May 1, 1951 A. E. DREXEL 2,551,425

EJECTOR-TYPE HOLDER FOR TONGUE BLADES

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Fig. 1.

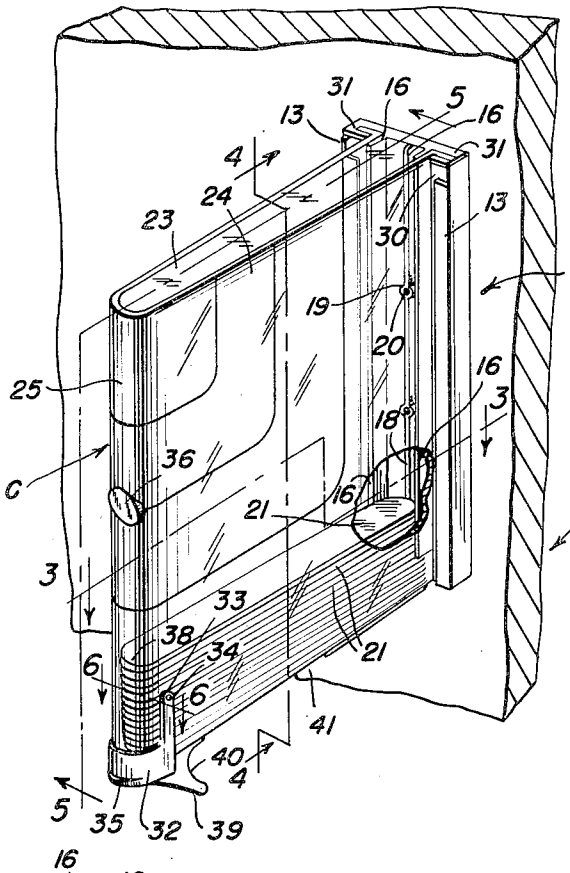
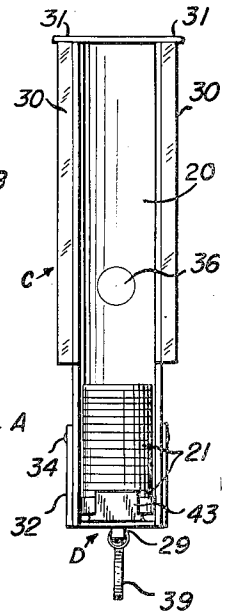


Fig. 10.



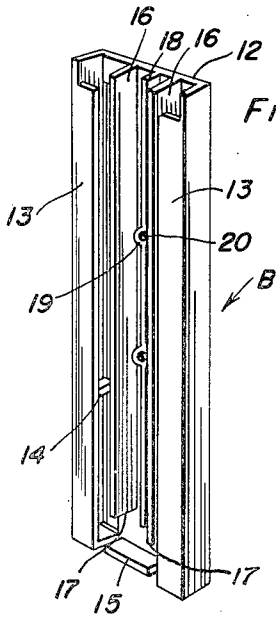


Fig. 8.

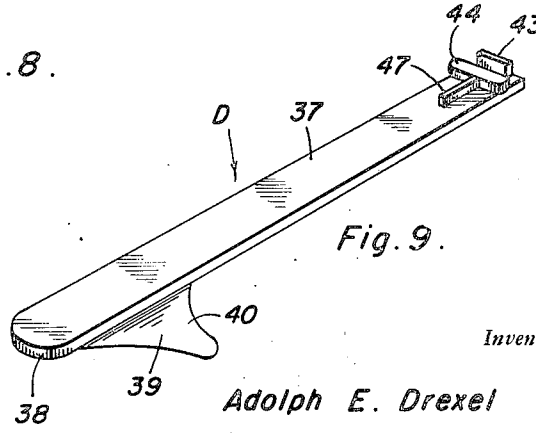


Fig. 9.

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Fig. 2.

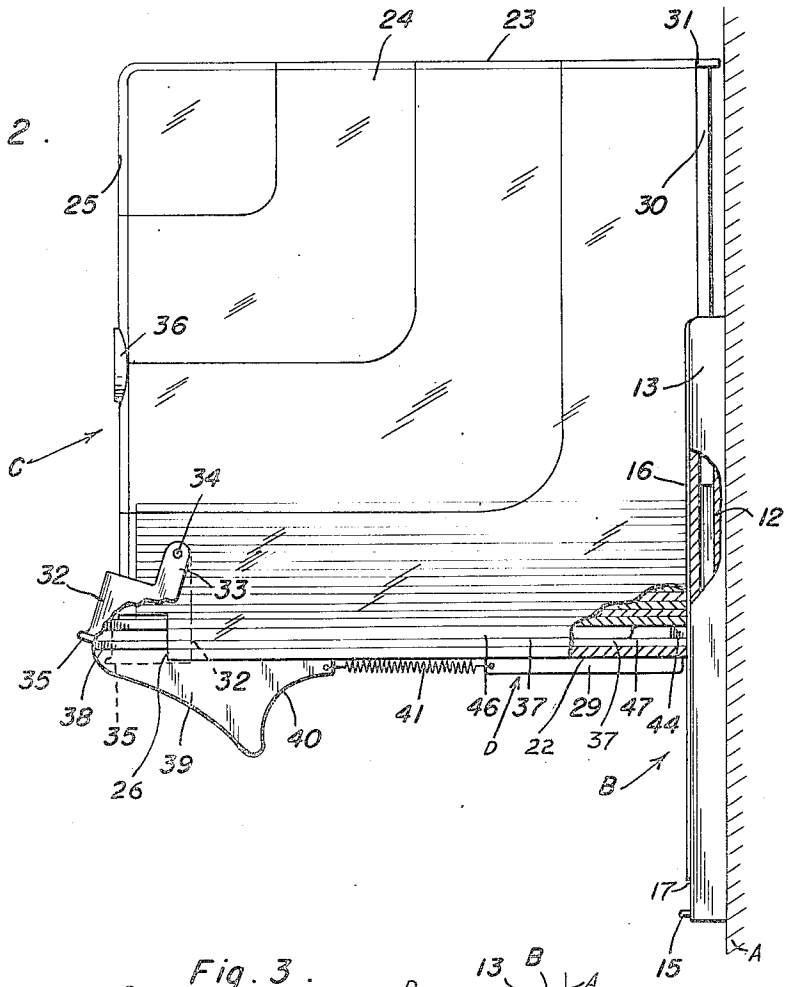


Fig. 3.

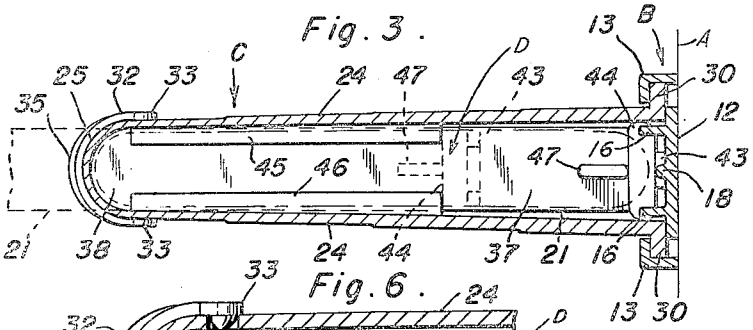
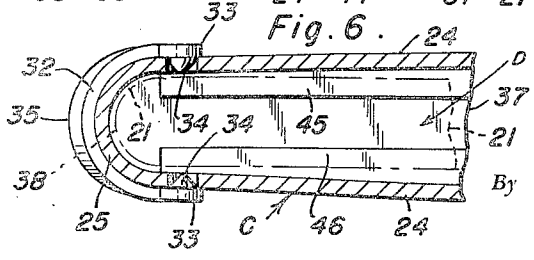


Fig. 6.



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Fig. 4.

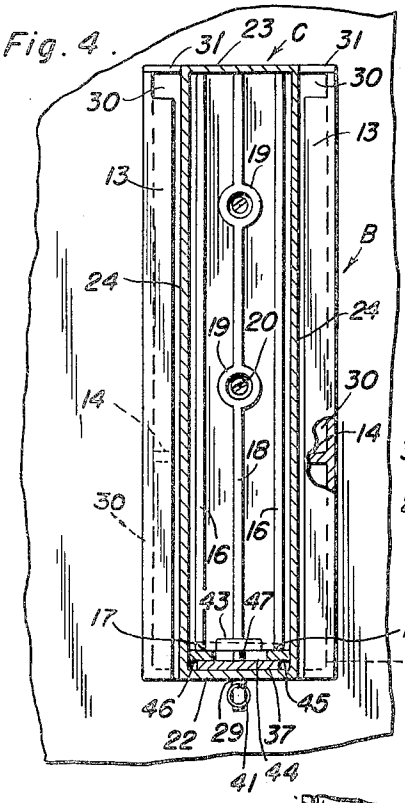


Fig. 7.

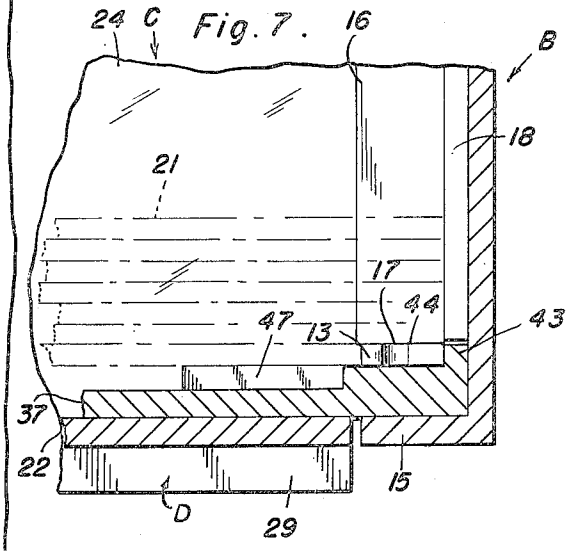
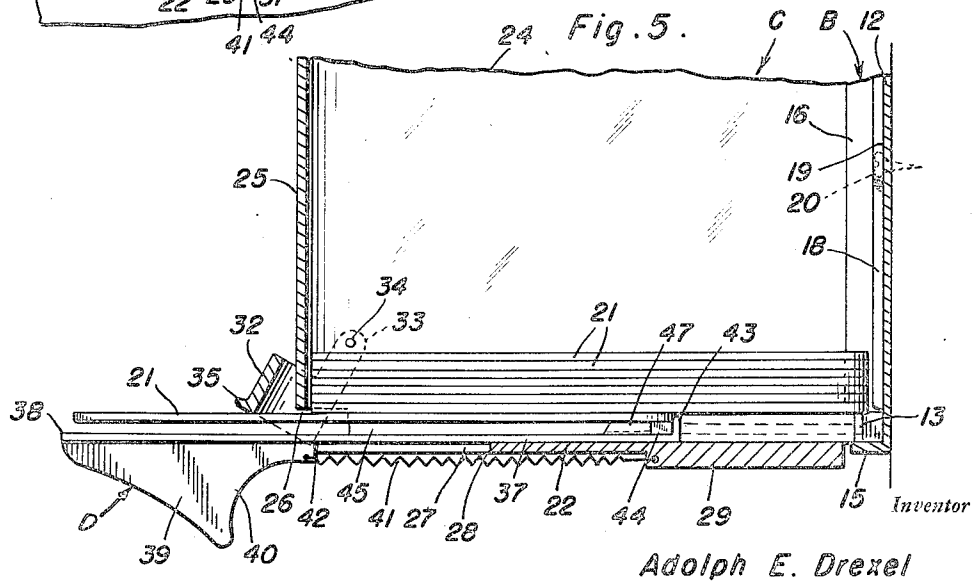


Fig. 5.



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EJECTOR-TYPE HOLDER FOR TONGUE BLADES

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Application May 27, 1948, Serial No. 29,515

8 Claims. (Cl. 312—67)

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The present invention relates to a novel and improved ejector-type holder and dispenser which is especially, but not necessarily, adapted for use in the office of a physician, a hospital examination room, or the like, the same being expressly made and designed to conveniently and effectively contain and dispense so-called tongue blades, one at a time.

An object of the invention, outstanding in degree, is to provide a holder and dispenser for tongue blades which is essentially made of plastic and nicely shaped and colored to appeal to the eye of the observer, the same being highly desirable for use because of the hygienic conveniences and time saving facilities incorporated therein.

More specifically, in carrying out the principles of the invention, I have evolved and produced a wall-type tongue blade dispenser, wherein the tongue blades are always within convenient reach of the examiner, are hygienically stored in stacked relation for convenience, and wherein the operation is such that it may be achieved with one hand, the only hand which touches the blade as it is ejected from the blade holding casing.

Another object of the invention is to provide a blade holding dispenser for use in examining rooms, wherein the blade may be readily ejected and projected for use almost without looking, a device which is attractive in appearance, the hygienic factors of which are appreciated by discreet patients, a structure whose use saves many steps and considerable time, protects the encased blades from dust, dirt and deleterious matter and insects, and is far more efficient than the usual lidded jars which are commonly used in present-day practices.

An equally important aim is to provide a structure of the kind under advisement, which is characterized, on the one hand, by a unique suitably colored and transparent casing, the casing being closed on all sides except the back, being such as to conform to the shape of the tongue blades which are stored therein, and thus, serving to expedite the step of systematically and aptly charging or loading the casing with blades in stacked relation, in a manner to avoid cocking and jamming.

Another objective is to provide a casing of the aforementioned type with a novel wall bracket or fixture on which the casing is slidably hung, coacting elements existing between the bracket and casing, whereby the latter may be conveniently locked in place by an existing part of the projectible and retractible ejector-slide.

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Other objects and advantages will become more readily apparent from the following description and the accompanying illustrative drawings.

In the drawings:

Figure 1 is a perspective view, showing a fragmentary portion of a wall and illustrating the improved tongue blade holding and dispensing device mounted for use on said wall, portions being broken away to bring out certain of the details of construction.

Figure 2 is a side elevational view on a slightly enlarged scale with the casing elevated in relation to the wall bracket, this view serving to bring out the manner in which the casing is vertically slid in relation to the bracket while being attached or detached, as the case may be.

Figure 3 is a horizontal section on the plane of the line 3—3 of Figure 1, looking in the direction of the arrows.

Figure 4 is a vertical section on the line 4—4 of Figure 1, looking in the direction of the arrows.

Figure 5 is a fragmentary vertical sectional and elevational view on the line 5—5 of Figure 1.

Figure 6 is an enlarged horizontal fragmentary section on the line 6—6 of Figure 1, looking in the direction of the arrows.

Figure 7 is an enlarged fragmentary sectional view to bring out certain of the details of construction not clearly evident from other views.

Figure 8 is a perspective view of the wall fixture or bracket.

Figure 9 is a perspective view of the projectible and retractible ejector-slide.

Figure 10 is a rear end elevation of the casing detached from the wall bracket.

Referring now to the drawings by distinguishing reference characters, the wall or other stationary support is denoted by the reference character A, the wall hanger bracket or fixture by the reference character B, and the blade holder and dispenser unit by the reference character C. A comparatively major part, a subdivision of the unit C, is the especially constructed ejector-slide or plate D (see Figure 9).

Attention is directed first to the hanger bracket or fixture B, which is designed to conveniently suspend the casing unit C on a wall or other support. This bracket or fixture is preferably made of ivory or equivalent material and is shown to advantage in Figure 8. Reference being had to the latter figure, it will be noted that the bracket comprises a substantially rectangular plate 12, whose vertical edge portions are provided with channel-shaped guide tracks 13, dis-

posed in parallelism along said edges. The numerals 14 designate horizontal check webs which will be later described. At the bottom of the plate is a horizontal lip or lug 15 which may be conveniently referred to as a detent. This is in spaced relation below the lower ends of a pair of parallel guide flanges 16. These flanges 16 are duplicates and are attached to the plate and extend at right angles from the plate, and are located inwardly of and are in spaced parallelism with the guide channels or tracks 13. The lower ends of said flanges constitute additional shoulders or detents 17 which serve in a manner to be later described. Between the flanges 16 and also attached to the plate is a vertically or longitudinally extending reinforcing rib 18 having reinforced holes 19 to accommodate screws or equivalent fasteners 20 which are, in practice, screwed into the wall A. It will be noted that the channel guides 13 are open at their upper ends and closed at their lower ends. The closed lower ends are substantially level with the detent 15. Also, the detent 15 is of a width corresponding to the widths of the flanges 16 and the vertical edge portions of the flanges 16 extend to planes slightly beyond the adjacent channel guides 13. The closed lower ends of said channels 13 and coacting detent means 15 coordinate in providing an effective closure when joined with the hereinafter described casing C and ejector slide D.

The casing C is of substantially rectangular form and is made of suitably colored substantially transparent plastic. It is slightly narrower at the outward vertical or front portion and, consequently, slightly wider at the rear attachable portion, as brought out in perspective in Figure 1, and the narrower front corresponds to the rounded end portions of the customary wooden or equivalent tongue depressor blades 21. Generally visualized, the casing is closed on all but one side, namely, the vertical side or end which permits convenient insertion and removal of tongue blades, that is, when the casing is detached from the wall bracket. Said casing includes a horizontal bottom wall 22, a parallel horizontal top wall 23, duplicate side walls 24 and a vertical front end wall 25. The latter is rounded in cross-section to correspond to the rounded end configuration of one of the blades 21. The lower end of the front wall 25 is provided with a discharge slot 26. The bottom 22, as shown in Figure 5, has a guide slot 27, which opens into said notch or slot 26 and the inner end of the slot 27, the crotch portion, constitutes a stop 28. The numeral 29 designates a reinforcing rib on the underside of said bottom 22. The numerals 30 designate outstanding keying and assembling ribs on walls 24 which are slidable in the channel guide-ways 13. These "keys" 30 are approximately of the vertical lengths shown in side view in Figure 2. The numerals 31 at the upper end portions of the ribs denote stop lugs which, when the casing C is seated properly in the bracket, rest on the upper end portions of the bracket and virtually close the channels.

The numeral 32 designates a hood-like cover for the discharge opening 26, and this is of arcuate form and conforms to the curvature of the front end wall 22 and is sufficient to normally drop down and close the discharge opening. It is provided with arms 33 which have studs 34 which snap into suitable accommodation holes in the sides of the casing. This arrangement permits the cover to have the desired hinge action. Also, the plastic material is sufficiently pliant to permit the arms 33 to be grasped between the user's fingers and spread apart to either dislodge the studs 34 or to "snap" the same into the holes provided therefor in the sides. The numeral 35 is simply a finger-grip carried by the hood. The numeral 36 is merely an "ornament" left by the molding step and is of no special purpose.

Coming now to the unusually constructed ejector slide, this comprises an elongated plate 37 (see Figure 9) having a rounded outer end portion 38 which conforms somewhat to the shape and size of a conventional-type depressor or tongue blade 21. The numeral 39 designates a trigger or finger-grip which has a finger notch 40 and which is slidable in the kerf or slot 27, as brought out in Figure 5. The numeral 41 designates a return spring which is a simple coiled spring having one end attached to the trigger and the other end attached to the reinforcing rib 29. The numeral 42 designates a stop or abutment on the trigger which comes against the stop 28 to limit the inward sliding movement of the ejector slide. On the inner end of the slide is an upstanding lug 43 which constitutes a follower which serves to engage the adjacent end portion of the tongue blade to project same. The numeral 44 is a transverse cross-member which constitutes a stop for the outward or forward movement of the ejector slide and which comes into contact with guide flanges or ribs 45 and 46, as shown in dotted lines in Figure 3. These guide ribs are rigidly mounted on the inner surfaces of the side walls 24 of the casing and are at a level above the bottom of the casing so that the coacting portion of the slide slides at the bottom beneath them, in an obvious manner. The guide ribs 45 and 46 also serve as ledges and also serve to keep the blades 21 level and lined up with the discharge opening 26 in the casing. What is more, the desired levelling result is furthered by the provision of the auxiliary riser or abutment 47. It will be seen that the two risers 44 and 47, together, form a sort of T-shaped rest for the adjacent end portion of a coacting tongue blade. The numeral 43 is the follower which causes the blade to move out with the ejector slide when the trigger of the latter is actuated in an obvious manner, as shown for example in Figure 5. Without the guide ribs 45 and 46, and the risers 44 and 47, the tongue blade might tilt toward one longitudinal edge or the other, and thus "jam" the expected one-by-one dispensing result.

It will be understood that normally the hood-like closure 32 is "down," as seen in Figure 1. When, however, the ejector is operated and the forward curvate end 38 comes into pressure contact with the cover, the cover is lifted up and the blade is allowed to be projected for convenient grasping, all as shown realistically in Figure 5.

It will be noted, in considering the construction, that the ejector slide plate 37 is approximately the same length as one of the tongue blades 21, being slightly longer so that one end of the blade rests against the follower lug 43, while the other end of the blade somewhat matches the correspondingly shaped end of the plate, the end 38. One half portion of the lowermost blade, the one to be dispensed, rests on the risers 44 and 47, and against the follower lug 43. The forward half portion of the same blade rests upon the top surfaces of the guide flanges 45 and 46. Thus, when

you have one end of the blade resting on flanges 45 and 46, the other end portion is on the risers 44 and 47 with the lateral end abutting the follower 43. This means that when the ejector is "in" there is a space between the lowermost blade, the intermediate portion and the underlying bottom of the casing, the bottom 22. By thus "suspending" the blade so that it is not in direct frictional contact with the plate 37, the blade is in a satisfactory position to be ejected with requisite smoothness. Also, there is a minimum of contact between the blade 21 and said parts 43, 44, 47 and 45 and 46 than would be the case if the blade were resting throughout its entire area on the plate 37. This makes for smooth operation of the ejector-slide, obviously.

Another point to be made clear is the fact that the aforementioned vertical guide flanges 16, part of the bracket B, primarily serve to define between themselves a guide-way and, therefore, the adjacent rounded end portions of the tongue blades 21 in the stack, fit down in the space between the flanges 16. This facilitates properly racking and uniformly stacking the blades in the casing and with inner ends against the bracket to facilitate their dropping down slowly for step-by-step dispensing, and this accomplishment is exaggerated in the dotted line showing of the right-hand end portions of the blades fitting between the flanges 16 in Figure 7. We again see this accomplishment disclosed in Figure 1.

It is also highly desirable that the ejector-slide D serve not only as a vending device for the stack of blades, but also as a ways and means of latching or locking the casing unit on the bracket B. This is done by permitting the inner spring retracted end portion of said ejector-slide to fit releasably between the detents or shoulders 15 and 17. Or, to put it otherwise, the detents 15 and 17 with the space existing between same, provide a sort of a keeper pocket and the adjacent end portion of the plate 37 including the lug 43 and riser 44 fit into this pocket or space. The spring holds the parts 15, 17 and 37 thus assembled, and the ejector-slide becomes a retaining latch and latches the casing C on the bracket B. It means, too, that before the casing may be lifted and slipped up and off of the bracket means, the "latch" D must be released. Assuming then that the casing is, for instance, in the assembled position seen in Figures 1 and 4, and it is desired to lift the casing up for re-loading or recharging it with new blades, before this can be done, it will be necessary to catch ahold of the trigger 40 and to slide the plate 37 slightly outward until the parts 43 and 44 are withdrawn from the space and disengaged from the detents or shoulders 15 and 17. Now, the casing is "unlatched" and may be lifted up and removed, as shown in the partly lifted position in Figure 2.

It is believed to be novel to slide the ribs or flanges 30 up and down in the channel-like portions 13, to provide a guide for the stack of blades between the flanges 16 and to utilize the plate 37 as a latch for interlocking coaction with the detents 15 and 17 (see Figures 3 and 7 particularly).

I would stress the fact that the upper ends of the so-called guide channels 13 are cut away to provide clearance notches and to facilitate placing the lower ends of the ribs 30 into the channels to facilitate attaching the casing C to the bracket B. It will be noted that the flanges or ribs 30 range only a little over one half the vertical height of the casing. Also, I stress the fact

that it is possible to place a complete package (not shown) of blades into the open side of the casing without touching same by hand. The ends of the blades which are adjacent to the bracket B are nicely sustained between the stabilizing flanges 16 and are not apt to get out of place. The major portion of each blade just before it is dispensed is supported on the ledge flanges or ribs 45 and 46 and only one end portion of a relatively small area, of the blade, actually bears upon the slide D. In fact, this does not bear directly on plate 37 but instead bears on the elements 44 and 47 of the so-called T-shaped riser. The flanges 45 and 46 are in the proper plane in relation to the bottom of the casing, the ejector slide and also the hooded discharge opening 26 to make sure that all parts work in proper progression and relationship.

A careful consideration of the foregoing description in conjunction with the invention as illustrated in the drawings will enable the reader to obtain a clear understanding and impression of the alleged features of merit and novelty sufficient to clarify the construction of the invention as hereinafter claimed.

Minor changes in shape, size, materials and rearrangement of parts may be resorted to in actual practice so long as no departure is made from the invention as claimed.

Having described the invention what is claimed as new is:

1. In a tongue blade holder and ejector-type dispenser of the class described, a wall fixture comprising a plate adapted to be secured to a wall or the like, said plate being provided with spaced parallel channel-like guides and being provided centrally with outstanding spaced parallel flanges forming a guide-way for end portions of tongue blades, an open-ended blade accommodation casing adapted to permit tongue blades to be racked in stacked relation therein by way of the open end, said open end being provided with outstanding assembling ribs and said ribs being releasably slidable in said guides, the forward lower end portion of said casing being provided with a discharge opening for the blades, and trigger operated spring returned ejector means slidably mounted in the bottom of said casing.

2. In a tongue blade holder and ejector-type dispenser of the class described, a wall fixture comprising a plate adapted to be secured to a wall or the like, said plate being provided with spaced parallel channel-like guides and being provided centrally with outstanding spaced parallel flanges forming a guide-way for end portions of tongue blades, an open-ended blade accommodation casing adapted to permit tongue blades to be racked in stacked relation therein by way of the open end, said open end being provided with outstanding assembling ribs and said ribs being releasably slidable in said channel guideways, the forward lower end portion of said casing being provided with a discharge opening for the blades, and trigger operated spring returned ejector means slidably mounted in the bottom of said casing, embodying an elongated plate provided at its inner end with an upstanding follower lug for engaging the adjacent end of the blade and being further provided with T-shaped riser means adjacent said lug to elevate and support the adjacent end portion of the blade.

3. In a tongue blade holder and ejector-type dispenser of the class described, a wall fixture comprising a plate adapted to be secured to a

wall or the like, said plate being provided with spaced parallel channel-like guides and being provided centrally with outstanding spaced parallel flanges forming a guide-way for end portions of tongue blades, an open-ended blade accommodation casing adapted to permit tongue blades to be racked in stacked relation therein by way of the open end, said open end being provided with outstanding assembling ribs and said ribs being releasably slidable in said channel guide-ways, the forward lower end portion of said casing being provided with a discharge opening for the blades, and trigger operated spring returned ejector means slidably mounted in the bottom of said casing embodying an elongated plate provided at its inner end with an upstanding follower lug for engaging the adjacent end of the blade and being further provided with T-shaped riser means adjacent said lug to elevate and support the adjacent end portion of the blade, said casing being provided on its interior with longitudinally extending blade supporting flanges spaced above the bottom of said casing, said flanges providing slide tracks over which the blade may slidably glide for unimpeded discharge through the discharge opening, said T-shaped riser being engageable with adjacent end portions of said flanges to limit the outward projecting movement of said ejector.

4. As a new article of manufacture and as a component part of an assemblage of the class described, an elongated blade supporting an ejecting plate provided on one side and at one end with a projection forming a finger-grip, provided on its opposite end with an upstanding lug forming a blade ejecting follower and provided adjacent said follower with a T-shaped riser, said riser coacting with the follower.

5. A tongue blade holder and dispenser of the class described comprising a one-piece transparent plastic or equivalent casing including a flat bottom wall, a flat top wall, vertical side walls and a rounded front vertical end wall, the remaining vertical rear edge of said casing being completely open and said side walls, adjacent said top being provided with vertical outstanding keying ribs, said bottom being provided with a trigger notch and said notch opening through the outer forward end of said bottom, the adjacent lower end of the vertical end wall of said casing having a blade discharge opening and said opening cooperating with said notch, a pair of horizontal spaced parallel flanges mounted on the interior of the side walls of said casing and in spaced relation above the bottom of the casing and in alignment with said discharge opening, said flanges constituting guide tracks and being adapted to support each tongue blade as it drops down from the stack and is ready for dispensing, an ejector plate slidable in contact with the inner surface of the bottom of the casing, a trigger attached to said plate and depending therefrom and slidable back and forth in said notch, spring means connected with said trigger and also connected at one end with the bottom wall of said casing, said ejector plate having riser means to support a coacting end portion of each tongue blade as latter comes to rest thereon.

6. A tongue blade holder and dispenser of the class described comprising a one-piece transparent plastic or equivalent casing including a flat bottom wall, a flat top wall, vertical side walls and a rounded front vertical end wall, the remaining vertical rear end of said casing being completely open and said side walls, adjacent said top being provided with vertical outstanding keying ribs, said bottom being provided with a trigger notch and said notch opening through the outer forward end of said bottom, the adjacent lower end of the vertical end wall of said casing having a blade discharge opening and said opening cooperating with said notch, a pair of horizontal spaced parallel flanges mounted on the interior of the side walls of said casing and in spaced relation above the bottom of the casing and in alignment with said discharge opening, said flanges constituting guide tracks and being adapted to support each tongue blade as it drops down from the stack and is readied for dispensing, an ejector plate slidable in contact with the inner surface of the bottom of the casing, a trigger attached to said plate and depending therefrom and slidable back and forth in said notch, spring means connected with said trigger and also connected at one end with the bottom wall of said casing, said ejector plate having riser means to support a coacting end portion of each tongue blade, said riser means constituting stop means and being engageable with said flanges to limit the outward projection of the ejector plate through and beyond the discharge opening.

7. A sanitary ejector-type tongue blade holder and dispenser especially adapted for use in a physician's office comprising a one-piece transparent casing including a flat bottom wall, a flat top wall, vertical side walls and a rounded vertical front end wall, said walls defining a tongue blade receiving and protecting chamber and said chamber being open on its rear side to facilitate the step of charging same with a stack of tongue blades, said vertical end wall being provided with a discharge opening for the blades in proximity to said bottom wall, said side walls being provided interiorly with a pair of opposed spaced parallel flanges, said flanges being in spaced parallelism above said bottom wall, constituting ledges to support each tongue blade preparatory to delivering same through said discharge opening and being in a plane with said discharge opening, the ends of the flanges adjacent the open side of said casing being spaced from said open side to provide stop shoulders, an ejector slide comprising a plate commensurate with the length of the bottom wall of the casing and slidable in the chamber on said bottom wall and slidable between the bottom wall and said ledge flanges, said ejector plate being provided with exteriorly accessible finger actuating means and being provided with a tongue blade engaging follower and also with blade supporting means to partly support one end of each blade in readiness for dispensing, said blade supporting means also functioning as a stop and being engageable with the stop shoulders provided by said flanges to thus limit the outward sliding action of the tongue blade, cover means for the discharge opening said cover means being hingedly mounted on the casing and gravity closed and being adapted to be pressed to open position by the sliding action of said ejector.

8. The structure specified in claim 7, together with a wall bracket comprising a plate having spaced parallel vertical guide channels, said channels being open at their upper ends and closed at their lower ends, the side walls of said casing having outstanding keying ribs slidably interlocked with said channels, the top wall of said casing having outstanding lugs and said lugs resting upon and closing the upper open ends of said guide channels, and said wall bracket plate

being provided between said guide channels with guide elements for steadying adjacent ends of the tongue blades and causing latter to descend in progressive alignment and to be lined up with the follower on said ejector plate to minimize the likelihood of said blades being canted or otherwise jammed in relation to each other or other parts of the casing and wall bracket.

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