

CONTAINER FOR RETICLE

BACKGROUND OF INVENTION

1. FIELD OF INVENTION

The present invention relates to a container for a reticle.

2. RELATED PRIOR ART

Referring to Fig. 1, there is shown a conventional container for a reticle. The conventional container includes a frame 11, a base 12, a cover 13, pressing elements 14 and guiding elements 15. The frame 11 is detachably attached to the base 12. Supporting elements 121 are formed on the base 12. The frame 11 and the base 12 can be covered by the cover 13. The pressing elements 14 and the guiding elements 15 are attached to an internal side of the cover 13. Each of the pressing elements 14 includes a first arched portion 141 and a second arched portion 142. A reticle 16 can be located on the supporting elements 121. The edge of the reticle 16 is pushed by the guiding elements 15 and the second arched portions 142 of the pressing elements 14 while the top of the reticle 16 is pushed by the first arched portions 141 of the pressing elements 14.

There are however problems with the conventional container. Firstly, the edge of the reticle 16 could be damaged by the second arched portions 142 of the pressing elements 14 when the top of the reticle 16 is pressed by the first arched portions 141 of the pressing elements 14. This is partly because the edge of the reticle 16 is weaker than the top. The is partly because the harder the top of the reticle 16 is pressed by the

1 first arched portions 141 of the pressing elements 14, the harder the edge
2 of the reticle 16 is pressed by the second arched portions 142 of the
3 pressing elements 14.

4 Secondly, the reticle 16 could be dropped onto the base 12 from the
5 supporting elements 121 since the sight of reticle 16 is often hindered.
6 The reticle 16 could therefore be damaged by the base 12.

7 The present invention is therefore intended to obviate or at least
8 alleviate the problems encountered in prior art.

9 10 **SUMMARY OF INVENTION**

11 It is the primary objective of the present invention to provide a
12 container for securely containing reticles.

13 To achieve the primary objective of the present invention, a container
14 includes a base including supporting elements formed thereon, a covering
15 device for covering the base and pressing elements attached to an internal
16 side of the covering device. Each of the pressing elements includes flat
17 body, a first leg extended from an edge of the flat body for pressing an
18 upper side of a flat object and a second leg extended from another edge of
19 the flat body for pressing an edge of the flat object independent of the
20 first leg.

21 Other objectives, advantages and features of the present invention
22 will become apparent from the following description referring to the
23 attached drawings.

24 25 **BRIEF DESCRIPTION OF DRAWINGS**

26 The present invention will be described via detailed illustration of the

1 preferred embodiment in view of prior art referring to the drawings.

2 Fig. 1 is a side view of a conventional container for reticles.

3 Fig. 2 is an exploded view of a reticle and a container according to
4 the preferred embodiment of the present invention.

5 Fig. 3 is an exploded partial view of the container shown in Fig. 2.

6 Fig. 4 is a cross-sectional view of the reticle and the container shown
7 in Fig. 2.

8 Fig. 5 is a cross-sectional view of the container in another position
9 than shown in Fig. 4.

10 Fig. 6 is a cross-sectional view of the reticle in another position than
11 shown in Fig. 4.

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13 **DETAILED DESCRIPTION OF PREFERRED EMBODIMENT**

14 Referring to Fig. 2, a reticle 5 can be contained in a container
15 according to the preferred embodiment of the present invention. The
16 container includes a base 2, a covering device 3 and pressing elements 4
17 and 4'.

18 The base 2 includes four supporting elements 21, four restraining
19 blocks 23 and two restraining tabs 24 all formed on the top thereof, a
20 groove 25 defined in the top thereof and four recesses 22 defined in the
21 bottom thereof. Each of the supporting elements 21 includes a primary
22 rounded portion 211 and an auxiliary rounded portion 212 shorter than
23 the primary rounded portion 211. The supporting elements 21 are
24 located corresponding to four corners of the reticle 5. Each of the
25 restraining blocks 23 is located next to a related one of the supporting
26 elements 21.

1 The covering device 3 includes an external cover 31 and an internal
2 cover 32 detachably attached to the external cover 31. The external
3 cover 31 includes a handle 311 formed on the top thereof and four
4 buckles 312 formed on an edge 313 thereof. The buckles 312 are
5 located corresponding to the recesses 22. The external cover 31 is made
6 of plastic for example.

7 The internal cover 32 includes four cylinders 321 extended from an
8 internal side thereof. A screw can be driven into the external cover 31
9 through each of the cylinders 321 so that the internal cover 32 is secured
10 to the external cover 31. The internal cover 32 is made of metal for
11 example and used as a shield against static discharge.

12 Referring to Fig. 3, each of the pressing elements 4 includes a flat
13 body 40, a first leg 41 extended from an edge 40a of the flat body 40, a
14 second leg 42 extended from another edge 40b of the flat body 40 and a
15 security block 43 extended from the bottom of the flat body 40. The
16 first leg 41 is made of a bent or arched configuration. The first leg 41
17 includes a foot 411 at a lower end thereof and a boss 412 extended from
18 the bottom of the foot 411. The second leg 42 includes a foot 421 at a
19 lower end thereof.

20 The pressing elements 4' are identical to the pressing elements 4
21 except including an extensive portion 44 extended from the flat body 40
22 and a third leg 45 extended from the extensive portion 44.

23 Referring to Fig. 4, the reticle 5 is located on the primary rounded
24 portions 211 of the supporting elements 21. The weight of the reticle 5
25 is evenly exerted on the supporting elements 21.

26 Referring to Fig. 5, the covering device 3 is located on the base 2 to

1 cover the reticle 5. The edge 313 of the external cover 31 are inserted in
2 the groove 25 to make sure that the external cover 31 is in a correct
3 position on the base 2. The buckles 312 are inserted in the recesses 22
4 to make sure that the external cover 31 is firmly attached to the base 2.

5 During the mount of the covering device 3 on the base 2, an edge of
6 the reticle 5 is pushed by the third legs 45 so that an opposite edge of the
7 reticle 5 is abutted against the restraining tabs 24. Two other edges of
8 the reticle 5 are restrained between the restraining blocks 23 and pressed
9 by the second legs 42. Thus, the horizontal position of the reticle 5 is
10 retained. The top of the reticle 5 is pressed by the first legs 41 so that
11 the vertical position of the reticle 5 is retained. More particularly, the
12 top of the reticle 5 is in contact with the bosses 412 so that damages to the
13 top of the reticle 5 are minimized. The legs 41 and 42 of each of the
14 pressing elements 4 are used independent of each other. Excessive
15 bending of the first legs 41 are avoided by the security blocks 43.

16 Referring to Fig. 6, during the locating of the reticle 5 onto the
17 supporting elements 21 or the removing of the covering device 3 from the
18 base 2, the reticle 5 might be dropped from the primary rounded portions
19 211 of some of the supporting elements 21. Fortunately, the reticle 5 are
20 very likely to be dropped onto the auxiliary rounded portions 212 of the
21 same supporting elements 21.

22 The primary advantage of the container according to the present
23 invention is a secure operation. The first leg 41 and the second leg 42 of
24 each of the pressing elements 4 are made and used independent of each
25 other. The second leg 42 does not press the top of the reticle 5 harder as
26 the first leg 41 presses an edge of the reticle 5 harder. Moreover, the

1 auxiliary rounded portions 212 of the supporting elements 21 would
2 protect the reticle 5 from the base 2 should the reticle 5 be dropped from
3 the primary rounded portions 211 of the supporting elements 21.

4 The present invention has been described via the detailed illustration
5 of the preferred embodiment. Those skilled in the art can derive
6 variations from the preferred embodiment without departing from the
7 scope of the present invention. Therefore, the preferred embodiment
8 shall not limit the scope of the present invention defined in the claims.

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1 **CLAIMS**

- 2 1. A container comprising:
- 3 a base comprising supporting elements formed thereon;
- 4 a covering device for covering the base; and
- 5 pressing elements attached to an internal side of the covering
- 6 device and each formed with a flat body, a first leg extended from an
- 7 edge of the flat body for pressing an upper side of a flat object and a
- 8 second leg extended from another edge of the flat body for pressing
- 9 an edge of the flat object independent of the first leg.
- 10 2. The container according to claim 1, wherein each of the supporting
- 11 elements comprises:
- 12 a primary rounded portion for supporting the flat object; and
- 13 an auxiliary rounded portion for supporting the flat object should
- 14 the flat object be dropped from the primary rounded portion, wherein
- 15 the auxiliary rounded portion is shorter than the primary rounded
- 16 portion.
- 17 3. The container according to claim 1, wherein the first leg is made of a
- 18 bent configuration for resiliently pressing the flat body.
- 19 4. The container according to claim 1, wherein the first leg comprises
- 20 foot at an end and a boss extended from a lower side of the foot for
- 21 contact with the flat body.
- 22 5. The container according to claim 1, wherein the base comprises at
- 23 least one restraining tab formed thereon for contact with an edge of
- 24 the flat object, and at least one of the pressing elements comprises a
- 25 third leg for contact with an opposite edge of the flat object.
- 26 6. The container according to claim 1, wherein the covering device

- 1 comprises an external cover and an internal cover attached to the
2 external cover.
- 3 7. The container according to claim 6, wherein the external cover
4 comprises at least two buckles located opposite to each other, and the
5 base comprises at least two recesses for receiving the buckles.
- 6 8. The container according to claim 7, wherein the external cover
7 comprises an edge, and the base comprises a groove for receiving the
8 edge of the external cover.
- 9 9. The container according to claim 6, wherein the external cover
10 comprises a handle formed thereon.
- 11 10. The container according to claim 6, wherein the internal cover is
12 made of metal.
- 13 11. The container according to claim 1, wherein the base comprise at least
14 two restraining blocks for restraining two opposite edges of the flat
15 object.
- 16 12. The container according to claim 1, wherein the second leg of each of
17 the pressing elements comprises a foot at an end thereof.
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