Nov. 10, 1953 M. T. GREEN 2,658,217

LINT REMOVER

Filed June 1, 1950

Fig. 1.

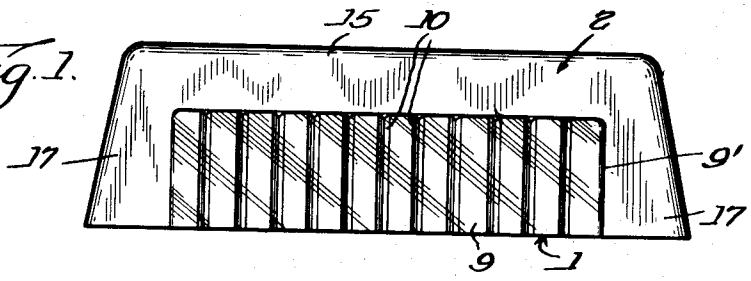


Fig. 2.

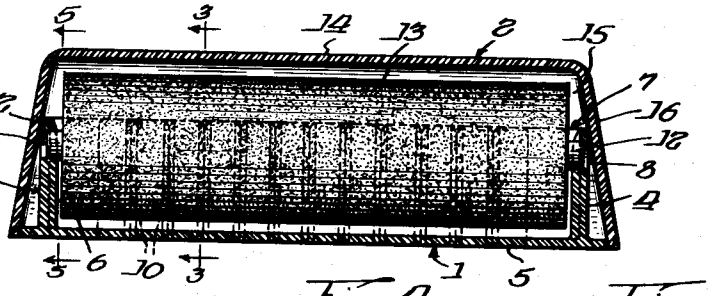


Fig. 3.

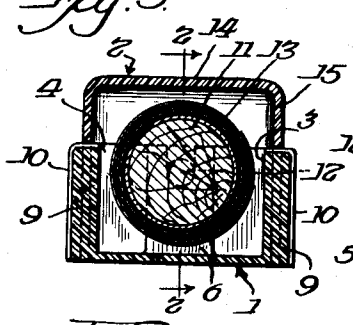


Fig. 4.

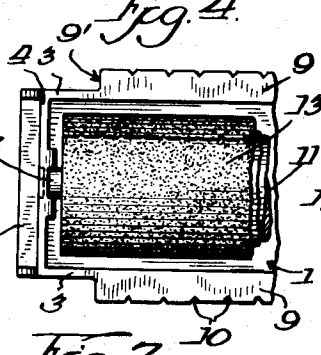


Fig. 5.

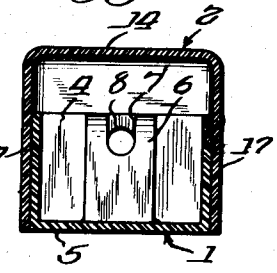


Fig. 6.

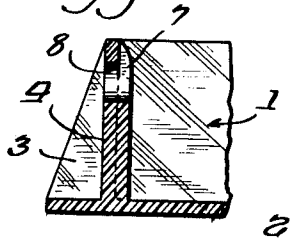
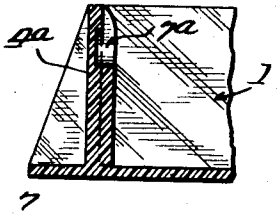


Fig. 7.



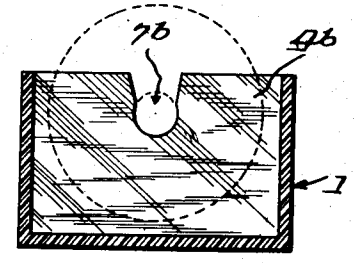


Fig. 8

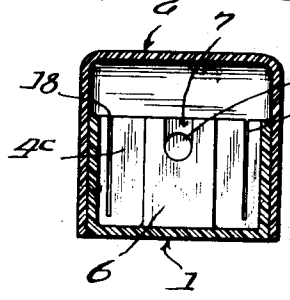


Fig. 9.

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UNITED STATES PATENT OFFICE

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LINT REMOVER

Marvin T. Green, Chicago, Ill.

Application June 1, 1950, Serial No. 165,537

4 Claims. (Cl. 15—104)

1

This invention relates to improvements in cleaning implements, having for an object to provide a device or implement so constructed that, when contacted with and moved over a surface, it will function to remove adhering, small, foreign particles therefrom and retain such removed particles thereon.

Another object of the invention is to provide a device of the above stated character which is portable, desirable for use as a toiletry accessory, retained in such a manner as to remain operatively effective for a long period of time, and capable of having its cleaning surface quickly and efficiently renewed as and when its former one becomes excessively ladened or littered with surface removed particles.

It is an object of the invention to provide an advantageous and novel holder casing or carrier for the cleaning member of the implement, being so constructed as to normally cover and shield said member, yet permit its convenient and ready exposure; moreover, permit comfortable and effectual retention of the holder casing in user's hand in a manner whereby the cleaning member can be positively engaged with and moved over a surface to be cleaned or freed of foreign particles, i. e., dust, lint, ravelings, etc.

Yet another object of the invention is to provide a cleaning implement of comparatively simple, rugged and cheap construction effectually usable over a prolonged period of time; furthermore, a device so cased or housed as to be fully concealed and rendered aesthetically attractive.

The foregoing, as well as other objects, advantages and meritorious teachings of my invention, will be in part obvious and in part pointed out in the following detailed disclosure thereof, when taken in conjunction with the accompanying drawings, it being understood that the forms of the invention presented herein are precise and what are now considered to be the better modes of embodying its principles, but that other modifications and changes may be made in specific embodiments without departing from its essential features.

In the drawings:

Figure 1 is a side elevation of the improved cleaning implement in closed position.

Figure 2 is a vertical, longitudinal section, taken on the line 2—2 of Figure 3 looking in the direction in which the arrows point.

Figure 3 is a vertical transverse section, taken on the line 3—3 of Figure 2, looking in the direction in which the arrows point.

Figure 4 is a fragmentary top view of one end

2

portion of the adhesive cleaning or picking device and the open receptacle receiving, retaining and housing the latter.

Figure 5 is a vertical, transverse section, taken on the line 5—5 of Figure 2, looking in the direction in which the arrows point, showing the formation of one of the end walls of the open receptacle and the seating of one of the bearing pins of the adhesive cleaning or picking device thereon.

Figure 6 is an enlarged fragmentary detail in vertical, longitudinal section, showing the formation of one end portion, end wall and pin bearing in the latter.

Figure 7 is a similar view illustrating a slightly modified form of pin bearing in the open receptacle end wall.

Figure 8 is an enlarged vertical, transverse section through the open receptacle, one or both of whose end walls are formed with another modified form of pin bearing, and

Figure 9 is a vertical, transverse section, similar to Figure 5, in which one or both of the open receptacle end walls is vertically slit or slotted to impart a greater degree of resiliency or yieldability thereto.

Referring in detail to the drawings, particularly, to that form of my invention shown in Figures 1 through 6 of the accompanying drawings, the same consists, generally, of a substantially rectangularly shaped open receptacle identified in its entirety by the numeral 1 and a removable cover 2 therefor. Either or both the receptacle and/or cover may be of plastic material, metal, wood or combinations thereof and surface finished, for aesthetic appeal, as desired.

The receptacle 1, as above stated, is rectangularly shaped, having a length greater than its width. It has side and end walls respectively identified by the numbers 3 and 4 and a bottom 5. The opposite ends of the receptacle's side walls and its bottom are extended beyond their adjacent end walls. The ends of the side wall extensions are inclined, while the ends of the bottom extensions are substantially flush with the lower ends of the walls, as clearly shown in Figures 2, 4 and 6 of the drawings.

Each end wall 4 has its intermediate portion thickened by forming an inwardly disposed panel 6 thereon. The panels have bearing pockets, or recesses 7 thereon, intermediately of their upper end portions and opening onto their respective upper edges. If desired, the bearings may each open onto the outer sides of their respective end

walls, as shown in Figures 2 and 4 and indicated at 8.

To facilitate and improve the engagement of the open receptacle 1 and its gripped retention in the hand of a person, the side walls 3 are materially outwardly thickened intermediately of their opposite ends, as at 9. It is to be noted that these thickened portions 9 of the side walls terminate in spaced relation to the wall ends and hence, the receptacle end walls, and that their ends are straight and provide external, vertical shoulders 9' (see Figures 1 and 4). Thus, the opposite end portions of the open receptacle are of less width than the intermediate portions, the purpose of which will be more fully hereinafter described. Relatively spaced and parallel grooves or scorings, collectively identified by the reference character 10, may be and preferably are formed in and extended transversely of the outer faces of the side wall thickened portions 9 and their upper edges, whereby to better their gripping engagement and retention in a user's hand. Of course, other and different forms of grip improving surfaces may be substituted for the above, such as conditions or preferences may dictate.

A cylindrically shaped roller core 11 having coaxially disposed and carried bearing pins 12, is received in the open receptacle 1 and rotatably supported therein by the reception of said pins in the opposed end wall bearing pockets 7. As will be noted, the length of the roller core is such that it will have rather snug though rotative engagement in the open receptacle, while its diameter is such that a portion of the core extends outwardly therefrom, i. e., the outwardly disposed peripheral portion of said roller core lies outwardly of and beyond the open side of the receptacle.

In order that the roller core 11 may constitute a cleaning member, a strip of adhesive coated material 13, of appropriate length and width, is wound over and about its periphery. The qualities of tackiness of the adhesive applied to the material are such that they will maintain, over a prolonged period of time; moreover, will not become removed, deposited upon or cause discoloration or other injury to a surface contacted thereby or over which the cleaning member is rotated. Consequently, as and when the extended or outer peripheral surface of the adhesive cleaning member is engaged with and rolled over a surface or such, all small, foreign particles on that surface will be engaged and will adhere to the tacky surface of the cleaning member, and so be removed. As and when the adhesive coated and exposed peripheral surface of the cleaning member, constituted as above, becomes excessively ladened or littered with surface removed particles, the free end of the adhesive material strip may be engaged and a sufficient portion of such material turned from or removed from the roller to expose a clear and fresh adhesive peripheral surface, whereupon the removed portion of the material may be cut or torn transversely of itself from the body.

The cover 2 is of substantially U-shaped form, including a body portion having a top 14, side and end walls 15 and 16, and end walls 17, all of which are, preferably, contiguous. The length of said cover, for obvious reasons, substantially corresponds to that of the receptacle 1 and, as will be noted, its end walls 16 are inclined at degrees substantially like those of the opposite ends of the receptacle side walls 3, as shown in Figure 2. Also, the cover width substantially corresponds to the width of the opposite end portions of said open receptacle, while its depth is somewhat greater than the overall depth of the receptacle and the outwardly extended portion of the above described rotatable cleaning member. Consequently, it is obvious that said cover will be cappingly related to the open receptacle when engaged thereover (see Figures 1, 2, 3 and 5). The opposite and inclined end portions of the open receptacle will have the channeled, opposite end walls of the cover (the inclined end and side end walls 16 and 17) slidably engaged thereover with the inner or lower edges of the cover side walls bearing or resting on and along the upper edges of the receptacle side wall thickened intermediate portions 9. In such relation, the outer faces of said receptacle side wall thickened portions 9 will be disposed in planes (vertical planes) outwardly of or beyond the cover side walls 15 and 16 and so exposed, whereby they may be directly engaged by or in the hand of a user and comfortably and effectually retained for cleaning use following removal of the cover.

In Figure 7 I have shown a slightly modified form of bearing pocket 7^a in the upper portions of the end walls 4^a. In this embodiment, the back of the bearing pocket is closed or solid instead of having the opening 8 therethrough, as in the instance of the preceding form of the invention.

Instead of forming the bearing pockets 7 and 7^a in the open receptacle and walls 4 and 4^a, I may form bearing pockets 7^b therein by cutting away or otherwise voiding upper and intermediate portions of such walls and opening the same onto their upper edges or margins, as clearly shown in Figure 8.

A materially greater resiliency or yieldability may be imparted to the open receptacle and walls 4^c by vertically slitting or slotting the same on either side of the thickened end wall portion panel 6, in the manner shown in Figure 9 of the accompanying drawings, and designated at 18. Under certain conditions or requirements of use, such increased resilience or yieldability is desirable, especially, to mount more snugly and retain the rotatable ceaning member in the receptacle 1 or to facilitate its engagement in or removal from said receptacle, particularly, the cleaning member mounting pins in or from the receptacle end wall bearing pockets.

It will be understood and appreciated that the cover of my improved cleaning implement is normally kept engaged on or over the open receptacle thereof, in the manner shown in Figure 1 of the drawings. To use the improved cleaning implement, a person need only grasp the grooved or scored outer faced portions of the thickened sides 9 of the receptacle 1 in his hand, i. e., gripped by the heel of the hand, palm and fingers. When thus held, the cover 2 may be engaged by the fingers of the user's other hand and easily and conveniently removed from the open receptacle 1 of the cleaning implement, thus exposing the rotatable adhesive cleaning member hereinbefore specifically described, particularly, the outer and extended peripheral surface thereof. The implement may now be so positioned as to cause contact of its extended periphery with or upon a surface to be cleaned. Thereupon, the hand and the implement are moved, causing the adhesive cleaning member to be rotated in the implement open receptacle 1 and advancing its

peripheral surface along and over the surface to be cleaned. Because of the adhesive qualities of the material **13**, wound about the periphery of the cleaning member core **11**, it will be understood that as the cleaning member rotates, small foreign particles contacted with said adhesive peripheral surface will become fixed to or adhere to the same.

With usage of the device, the cover **2** is, of course, replaced thereon, concealing the littered adhesive peripheral surface of the rotatable cleaning member supported in the open receptacle **1**, and also, possibly prolong the tacky effectiveness of its exposed surface.

As and when an exposed and used area or peripheral portion of the rotatable member becomes excessively littered or covered with adhered foreign particles, it will be understood that a sufficient portion of the material **13** may be unwound or removed from the member, as hereinbefore explained, thereby producing a fresh and clean surface.

The cleaning member may be conveniently and quickly removed from the open receptacle **1** of the cleaning implement, simply by appropriately engaging it and lifting it together with its mounting pins from the bearing pockets **7**, etc., in the open receptacle and walls. Thus, new or fresh cleaning members may be placed in the open receptacle of the implement when required.

Whereas I have hereinbefore cited, with some degree of particularity, the characters of use of my improved cleaning element and the characters of matters or particles which may be removed from devious and various surfaces thereby, it is to be most definitely understood that such descriptive matter is not to be regarded as of a limitative nature. As an instance of advantageous usage of the improved cleaning implement, other than those hereinbefore set forth, I have found said implement to be quite efficient in the cleaning or removing of hair adhering to the surfaces of furniture upholstery, clothing, etc. The implement is also found advantageous and beneficial for use in raising and maintaining the nap of certain characters of fabrics, whereby to eliminate their compacting and the resultant so-called "shine" thereof.

The device, because of its encased construction and design, is possessed of material, aesthetic qualities and so, may be satisfactorily used as a toiletry article or accessory—kept clearly in view on various types of furniture for immediate use.

I claim:

1. A cleaning implement, comprising an open receptacle, opposite end portions of the sides of the receptacle being shouldered and the receptacle opposite end portions reduced in width with relation to the receptacle sides, those portions of the receptacle sides intermediately of the shoulders forming hand gripping means, a cleaning means retained in the receptacle and extended therefrom, and a cover having top, end and side walls, intermediate portions of the side walls being cut away and the remainders thereof and its end walls being engageable over the width reduced opposite ends of said receptacle terminating adjacent the shouldered opposite end portions of the receptacle sides and over the extended portion of said cleaning means, and exposing said hand gripping means entirely throughout the areas thereof.

2. A cleaning implement, comprising an open receptacle including side and end walls, a cleaning means retained in the receptacle partially extended therefrom, intermediate portions of the side walls of said receptacle being thickened and externally vertically shouldered inwardly of their points of jointure with the opposite end portions of the end walls, and a side and end walled cover having its end walls downwardly extended and channeled and substantially snugly and slidably engaged with and over the end walls of the receptacle and said opposite end portions of its side walls adjacent and outwardly the external vertical shoulders, the side walls of the cover abuttingly engaging the external vertical shoulders of the thickened intermediate portions of the receptacle side walls and exposing the same entirely throughout their respective areas and the cover overlying said extended portion of the cleaning means.

3. A cleaning implement, comprising an open top receptacle including side and end walls, adhesive means rotatably received in said receptacle and extending from its open top, intermediate portions of the receptacle side walls being thickened, the outer faces of said thickened intermediate portions being substantially plane and continuous throughout their respective areas, and a substantially U-shaped cover having its end walls internally and vertically channeled and removably and slidably engaged with and over the end portions of the receptacle including its end walls and those portions of its side walls outwardly of the side wall thickened intermediate portions, said side wall thickened intermediate portions being extended outwardly from and beyond the opposite sides of the cover and having their outer plane and continuous faces completely exposed.

4. A cleaning implement, comprising an open top receptacle including side and end walls, adhesive means rotatably received in said receptacle and extended from its open top, intermediate portions of the receptacle side walls being thickened, the outer faces of said thickened intermediate portions being substantially plane and continuous throughout their respective areas, and a cover including side and end walls removably engaged with and over the receptacle, its open top and the extended portion of said adhesive means, intermediate portions of the side walls of said cover substantially corresponding to the lengths and depths of said thickened intermediate portions of the receptacle side walls being cut away and embracing and receiving the receptacle side wall thickened intermediate portions therethrough, with the outer faces of said portions being completely exposed.

MARVIN T. GREEN.

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