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2,492,262

COVER FOR CALCULATING MACHINES AND THE LIKE

Filed Nov. 7, 1946

2 Sheets-Sheet 1

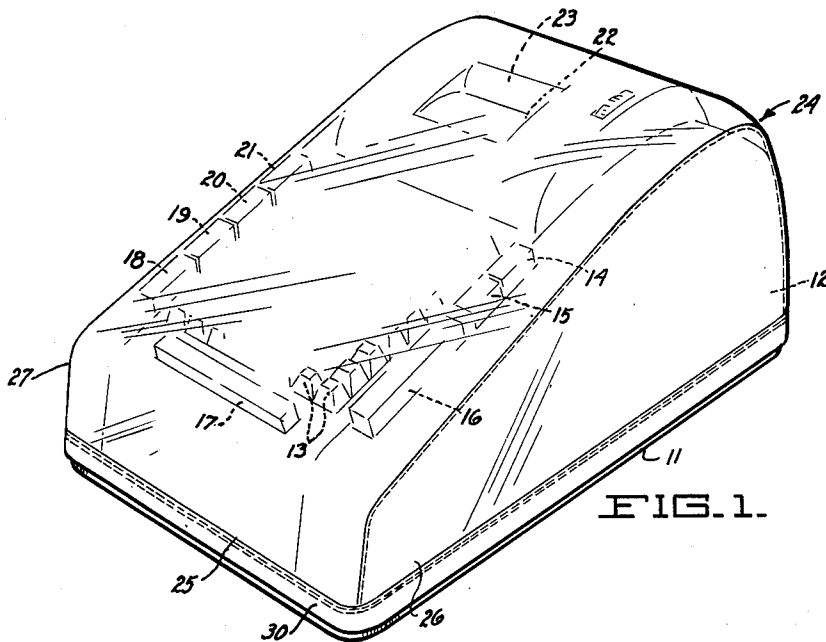


FIG. 1.

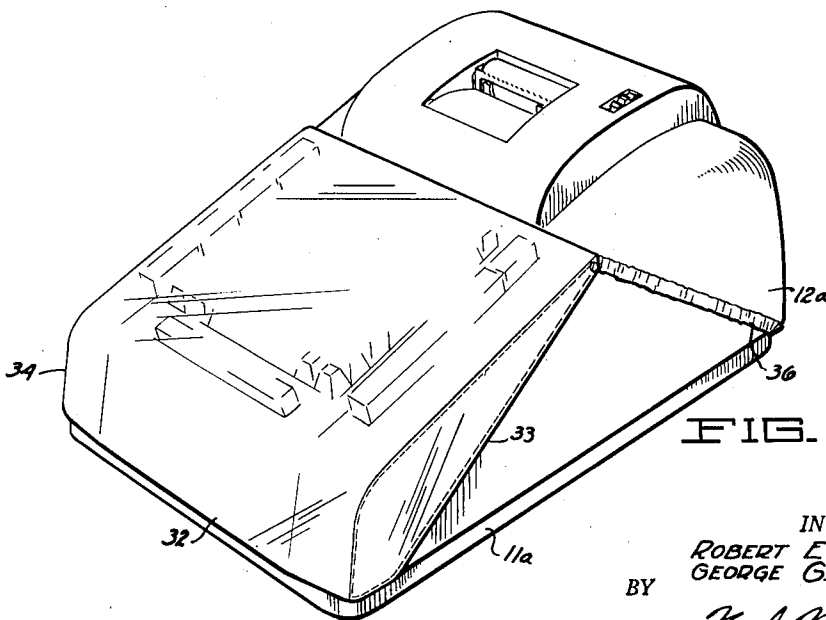


FIG. 2.

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2 Sheets-Sheet 2

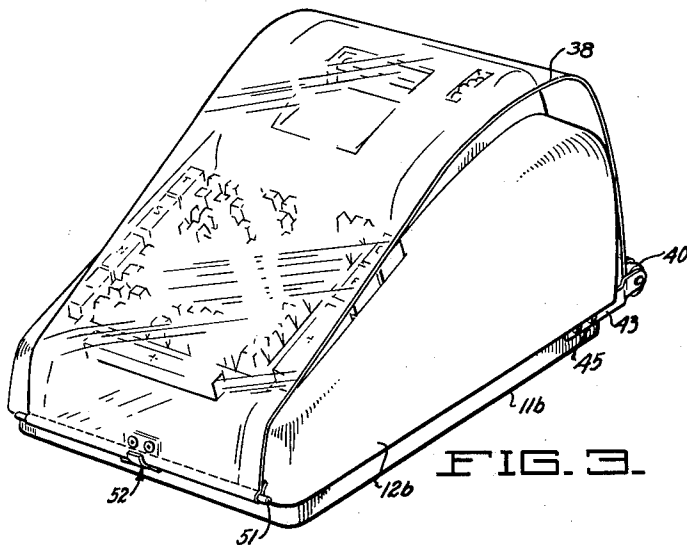


FIG. 3.

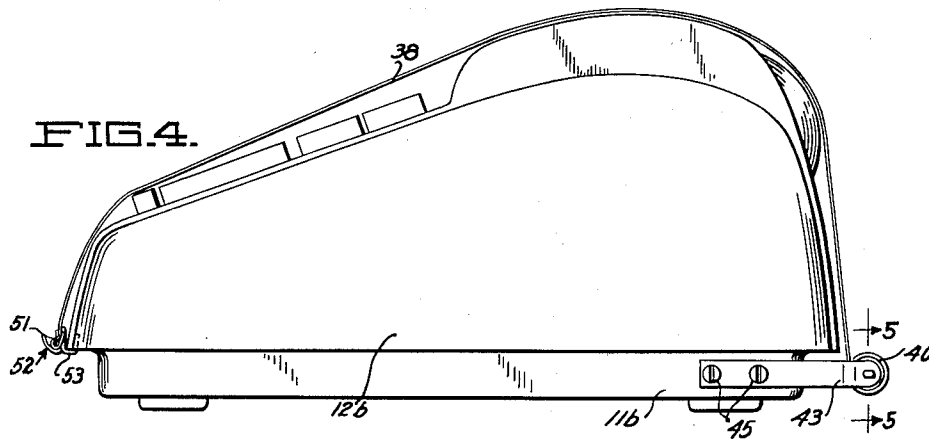


FIG. 4.

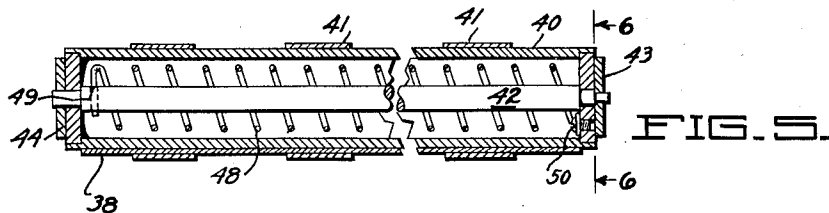


FIG. 5.

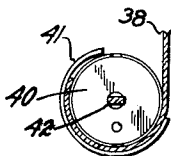


FIG. 6.

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COVER FOR CALCULATING MACHINES
AND THE LIKE

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Application November 7, 1946, Serial No. 708,344

3 Claims. (Cl. 45—68.1)

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This invention relates to calculating machines and the like and has particular reference to dust covers for such machines.

In these machines, cleaning of the keyboard of dust and dirt accumulated thereon offers a considerable problem in view of the many projections and surfaces presented by the keys. Also, it is desirable to keep dust and grit from entering into the working parts of the machine through the various openings and crevices which are provided in the machine cover to permit proper working of the different parts of the machine. Consequently, it is desirable, and a common practice, to cover such machines when not in use.

In many cases, for example, where a machine of the above type is used only intermittently, the removal and replacement of a dust cover is considered a nuisance, and a natural tendency of the operator is to leave the cover removed with the result that in time the machine becomes unsightly.

One object of the present invention is to obviate the above mentioned difficulty.

Another object is to provide a cover for a machine of the above type which does not hamper manipulation of the keyboard even though the cover is in place on the machine.

Another object is to maintain a machine cover of the above type in close proximity with the tops of the keys of the keyboard so that said keys may be manipulated with the cover in place.

Another object is to obviate the necessity of bodily removing a machine cover from the machine in order to move the same to a machine uncovering position.

Another object is to enable identification of the features of a machine even though the machine is covered.

The manner in which the above and other objects of the invention are accomplished will be readily understood on reference to the following specification when read in conjunction with the accompanying drawings, wherein:

Fig. 1 is a perspective view of an adding machine and a machine cover therefor embodying the present invention.

Fig. 2 is a perspective view of an adding machine and a cover therefor comprising an alternative form of the present invention.

Fig. 3 is a perspective view of an adding machine and a cover therefor embodying a second modified form of the invention.

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Fig. 4 is a side view of the machine and cover illustrated in Fig. 3.

Fig. 5 is a sectional view of the cover roll and is taken along the line 5—5 of Fig. 4.

Fig. 6 is a transverse sectional view of the cover roll and is taken along the line 6—6 of Fig. 5.

Referring in detail to the drawing, the machine dust cover is illustrated as applied to an adding machine, such as is disclosed and claimed in the copending application of Robert E. Boyden, Serial Number 582,553, filed March 13, 1945, and entitled Calculating machine. Reference may be had to said application for details of the machine not specifically disclosed herein. However, it is to be understood that the present invention is not limited to machines of the above type but may be equally well applied to calculating and other computing machines, check writers and the like. Also, the invention may be applied to machines of the full key keyboard type or the ten key keyboard type.

Referring to the form of the invention disclosed in Fig. 1, the adding machine chosen for illustration comprises in general a base 11 and a casing 12. In side elevation the machine is similar to that disclosed in Fig. 4. The machine is of the full keyboard type comprising eight banks or rows of depressible amount keys 13 surrounded on three sides by depressible operation control bars. Included in the latter group of control bars is a "correction" bar 14, a "repeat" bar 15, "add" bars 16 and 17, a "minus" bar 18, a "non-add" bar 19, a "sub-total" bar 20 and a "total" bar 21, each of which, when depressed, controls a corresponding function of the machine.

A paper tape (not shown) is printed within the machine and is ejected through an opening 22 as it passes over a platen 23.

A dust machine cover, generally indicated at 24, is formed of a thin flexible membranous material which is transparent, or at least sufficiently transparent to enable the operator to discern the features of the machine and to read the characters on the various keys and bars of the keyboard as well as those characters printed on the paper tape.

Although many presently manufactured plastic materials may serve as a cover material, we prefer to employ a plastic of the polyvinyl thermoplastic type commercially known as "Vinylite" having a thickness on the order of .006 inch. The cover is formed in three sections comprising a

center section 25 and side sections 26 and 27 sewn or otherwise secured to the center section.

A hem 30, preferably of the same material but somewhat greater in thickness, for example, on the order of .008 inch is sewn or otherwise secured along the bottom edge of the three sections to form a reinforcing element. The hem 30, by virtue of its additional weight and body, also helps to maintain the cover in position on the machine.

The cover is so constructed that the center section 25 extends in close proximity to the tops of the various keys and bars so that, if desired, the operator may readily depress the keys directly through the cover, that is, he may operate the machine without removing the cover.

The provision of a transparent cover enhances the appearance of the machine, when covered, and also enables one to positively identify the machine even though covered.

Fig. 2 illustrates a modified form of machine dust cover as applied to the same type of machine illustrated in Fig. 1. In this case, the cover is constructed to extend over the keyboard portion only of the machine. The cover is preferably of the same material as that mentioned in connection with Fig. 1 and also comprises three sections, including a center section 32 and end sections 33 and 34, suitably secured to the sides of the center section.

It will be noted that the base 11a of the machine is of somewhat smaller dimensions laterally and longitudinally than the adjacent portion of the casing 12a. Now, the lower forward edge of the center section 32 extends slightly below the lower edge of the casing 12a while the lower edge of each of the side sections extends diagonally from a point adjacent the lower forward edge of the center section to the rear edge thereof.

A band 36, preferably of rubber or the like, is attached at opposite ends thereof to the two junctures of the rear end of the side and center cover sections, and is intended to be extended around the rear of the machine as shown to yieldably maintain the cover against the tops of the keys. However, the strength of the band 36 should be such that the cover will not, of itself, materially depress any of the keys or bars of the keyboard or prevent return of any of these keys or bars from a depressed position.

Figs. 3 to 6 illustrate a modified form of the invention in which the machine dust cover is always carried by the machine, i. e., it need not be bodily removed from the machine at any time but is normally in the form of a roll which may be unrolled into a machine covering position or rolled into an uncovering position. The cover is preferably of the same material as that mentioned in connection with Figs. 1 and 2 and comprises a single strip 38 extending laterally sufficiently to cover the entire keyboard.

The cover is secured at one end thereof to a hollow roll 40 by means of a series of arcuate spring clips 41 (Figs. 5 and 6) which are snapped over the periphery of the roll with one end of the strip 38 in place thereon.

The roll 40 is rotatably mounted on a shaft 42, the reduced end sections of which extend into brackets 43 and 44 secured to the sides of the base 11b of the machine by screws, two of which are shown at 45. It will be noted that one end of the shaft 42 is non circular and shaped to fit a correspondingly formed opening in the bracket 43, as illustrated in Figs. 4 and 6, to prevent rotation of the shaft.

A torsion spring 48 surrounds the shaft 42 and is rigidly secured at one end 49 thereof to the shaft. The other end of the spring is secured by means of a screw 50 threaded into an end wall of the roller to provide sufficient torsional force necessary to roll the cover upon the roll 40.

The forward end of the cover 38 is secured to a laterally extending stiffening rod 51 and a combined finger grip and locking clip 52 is secured over both the rods 51 and the forward central portion of the cover 38. The latter has a U-shaped formation 53 which is adapted to fit under the forward lower edge of the casing 12b to maintain the cover 38 in a covering position as illustrated. However, on release of the clip 53 from the forward edge of casing 12b, the spring 48, having an initial torque applied thereto is effective to roll the cover onto the roll 40.

It will be noted on reference to Fig. 4, in particular, that the cover 38 extends in close proximity to the tops of the various keys and bars of the keyboard so that the operator may view the various keys and may depress them through the cover, even though the latter is in key covering position. Such operation is intended, however, only for occasional machine operations.

Although we have described our invention in detail and have therefore used certain specific terms and languages herein, it is to be understood that the present disclosure is illustrative rather than restrictive, and changes and modifications may be made without departing from the spirit or scope of the invention as set forth in the claims appended hereto.

Having thus described our invention, what we desire to secure by United States Letters Patent is:

1. A dust cover for business machines and the like having depressible keys, said keys having top surfaces extending substantially in a common plane, comprising a flexible substantially transparent membranous material adapted to extend over said keys whereby said keys may be visibly identified and depressed through said cover while said cover is on said machine and means for yieldably maintaining said cover adjacent said plane and against the tops of at least certain of said keys.

2. A business machine comprising a plurality of depressible keys, said keys having their top surfaces extending and substantially in a common plane, a roll, bracket means adjacent the bottom of one end of said machine for rotatably supporting said roll, a thin flexible substantially transparent cover strip attached adjacent one end thereof to said roll, spring means for rolling said cover strip upon said roll and to enable said strip to be withdrawn therefrom to a position covering said machine, and means for removably attaching the free end of said strip to the other end of said machine adjacent the bottom thereof, to position the portion of said strip adjacent said keys in a plane adjacent said plane of said keytop surfaces and in contact with at least certain of said keys, whereby said keys may be visibly identified and depressed while said strip extends thereover.

3. A business machine comprising a plurality of depressible keys, said keys having their top surfaces extending substantially in a common plane, a roll, bracket means adjacent the bottom of one end of said machine for rotatably supporting said roll, a thin flexible substantially transparent cover strip attached adjacent one end thereof to said roll, spring means for rolling said cover strip upon said roll and to enable said strip

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to be withdrawn therefrom to a position covering said machine, an elongated stiffening member attached to the free end of said strip, and a hook carried by said free end of said strip and removably attachable to the other end of said machine adjacent the bottom thereof to position the portion of said strip adjacent said keys in a plane adjacent said plane of said keytop surfaces and in contact with at least certain of said keys whereby said keys may be visibly identified and depressed through said strip while said strip extends thereover.

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