the guides 126_1 is shown in FIG. **4** for the sake of simplicity.

The electrical circuit of the plunger **114** and illuminating lamp **124** is shown in FIG. **9.** As shown therein, the aforesaid power switch **6** and the lamp **124** are connected in series with one of the terminals of the socket S connected with a commercially available power source. The plunger **114** is connected with both terminals of the socket S and in series with the afore-said actuating switch **7.**

In the above-described arrangement, the device is loaded with the card **10** and the film F in the described manner and then the film F is moved to a predetermined position for mounting by the operation of the dial **5.** The switch button **7** is then depressed to energize the plunger **114**, whose actuator **113** thus moves the movable cutter **123** linearly toward the film F against the recovering force of the return spring **115.** As the result, the sloped surfaces 128_1 and 128_2 of the opposite movable guides 126_1 and 126_2 are forced outwardly by the opposite side edges of the cutter **123** in the described manner so that the opposite side edges of the film F are disengaged from the guides 126_1 and 126_2 (see FIG. **6**). At the same time, the cutting edges C_1 and C_2 of the movable cutter **123** reach the cutting slots **102** and **107** of the stationary cutters **101** and **106** and cooperate therewith to shear the film F from left to right. Since the stationary cutter **101** is biased counter-clockwise by the springs **105** and **105'**, the movable cutter **123** while sliding is resiliently held between the two stationary cutters **101** and **106** by a predetermined resilient force provided from these springs. Therefore, during the while the cutting edges C_1 and C_2 of the movable cutter **123** move across the cutting slots **102** and **107** of the stationary cutters **101** and **106**, the film F can be cut with a uniform cutting force.

The piece of film thus cut off is moved forward by the front end of the movable cutter **123** and urged onto the bonding layer 10_3 surrounding the aperture 10_1 of the apertured card **10** which is inserted into the guide plate **11.** Thus, the film piece is mounted on the card **10.** Until such film mounting is completed, the plunger **114** remains energized to linearly move the movable cutter **123** by means of the actuator **113.** The stroke of the actuator is selected somewhat greater than that of required for the film mounting so that a sufficient contact pressure to uniformly bond the severed film piece onto the bonding layer 10_3 of the card **10** may be imparted from the actuator through the connecting spring **112** to the movable cutter **123.**

When the switch button **7** is released, the plunger **114** is deenergized allowing actuator **113** to be retracted by the return spring **115** until stopped by the stopper **116.** Accordingly, the guides 126_1 and 126_2 are inwardly returned to their positions shown in FIG. **5** and they are now ready to guide the film F again.

In the foregoing embodiment, the movable and stationary cutters are described as made of stainless steel having a relatively high hardness, and the cutting edges C_1 and C_2 of the movable cutter the cutting slots **102** and **107** of the stationary cutters **101** and **106** are well

sharpened to provide a good cutting performance. Alternatively, as shown in FIG. **8**, the movable cutter per se may comprise a cutter body **123'** made of casting material, and cutting edges C_1, and C_2 made of carbon steel or the like metal and attached to the cutter body **123'**. Also, the lower stationary cutter **106** has been shown as fixed to a frame member, but the same effect as described above may be achieved by making the lower stationary cutter in a form similar to the upper one **101** which is pivotally supported at one end. Further, the upper stationary cutter **101** has been shown as a rockable structure pivotally supported at one end and urged into forced contact with the movable cutter **123** by the springs **105, 105'**, whereas such a pivotal construction is not always necessary for the upper stationary cutter but it may take an alternative form as shown in FIG. **10**, wherein a stationary cutter **101'** formed with a cut-away **102'** corresponding to the cutting slot **102** is secured to one end of a plate spring P_1, whose other end is secured to a supporting frame member (not shown), so that the resiliency of the plate spring is utilized to urge the stationary cutter **101'** into forced contact with a movable cutter **123'**. Such alternative arrangement of the cutter may achieve the same result as that described above.

In the present film mounter disclosed hereinabove, the stationary cutter **101** is always biased for rotation about pivots **103** and **103'** and into contact with the movable cutter **123** by the springs **105** and **105'** and therefore, the clearance between at least at the cutting edge portions of the two stationary cutters **101, 106** and the movable cutter may be regarded as zero. More specifically, if the movable cutter should present any non-parallel relationship, it will be compensated for by a proportional angular movement of the stationary cutters to thereby eliminate the possibility of producing any significant clearances between the movable cutter and the stationary cutters which would hamper the film cutting performance of the cutters or the movement of the movable cutter.

Also, the so-called self-sharpening construction of the cutting edges ensures a long service life of the cutting edges and the need for replacement thereof will rarely occur unless the cutting edges do wear to adversely affect the proper dimensions in severing the film for mounting. In that case replacement or sharpening can readily and simply be accomplished in a short time without taking any additional trouble to adjust the clearances between the movable and stationary cutters.

Furthermore, the cutting edges of the stationary cutters are tapered with respect to the cutting edges of the movable cutter and this is very useful to cut the film progressively from its one side edge to the other with a greater smoothness than in the conventional arcuate cutting edges, whereby a regular rectangular shape of a predetermined size is always ensured for every piece of film cut off.

In the illustrated embodiment, the tapers in the cutting edges of the upper and lower stationary cutters are oriented in the same way, but they may be opposite in orientation.

While the present invention has been shown and described with respect to some specific forms, it is to be understood that various changes and modifications may be made therein without departing from the spirit of the invention as defined in the appended claims.

We claim:

1. A film mounter comprising:

a supporting frame for holding a length of elongated film,

cutter means including a movable cutter member having a pair of cutting edges spaced apart at a distance corresponding to the longitudinal dimension of a piece of film to be cut off, and a second cutter member with cutting edges arranged to complement the cutting edges of said movable cutting member to provide a shearing action, the cutting edges of said second cutter member being held stationary with respect to displacement normal to the plane of the film and at least one of the cutting edges of said second cutter member being held movably in the direction of elongation of the supported film with respect to at least one of the cutting edges of said movable cutter member, said second cutter member having at least one of the cutting edges thereof adapted to be uniformly urged into resilient contact with said cutting edge of said movable cutter member during said shearing action,

means for feeding a film between the cutting edges of said second cutter member, and

drive means associated with said movable cutter member for driving same towards the cutting edge of said second cutter member to hold and cut said film between the cutting edges of said movable cutter and second cutter members.

2. A film mounter as defined in claim **1**, wherein said second cutter member has one end thereof adjacent to said drive means pivotally supported and the other end formed with a narrow transverse slot for passing said film therethrough, the edge of said slot being formed as a cutting edge and adapted to be urged into resilient contact with said movable cutter member.

3. A film mounter as defined in claim **2**, wherein said narrow slot in said second cutter member is in the form of a wedge-shaped slit having a gradually reduced width, and said drive means drives said movable cutter member linearly toward said narrow slot of said second cutter member in a direction substantially perpendicular thereto.

4. A film mounter as defined in claim **1**, wherein said movable cutter member has parallel surfaces, the end faces of said parallel surfaces opposite to said drive means being provided with said cutting edges, and said second cutter member has one end thereof adjacent to said drive means pivotally supported in parallel relationship with said parallel surfaces of said movable cutter member and the other end formed with a narrow slot for passing said film therethrough, the edge of said slot being formed as a cutting edge and being adapted to be urged into resilient contact with one of said cutting edges of said movable cutter member.

5. A film mounter as defined in claim **4**, wherein spring members are provided to connect the slotted ends of said second cutter members with the movable cutter member so as to urge the cutting edges of said second cutter members into resilient contact with the cutting edges of said movable cutter member.

6. A film mounter as defined in claim **1**, wherein said second cutter member is fixed to one end of a resilient member secured to said frame and extending forwardly from said drive means, said end of said resilient member to which said second cutter member is fixed is em-

bedded in said cutter member so that the surface of the resilient member is on the same plane as that of the cutting edge of said second cutter member, said resilient member being secured to said frame to urge the cutting edge of said second cutter member into contact with the cutting edge of said movable cutter member.

7. A film mounter as defined in claim **6,** wherein said film feed means includes a pair of film transport rollers for nipping the film and slit-like guide slots formed in said second cutter member from surfaces including said cutting edges to opposite surfaces of said second cutter member, said guide slots having a width substantially equal to the width of said film, the edges of said guide slots providing the cutting edges of said second cutter member.

8. A film mounter according to claim **1** in which the cutting edges of said second cutter member are independently supported by respective supporting means permitting at least one of the second cutter member cutting edges to move in the direction of elongation of the supported film, and the urging of the second cutter member into resilient contact with said cutting edges of said movble cutter member during the shearing action is accomplished by spring means extending between the respective supporting means, said spring means being operable to bias said at least one of the second cutter members cutting edges toward contact with the complementary cutting edge of the movable cutting member.

9. A film mounter comprising:

a supporting frame for holding a length of elongated film,

cutter means including a movable cutter member having a pair of parallel cutting edges spaced apart at a distance corresponding to the longitudinal dimension of a piece of film to be cut off, and a second cutter member with parallel cutting edges to match the cutting edges of said movable cutter member to provide a shearing action, the cutting edges of said second cutter member being held substantially stationary with respect to displacement in the direction of cutting movement of said movable member, the cutting edges of said second cutter member being held movably in a direction perpendicular to the cutting movement of said movable member, and the cutting edges of said second cutter member being adapted to be resiliently biased towards and contacted with the respective associated cutting edges of said movable cutter member during said shearing action.

10. A film mounter according to claim **9** in which the cutting edges of said second cutter member are independently supported by respective supporting means permitting the second cutter member cutting edges to move in the direction of elongation of the supported film, and the urging of the second cutter member into resilient contact with said cutting of said movable cutter member during the shearing action is accomplished by spring means extending between the respective supporting means, said spring means being operable to bias said second cutter member cutting edges toward contact with the complementary cutting edge of the movable cutting member.

* * * * *