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CLERK U.S. DISTRICT COURT
CENTRAL DIST. OF CALIF.
SANTA ANA

11 IN THE UNITED STATE DISTRICT COURT
12 FOR THE CENTRAL DISTRICT OF CALIFORNIA

13 EDCO PLASTICS, INC., A California
14 Corporation,

15 Plaintiff,

16 vs.

17 ALLYNCE, INC., A California
18 Corporation; CASSANDRA SAMANO,
19 an individual; RALPH DUDLEY, an
20 individual; DISPENSING DYNAMICS
21 INTERNATIONAL, a California
22 Corporation, previously known as
23 PERRIN MANUFACTURING
24 COMPANY; and DOES 1-10, inclusive,

25 Defendants.

Case No. SACV12-1168 JVS
(JPRx)

**SECOND AMENDED
COMPLAINT FOR DAMAGES
AND INJUNCTION FOR:**

**(1) INFRINGEMENT OF UNITED
STATES PATENT NO. 6,962,013;
AND, (2) FRAUD**

DEMAND FOR JURY TRIAL

26 Plaintiff EDCO PLASTICS, INC., ("EDCO"), by and through its
27 attorneys, alleges and avers as follows:

THE PARTIES

28 1. At all times relevant, EDCO was, and is, a corporation duly organized
under the laws of the State of California and having its principal place of
business in the County of Orange, California.

2. EDCO is informed and believes and thereon alleges that at all times
mentioned herein Defendant ALLYNCE, INC., ("ALLYNCE") was, and is, a

1 California corporation with its principal place of business in the County of Los
2 Angeles, California, and doing business in the County of Orange, California.

3 3. Defendant DISPENSING DYNAMICS INTERNATIONAL, previously
4 known as PERRIN MANUFACTURING COMPANY (hereafter for convenience
5 "DDI") was, and is, a California corporation with its principal place of business in
6 the County of Los Angeles, California, and doing business in the County of
7 Orange, California.

8 4. EDCO is informed and believes that Defendant CASSANDRA
9 SAMANO ("SAMANO") is an individual whose principal residence is located in
10 the County of Los Angeles, California, and is a principal of ALLYNCE.

11 5. EDCO is informed and believes that Defendant RALPH DUDLEY
12 ("DUDLEY") is an individual whose principal residence is located in the County
13 of Los Angeles, California, and is a principal of ALLYNCE.

14 6. The true names and capacities of the Defendants named herein as
15 DOES 1 through 10, whether individual, corporate, associate, or otherwise, are
16 unknown to Plaintiff, who therefore sues said Defendants by said fictitious
17 names, Plaintiff is informed and believes, and thereon alleges, that each of the
18 Defendants designated herein as DOES is legally responsible for the events and
19 happenings hereinafter alleged and legally caused injury and damages
20 proximately thereby to Plaintiff as alleged herein. Plaintiff will seek leave to
21 amend the Complaint when the true names and capacities of said DOE
22 Defendants have been ascertained.

23 7. Plaintiff is informed and believes, and on that basis alleges, that each
24 of the Defendants participated in and is in some manner responsible for the acts
25 described in this Second Amended Complaint and any damages resulting
26 therefrom.

27 8. Plaintiff is informed and believes, and on that basis alleges, that each
28 of ALLYNCE and DOES 1-3 has acted in concert and participation with each

1 other concerning the claims in this First Amended Complaint. Plaintiff is
2 informed and believes, and on that basis alleges, that each of ALLYNCE and
3 DOES 1-3, was empowered to act as the agent, servant and/or employee of
4 each other, and that all acts alleged to have been done by each of them were
5 authorized, approved and/or ratified by each of them.

6 9. Plaintiff is informed and believes, and on that basis alleges, that each
7 of DOES 4-6 is a customer of ALLYNCE.

8 10. Plaintiff is informed and believes, and on that basis alleges, that each
9 of DDI and DOES 7-10, has acted in concert and participation with each other
10 concerning the claims in this Second Amended Complaint. Plaintiff is informed
11 and believes, and on that basis alleges, that each of DDI and DOES 7-10, was
12 empowered to act as the agent, servant and/or employee of each other, and that
13 all acts alleged to have been done by each of them were authorized, approved
14 and/or ratified by each of them.

15 JURISDICTION AND VENUE

16 11. EDCO asserts against Defendants ALLYNCE, SAMANO, DUDLEY
17 and DOES 1-6, in the First Claim, a claim for patent infringement arising under
18 the patent laws of the United States, *Title 35 of the United States Code*. This
19 Court, therefore, has subject matter jurisdiction under *28 U.S.C. §§1331 and*
20 *1338(a)*. Further, in Defendants' Answer filed on September 28, 2012, said
21 Defendants alleged that the Patent was invalid and/or unenforceable under *35*
22 *U.S.C. §102*. In the Second Claim for Fraud, EDCO asserts that the Patent was
23 sold to EDCO by DDI, who orally and in writing represented that the Patent was
24 valid and enforceable. Accordingly, this Court has subject matter jurisdiction
25 under the same provisions of law, or alternatively, under *35 U.S.C. §1367*,
26 supplemental jurisdiction.

27 12. Venue is proper in this judicial district under *28 U.S.C. §§1391(c) and*
28 *1400(a)-(b)*, because all Defendant may be found within this judicial district, and

1 because a substantial part of the events giving rise to this claim, as to each
2 Defendant, occurred within this judicial district.

3 THE PATENT IN SUIT

4 13. Plaintiff is the owner of all right, title and interest in and to United
5 States Patent No. 6,962,013 (the "013 Patent"), entitled "License Plate Frame,"
6 that was duly and legally issued on November 8, 2005. A true and correct copy
7 of the '013 Patent is attached hereto as Exhibit "A."

8 14. The method claimed in the '013 Patent is a method of forming a
9 vehicle license plate frame. Claim 1 lists the steps of the method which include
10 forming a frame body having a first color, wherein the frame body comprises a
11 substantially planar surface and at least one character formed by a recessed
12 surface in the frame body, and adhering a contrast layer comprising an adhesive
13 substance and a coloring agent having a second color to the substantially planar
14 surface of the frame body and not to the recessed surface, wherein the second
15 color contrasts with the first color.

16 15. Claim 4 claims a method of forming a vehicle license plate frame by
17 forming a frame body having a first color, wherein the frame body comprises a
18 substantially planar surface and at least one character formed by a recessed
19 surface in the frame body. The steps include adhering a contrast layer
20 comprising an adhesive substance and a coloring agent having a second color
21 to the substantially planar surface of the frame body and not to the recessed
22 surface, wherein the second color contrasts with the first color, by: providing a
23 hot stamp foil having a transfer surface and a working surface, the transfer
24 surface comprising a layer of colored material; placing the transfer surface of the
25 hot stamp foil onto the substantially planar surface; and applying heat and
26 pressure to the working surface of the hot stamp foil, thereby forming the layer
27 of colored material on the substantially planar surface of the frame body.

28 ///

1 DUDLEY, and DOES 1-3 have used and/or have, without authorization, used,
2 offered for sale and sold license plates frames that were made using the method
3 of the '013 Patent which infringes the Patent, both literally and/or under the
4 Doctrine of Equivalents.

5 20. Upon information and belief, one or more of the Defendants were,
6 and are aware of the '013 Patent and continues to sell or offer to sell products
7 that infringe the '013 Patent.

8 21. Upon information and belief, Defendants have provided their
9 customers, DOES 4-6, with license plate frames that were made using the
10 method of the '013 Patent. These customers are, therefore, direct infringers of
11 the '013 Patent.

12 22. As a result of the aforementioned acts, Defendants have infringed,
13 actively induced infringement and/or contributed to infringement by others of
14 claims 1-8 of the '013 Patent.

15 23. Plaintiff informed at least one of the Defendants of the '013 Patent
16 on or about January 23, 2012. On information and belief, Defendants have
17 nevertheless continued infringement, inducement of infringement and
18 contributory infringement of the '013 Patent without seeking the permission or
19 authorization of Plaintiff.

20 24. Upon information and belief, by the acts of patent infringement herein
21 complained of, Defendants have made substantial profits to which they are not
22 equitably entitled.

23 25. Plaintiff is entitled to recover from Defendants all damages it has
24 sustained as a result of Defendants' infringement, inducement of infringement
25 and contributory infringement of the '013 Patent.

26 26. Upon information and belief, Defendants' infringement, induced
27 infringement and/or contributory infringement of the '013 Patent will continue and
28 will cause Plaintiff irreparable harm unless enjoined by this Court, since Plaintiff

1 has no adequate remedy at law.

2 27. Upon information and belief, this is an exceptional case as to
3 Defendants under 35 U.S.C. §285.

4 **SECOND CLAIM FOR FRAUD**

5 (Against DDI and DOES 7-10)

6 28. EDCO restates and incorporates by reference the allegations of
7 paragraphs 1-27, inclusive, as if set forth fully herein.

8 29. On September 28, 2012, Defendants ALLYNCE, SAMANO and
9 DUDLEY answered the Complaint, alleging the Patent was invalid or
10 unenforceable due to premature public disclosure in violation of 35 U.S.C. §102.
11 This was the first notice to EDCO of any problem with the Patent.

12 30. EDCO purchased the '013 Patent as the cornerstone asset in the
13 Asset Purchase Agreement from DDI, for valuable consideration, on July 22,
14 2009. Prior to and at the time of entering into the Agreement, DDI through its
15 Director and Inventor, Patrick Perrin, and through Scott Strachan, then Chief
16 Financial Officer and now President and Chief Operating Officer, represented to
17 EDCO and its principals, both orally and in writing that title to the Patent was
18 good, vested in DDI, and valid.

19 31. Mr. Perrin, DDI's Director and Patent Inventor knew or should have
20 known, that if public disclosure had been made more than one year before the
21 date the application for the Patent was filed, that no patent rights could be
22 granted. The attorney who prosecuted the Patent was Jeffrey Sheldon, who
23 initially represented EDCO in this litigation. Mr. Sheldon and attorneys in his law
24 office informed Mr. Perrin of the requirements for obtaining a valid patent. In
25 applying for the Patent from the United States Patent and Trademark Office, Mr.
26 Perrin had to represent under oath and in writing that he had complied with the
27 law. Mr. Perrin's representation of compliance with the law to the USPTO, based
28 on his premature public disclosure, was false. Therefore, DDI's principals knew

1 or should have known that the representation of validity of the Patent to the
2 USPTO and to EDCO was false.

3 32. No reasonable person in Mr. Perrin's position would have believed
4 that the Patent, for which premature public disclosure had been made was valid.
5 But, DDI's principals including Mr. Perrin and Mr. Strachan, made the
6 representation of validity to EDCO's principals, stating that the Patent was good,
7 in order to induce EDCO to pay valuable consideration for the purchase of the
8 Patent along with some other assets. EDCO's principals stressed to Mr.
9 Strachan that the Patent was the most important asset in the entire transaction.

10 33. EDCO had no way to discover prior to entering into the Asset
11 Purchase Agreement, either through due diligence or through Mr. Sheldon's
12 efforts and the efforts of his legal associates during Patent prosecution before
13 the USPTO, that the representations by Mr. Perrin and Mr. Strachan on behalf
14 of DDI were false, because they had concealed that information from both EDCO
15 and Mr. Sheldon. Therefore, EDCO's reliance on the representations of DDI's
16 principals was justifiable. Further, EDCO was justified in relying on the issuance
17 of the Patent itself, to support its belief that Mr. Perrin had complied with the law
18 as represented to the USPTO by DDI's principal under oath.

19 34. EDCO was harmed by the purchase of a Patent which may not be
20 valid or enforceable. It paid valuable consideration and engaged in litigation in
21 federal courts to enforce its patent rights.

22 35. EDCO's reliance on the representations of DDI's principal was a
23 substantial factor in causing Plaintiff's damages.

24 36. The representations by DDI's principal were intentionally made
25 and/or the true facts regarding the invalidity or unenforceability of the Patent
26 were knowingly concealed, with the goal of thereby depriving EDCO of valuable
27 property or legal rights, justifying imposition of punitive damages against DDI
28 pursuant to *California Civil Code* §3294. DDI profited from its wrongdoing, and

1 would have succeeded in its scam of selling a valueless Patent, but for EDCO's
2 efforts to enforce its Patent rights.

3 **PRAYER FOR RELIEF**

4 Wherefore, Plaintiff prays for judgment as against Defendants as follows:

5 1. For preliminary and permanent injunctions against further
6 infringement, inducement of infringement or contributory infringement of the '013
7 Patent against Defendants ALLYNCE, SAMANO, DUDLEY and DOES 1-6.

8 2. For an award in Plaintiff's favor of three times the damages it has
9 sustained as a consequence of infringement, inducement of infringement and
10 contributory infringement of the '013 Patent by Defendants ALLYNCE, SAMANO,
11 DUDLEY and DOES 1-6, pursuant to 35 U.S.C. §284.

12 3. For an award to Plaintiff of attorney's fees, as provided by 35 U.S.C.
13 §285, against Defendants ALLYNCE, SAMANO, DUDLEY and DOES 1-6.

14 4. For an award to Plaintiff of interest and costs against Defendants
15 ALLYNCE, SAMANO, DUDLEY and DOES 1-6.

16 5. For an award to Plaintiff of general and special damages against
17 Defendants DDI and DOES 7-10. The special damages to include:

18 a. The difference in fair market value at the time of purchase of
19 the '013 Patent, between the actual amount paid by Plaintiff, and the actual value
20 received by Plaintiff;

21 b. The amounts reasonably spent in reliance on DDI's false
22 representations/failure to disclose unpatentability in the transaction to acquire the
23 '013 Patent, the subsequent efforts to enforce the '013 Patent, and other out-of-
24 pocket damages; and

25 c. Consequential damages that Plaintiff would have acquired had
26 it been able to sue and recover, sell and/or license a valid patent, as represented
27 by DDI, less what Plaintiff actually received as determined through the life of the
28 patent as represented, reduced to present value.

EXHIBIT A



US006962013B1

(12) **United States Patent**
Perrin

(10) Patent No.: **US 6,962,013 B1**

(45) Date of Patent: **Nov. 8, 2005**

(54) **LICENSE PLATE FRAME**

(75) Inventor: **Patrick Perrin, Rancho Palos Verdes, CA (US)**

(73) Assignee: **Perrin Manufacturing Company, City of Industry, CA (US)**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **10/857,064**

(22) Filed: **May 28, 2004**

(51) Int. Cl.⁷ **G09F 7/00**

(52) U.S. Cl. **40/209; D12/193**

(58) Field of Search **40/209; 428/346; D12/193**

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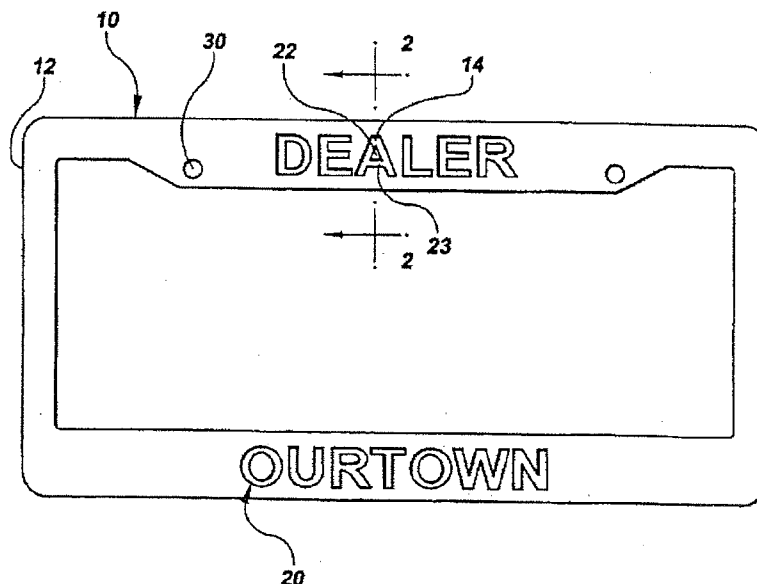
Primary Examiner—Gary C. Hoge

(74) *Attorney, Agent, or Firm*—Michael Fedrick; Jeffrey G. Sheldon; Sheldon & Mak

(57) **ABSTRACT**

License plate frames having recessed areas in the frame surface which form characters, words, and/or graphics, and having an adhered layer of material of contrasting color on the frame surface.

8 Claims, 2 Drawing Sheets



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FIG. 1

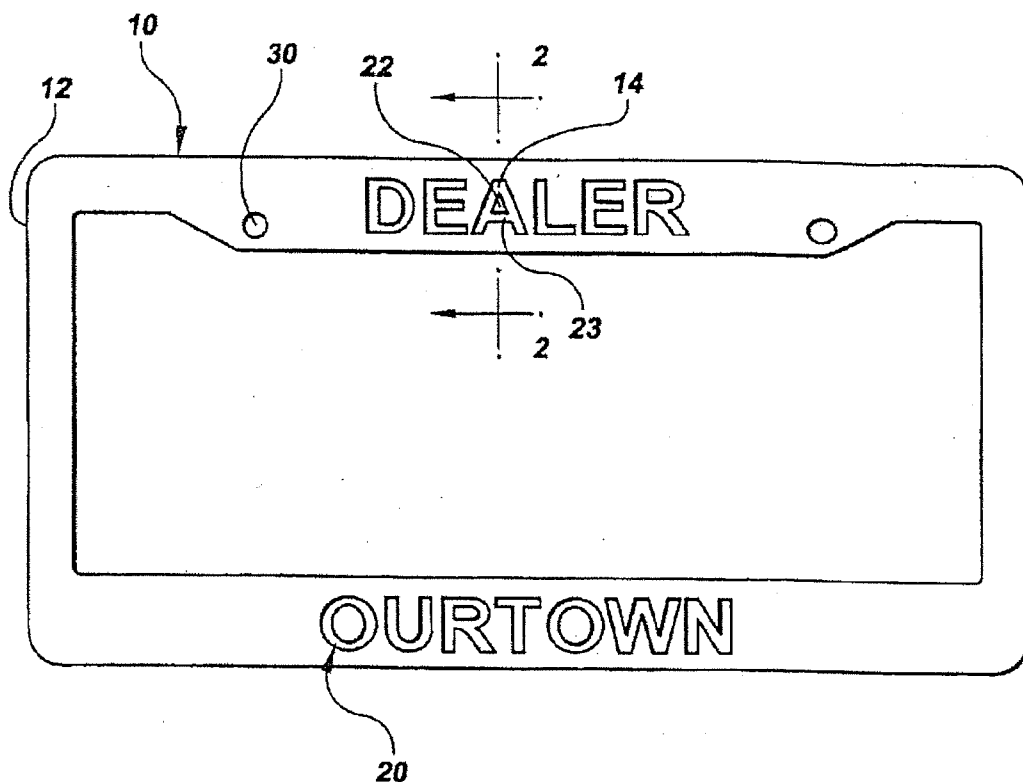
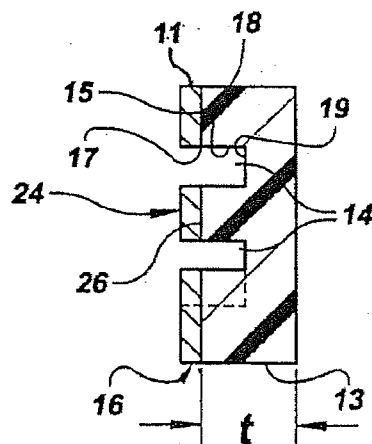


FIG. 2



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FIG.3

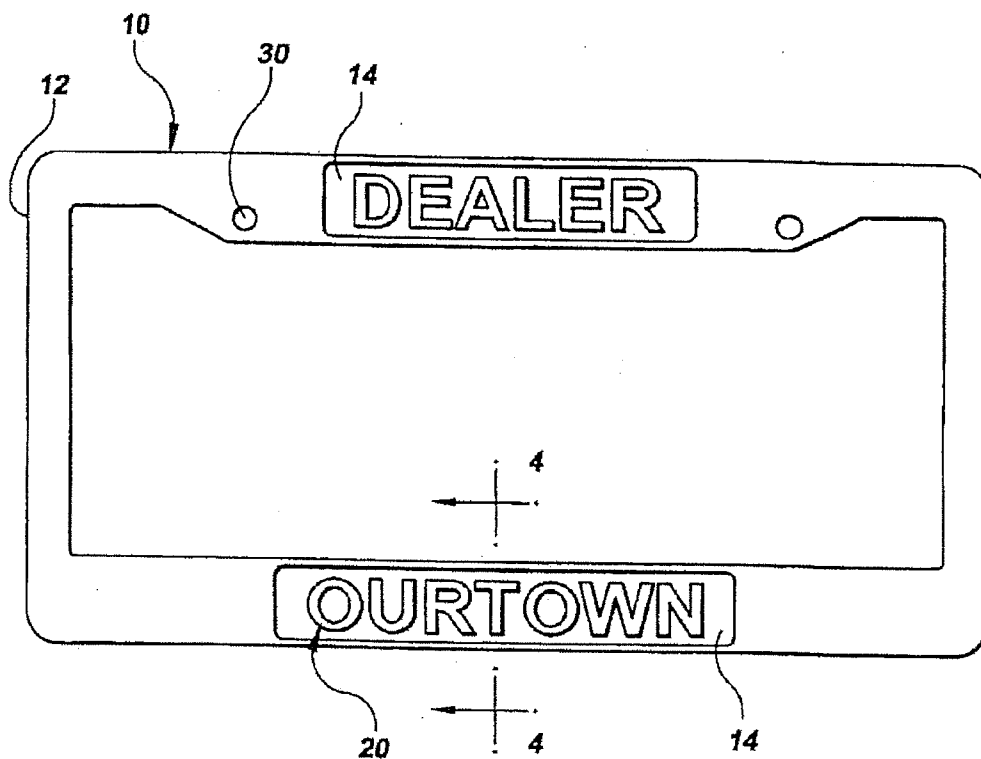
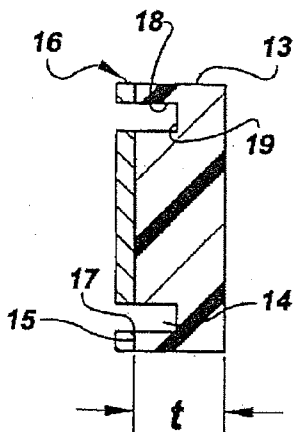


FIG.4



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LICENSE PLATE FRAME

BACKGROUND

Decorative license plate frames, in particular those for automobile license plates, frequently include words or decorative symbols on their surfaces. For example, automobile dealerships often include their names on license plate frames as a form of advertisement. One method of forming words or symbols on a frame surface is to screen print them on a flat surface of a molded frame. Words can also be bonded or otherwise attached to a surface of a frame. A further method of forming words on a license plate frame is to integrally mold them on the surface of a plastic frame. Letters formed in this way are raised above a flat surface of the frame, and a layer of contrasting colored material is applied to the letters' raised surface.

These methods of forming characters in a license plate frame, however, suffer from several drawbacks. Screen printed lettering, for example, lacks the visual depth of a raised letter. Raised lettering, however, is subject both to fading due to sun exposure as well as to physical wear. Bonded lettering is subject to the strength and durability of the adhesive or other means used to attach the lettering to a frame, and such lettering may become detached from the frame over time.

SUMMARY

The license plate frames described herein overcome the drawbacks of prior license plate frames through the use of recessed areas in a frame surface and an adhered layer of material having a contrasting color. The present frames for a vehicle license plate include a substrate having a substantially planar surface, a contrast layer adhered to this surface which has a contrasting color compared with the color of the surface, and one or more recessed portions in the substrate. The frames are preferably made from a plastic material having a thickness of between about 120 and about 135 thousandths of an inch, and the recessed portions in the substrate are preferably about 50 thousandths of an inch deep. The recessed portions meet the surface of the substrate at a substantially non-radiused edge and form or highlight one or more characters in the frame. The recessed portions can form complete letters or other characters, or can in addition include a contrasting portion to form part of a character. Such a contrasting portion has an upper surface which is substantially coplanar with the substantially planar surface of the substrate, and the contrast layer is adhered to this surface. The contrasting portion can alternatively form a complete character, in which case the recessed portion provides a contrasting background for the character.

Such frames can be made by forming a frame body having a substantially planar surface and at least one character formed by a recessed surface in the frame body, and then adhering a contrast layer to the substantially planar surface of the frame body and not to the recessed surface. The frame body has a first color, and the contrast layer has a second color that contrasts with the first. Preferably, at least one recessed surface forms a complete letter or other character. The contrast layer can be adhered through the use of a hot stamp foil. A transfer surface of the hot stamp foil comprising a layer of colored material is placed onto the substantially planar surface of the frame body, after which heat and pressure are applied to a working surface (the other side) of the hot stamp foil, thereby forming the layer of colored material on the substantially planar surface of the frame

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body. The recessed surface and the substantially planar surface preferably meet at a substantially non-radiused edge in order to facilitate removal of the hot stamp foil from the surface of the frame.

In an alternative to this method, a character can be formed by a raised surface present in a recessed surface of the frame body. The raised surface is substantially coplanar with the substantially planar surface of the frame body, and the contrast layer is formed on this raised surface at the same time as on the substantially planar surface. The recessed surface in this embodiment can serve as a background to a character formed by the raised surface, or alternatively the raised surface can help to form a character outlined by the recessed surface.

DRAWINGS

These and other features, aspects and advantages of the present invention will become better understood with regard to the following description, appended claims, and accompanying figures where:

FIG. 1 is a plan view of a frame having recessed characters.

FIG. 2 is a sectional view of the frame of FIG. 1 along line 2—2.

FIG. 3 is a plan view of a frame having raised characters surrounded by recessed areas of the frame.

FIG. 4 is a sectional view of the frame of FIG. 3 along line 4—4.

All dimensions specified in this disclosure are by way of example only and are not intended to be limiting. Further, the proportions shown in these Figures are not necessarily to scale. As will be understood by those with skill in the art with reference to this disclosure, the actual dimensions of any device or part of a device disclosed in this disclosure will be determined by their intended use.

DETAILED DESCRIPTION

The vehicle license plate frames described herein provide an improved combination of surface features and character display features compared with prior frames. The present frames 10, for example, comprise characters 20 formed in recessed areas 14 of a frame body 12 which are not subject to as much wear or exposure to the elements compared with raised lettering on a frame. The frame body 12, for supporting or containing a vehicle license plate, comprises a substrate 13 having a substantially planar outer surface 15. Recessed portions 14 in the frame body 12 are molded, cut, or otherwise formed in the substrate 13. As used herein, "recessed portion" refers to an area of the frame body 12 having a surface which extends below the plane of the substantially planar surface 15 of the substrate 13, i.e. away from the substantially planar surface 15 in the direction of the rear surface of the frame 10.

The recessed portions 14 of the frame 10 and the substantially planar surface 15 of the substrate 13 meet and are joined at an edge 17 of the substantially planar surface 15. The wall or walls 18 defining the recessed portion 14 extend away from this edge 17, preferably at an angle of less than about 90 degrees from the substrate surface 15, such as an angle of about 85 degrees, though walls extending at a less steep angle are also practicable with an injection molded frame. In a preferred embodiment, a recessed portion 14 includes a base 19 comprising a surface in the recessed

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portion 14 connected to the walls 18. The base 19 can preferably be planar and parallel to the substantially planar outer surface 15.

The material of the frame body 12, which is preferably monochromatic, has a first color. The recessed portions 14 formed in the frame body 12 thus have this first color. The frame body 12 further includes a layer of material 16 adhered to the substantially planar surface 15 which has a second color that contrasts with the first color of the frame body 12. The term "contrast" and variations thereof is used herein to refer to colors which can be distinguished by an average human observer with good vision (i.e., approximately 20/20 vision, with or without correction) in mid-day outdoor lighting conditions when placed side by side with each other. The term "colors" refers to any hue in the visible spectrum and includes black, white, and gray, as well as various finishes such as matte, glossy, and metallic. Contrast generally increases with increased difference in color wavelengths. For example, red color having a wavelength of 700 nanometers generally contrasts more with yellow having a wavelength of 580 nanometers than with orange having a wavelength of 620 nanometers. When the contrasting colors are black, white and/or gray, contrast can be measured as the difference in brightness between the lightest and darkest shades.

The edge 17 joining the recessed portions 14 and the substantially planar surface 15 of the substrate 13 is substantially non-radiused, i.e. is a sharp edge. When a contrast layer 16 is applied to the frame 10 from a transfer sheet comprising an ink or other coloring agent, such as a hot stamp foil, and the transfer sheet is subsequently removed from the surface 15 of the frame, the use of a substantially non-radiused edge results in a clean separation between the coloring agent adhered to the frame 10 and the coloring agent remaining on the transfer sheet. The resulting outer edge 111 of the contrast layer 16 is thereby given a generally smooth appearance. The edges 17, if they are slightly radiused (for example, due to manufacturing tolerances and variations), should have a radius which is less than the depth of the recessed portion 14, that is, the distance from the plane of the substantially planar surface 15 to the base 19 of the recessed portion 14. Preferably the radius is less than half of this depth, and more preferably less than a tenth of this depth.

The characters 20 of the frame can be formed by recessed portions 14 in the substrate 13 of the frame 10. As used herein, the term "character" refers to any number, letter, punctuation mark, picture or other symbol or graphic image that can be formed by a recess in the surface of the frame body 12 and the contrast layer 16. A character 20 can be formed completely by the recessed portion 14, or a further contrasting portion 24 that borders or falls within the recessed portion 14 can be used in addition to form a character 20, as described below.

In one embodiment, the frame 10 includes one or more discontinuous recessed portions 14, and the recessed portions 14 form either the entire character 20 or at least a portion of the character 20. For example, as shown in FIG. 1, a complete character 20 depicting the letter "L" (in the word DEALER) can be formed entirely from a recessed portion 14, i.e., the boundaries of the letter comprise the boundaries between the recessed portion 14 and the surface of the frame substrate 13.

For some characters 20, however, a contrasting portion 24 within the character 20 is required in order to form the character 20. For example, in order to form the letter "A" as shown in FIG. 1, a small contrasting portion 24 within the

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recessed portion forming the letter is required, i.e. the roughly triangular segment 22, in order to form the recessed crossbar 23 of the letter. In order to form such a contrasting portion 24 within the recessed portion 14 of the character 20, the contrasting portion 24 includes a character upper surface 26 which is substantially coplanar with the surface 15 of the substrate 13. In this way, the same contrast layer 16 adhered to the substrate 13 can likewise be adhered to the character upper surface 26.

In an alternative embodiment, the contrasting portion 24 forms a complete character 20. For example, the characters 20 shown in FIG. 3 comprise a character upper surface 26 overlaid by a contrast layer 16 (as shown in FIG. 4). In this embodiment, the contrasting portion 24 which forms a character 20 can be entirely within a recessed portion 14 as shown in FIG. 3, or alternatively the character 20 can be joined to the substrate 13 by a joining portion (not illustrated). The recessed portion 14 in this embodiment thus forms a background which highlights the characters 20 formed by the contrasting portion 24.

Frames are designed to provide support to the license plates with which they are used and are generally attached to the license plates and/or to the vehicles for which the license plates are issued. For example, the frame 10 shown in FIG. 1 includes screw holes 30 for receiving screws (not shown). In order to mount the frame 10 and a license plate, the screws are placed through screw holes 30 and then through corresponding holes provided in the license plate. The frame 10 and license plate can then be placed together onto the surface of a vehicle having two corresponding holes for receiving the screws. The screws are then lined up with the holes in the vehicle and rotated in order to screw them into the vehicle holes.

Frames 10 can have two holes 30 as shown in FIGS. 1 and 3, or alternatively can be provided with further holes for engaging screws or other mounting means (or even with only one hole). Four-hole automobile license plates and frames are commonly used. Other ways of securing a frame 10 and license plate to a vehicle can also be employed, though it is preferred that the frame 10 and license plate be removably secured to a vehicle (as is the case when screws are used).

The rear surface (not shown) of the frame 10 is in contact with the front surface (i.e. the surface designed to be viewed) of a license plate when the frame 10 and license plate are secured to a vehicle. The rear surface can have attached thereto clips, hooks, or other means for further securing the license plate to the frame 10. Additionally or alternatively, a lip (not shown) extending away from the front surface of the frame 10 can be provided along the periphery of the frame 10 in order to help retain a license plate.

To form a frame 10 as described herein, a frame body 12 is formed from a suitable material, such as plastic, i.e. a synthetic or semisynthetic polymer material that can be molded or extruded into objects. Preferably, a plastic material such as high impact polystyrene or ABS is used, and the frame body 12 is injection molded. A minimum wall thickness on the frame 10 of 0.075 inch to 0.100 inch is preferably maintained to achieve optimum filling of the mold during the injection molding process and to minimize the tendency of the molded part to warp.

In this embodiment, the face of the frame body 12 carrying the characters 20 to be displayed preferably has a thickness ("t" in FIGS. 2 and 4) of between about 120 and 135 thousandths of an inch. While the use of a substrate 13 having a lesser thickness is possible, this range has been found to produce a desirable visual quality in the recessed

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characters 20. Recessed portions 14 formed in frames 10 of this thickness are preferably about 50 thousandths of an inch deep, i.e. the base 19 of such a recessed portion 14 is about 50 thousandths of an inch from the plane of the substantially planar surface 15 of the substrate 13. Any characters 20 5 formed within such a recessed portion 14 thus preferably rise approximately 50 thousandths of an inch high from the base 19 of the recessed portion 14, so that the character upper surface 26 is substantially coplanar with the surface 15 of the frame substrate 13. The characters 20 of the frame 10 are preferably formed together with (e.g., integrally molded with) the rest of the frame body 12, though they could also be formed afterward by cutting into the frame body 12, such as by machine cutting.

In order to apply the contrast layer 16 to the substrate surface 15 and any character upper surfaces 26, a hot stamp foil is preferably brought into contact with these surfaces. As used herein, a "hot stamp foil" refers to a transfer sheet comprising an ink or other coloring agent in a hot melting type adhesive layer of the transfer sheet, as is known in the art. The use of multiple coloring agents can allow an image to be formed in the adhesive layer. The adhesive layer itself is formed on a transfer surface of the transfer sheet, with the opposite surface of the transfer sheet comprising a working surface capable of withstanding the heat and pressure required to transfer the adhesive layer to another surface, and capable of transferring sufficient heat through the transfer sheet for this purpose.

In order to form a contrast layer 16 on the surface 15 of a frame body 12, the transfer surface of the hot stamp foil is placed in contact with the substantially planar substrate surface 15, and the working surface of the hot stamp foil is contacted by a heated surface of approximately 400 degrees Fahrenheit which is also capable of applying pressure, such as a roller or a hydraulic press. Pressure of up to four tons is applied to the working surface for several seconds, after which the hot stamp foil is pulled away from the frame 10, leaving a layer of colored material 16 from the transfer surface of the hot stamp foil adhered to the frame 10. When the edges 17 between the recessed portions of the frame surface and the substantially planar portion of the frame surface are sharp edges, the edges of the contrast layer are clean, i.e. they conform to the edges 17 of the characters 20.

The contrast layer 16 formed by such colored material should have a color which contrasts with the color of the substrate 13, so that a character 20 formed in or by a recessed surface 14 in the substrate 13 can be distinguished by a viewer. In one embodiment, the substrate 13 is black, and the contrast layer has a metallic color, such as chrome, silver, or gold. Preferably, the hot stamp foil has a surface area sufficient to cover all of the substantially planar surface 13 of the frame body 12.

The hot stamp foil and the coloring agent used in the hot stamp foil can be any of a number of different foils and coloring agents known to the art. For example, mylar foil containing a silicone dye can be used. Preferably, a hot stamp foil which creates a metallic appearance on the surface of the frame, such as the brushed chrome foil made by ITW Foils (5 Malcolm Hout Drive, Newburyport, Mass. 01950), is used.

Although the use of a hot stamp foil to transfer a colored layer to a frame 10 is preferred, other methods of producing the contrast layer 16 on the frame surface 15 can be used. The contrast layer 16 should generally comprise an adhesive substance and a coloring agent. The adhesive substance is one capable of holding materials together by surface attachment. Laminating, the use of cold stamp foils, and other

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methods for creating a colored surface can also be employed to produce the contrast layer 16.

EXAMPLE 1

Frame with characters Formed by Recessed Portions

A frame for an automobile license plate having characters formed by the recessed portions of the frame, such as the Edge FX frame (manufactured by Perrin Manufacturing Co., 1020 Bixby Drive, Industry, Calif. 91745-1703), was formed. The frame body was approximately 120 thousandths of an inch thick and was rectangular, having two shorter parallel sides approximately 6 inches in length and two longer parallel sides approximately 12 inches in length. Recessed letters similar to those shown in FIG. 1 were formed in the front surface of one of the longer sides in order to form the word PRINCETON, while the word RUGBY was formed in the other long side with such recessed letters. The front surface was about $\frac{1}{2}$ " wide along the shorter sides and between $\frac{3}{8}$ of an inch and 1 inch wide along the longer sides, the width being such as to cover the edges of a license plate placed in the frame. Four holes for retaining screws were formed, two in each of the longer sides.

Adhered to the front surface of the frame was a layer of metallic colored material transferred by a hot stamp foil technique from a brushed chrome foil made by ITW Foils. The edges between the recessed areas of the frame surface and the substantially planar front surface were sharp, and the walls forming the recessed areas extended away from the front surface of the frame at approximately an 85 degree angle. These walls extended approximately 50 thousandths of an inch from the front surface of the frame before reaching a lower surface roughly parallel with the front surface of the frame. The frame substrate was black in color, so the layer of chrome-colored material contrasted with the black-colored recessed letters.

A lip was formed around the outer periphery of the frame body which extended toward the rear surface of the frame at approximately a 90 degree angle to the front surface of the frame. The lip extended approximately $\frac{1}{16}$ of an inch from the front surface and was approximately $\frac{1}{8}$ of an inch thick. Two retainer clips were formed in the lip along the longer side which comprised the word RUGBY in order to help retain a license plate.

EXAMPLE 2

Frame with Characters Formed Within a Recessed Portion

A frame having characters formed within the recessed portions of the frame, such as the Panel FX frame (manufactured by Perrin Manufacturing Co., 1020 Bixby Drive, Industry, Calif. 91745-1703), was formed. The frame was identical to the frame of Example 1, except that raised letters similar to those shown in FIG. 3 (rather than recessed letters) were formed in one of the longer sides of the frame in order to form the word "Panel Fx", while the words "Put Your Name Here" were formed in the other long side with such letters. The recessed portion of the front surface of the frame formed a black background which provided contrast to the chrome-colored letters.

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EXAMPLE 3

Manufacturing a Frame

A frame body as described in Example 1 was injection 5 molded from impact polystyrene with an overall nominal wall thickness of 0.135" and a minimum wall thickness in the lettering of 0.085" to facilitate the filling of the part and minimize warping. A roll of brushed chrome foil made by ITW Foils was unrolled so as to expose an unused portion 10 of the foil, and the transfer surface (i.e., the surface containing the colored adhesive material) was placed into contact with the substantially planar front surface of the frame. A heated platen at 400 degrees Fahrenheit was pressed against the opposite surface of the hot stamp foil for 2 seconds. The foil was then pulled away from the frame, leaving the front surface covered by a layer of chrome-colored adhesive material. The frame and adhesive layer were allowed to cool for 3 seconds in order to allow the adhesive layer to harden on the frame.

Although the present invention has been discussed in considerable detail with reference to certain preferred embodiments, other embodiments are possible. Therefore, the scope of the appended claims should not be limited to the description of preferred embodiments contained in this disclosure. All references cited herein are incorporated by reference to their entirety.

What is claimed is:

1. A method of forming a vehicle license plate frame, comprising the steps of:
 - (a) forming a frame body having a first color, wherein the frame body comprises a substantially planar surface and at least one character formed by a recessed surface in the frame body; and
 - (b) adhering a contrast layer comprising an adhesive substance and a coloring agent having a second color to the substantially planar surface of the frame body and not to the recessed surface, wherein the second color contrasts with the first color.
2. The method of claim 1, wherein at least one recessed surface forms a complete character.
3. The method of claim 1, wherein the recessed surface and the substantially planar surface meet at a substantially non-radiused edge.
4. A method of forming a vehicle license plate frame, comprising the steps of:
 - (a) forming a frame body having a first color, wherein the frame body comprises a substantially planar surface and at least one character formed by a recessed surface in the frame body; and
 - (b) adhering a contrast layer comprising an adhesive substance and a coloring agent having a second color to the substantially planar surface of the frame body and not to the recessed surface, wherein the second color contrasts with the first color, by:

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- (i) providing a hot stamp foil having a transfer surface and a working surface, the transfer surface comprising a layer of colored material;
- (ii) placing the transfer surface of the hot stamp foil onto the substantially planar surface; and
- (iii) applying heat and pressure to the working surface of the hot stamp foil, thereby forming the layer of colored material on the substantially planar surface of the frame body.

5. The method of claim 4, wherein the hot stamp foil has a surface area sufficient to cover the substantially planar surface of the frame body.

6. A method of forming a vehicle license plate frame, comprising the steps of:

- (a) forming a frame body having a first color, wherein the frame body comprises:
 - (i) a substantially planar surface; and
 - (ii) a character formed in a recessed surface in the frame body, and wherein the character comprises an upper surface; and
- (b) adhering a contrast layer comprising an adhesive substance and a coloring agent having a second color to the substantially planar surface of the frame body and to the upper surface of the character but not to the recessed surface, wherein the second color contrasts with the first color.

7. The method of claim 6, wherein the recessed surface joins the substantially planar surface of the frame body at a substantially non-radiused edge.

8. A method of forming a vehicle license plate frame, comprising the steps of:

- (a) forming a frame body having a first color, wherein the frame body comprises:
 - (i) a substantially planar surface; and
 - (ii) a character formed in a recessed surface in the frame body, wherein the character comprises an upper surface; and
- (b) adhering a contrast layer comprising an adhesive substance and a coloring agent having a second color to the substantially planar surface of the frame body and to the upper surface of the character but not to the recessed surface, wherein the second color contrasts with the first color, by:
 - (i) providing a hot stamp foil having a transfer surface and a working surface, the transfer surface comprising a layer of colored material;
 - (ii) placing the transfer surface of the hot stamp foil onto the substantially planar surface; and
 - (iii) applying heat and pressure to the working surface of the hot stamp foil, thereby forming the layer of colored material on the substantially planar surface of the frame body.

* * * * *

PROOF OF SERVICE

I hereby certify that on January 29, 2013, I caused the foregoing document to be served via electronic mail to the addressee(s) shown below.

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FEDERAL: I declare, under penalty of perjury under the laws of the United States of America that the foregoing is true and that I am employed in the office of a member of the Bar of this Court at whose direction the service was made.

Executed on January 29, 2013, at Newport Beach, California.



Willa Phillips