April 14, 1942. E. N. DARLING 2,279,559

BLACKBOARD ERASER

Filed Dec. 14, 1940

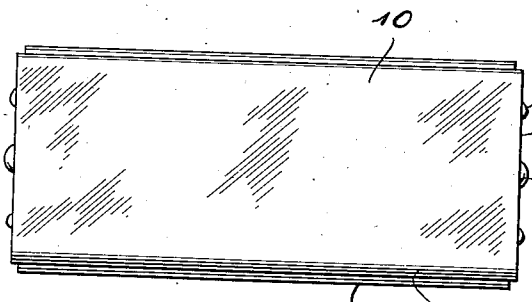


Fig. 1.

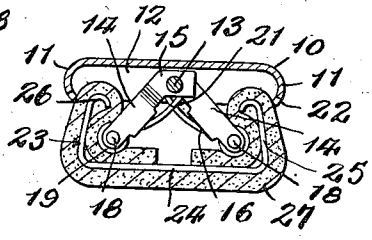


Fig. 3.

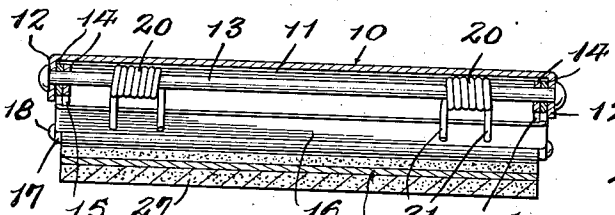


Fig. 2.

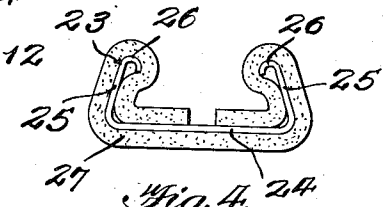


Fig. 4.

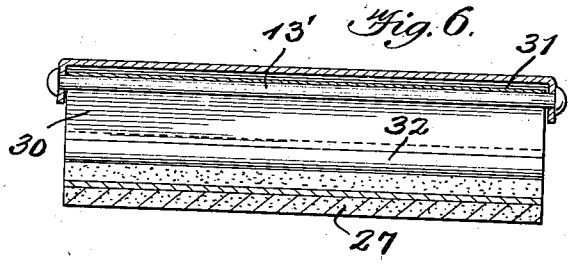


Fig. 6.

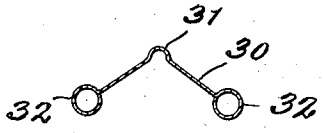


Fig. 7.

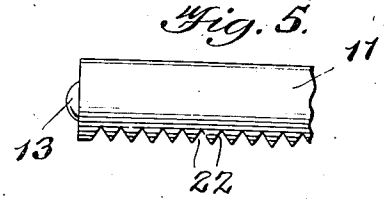


Fig. 5.

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BLACKBOARD ERASER

Earl N. Darling, Rockland, Idaho

Application December 14, 1940, Serial No. 370,207

2 Claims. (Cl. 15—231)

This invention relates to a black-board eraser, and it consists in the constructions, arrangements and combinations herein described and claimed.

It is an object of the invention to provide an eraser embodying novel means for securement of a cleaning cloth or pad, as well as to permit ready removal of the cloth or pad.

More specifically, it is an object of the invention to provide an eraser of two interfitting parts, one of which embodies spring-actuated arms, for effecting securement of the cleaning pad as well as retaining the interfitting parts in operative relation, the spring arms being so constructed as to permit ready manual separation of the interfitting parts.

Additional objects, advantages and features of invention will be apparent from the following description, considered in connection with the accompanying drawing, wherein—

Figure 1 is a top plan view of an eraser constructed in accordance with my invention.

Figure 2 is a longitudinal sectional view on the line 2—2 of Figure 1.

Figure 3 is a cross section on the line 3—3 of Figure 2.

Figure 4 is an end elevation of the pad and holder therefor.

Figure 5 is a fragmentary side elevation of a portion of the case or shell proper.

Figure 6 is a longitudinal sectional view of a modified form of eraser.

Figure 7 is a cross sectional view of the spring tension means for securing the pad within the holder.

In carrying out the invention, I provide a substantially rectangular shell 10, formed of sheet metal or other suitable material, the shell being of any appropriate size and having side and end flanges 11 and 12, respectively. Each of the end flanges 12 are provided with an opening medially of the longitudinal axis of the shell, for reception of a rod 13, the ends of the rod 13 being peened for retention thereof.

Upon the rod 13, adjacent the end flanges 12 there are pivotally mounted a pair of arms 14, one of the arms of each pair being slightly offset as at 15, to permit snug abutting relation of the arms.

In order that the arms 14 at respective sides of the shell will move in unison, the arms are connected by a bar member 16. In the present instance, the bar member 16 is shown as integrally formed with respective arms, although this construction is not arbitrary.

The free ends 17 of the arms are provided with an aperture, and in aligned apertures of the arms a pintle 18 of a roller 19 is mounted.

A pair of helical springs 20 are mounted on the rod 13 suitably spaced apart longitudinally thereof, each spring having a pair of oppositely directed legs 21 in pressure bearing engagement with respective bars 16, tending to swing the arms 14 in an outward and upwardly direction, for a purpose presently to be explained.

Preferably, the side flanges 11 are slightly arcuate as viewed in cross section in order to readily fit within the palm of a hand of the user, and the lower edge is toothed or serrated as at 22, to more firmly grip the cleaning pad, as will be explained.

A resilient support 23 is provided comprising a base member 24, preferably of rectangular form and of less dimensions as to length and width than the shell 10 so as to be readily accommodated within the shell. Integrally formed with the longitudinal edges of the base member 24 there are upwardly extended spring arms 25, the upper edges of the arms being inwardly curved as at 26.

In use, a cloth or pad 27 is laid over the base 24 of the support, respective ends being extended upwardly over the arms 25 and thence brought to rest upon the upper side of the base, as clearly shown in Figure 4. The support may now be secured to the shell 10, by merely pressing the arms 14 of the springs 20 to an extent so as to allow the rollers 19 to pass between the upper edges of the spring arms 25. The arms 14 are then released, and the shell 10 given a slight downward pressure in the direction of the pad support, so as to position the arms 25 therewithin. The legs 21 of the spring exert an outward, upward pressure on the arms 14 and 25, moving them in a similar direction and into engagement with the teeth or serrations 22. The pads 27 will thus be securely held in position in readiness for use. In order to release the pad for renewal or cleaning, it is merely necessary to move the arms 14 against the action of the springs 20 when the shell 10 may be removed from the pad support 23.

In Figures 6 and 7 a modified form of pad gripping means is shown, and as may be readily seen from Figure 7, the tension means consists of a flat resilient metallic strap 30, bent medially longitudinally thereof to define an open loop 31

adapted to receive the rod 13' corresponding to the rod 13 previously described. The outer longitudinal edges of the strap 30 are bent to form cylindrical portions 32, which function in a manner similar to the rollers 19. The strap 30 will be formed from material having substantial resilience so that in operative position the cylindrical portions 32 will be firmly pressed against a pad carried by the arms 25 of the support 23.

The pad 27 has been here shown as a single flat member, but obviously, the pad may be formed as an endless belt member, if desired.

It is a common practice when cleaning blackboards to moisten the pad 27, and obviously, this practice may be followed in my construction, either before or after the pad is put into position on the support.

While I have shown and described a preferred construction, this is by way of illustration only, and I consider as my own all such modifications in structure as fairly fall within the scope of the appended claims.

I claim:

1. In a black-board eraser, a shell having downwardly extended flanges, a pair of spring-pressed arms pivotally mounted on each of the end flanges, said arms having movements in opposite directions under action of spring pressure in the direction of the side flanges, said side flanges having serrations, a pad support having resilient arms constructed for placement within the flanges of the shell and a pad member carried by the support adapted to be engaged between the spring-pressed arms, resilient arms and said side flanges.

2. In a black-board eraser, a shell having downwardly extended side and end flanges, a rod extended longitudinally of the shell medially thereof, and fixed in respective end flanges, a pair of arms swingably mounted on the rod adjacent respective end flanges, a helical spring on the rod for each pair of arms, said spring having leg members, a bar extended between respective arms, said spring leg members being in operative engagement with the bars to move the arms in an upward direction, the free end of the arms haivng a roller mounted therebetween, said side flanges being slightly arcuate and having a serrated edge, a pad support having resilient arms constructed for placement within the flanges of the shell and a pad member carried by the support adapted to be engaged between the rollers of the spring-pressed arms, resilient arms and respective side flanges.

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