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I CHESLER

2,148,684

PENCIL ERASER TIP

Filed Dec. 11, 1937

FIG. 1.

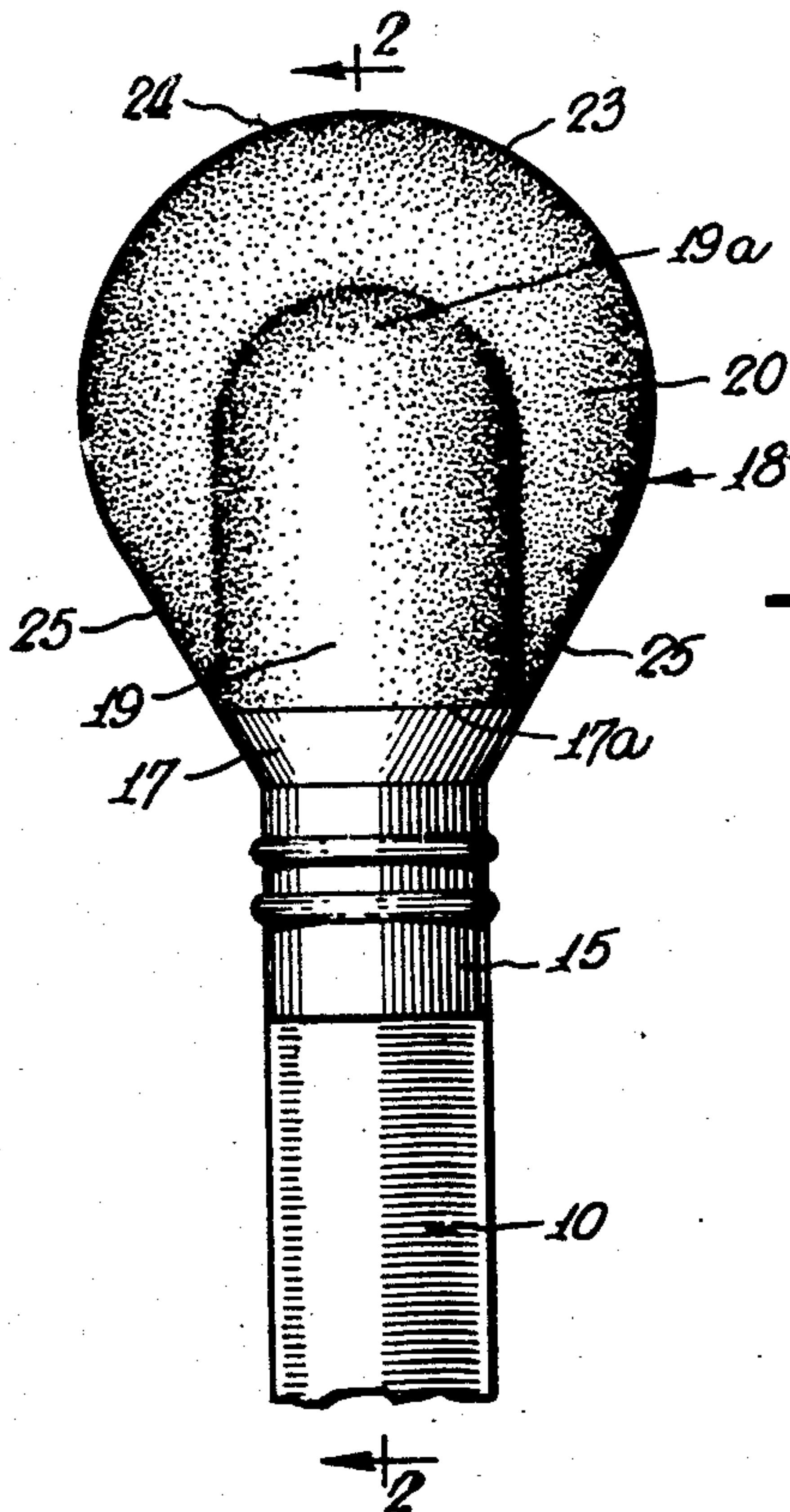


FIG. 2.

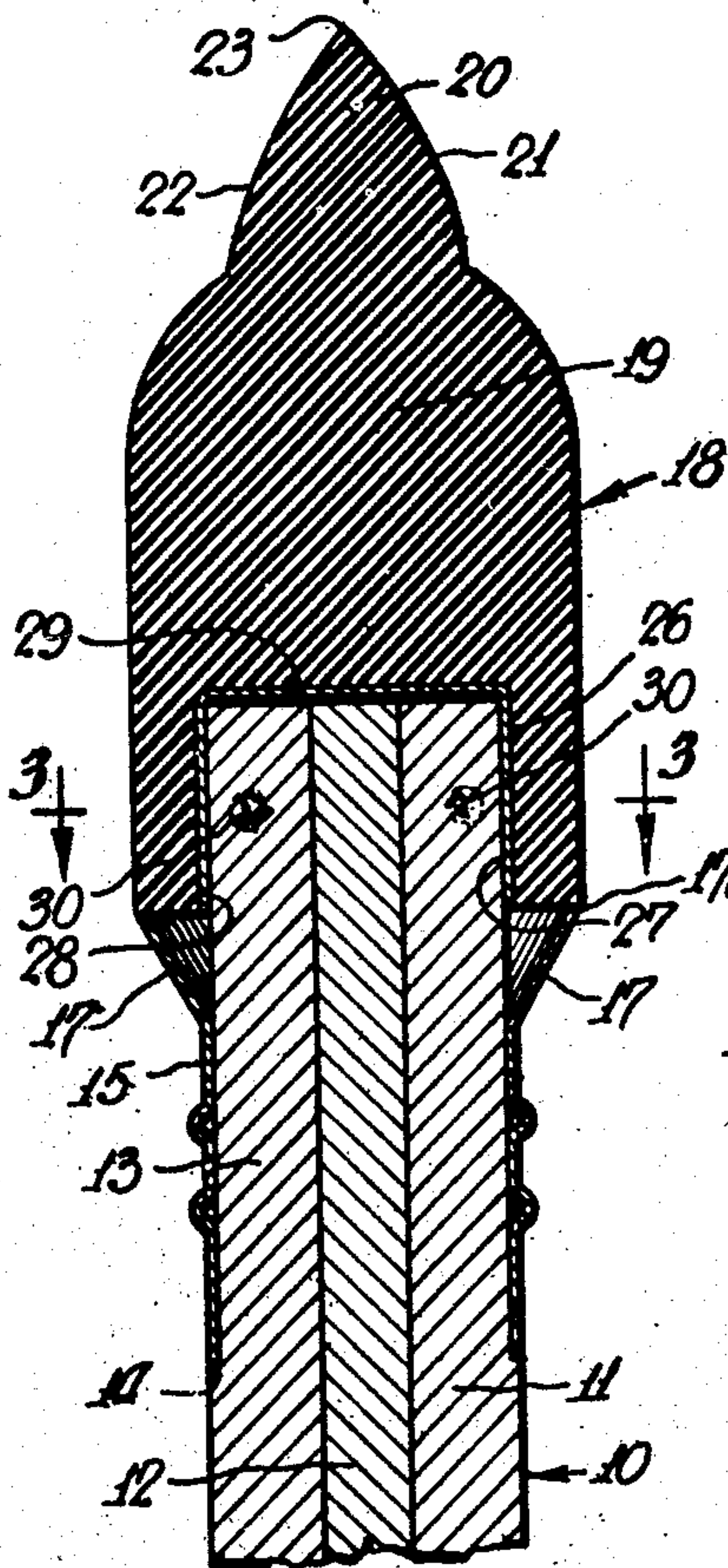


FIG. 3.

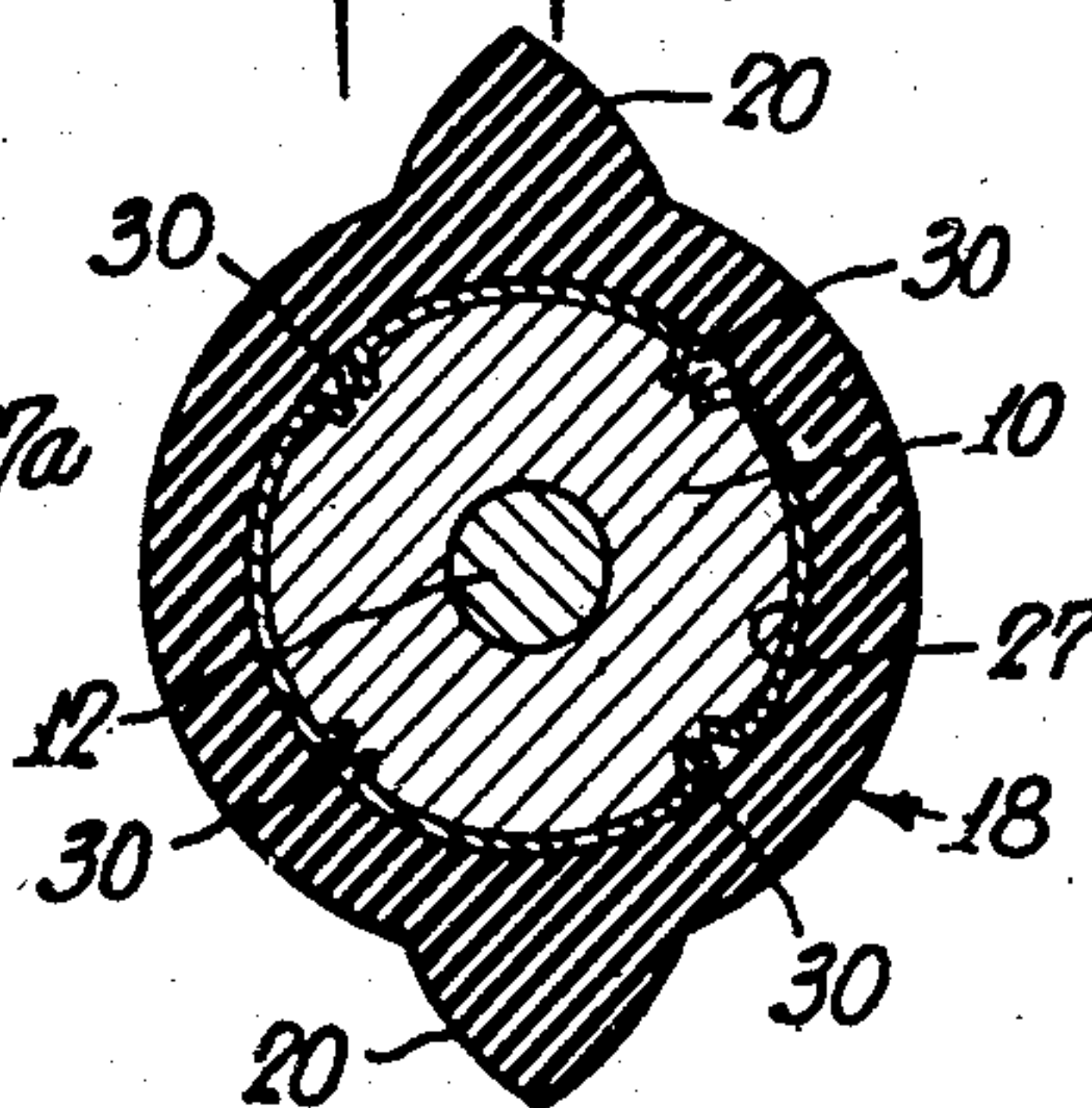


FIG. 4.

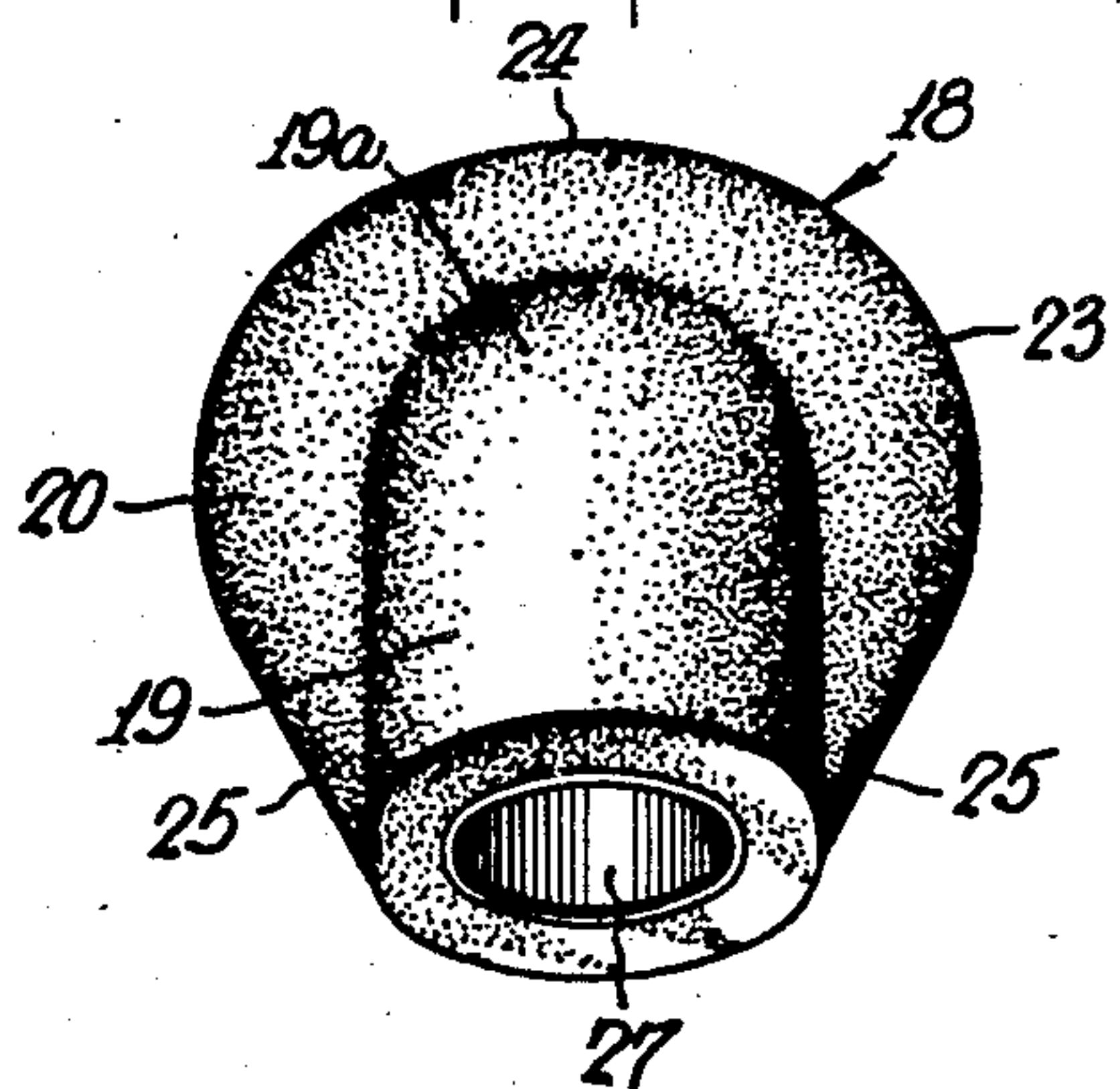
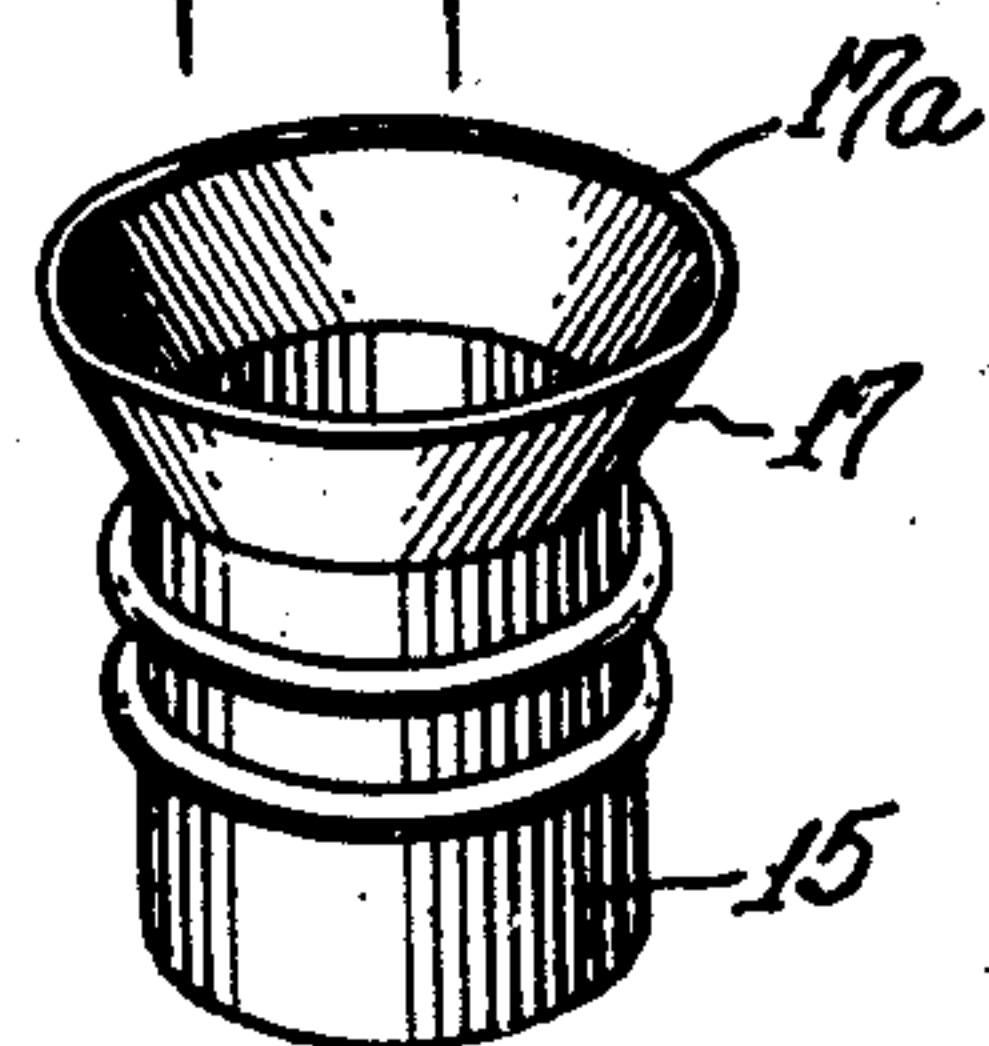


FIG. 5.



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## UNITED STATES PATENT OFFICE

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## PENCIL ERASER TIP

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23 Claims. (Cl. 120—38)

The present invention relates to eraser tips, and to means for permanently securing the same to pencils.

Among the objects of the invention are to provide an eraser which is permanently mounted on the end of a pencil, and which has a sharp arcuate rim like that of conventional typewriter erasers, which has sufficient body to prevent undue flexure of said rim during erasures, said body being itself an erasing structure useful as such after said rim has been worn away, which has its entire rubber body inherently available for erasure purposes so that it will serve for the life of the pencil, and which is ornamental in appearance without exposure of the means by which it is secured to the pencil and yet which is inexpensive to manufacture.

In the accompanying drawing in which is shown one of various possible embodiments of the several features of the invention:

Fig. 1 is a front elevation on an enlarged scale of a pencil showing my improved eraser tip attached thereto.

Fig. 2 is a longitudinal section taken on line 2—2 of Fig. 1.

Fig. 3 is a transverse section on line 3—3 of Fig. 2.

Fig. 4 is a perspective of a portion of the eraser tip.

Fig. 5 is a perspective of the ferrule constituting part of the eraser tip.

Fig. 6 is a side elevation on an enlarged scale showing another form of eraser tip, and

Fig. 7 is a top plan view of the eraser tip of Fig. 6.

Referring to Figs. 1-5 of the drawing, there is shown a wood-cased pencil 10, having the usual wood sheath 11 enclosing the writing lead 12. This pencil may be either round or polygonal in cross-section and has a reduced cylindrical shank 13, extending upwardly from a seating shoulder 14. This shank 13 mounts the improved eraser tip which includes an ornamental metal ferrule 15, shown in Fig. 5, seated against the shoulder 14. Shank 13 is of length greater than that of the ferrule 15 and extends beyond the upper end of said ferrule, which is flared at 17 to provide a supporting rim 17a for the rubber eraser 18.

The eraser 18 comprises a cylindrical body 19, rounded at its upper end as a hemi-spherical dome 19a and provided with a substantially crescent shaped flange 20 extending outwardly from the sides and dome of said body. This body 19 not only serves as an erasing structure when the flange 20 is worn away, but also serves as a re-

inforcing member for said flange, so that the latter will not collapse during the making of erasures.

The faces 21 and 22 of the flange 20 are convexly curved and converge to a comparatively thin sharp peripheral edge 23 in a plane axially of the pencil. This peripheral edge 23 diverges along straight lines 25 from the lower rim of body 19, to substantially the plane of the base of dome 19a, and the outer part 24 of said periphery is formed as the arc of a circle concentric with dome 19a.

A metal lining 27, advantageously in the form of an inverted cup with a cylindrical wall 28 and an end wall 29, is lodged in a corresponding socket 26 in the lower end of body 19. The rubber is molded around and vulcanized directly onto this cup 27 for permanent attachment thereto.

The socket 26 being of depth substantially equal to the distance of the flare rim 17a from the end of the pencil, and said flare rim being of the same diameter as body 19, it is seen that when the eraser is in place on the pencil, it abuts said rim 17a. The flare 17 and the flange tapering edges 25, from therebetween an uninterrupted continuous contour with no projecting parts. Preferably the flange edges 25 of the eraser extend at the same angle as the flare 17 to obtain the ornamental effect shown in Fig. 1.

For permanent attachment of the rubber eraser 18, a piercing tool (not shown), preferably of triangular cross-section is forced through the lower portion of the eraser body 19 at spaced points to puncture the cup 27 and force barbs inwardly therefrom to penetrate the wooden sheath 11. When the piercing tool is withdrawn from the eraser 18, the rubber will return to its original position so that no evidence of piercing will be apparent.

The eraser 18 is advantageously made of a rubber similar to that used in so-called "ink" erasers so that it can be used as a typewriter eraser, quite as effectively as erasers made specially for that purpose, and with the added advantage of added leverage and control afforded by the pencil which serves as the handle. However, it must be understood that as far as certain aspects of the invention are concerned, the eraser may be made of soft rubber for use on ordinary lead pencil marks, and may be devoid of the crescent shaped flange.

According to the present invention, the entire rubber mass of the eraser is accessible and available for erasing purposes, so that it will last for



the life of the pencil, and this without the need for any special eraser feed or adjustment.

In Figs. 6 and 7 is shown another form of eraser tip presenting an increased length of erasing edge, with a minimum amount of eraser bulk. For that purpose the eraser is provided with a plurality of flanges, integral with the body 19, and extending outwardly therefrom in different planes axially thereof. In the specific embodiment shown the eraser 18a has a pair of additional flanges 35, extending outwardly from diametrically opposite sides of the eraser body 19 in the longitudinal axis thereof and at right angles to the flange 20. These two flanges 35 have faces 37 and 38 converging towards arcuate comparatively thin erasing edges 40 and terminate at their upper ends in the dome of the eraser body 19. The corresponding substantially straight sides 41 of these flanges 35 converge towards the socket rim of the eraser body 19. By means of this construction, flanges 35 present additional eraser edges when the erasing edge of the flange 20 has been worn down.

As many changes could be made in the above construction, and many apparently widely different embodiments of this invention could be made without departing from the scope of the claims, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. As an article of manufacture a rubber eraser adapted to be attached to one end of a pencil, and comprising a body, having a socket at one end for receiving an eraser supporting member, and a flange integral with said body and extending outwardly therefrom in an axial plane of the eraser substantially to the rim of said socket, said flange being substantially V-shaped in cross section to provide a comparatively thin peripheral erasing edge.
2. As an article of manufacture a rubber eraser adapted to be attached to one end of a pencil, and comprising a body having a metal lined socket at one end for receiving an eraser supporting member, and a flange integral with said body and extending outwardly therefrom in an axial plane of the eraser, said flange presenting a comparatively thin peripheral erasing edge extending substantially to the rim of said socket.
3. As an article of manufacture an eraser adapted to be attached to one end of a pencil and comprising a rubber body having a socket at one end and an inverted metal cup vulcanized in said socket and serving to receive an eraser supporting member, said rubber body having an integral flange extending outwardly therefrom and substantially V-shaped in cross section to provide a comparatively thin peripheral erasing edge in an axial plane of said article and extending substantially to the rim of said socket.
4. As an article of manufacture, a rubber eraser adapted to be attached to one end of a pencil and comprising a body having a socket at one end for receiving an eraser supporting member, and a substantially crescent-shaped flange extending outwardly from said body in an axial plane thereof, substantially to the rim of said socket and having opposed faces converging outwardly to present a comparatively thin peripheral erasing edge.
5. As an article of manufacture, a rubber eraser

adapted to be attached to one end of a pencil and comprising a body having a socket at one end for receiving an eraser supporting member, a substantially hemi-spherical dome at the other end, and a flange extending in an axial plane of said body outwardly from said dome and along-side of said body to the socket rim thereof.

6. As an article of manufacture, a rubber eraser adapted to be attached to one end of a pencil and comprising a body having a socket at one end for receiving an eraser supporting member, and a hemi-spherical dome at the other end, and a flange extending outwardly from the sides and dome end of said body in an axial plane thereof, said flange extending to the rim of said socket, having a circular section concentric with said dome and side sections converging towards the socket rim of said body.

7. An eraser attachment for pencils comprising a metal ferrule adapted to embrace the pencil, and a rubber eraser to be seated on said ferrule and having a socket for receiving the outer protruding end of the pencil.

8. An eraser attachment for pencils comprising a ferrule adapted to embrace the pencil and having a flare at one end, and a rubber eraser to be seated on said flare and having a socket for receiving the protruding outer end of the pencil.

9. An eraser attachment for pencils comprising a ferrule adapted to embrace the pencil, a rubber eraser to be seated upon the end of said ferrule and having a socket for receiving the protruding end of said pencil, and a metal lining in said socket, said body being vulcanized onto said lining.

10. An eraser attachment for pencils comprising a ferrule adapted to embrace the pencil and enlarged at one end to form a seating rim, and a rubber eraser to be seated on said rim and having a metal lined socket for receiving the protruding end of the pencil.

11. An eraser attachment for pencils comprising a ferrule adapted to embrace a pencil, and a rubber eraser to be seated on said ferrule and comprising a body having a socket at one end for receiving the end of the pencil, and a flange extending outward from said body in an axial plane thereof, said flange being substantially V-shaped in cross section to provide a comparatively thin peripheral erasing edge extending to the rim of said socket and in contact at said rim with said ferrule.

12. An eraser attachment for pencils comprising a ferrule adapted to embrace the pencil, a rubber eraser seated on one end of said ferrule and having a socket for receiving the protruding end of said pencil, the adjoining portions of said eraser and said ferrule having inclined registering sides forming a continuous contour between said ferrule and said eraser.

13. In combination, a wooden pencil casing, a ferrule embracing said casing at a distance below the end thereof, and a rubber eraser having a socket telescoped over the protruding end of said pencil and seated upon said ferrule.

14. In combination, a pencil having one end reduced to form a shank extending from an annular shoulder, a ferrule embracing said shank and seated upon said shoulder, said ferrule having an overall length less than that of said shank whereby the outer end of said shank protrudes beyond said ferrule, and a rubber eraser having a socket telescoped over said protruding shank end and engaging the outer end of said ferrule.

15. In combination, a wooden pencil casing



having a reduced end defining an annular shoulder, a ferrule embracing said reduced end and seated upon said shoulder, said ferrule having an overall length less than that of the reduced end, whereby the outer end of said pencil protrudes beyond said ferrule, said ferrule having a flare at its outer end defining a seating rim, and a rubber eraser having a socket telescoped over said protruding pencil end and seated upon said rim.

16. In combination a wooden pencil casing, a ferrule embracing said casing in such a position that the end of said pencil protrudes therebeyond, and a rubber eraser having a body provided with a socket telescoped over said protruding pencil end and abutting said ferrule, said body having a flange extending outwardly therefrom in an axial plane thereof, and presenting a comparatively thin peripheral erasing edge.

17. In combination a wooden pencil casing, a rubber eraser provided with a socket, a metal lining for said socket, said metal lined socket being telescoped over the end of said pencil, and said metal lining being punctured with the displaced punctured metal extending into the wood of said casing, whereby said rubber eraser is permanently attached to said casing.

18. In combination a wooden pencil casing, a metal cup telescoped over one end of said casing, a rubber eraser body molded and vulcanized around said cup, said body and the peripheral wall of said cup being pierced at spaced sections thereof to form barbs extending from said cup into said casing, whereby said cup and said eraser body are permanently secured to said casing.

19. In combination a wooden pencil casing, a ferrule embracing said casing in such a position that the end of said pencil protrudes beyond said ferrule, said ferrule having a flare at its outer end, a rubber eraser comprising a body having a socket at one end, and a flange integral with said body and extending outwardly therefrom in an axial plane thereof, a metal lining in said socket, said body being vulcanized onto said lining to form a permanent connection therewith, and said eraser being seated upon said ferrule flare with its metal lined socket telescoped over the protruding end of said pencil, said metal lining being punctured at spaced sections thereof to form barbs protruding into said casing whereby said eraser is permanently secured to said pencil, the sides of said flange adjacent said ferrule forming

an uninterrupted outline continuous with said flare.

20. As an article of manufacture a rubber eraser, adapted to be attached to one end of a pencil, and comprising a central body having a socket to be telescoped over the end of a pencil, and a plurality of flanges integral with said body, and extending outwardly therefrom in different planes axially of the body, each of said flanges presenting a comparatively thin peripheral erasing edge extending to the rim of said socket.

21. As an article of manufacture a rubber eraser, adapted to be attached to one end of a pencil and comprising a central body, a pair of flanges integral with said body and extending substantially at right angles to each other in the longitudinal axis of said body, one of said flanges extending outwardly from the top and sides of said body, and the other extending outwardly from the sides thereof, and substantially terminating at one end at the top of said body.

22. As an article of manufacture a rubber eraser, adapted to be attached to one end of a pencil, and comprising a central body, a substantially crescent shaped flange extending outwardly from the top and sides of said body in an axial plane thereof, and a pair of flanges extending outwardly from diametrically opposite sides of said body substantially at right angles to said first mentioned flange, and terminating at one end substantially at the end of said body, each of said flanges presenting a comparatively thin peripheral erasing edge.

23. As an article of manufacture a rubber eraser, adapted to be attached to one end of a pencil, and comprising a body having a socket at one end for receiving an eraser supporting member, and a semi-spherical dome at the other end, a crescent shaped flange extending outwardly from the sides and dome end of said body in an axial plane thereof, said flange having side sections converging towards the socket rim of said body, and a pair of flanges extending from diametrically opposite sides of said body substantially at right angles to said first mentioned flange and in an axial plane of said body, said pair of flanges having corresponding outer sides converging towards the socket rim of said body and terminating at the upper end thereof substantially at the top of said dome, each of said flanges presenting a comparatively thin peripheral erasing edge.

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