March 29, 1938. A. A. CAMPBELL 2,112,593

RUBBING APPLIANCE

Filed Jan. 7, 1937

Fig. 1.

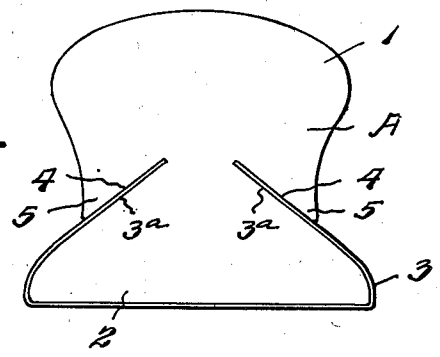
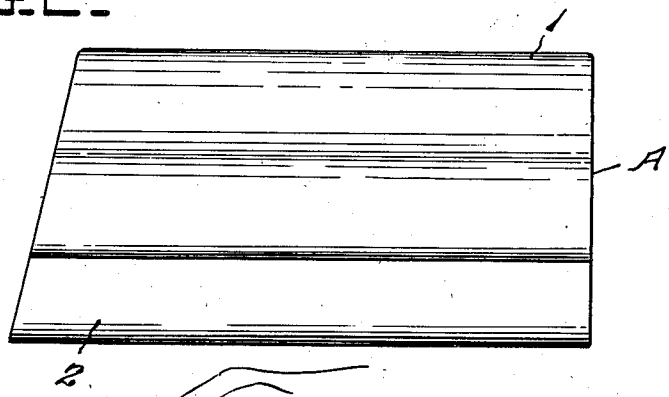


Fig. 2.



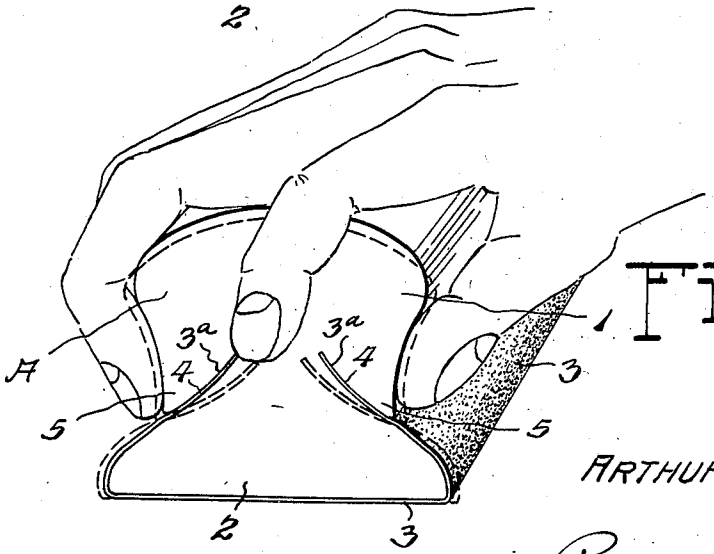


Fig. 3.

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RUBBING APPLIANCE

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Application January 7, 1937, Serial No. 119,491

1 Claim. (Cl. 51—187)

This invention comprises a novel form of rubbing appliance or block of the type to which an abrasive sheet such as sand paper may be applied readily and removed when worn out incident to the rubbing action of the appliance. According to the construction of the invention, my device comprises a body made up of a base section and a head or handle section, the body being preferably formed of rubber, provisions being had for the quick application and retaining of the abrasive material or sand paper incident to the formation of the body and the manner in which the appliance is held when being manipulated for the application of the abrasive surface member thereof to the part which is being smoothed or sanded by means of the device.

I am aware that heretofore it has been proposed to employ a rubbing block comprising a rubber body to which a sand paper or like abrasive member is applied, the attachment of the latter being effected by insertion of end portions thereof in slots of the body and interengagement with the said end portions of penetrating prongs for preventing unauthorized displacement of the abrasive member from the supporting body. My present invention is intended to improve upon the above type of construction in respect particularly to the formation of the head or handle of the rubbing appliance so that it may be more readily grasped and held by the hand in the use thereof than is true in respect to previous appliances of this sort. Additionally, my present invention is intended to improve upon the method of securing the abrasive member or sand paper to the base portion of the body. To this end I utilize a special arrangement or formation of receiving slots formed at opposite sides of the body intermediate the head and base portions thereof. These slots are so arranged that the natural pressure on the opposite sides of the handle portion of the appliance, incident to grasping the same for rubbing purposes, produces a compression of portions of the rubber body at the slots such as to cause these portions to bind firmly against the ends of the abrasive member inserted in the slots. Under these conditions, as the workman uses the abrading device his natural mode of gripping the same for operating the device will effectively retain the abrading member in proper engagement with the device so as to avoid likelihood of disconnection therefrom under working conditions.

In the accompanying drawing a preferred embodiment of my invention is illustrated, though I do not wish to be limited to the exact form of construction depicted, because some modifications in the precise shape of the head and base sections of the body of my device may be made, and other modifications as well, without departing from the principle involving the handle structure and mode of retaining the abrading member in position on the rubbing body.

In the said drawing,

Figure 1 is an end view of a rubbing appliance embodying the essential features of my invention.

Figure 2 is a side elevation.

Figure 3 is a perspective view showing the manner in which the handle portion of the appliance is grasped, the dotted lines illustrating the way in which the rubber substance of the body of the device is distorted to more firmly clamp against the end portions of the abrading member.

Specifically describing the said preferred embodiment of my invention, A in the drawing denotes the body of my rubbing appliance which comprises the head or handle section 1 and the base portion or section 2. In cross section the said body has similarity to the cross-sectional formation of an ordinary railroad rail, and this construction is intentionally availed of because it affords, through the provision of the handle portion 1, a desirable formation at this point, which enables the workman who uses the abrading device of the invention to very readily and firmly grasp the same as he operates it to perform the desired work of smoothing down a particular object to which the abrading member is to be applied.

The body A, comprising the parts 1 and 2 above referred to, is preferably made of rubber so that it yields to the pressure incident to the gripping of the handle portion by the hand of the operator, and also yields to the pressure of the force applied by the hand in holding the base portion 2 with the abrading member 3 attached thereto, in contact with the surface which is being smoothed by means of the appliance.

The abrading member 3 above referred to consists of a strip of sand paper or the like and is readily attachable and detachable from the base portion 2 of the device to readily enable different grades of abrasive members 3 to be used in conjunction with the device and to facilitate quick removal and replacement of the abrasive member, which is obviously desirable.

As previously indicated herein, in addition to the special formation of the head or handle portion 1, after the manner of construction of the

ball or head of a rail, the invention makes provision for quick and easy attachment and retaining of the abrasive member 3 in place upon the base 2. The provision in this respect comprises the formation in the sides of the body A intermediate the handle 1 and the base of slots 4 which incline upwardly and inwardly and extend from the sides of the body substantially in line with the inclinations of the opposite upper portions of the base section 2 of the device. There is a special reason for the provision of the slots in the precise location illustrated and above described, for by their said arrangement the portions of the handle section 1 just above the slots 4 provide lips 5 that overhang the slots, and are adapted to lie above and in contact with the ends 3a of the abrasive member 3 when the latter is applied to the base 2 of the device.

Now when the operator or workman who uses the device of the invention grasps the handle or head portion 1, his fingers at one side thereof and the thumb at the other side grip the handle portion 1 in such a way as to naturally apply pressure downwardly against the lips 5 above the slots 4, and this pressure is transmitted to the end portions 3a of the abrasive member 3, tending to bind the latter in the slots 4 through the frictional contact of said lip portions 5. Not only is the above action relied upon to hold the abrasive member 3 in proper connection with the device, but it will be apparent that as the workman manipulates the rubbing appliance, the pressure of the hand and the gripping force of the fingers and thumb downwardly upon the handle section 1 will tend to compress or flatten the whole handle section downwardly upon the base section 2, which is pressed, with its abrasive member 3, against the surface that is being smoothed. Thus, not only the gripping force of the hand in holding or grasping the rubbing appliance of the invention is availed of to ensure that the ends 3a of the abrasive member will be effectively clamped in the slots 4, but the distortion effect of the compression of the handle portion 1 downwardly against the base section 2 of the body A, through the pressure incident to the force of maintaining the abrasive member 3 in contact with the surface being cleaned or smoothed, is similarly utilized to increase the clamping or retaining effect of the lips 5 above the slots 4 and the portions of the rubber base 2 below the slots 4.

In the use of my rubbing appliance, therefore, it is unnecesary to resort to penetrating prongs or any special interlocking means for holding the abrasive member 3 attached to the body of the appliance. By simply folding the abrasive member 3 or sand paper around the bottom portion of the base and carrying the ends upwardly over the sides of the base to insert the portions 3a in the slots 4, the abrasive member will be sufficiently connected with the body A as not to become displaced therefrom in the ordinary handling of the appliance. When it comes to the operation of the appliance for smoothing or sanding actions, necessarily the abrasive member 3 must be effectively held against displacement as it is frictionally operated in contact with the work. The additional clamping effects to ensure the last mentioned action of positive connection and holding of the abrasive member in place on the body A is obtained incident to the grasping of the handle portion 1, forcing of the lips 5 against the ends 3a of the member 3, and the general distortion of the handle section 1 and base 2 incident to the pressure of holding these parts in their working positions when the rubbing operation is being performed with the abrasive member 3 in contact with the work.

It is notable that the greater the pressure applied to my rubbing appliance in actual use thereof, the greater will be the clamping effect exerted on the ends 3a of the abrasive member 3 and the more positive will be the connection of this member with the body A, ensuring that it will not be disengaged therefrom.

The front end of the sanding appliance body is inclined downwardly and forwardly toward its bottom, this affording a more easy gripping action of the hand on the appliance.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is—

As a new article of manufacture, a rubbing appliance comprising a one-piece body of compressible resilient material formed to provide a handle portion and a base portion, said body being formed with opposite converging slots extending upwardly at acute angles to the base and into the handle portion so as to provide a narrow neck connection between the handle and the base and overlapping yieldable lips below said connection movable by the grip of the handle inwardly toward each other and downwardly toward the bottom walls of the slots by pressure in rubbing so as to effectively grasp the sides of an abrading strip when inserted into the slots and about the face of the body.

ARTHUR A. CAMPBELL.