July 24, 1934. G. W. MUNSON 1,967,720

CUSHION CAP FOR KEY OPERATED MACHINES

Filed Nov. 27, 1929

Fig. 1.

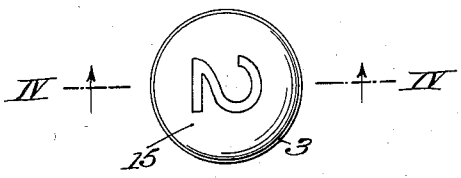


Fig. 2.

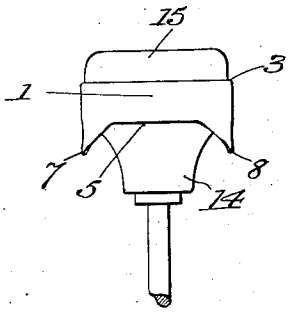


Fig. 3.

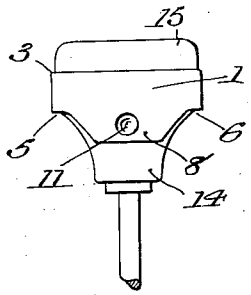
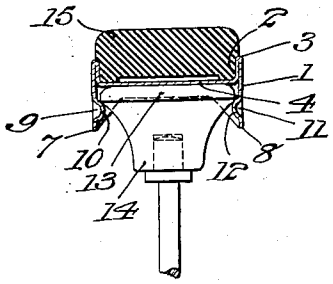


Fig. 4.



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CUSHION CAP FOR KEY OPERATED MACHINES

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3 Claims. (Cl. 197—103)

This invention relates to improvements in cushion caps for key operated machines and has for its object to provide a device which may be removably secured to keys of calculating or other machines without obstructing the general visibility of the lines of keys.

Another object is to provide a device which will minimize the obstruction between the lines of keys in one direction and permit of a free passage between the rows of keys for the movement of the division bars or other means (not shown) of calculating machines or the like.

Another object is to provide a device which will be simple and rigid in construction, economical to manufacture and readily applied to the key of the machine.

Another object is to provide certain improvements in the form, construction and arrangement of the parts whereby the above named and other objects may effectively be attained.

A practical embodiment of my invention is represented in the accompanying drawing, in which

Fig. 1 represents a plan view of my improved cap.

Fig. 2 represents a side elevation of the same applied to a key of a calculating machine.

Fig. 3 represents a front elevation of the same, and

Fig. 4 represents a vertical central section taken in the plane of the line IV—IV of Fig. 1, looking in the direction of the arrows.

The cap is constructed of thin sheet metal and comprises a tubular body denoted by 1, a shallow cup-shaped upper portion denoted by 2 having an annular peripheral edge denoted by 3 extending upwardly from the body and a bottom denoted by 4. The body has cut away portions 5, 6 disposed on opposite sides, thereby forming diametrically opposed depending front and rear portions 7, 8 respectively. The front portion 7 is provided with an indention 9 near its lower edge, which indention extends inwardly from the interior wall to form a rounded projection 10. The rear portion 8 has a similar indention 11 which forms a rounded projection 12 on the interior wall. These projections 10 and 12 are arranged to engage the lower edge of the relatively narrow rim 13 of the key 14 to prevent unintentional displacement of the cap. By this construction, it will readily be seen that when the cap is to be applied to the key, the projections will rest upon the top of the narrow rim 13 of the key, and by depressing the cap downwardly the front and rear portions 7, 8 will yield outwardly and allow the projections 10, 12 to pass over the rim, after which the portions 7, 8 will return to their normal position and the projections 10, 12 rest in position under the rim 13, as clearly shown in Fig. 4.

The cup-shaped upper portion 2 of the cap is arranged to receive a finger cushion 15 of rubber or other similar material, which is secured therein in any well known or approved manner.

By providing the body with the cut away portions 5, 6, it will be seen that the key 14 will be readily visible to the operator in any position. In other words, the cut away portions 5, 6 provide a decided line with respect to the adjacent keys, so that the operator can readily see whether the key is in its normal position or whether it has been depressed.

Another advantage obtained by the cut away portions 5, 6 is the fact that the passages in one direction between adjacent keys are kept entirely free from obstruction, since the portion of the keys of a machine of this character which receive the cushion caps are relatively thin, closely associated and designed with as little space as possible therebetween.

It is also to be pointed out that, by reason of the cut away portions 5, 6, the body does not extend below the rim 13 of the key 14, thus permitting the use of the division bars or other means (not shown) interposed between the keys which are commonly found in machines of this character.

It is obvious that various changes may be resorted to in the form, construction, and arrangement of the several parts without departing from the spirit and scope of my invention; and hence, I do not intend to be limited to the details herein shown and described except as they may be included in the claims.

What I claim is:

1. A cushion cap for the keys of calculating or similar machines in which the keys are arranged in vertical alinement and stepped relation, each key being formed with a relatively narrow rim and a reduced shank portion depending therefrom, said cap comprising a thin sheet metal tubular member arranged to cover the rim of the key and terminate at the lower edge thereof and a relatively wide portion extending perpendicularly below the rim to obscure the front of the shank of the key, the vertical edges of said extended portion being tapered to substantially conform to the contour of the shank, the lower end of the extended portion

being slightly yieldable and arranged to be sprung over the rim when being positioned thereon, an indentation formed in the tapered bottom of the extended portion and provided with a rounded interior wall disposed to frictionally engage the lower edge of the rim, and a resilient cushion fixed in and projecting from the top of the member.

2. A cushion cap for the keys of calculating or similar machines in which the keys are arranged in vertical alinement and stepped relation, each key being formed with a relatively narrow rim and a reduced shank portion depending therefrom, said cap comprising a thin sheet metal tubular member having portions arranged to cover the rim of the key and terminate at the lower edge thereof and relatively wide front and rear portions extending perpendicularly below the rim to obscure parts of the shank and leave the sides of the shank exposed, the vertical edges of said extended portions being tapered to substantially conform to the contour of the shank of the key, the lower end of the extended portions being slightly yieldable and arranged to be sprung over the rim when being positioned thereon, an indentation formed in the tapered bottom of the extended portions, each indentation being provided with a rounded interior wall disposed to frictionally engage the lower edge of the rim, and a resilient cushion fixed in and projecting from the top of the member.

3. A cushion cap for the keys of calculating or similar machines in which the keys are arranged in vertical alinement and stepped relation, each key being formed with a relatively narrow rim and a reduced shank portion depending therefrom, said cap comprising a thin sheet metal tubular member having integrally formed therein upper and lower shallow cup-shaped portions, the walls of the lower cup portion being arranged to cover the rim of the key and terminate at the lower edge thereof and having at least one relatively wide portion extending perpendicularly below the rim to obscure a part of the shank, the vertical edges of said extended portion being tapered to substantially conform to the contour of the shank of the key, the lower end of the extended portion being slightly yieldable and arranged to be sprung over the rim when being positioned thereon, an indentation formed in the tapered bottom of the extended portion and provided with a rounded interior wall disposed to frictionally engage the lower edge of the rim, and a resilient cushion fixed in and projecting from the top of the upper cup-shaped portion of the member.

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