Feb. 20, 1968 F. B. BURNS ET AL 3,369,268

PAINT APPLYING TOOL

Filed June 2, 1967 2 Sheets-Sheet 1

Fig. 1.

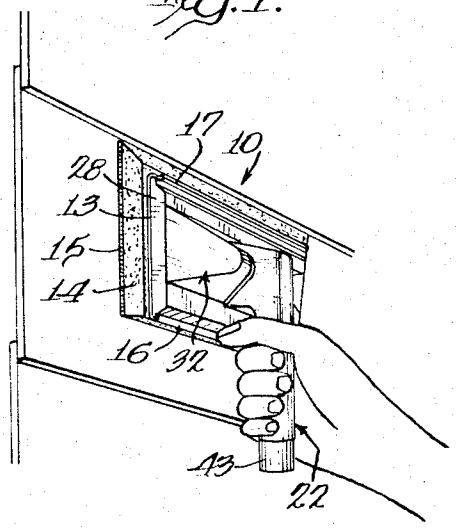


Fig. 2.

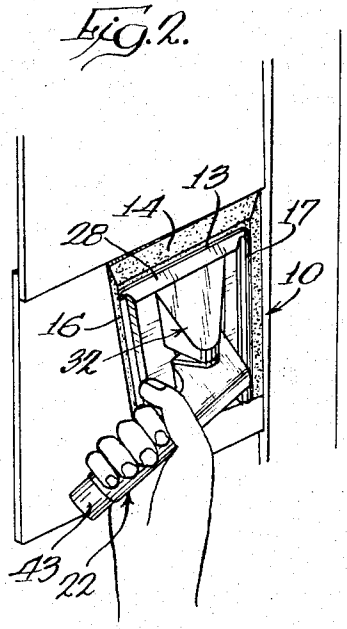


Fig. 3.

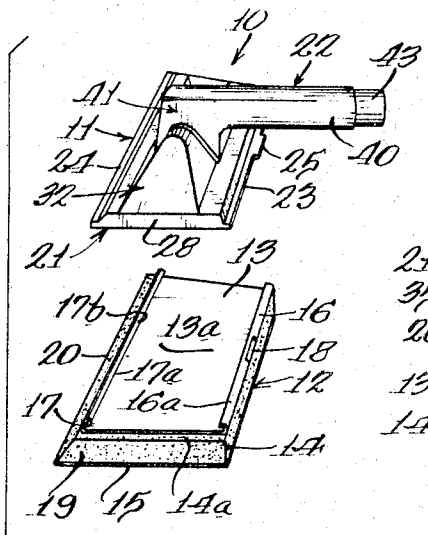
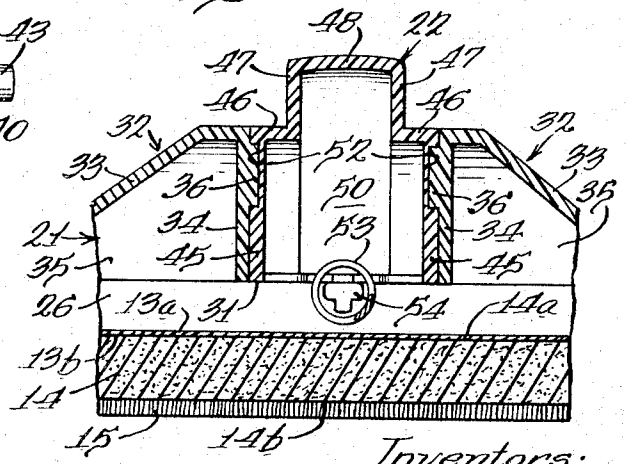


Fig. 6.



Inventors:
Frederick B. Burns
Giacinto C. D'Ercoli
Albert A. Mlachnik

By Hofgren, Wegner, Allen, Stellman & McCord
Attys

Feb. 20, 1968 F. B. BURNS ET AL 3,369,268

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Filed June 2, 1967 2 Sheets-Sheet 2

Fig. 4.

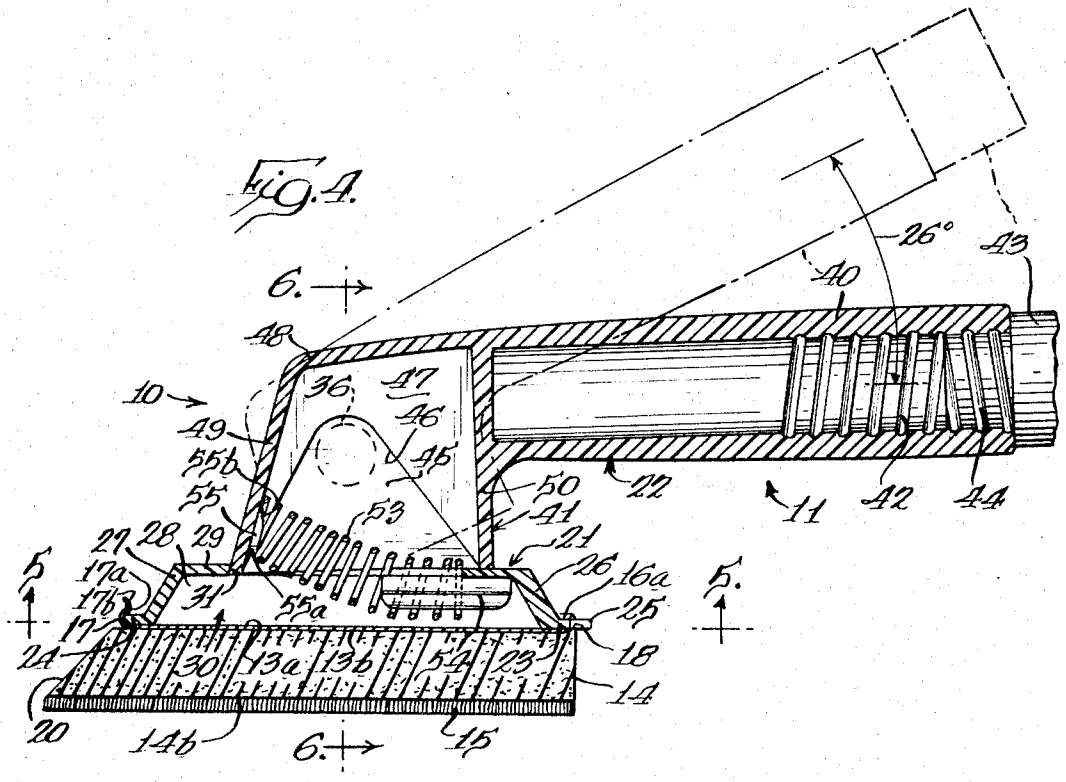
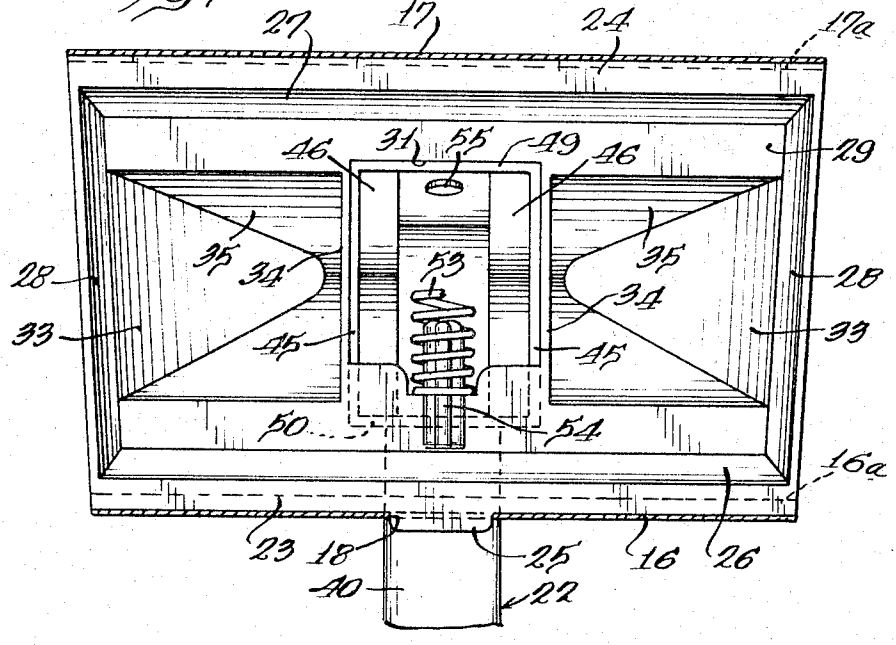


Fig. 5.



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3,369,268

PAINT APPLYING TOOL

Fredrick B. Burns, South Milwaukee, Wis., Giancinto C. D'Ercoli, Park Forest, Ill., and Albert A. Mlachnik, Milwaukee, Wis., assignors to E-Z Paintr Corporation, a corporation of Delaware

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ABSTRACT OF THE DISCLOSURE

A paint applying tool comprising a handle including a gripping portion that is pivotally movable relative to an enlarged base; and an applicator removably mounted on the base and including, a rigid backing member, an intermediate member secured to one face of the backing member, and a paint transferring means secured to one side of the intermediate member. The front and the sides of the intermediate member of the applicator are beveled, and the applicator backing member includes spaced flanges defining an opening that is narrower than the width of the handle base, so that the handle base must be forceably snapped into the backing member to secure the applicator to the handle.

Background of the invention

The tool of the present invention is of the type wherein a generally planar paint transferring surface is utilized to apply paint to a desired area. Heretofore, many serious problems have been encountered in the use of such tools, which have prevented their wide spread use in certain areas, such as in painting siding and shingles. One of the most serious drawbacks of prior art devices is their failure to provide an applicator member which is readily removable from the handle of the device, so that the applicator could be easily removed for cleaning and replacement purposes, when desired. A still further deficiency of prior art devices is their failure to provide an applicator whose paint transferring member is shaped so as to be able to apply paint to restricted areas, such as are provided with lapped siding, and shake shingles. Still further, prior art applicators have included a handle which is not movable relative to the paint applying member itself, and since the paint applying member must be disposed flushly against the surface which is being painted, the length of stroke which could be painted by such prior art devices has been limited.

Summary of the invention

The paint applying tool of the present invention obviates each of the problems noted above in connection with prior art devices by providing an arrangement wherein the gripping portion of the handle of the tool is yieldably movable relative to the paint transferring means, with the base of the handle cooperating with novel means on the applicator to positively, yet releasably, secure the applicator to the handle. The side and front faces of the applicator are beveled, so that relatively thin portions are provided around the periphery of the applicator, which enables the applicator to fit in and apply paint to restricted areas. Spring means yieldably urges the gripping portion of the tool handle toward an equilibrium position; however, the spring means enables the paint applicator to move relative to the gripping portion and thus the planar paint transferring surface of the applicator may be maintained in engagement with the surface being painted throughout a relatively wide stroke.

An object of the invention is to provide an applicator for a paint applying tool or the like with a rigid backing member having novel means for positively, yet releasably, mounting the applicator to the handle of the paint applying tool.

Another object of the invention is to provide an applicator as set forth in the preceding paragraph with an intermediate layer between a paint transferring means and the backing member, with the side and front edges of the intermediate layer being beveled so as to facilitate the painting of restricted areas.

A further object of the invention is to provide a paint applying tool, including a handle and an applicator as set forth above, with novel cooperative means on the base of the handle and the backing member of the applicator for releasably securing the applicator to the handle.

These and other objects of the invention will herein become more fully apparent from the following description, taken in connection with the annexed drawings wherein:

Brief description of the drawings

FIGS. 1 and 2 are fragmentary perspective views illustrating the paint applying tool of the present invention being used to paint lapped siding and facing trim at one edge of the lapped siding;

FIG. 3 is an exploded perspective view illustrating the handle and applicator disconnected from one another;

FIG. 4 is an enlarged central sectional view through the tool of the present invention;

FIG. 5 is a view taken generally along line 5—5 of FIG. 4;

FIG. 6 is a fragmentary sectional view taken generally along line 6—6 of FIG. 4.

Description of the preferred embodiment

While this invention is susceptible of embodiment in many different forms, there is shown in the drawings and will herein be described in detail a preferred embodiment of the invention with the understanding that the present disclosure is to be considered as an exemplification of the principles of the invention and is not intended to limit the invention to the embodiment illustrated. The scope of the invention will be pointed out in the appended claims.

The paint applying tool of the present invention is indicated generally at **10**, and includes a handle **11** and an applicator **12**. The applicator **12** is a laminated structure; and includes a backing member **13**, an intermediate member **14**, and a paint carrying and transferring member **15**.

Backing member **13** is a rigid metal plate, formed as by stamping or the like, and is generally trapezoidally shaped in plan view. Backing member **13** includes a planar upper surface **13***a*, and a first flange **16** extends upwardly from surface **13***a* at the rear edge of the backing member, while a second flange **17** extends upwardly from surface **13***a* at the front edge of the backing member. Flanges **16** and **17** extend from end to end of backing member **13**, and an elongate opening **18** is provided generally centrally of flange **16**. The upper edge **16***a* of flange **16** extends inwardly toward flange **17**, and cooperates with an inwardly extending portion **17***a* on flange **17** to define a female member having an opening of reduced width as will hereinafter appear. The upper end **17***b* of flange **17** extends outwardly away from flange **16**, and is rounded or inclined to define a cam surface, the purpose of which will also hereinafter appear.

Intermediate member **14** may be formed of any suitable material; such as plastic foams, sponge rubber, wood or the like, and the upper surface **14***a* of member **14** is secured to the planar lower surface **13***b* of backing member **13**. The upper surface **14***a* of member **14** is preferably slightly wider than backing member **13**, so that any rough edges that may be present at the outer ends of member **13** will not be exposed. In the preferred

embodiment, the front to rear dimension of the upper surface 14*a* of member 14 is substantially the same as the front to rear dimension of the lower surface 13*b* of backing member 13, it being understood that the backing member 13 is secured generally centrally of the intermediate member 14, so that an equal amount of the intermediate member will be exposed at the opposite sides of the backing member. The lower surface 14*b* of backing member 14 is larger than the upper surface 14*a* thereof, and the side surfaces 19 and the front surface 20 of the member 14 are inclined from the lower surface 14*a* to the upper surface 14*b* to thereby define relatively thin applicator portions around the lower periphery of the intermediate member.

The paint pick-up and transferring member 15 includes a plurality of short, erect fibers that are distributed uniformly over the lower surface 14*b* of member 14, it being understood that the fibers may be provided on a piece of material, such as mohair, that is bonded to the lower surface 14*b* of the intermediate member; or the fibers may be discrete elements that are secured to the intermediate member, as by flocking or the like.

Handle 11 is formed of two parts; namely, a base 21, and a gripping member 22. Base 21 defines a male member, which cooperates with the female member formed by the flanges 16 and 17 of the backing member 13, to releasably mount the applicator 12 on the handle 11. To this end, the base 21 includes a first flange 23 extending across the rear edge thereof, and a second flange 24 extending across the front edge thereof, the front to rear dimension between the ends of flanges 23 and 24 being greater than the dimension between the upright portion of flange 16 on backing member 13 and the inwardly extending portion 17*a* on flange 17. An elongate locating and keying extension 25 projects rearwardly from flange 23, and is positionable in the central opening 18 in flange 16; and as can be best seen in FIG. 5, the outer edges of the extension 25 are rounded to facilitate the insertion of the extension 25 into the opening 18. Thus, to assemble the handle 11 to the applicator 12, the base 21 is positioned with the extension 25 projecting through opening 18 and the rearward edge of flange 23 positioned against the inner surface of the upright portion of flange 16. The front to rear dimension to the outer edges of flanges 23 and 24 is less than the distance between the inner surface of the upright portion of flange 16 and the outer edge of the cam surface 17*b* on flange 17, so that when the insert 25 is received in opening 18, the forward edge of flange 24 is resting upon the cam surface 17*b*. The applicator 12 can be releasably secured to the handle 11 by merely applying a downward force to the base 21, which causes the flange 24 to slide down the cam surface 17*b* and force the flange 17 yieldably outwardly, as the flange 24 snaps over the projection 17*a* on flange 17. The inwardly directed backing member flange portions 16*a* and 17*a* positively retain the handle 11 in assembled relation with the applicator 12, but the applicator 12 may be readily removed from the handle 11, when desired, by merely flexing flange 17 outwardly to free flange 24 from the projection 17*a*.

Base 21 includes rear and front walls 26 and 27 that are inclined upwardly from flanges 23 and 24, respectively. Base 21 further includes upwardly converging side walls 28 and a generally horizontally disposed upper wall 29, which cooperate with rear and front walls 26 and 27 to define an enclosure 30 therebetween. A generally centrally disposed rectangular opening 31 is provided in upper wall 29, and a pair of identical uprights 32 extend upwardly from wall 29 at opposite sides of the opening 31. Uprights 32 each include a vertical wall 34 at one side of the opening 31, inclined side walls 33 converging upwardly from the edge of wall 29, and inclined connecting walls 35 which connect walls 33 and 34. Aligned cylindrical projections 36 extend outwardly from the facing surfaces of walls 34, and projections 36 cooperate to define a pivot axis that is parallel to the plane of the paint applicator portion 15.

The gripping member 22 of the handle 11 includes a hollow manually graspable portion 40 which extends rearwardly from an enlarged handle portion 41 that is received between the facing walls 34. Portion 40 is generally cylindrically shaped, but includes somewhat flattened top, bottom and side surfaces which facilitate gripping thereof. The rearward end of gripping portion 40 is internally threaded, as at 42, for reception of the externally threaded end of an extension pole (not shown) that may be secured to the tool 10 to enable normally inaccessible areas to be reached. A cap 43, having an externally threaded end portion 44 of reduced diameter threadably received within internally threaded bore 42, normally closes the rearward end of the gripping portion 40.

Enlarged handle portion 41 includes generally triangularly shaped side walls 45 positioned in face abutting engagement with side walls 34 of uprights 32, connecting walls 46 extending perpendicularly inwardly from side walls 45, upright walls 47 extending generally perpendicularly with respect to connecting walls 46 and merging with the flattened side portions of gripping portion 40, top wall 48 merging with the upper surface of gripping portion 40, inclined front wall 49 disposed generally perpendicularly with respect to upright walls 47, and rear wall 50 extending generally perpendicularly with respect to gripping portion 40. Aligned cylindrical recesses 52 are provided in the outer faces of walls 45, and the projections 36 on walls 34 are pivotally received therein to mount the gripping member 22 for pivotal movement with respect to the base 21.

Means is provided for biasing the gripping member 22 toward an equilibrium position, shown in full lines in FIG. 4, wherein the lower forward edge of front wall 49 of the gripping member engages the forward edge of opening 31, and the lower edge of rear wall 50 engages the upper surface 29 of the base rearwardly of the rear edge of the opening 31. Said means includes a helical spring 53 extending through chamber 30 and into the interior of the enlarged hollow end portion 41 of gripping member 22. One end of spring 53 bears against the front wall 49 of the member 40 and the other end of spring 53 bears against the base 21 to urge the gripping member 22 in a clockwise direction (as viewed in FIG. 4) about the pivot axis defined by projections 36 and recesses 52. More particularly, a first end of the helical spring is received over a cruciform shaped spring seat 54 that extends forwardly from the rear edge of opening 31 beneath the upper surface 29 of base 21, and the opposite end of spring 53 is received over a second spring seat 55 that is positioned adjacent the lower edge of the inner surface of wall 49.

The gripping member 22 is capable of moving through a large angular range relative to the base 21, and as indicated in broken lines in FIG. 4, in the illustrated embodiment the gripping member 22 can be moved approximately 26° from the equilibrium full line position to the broken line position. Upward deflection of the end of spring 53 engaging wall 49 when the gripping member 22 is in the broken line position is resisted by a generally cylindrical surface 55*a* at the bottom of the spring seat 55. The upper surface 55*b* of the spring seat 55 is inclined or curved to facilitate the removal of spring 53, when desired, for replacement purposes.

In use, as is evident from FIGS. 1 and 2, the inclined faces on the intermediate member 14 of the applicator 12 enable the paint transferring member 15 to apply paint to normally inaccessible areas, such as between the illustrated overlapped siding portions, and the areas of the siding adjacent the corner trim. Because of the wide range of angular movement of the gripping member 22 relative to the remainder of the tool, much wider painting strokes can be made by the user, thereby enabling a given area to

be painted in a shorter period of time. The base **21** and gripping member **22** of the handle are preferably formed from a suitable plastic material that will readily enable the gripping member **22** to be assembled to the base **21** by having the walls **34** of the uprights **32** and the walls **45** of the gripping member **22** flex somewhat as the projections **36** snap into recesses **52**. Thus, the gripping member **22** can be quickly and easily assembled to the base **21**, and can also be easily removed therefrom when desired. The applicator **12** may be readily snapped in place and is firmly held in place by the cooperative action of flanges **16** and **17**, and the engagement of projection **25** within opening **18**. The applicator **12** may be readily removed from the handle **11**, when desired, by merely flexing flange **17** downwardly to free flange **24** on the handle base. From the above, it will be apparent that the present invention fully achieves each of the objections thereof.

We claim:

1. A paint applicator comprising: a rigid, generally planar backing member having an upper face and a lower face, a first flange extending away from the plane of said backing member at one edge of the upper face thereof, at least one opening in said first flange, a resilient second flange at an edge of the upper face of the backing member opposite from said first flange, said second flange extending away from the plane of said backing member in the same direction as said first flange, said second flange having a portion extending inwardly toward said first flange and said second flange having a further cam portion at the upper end of said inwardly extending portion, said cam portion extending outwardly away from said first flange; an intermediate member having an upper face and a larger lower face, the upper face of said intermediate member being secured to the lower face of said backing member, said intermediate member also including front and side faces inclined from the lower to the upper face thereof; and paint transferring means secured to the lower face of said intermediate member.

2. A paint applicator as set forth in claim **1** wherein only a single opening is provided in said first flange, and said opening is located approximately midway along the length of said first flange.

3. A paint applicator as set forth in claim **1** wherein the cam portion of said second flange extends for the entire length of the flange.

4. A paint applicator as set forth in claim **1** wherein said first flange has a portion at the upper end thereof which extends toward said second flange.

5. A paint applicator as set forth in claim **4** wherein the portion of said first flange which extends toward said second flange also extends for the entire length of said first flange.

6. A paint applying tool comprising:

an applicator including

a rigid, generally planar backing member having an upper face and a lower face, a first flange extending away from the plane of said backing member at one edge of the upper face thereof, at least one opening in said first flange, a resilient second flange at an edge of the upper face of the backing member opposite from said first flange, said second flange extending away from the plane of said backing member in the same direction as said first flange, said second flange having a portion extending inwardly toward said first flange and said second flange having a further cam portion at the upper end of said inwardly extending portion, said cam portion extending outwardly away from said first flange;

an intermediate member having an upper face and a larger lower face, the upper face of said intermediate member being secured to the lower face of said backing member, said intermediate member also including front and side faces inclined from the lower to the upper face thereof; and

paint transferring means secured to the lower face of said intermediate member; and

a handle having a base with said applicator removably mounted thereon, said base including

first and second generally coplanar flanges extending outwardly from the lower portion of the front and rear edges of the base, the distance between the outer edges of the first and second flanges of said base being less than the distance between the outermost portion of said backing member cam portion and said backing member first flange, and the distance between the outer edges of the first and second flanges of said base being greater than the distance between the inwardly extending portion of said backing member second flange and said backing member first flange.

7. A paint applying tool as set forth in claim **6** wherein the upper end of said backing member first flange is bent forwardly to overlie at least a portion of said base first flange.

8. A paint applying tool as set forth in claim **6** wherein said backing member first flange includes only one opening, and said base first flange includes a projection received in said opening.

References Cited

UNITED STATES PATENTS

764,124	7/1904	Hayden.	
1,497,079	6/1924	Gullborg et al.	
2,516,396	7/1950	Kersh	15—233
2,707,293	5/1955	Ferrer.	
2,710,981	6/1955	Steiert	15—147 XR
2,840,839	7/1958	Benedetti.	
2,919,455	1/1960	Turner.	
2,922,177	1/1960	Hudson	15—231 XR
2,975,453	3/1961	Imhof.	
3,029,454	4/1962	Short et al.	
3,076,216	2/1963	Anderson	15—244 XR
3,103,028	9/1963	Richards.	
3,148,401	9/1964	Gilchrist et al.	15—566
3,157,901	11/1964	Murphy	15—148
3,205,520	9/1965	Trentel.	

FOREIGN PATENTS

100,848	4/1937	Australia.
797,405	2/1936	France.
11,875	12/1956	Germany.
208,122	8/1940	Switzerland.
241,200	7/1946	Switzerland.

DANIEL BLUM, *Primary Examiner.*