



- (51) International Patent Classification:  
A44C 17/00 (2006.01)
- (21) International Application Number:  
PCT/AU2012/001159
- (22) International Filing Date:  
25 September 2012 (25.09.2012)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
PCT/AU2012/000469 1 May 2012 (01.05.2012) AU
- (71) Applicant: JHEHD P/LATF THE JOHN HUDSON  
DISCRETIONARY TRUST [—/AU]; Shop 1, 6-10, Old  
Princess Hwy, Beaconsfield, VIC 3807 (AU).
- (72) Inventor: HUDSON, John; P/O Box 490, Cowes, VIC  
3922 (AU).
- (81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,  
BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,  
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,  
HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,  
KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,  
ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI,  
NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU,  
RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ,  
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA,  
ZM, ZW.

[Continued on next page]

(54) Title: PROMISE CUT DIAMOND AND METHOD FOR CUTTING THE SAME

(57) Abstract: A gemstone comprising a crown, a pavillion and a girdle. The crown comprising an octagonal table, eight triangular first half facets, eight second half facets, eight third half facets, and sixteen triangular upper girdle facets. The pavillion comprising four pairs of concentrically arranged cutlet pavillion facets, four pairs of bottom small break facets, eight girdle pavillion facets and eight pairs of bottom half facets. The girdle comprising eight pairs of small girdle half facets and eight full girdle facets.

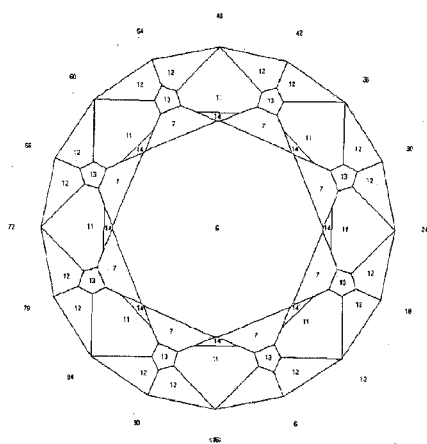


Figure 3a

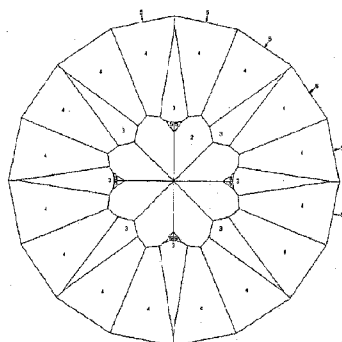


Figure 4a



**(84) Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Declarations under Rule 4.17:**

— *of inventorship (Rule 4.17(iv))*

**Published:**

— *with international search report (Art. 21(3))*

## **Promise Cut Diamond and Method for Cutting The Same**

### **Field of Invention**

The present invention relates generally to gemstones. More specifically, the present invention is related to a gemstone cut, primarily for diamonds with use extending to colored gemstones.

### **Discussion of Prior Art**

Diamonds are one of the most popular gemstones. One measure of the quality of a diamond is related to the cut of the diamond. The better the cut of a diamond, the higher the quality of light reflected and thus an increase in the brilliance.

Figure 1 illustrates the general structure associated with a diamond. The basic structure can be divided into three sections: a crown 102 which forms the upper section of the diamond, a pavilion 104 which forms the lower section of the diamond, and a girdle 106 which forms the rim separating the crown from the pavilion.

Figure 2a illustrates a prior art gemstone cut as described in US patent 693,084. The patent provides for a diamond, or other precious stone having a series of quadrilateral facets  $a$ , meeting in the center, at an elevation to form an apex, a series of quadrilateral facets  $a'$ , surrounding the series of quadrilateral facets  $a$ . A second series of quadrilateral facets  $a_2$ , surrounds the facets  $a'$  and extends to the girdle, and triangular girdle facets  $a_3$  fills the space between the points of the facets  $a_2$  and the girdle.

The U.S. patent to Huisman (3,585,764) provides for a method of cutting a diamond to produce 72 pavilion facets comprising the steps of: 1) cutting four pavilion facets, 2) dividing the four into eight pavilion facets, 3) cutting the eight into sixteen pavilion facets with substantially overlapping edges, 4) polishing the girdle to a 90° edge, 5) cutting a facet at 53° at each overlap, 6) dividing each such latter facet into three facets such that each latter facet is provided with a diamond shape, and 7) cutting 38 facets into the girdle.

The U.S. patent to Elbe (3,788,097) provides for a brilliant gem having upper and lower facets which are inclined to a girdle plane and formed by lateral surfaces of a pyramid. The angles between the lower facets and the girdle plane ranges from 37° to 45°, and are selected such that emerging light is dispersed in a dispersion angle from 1°20 minutes to 12° 57 minutes. The gem is also provided with a second plane parallel to the girdle plane, and contains an odd number of upper and lower facets in a ring of facets circling the gem.

The U.S. patent to Grossbard (4,020,649) provides for a step cut gemstone with a straight edged polygonal shaped girdle that has a generally pyramidal base and a crown with girdle and table breaks, wherein at least one of these breaks is cut with triangular shaped facets. The angle between the plane of the girdle break of the crown and the table should be in the range from 35° to 42°.

The U.S. patent to Andrychuk (4,083,352) provides for a method for systematically and accurately increasing the brilliance and depth of color of a gemstone without the need to determine the pavilion and facet angles by trial and error.

The U.S. patent to Grossbard (4,118,949) provides for a brilliantized step cut diamond that has a straight edged polygonal shaped girdle with sides and corner facets; a crown with table and a table-and-girdle breaks which are faceted; and a pyramidal base having a point cutlet, a cutlet break and a girdle break with ridges extending from the cutlet to the corner of the girdle. A fan with three pairs of triangular halves is disposed symmetrically about each ridge with a triangular facet in each corner of the base having an edge, which is collinear with the edge of a corner facet and an apex at a ridge. The angles between the cutlet break and the plane of the girdle is between 30° and 43°.

The U.S. patent to Elbe (4,308,727) provides for a jewel of a brilliant type wherein a first plurality of facets are provided on the bezel and include an annular facet region whose facets are larger than 50° and up to 90°, and another annular facet region whose facets extend from the first mentioned region towards the table and are inclined to the girdle at angles smaller than 25°. A second plurality of facets is also provided on the pavilion and includes a further annular region of facets, which are included to the girdle at angles between 25° and 52°.

The U.S. patent to Cheng (6,305,193 B1) provides for a gemstone that includes a pavilion portion, a crown portion and a girdle portion provided between the pavilion and the crown. The crown portion includes a plurality of facets provided on the surface and the crown portion has eight longitudinal sections, which collectively define it.

The U.S. patent to Alain Vets (US/2011/0146350 A1) provides for a round brilliant cut gemstone and method for cutting the same. The invention relates to a gemstone comprising of a girdle, a crown and a pavilion. The crown comprises of a table, eight star facets surrounding the table, eight first half facets which are aligned between the star facets, eight second half facets aligned adjacent to the first half facets and sixteen upper girdle facets aligned between the second half facets. The pavilion comprises sixteen pavilion main facets and sixteen lower girdle facets aligned between the pavilion main facets. The invention also relates to a method of cutting the gemstone.

Whatever the precise merits, features and advantages of the above cited references, none of them achieve or fulfils the purposes of the present invention.

## **Brief Description of the Drawings**

Figure 1 illustrates a general structure associated with a diamond.

Figures 2a, 2b and 2c illustrate a prior art diamond cuts.

Figures 3a, 3b, 3c and 3d collectively illustrate the top view of the present invention's gemstone crown and table, including a part of the girdle.

Figures 4a, 4b, 4c, 4d and 4e illustrates a top view of the present invention's gemstone pavilion, including a part of the girdle.

Figure 5 illustrates a ray-traced model of the gemstone of the present invention.

Figures 6a, 6b and 6c collectively illustrate the bottom-half facet, cutting process and dimensions of the completed cut.

Figure 7a, illustrates the girdle facets cut in process

Figures 7b and 7c collectively illustrate the upper-girdle facet, cutting process and dimensions of the completed cut.

Figures 8a, and 8b collectively illustrate the second-half facet, cutting process and dimensions of the completed cut.

Figures 9a, and 9b collectively illustrates the first-half facet, cutting process and dimensions of the completed cut.

Figures 10a, and 10 b collectively illustrates the small crown break facet cutting process and dimensions of the completed cut

Figures 11a, and 11 b collectively illustrates the third half facet cutting process and dimensions of the completed cut

Figure 12 illustrates the table and dimensions therein.

Figures 13a, and 13b collectively illustrates the cutlet pavilion facet cutting process and dimensions of the completed cut

Figures 14a, and 14b collectively illustrate the triangular girdle pavilion facets and dimensions of the completed cut.

Figure 15a, and 15b collectively illustrate the pavilion facets and heart-shape set, and dimensions of the completed cut.

Figure 16 illustrates the completed facet dimensions and the completed cut.

## Description of the Preferred Embodiments

While this invention is illustrated and described in a preferred embodiment, the gemstone may be produced in many different configurations, forms and materials.

There is depicted 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 the associated functional specifications for its construction and is not intended to limit the invention to the embodiment illustrated. Those skilled in the art will envision many other possible variations within the scope of the present invention.

It should be noted that the gemstone of the present invention can be a precious stone or a semi-precious stone, but in the preferred embodiment, the gemstone is a diamond.

Thus, the type of gemstone should not be used to restrict the scope of the present invention.

Furthermore, the specific parameters (e.g., depths, heights, ratios, and angles) are used for illustrative purposes only and should not be used to limit the scope of the present invention. Additionally, the shape of the gemstone in the figures corresponding to the specification and the preferred embodiment are for illustrative purposes only, and one skilled in the art can envision using other shapes (e.g., square with corner breaks, octagonal shape, square shape, oval shape etc.).

Figures 3a, 3b and 3c collectively illustrate the crown of the gemstone of the preferred embodiment of the present invention.

Figure 3a illustrates a top view of crown with its various facets. Crown includes a flat table shaped like an octagon (6) and is disposed at the top of the crown. Also disposed on the diagonally extended side of crown are facets, which include: first-half facets (7), small crown break facets (14), second-half facets (11) third half facets (13), and upper-girdle facets (12). As mentioned earlier, the octagonal table is surrounded by eight triangular first-half facets (intercept between 11; 12 and 6), one for each side of the octagonal table. In the preferred embodiment, small crown break facets (14) are angled downwardly at 29.00° (which are intercepted between 6,7, and 11) the first-half facets (7) are angled downwardly at 17.00° from the plane of the octagonal table at 0° (6). Additionally, eight second-half facets (11) are formed in-between the area formed by the first-half facets (intercepted between 6, 7 and 12). In the preferred embodiment, the second-half facets (11) are angled downwardly at 31.00° from the plane of the octagonal table. In the preferred embodiment the third half facets (13) are angled downwardly at 29.96° (and are intercepted between 11, 7 and 12)

In the preferred embodiment, the upper girdle facets (12) are angled downwardly at 37.32° from the plane of the octagonal table (6).

Figure 3b illustrates a side-view of the crown and the girdle of the present invention's gemstone. While figure 3c illustrates the crown in the preferred embodiment with a maximum table (6) spread of 60.2%, and a maximum spread of 10.4% for the upper-girdle facet (12).

Figure 4a, 4b, 4c and 4d collectively illustrate the pavilion of the gemstone of the preferred embodiment of the present invention.

Figure 4a illustrates top view showing a pavilion portion of the present invention's gemstone in the preferred embodiment. In the preferred embodiment, the cutlet pavilion facet (2) is angled downwardly at  $34.27^\circ$ , the girdle pavilion facet (3) is angled downwardly at  $46.17^\circ$ , and a pair of bottom-half facets (4) angled downwardly at  $47.60^\circ$ .

Figures 4b and 4c illustrates a side-view showing the pavilion portion and part of the girdle of the said invention's gemstone in the preferred embodiment.

Figure 4b illustrates the pavilion in the preferred embodiment with requisite maximum spreads from a top-view. This illustration shows a maximum cutlet pavilion spread (2) from the intercept between (2) and (3) (point-to-point diagonally and horizontally) as 39.42%; a maximum cut pavilion spread (2) from the intercept between (2) and (4) (point-to-point diagonally and horizontally) as 46.90%; a maximum cut for the bottom-half facets (as between the intercept of the girdle and (4), and (4) and (2), point-to-point both horizontally and diagonally) as 33.142%;

Figure 4c illustrates the pavilion, girdle and crown in the preferred embodiment with requisite maximum spreads from a side-view. The maximum cut from the table to the top of the girdle is 17.92%; from the top of the girdle to the base of the girdle a maximum cut of 9.46%; from, the intercept between (5) and (13) a maximum cut of 1.94%; from the base of the girdle (13) to the intercept between (3) and (2) a maximum of 52.94%; from the intercept between (4) to (2) the base

Figure 4f illustrates the percentage maximum cut in preferred embodiment as comprising a maximum of 59.9% depth proportion (short-measure), 100% width (short-measure), and 58.31% depth proportion (long-measure).

It should be noted that the depths and heights given in Figures 4d and 4f are expressed as a percentage of the diameter. Furthermore, throughout the specification specific angles are provided for various facets with the understanding that these angles cannot be used to restrict the scope of the present invention.

In summary, sixteen cutlets (4) are formed from the girdle and extend inward towards the lower pavilion cutlets. The cutlets are surrounded by eight girdle pavilion facets and eight cutlet pavilion facets (2). In the preferred embodiment, the cutlet pavilions are angled downwardly at  $34.27^\circ$ .

Notably, the table shown in Figure 15 offers a more specific range associated with each facet of the present invention's gemstone.

Figure 5 illustrates a ray-traced model of the preferred embodiment of the gemstone of the present invention.

Figure 6 illustrates a computer generated top view of the gemstone of the present invention.

Figures 6a, 6b, 6c, 6d; illustrates a computer generated top view of the gemstone of the present invention at average inclination angles of 0%(a), 10%(b), 20%(c), and 30%(d) respectively

**Table 1**

	Avgint			
	0°	10°	20°	30°
Hearts and arrows cut	65.898	67.009	63.366	61.064
Present invention's Gemstone Cut	87.000	85.000	83.000	78.000
Present invention's Gemstone Square Cut	85.858	86.868	83.838	78.787

Notably, the abovementioned embodiment is approximately 30% brighter.



**Conclusion**

A system and method has been shown in the above embodiments for the effective implementation of this gemstone cut. While various preferred embodiments have been shown and described, it will be understood that there is no intent to limit the invention by such disclosure, but rather, it is intended to cover all modifications and alternate constructions falling within the spirit and scope of the invention, as defined in the appended claims. For example, the present invention should not be limited by type of gemstone or shape of gemstone.

## Summary of the Invention

### Promise Cut Diamond

The present invention provides for a novel gemstone cut wherein the gemstone comprises a crown, a girdle, and a pavilion, each of which have facets disposed on them.

The crown further comprises an octagonal table (6), which comprises of 48 facets.

In the preferred embodiment, the polishing angle of the eight pairs of upper-girdle facet (12) is  $37.32^\circ$ . A second-half facet (11) is evenly placed in-between two upper-girdle facets (12), the latter appearing on the left and right of each second-half facet respectively. The polishing angle for each second-half facet (11) is  $31.00^\circ$ . In the preferred embodiment, between the second-half facet (11) is a pentagonal third half facet (13) the polishing angle for each is  $29.96^\circ$  each second-half facet (11) also appears below and between a pair of second-half facets (7), which are polished at an angle of  $17.00^\circ$  and small crown beak facets (14) which are pentagonal in shape, the polishing angle is  $29^\circ$ .

With respect to the crown in the present invention's gemstone cut, there are eight concentrically arranged second-half facet facets (11), and in-between these respective facets and upper-girdle facets (12) and third half facets (13) are disposed first-half facets (7). In the preferred embodiment, the polishing angles associated with the upper-girdle facets (12) are  $37.32^\circ$ , second-half facets (11)  $31.00^\circ$ , the third half facets (13)  $29.96^\circ$ , the first-half facets (7)  $17.00^\circ$ , The small crown break facets (14)  $29^\circ$  and the table (6)  $0^\circ$ .

In the preferred embodiment, the girdle comprises of 16 facets (5). Each girdle full-facet comprises polishing angle at  $90^\circ$ .

With respect to the pavilion in the present invention's gemstone cut, there are 40 facets. In the present embodiment, there are sixteen pentagonal bottom-half facets (4) polished at an angle of  $47.60^\circ$ . Each of the eight triangular girdle pavilion facets (3) is placed in-between two bottom-half facets (4). In the present embodiment, at the base of the pavilion, and dispersed evenly between four bottom-half facets (4), three girdle pavilion facets is a pair of hexagonal cutlet pavilion facets (2). In the present invention's gemstone the eight cutlet pavilion facets (2) give rise to a heart, flower figures 3d and 14c, respectively. The cutting angles in of these respective facets in the pavilion are:  $30.13^\circ$  for the cutlet pavilion facet (2),  $46.17^\circ$  for the girdle pavilion facet (3), and  $47.60^\circ$  for the bottom-half facet (4).

Additionally, the gemstone of the present invention can be a precious or a semiprecious stone. In the preferred embodiment, the gemstone is a diamond.

## Claims

- A gemstone comprising:
  - a crown comprising an octagonal table (6) disposed at the top of said crown, eight triangular first-half facets (7), eight second-half facets (11), eight third half facets (13), and sixteen triangular upper-girdle facets (12); said first-half facets disposed around said octagonal table, said table second-half facets disposed around and in-between said first-half facets and upper-girdle facets, and said upper-girdle facets disposed around and in-between said second-half facets and girdle;
  - a pavilion comprising four pairs of concentrically arranged cutlet pavilion facets (2), four pairs of [bottom] small-break facets (1), and eight girdle pavilion facets (3); and eight pairs of bottom half facets (4); said pairs of bottom small-break facets are evenly dispersed between pair cutlet pavilion facets on the left and right; said bottom half facet is placed on either side of the girdle pavilion facet, and
  - a girdle comprising eight pairs of small girdle half facets (5) and eight full girdle facets (13).
- A gemstone as per claim 1, wherein said gemstone is any of the following: precious gemstone or semi-precious gemstone.
- A gemstone as per claim 1, wherein said precious gemstone is a diamond.
- A gemstone as per claim 1, wherein a polishing angle associated with said second-half facet is 31.00°.
- A gemstone as per claim 1, wherein a polishing angle associated with said table is 0.00°.
- A gemstone as per claim 1, wherein a polishing angle associated with said first-half facet is 17.00°.
- A gemstone as per claim 1, wherein a polishing angle associated with said third-half facet is 29.96°.
- A gemstone as per claim 1, wherein a polishing angle associated with said facet (14) small break facet is 29.00°.
- A gemstone as per claim 1, wherein a polishing angle associated with said girdle full-facet is 90.00°.
- A gemstone as per claim 1, wherein a polishing angle associated with said bottom-half facet is 47.60°.
- A gemstone as per claim 1, wherein a polishing angle associated with said girdle pavilion facet is 46.17°.
- A gemstone as per claim 1, wherein a polishing angle associated with said cutlet pavilion facet is 34.27°.

1/30

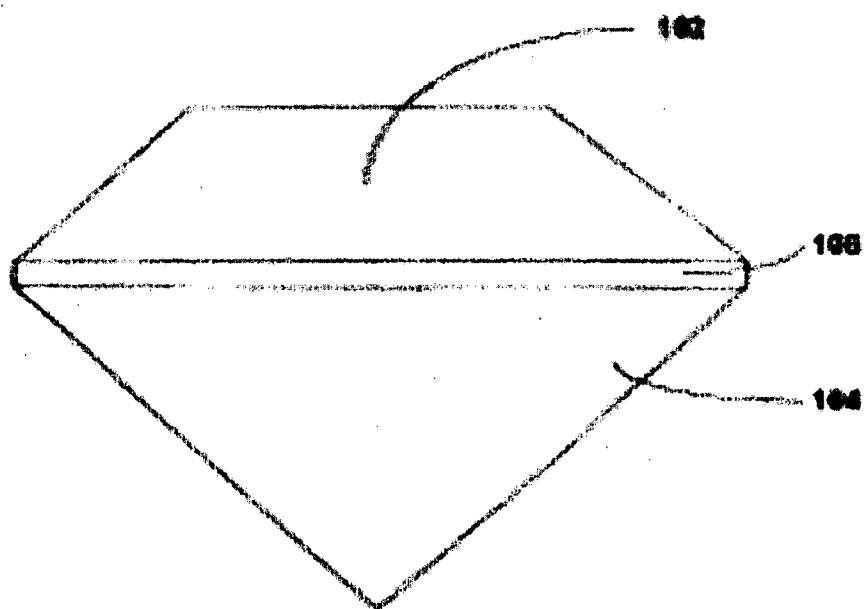


Figure 1

**No. 693,084.**

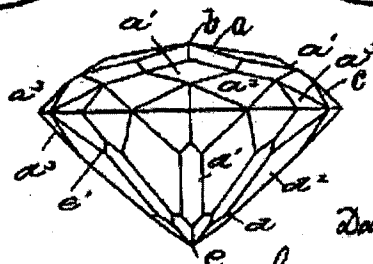
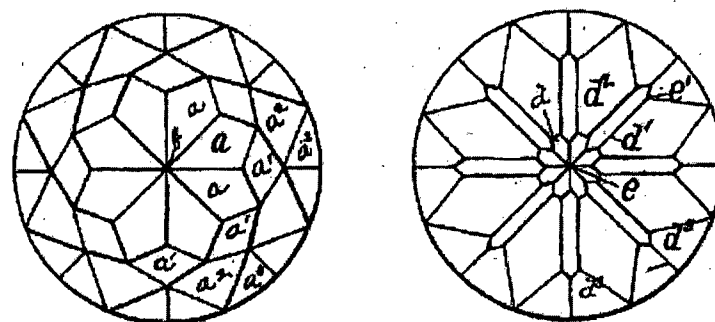
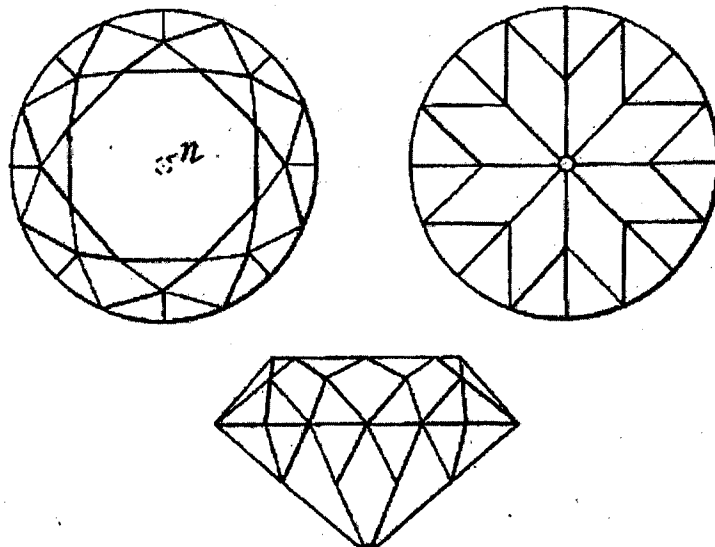
**D. C. TOWNSEND.**

**Patented Feb. 11, 1902.**

**DIAMOND.**

(Application filed Apr. 6, 1901.)

**(The Model.)**



Witnesses  
Edgeworth Evans  
Rogge Matthews

David C. Townsend  
Inventor  
By his Attorney, L. M. Pierce

THE UNITED STATES OF AMERICA, DISTRICT OF COLUMBIA, D. C.

**Figure 2**

3/30

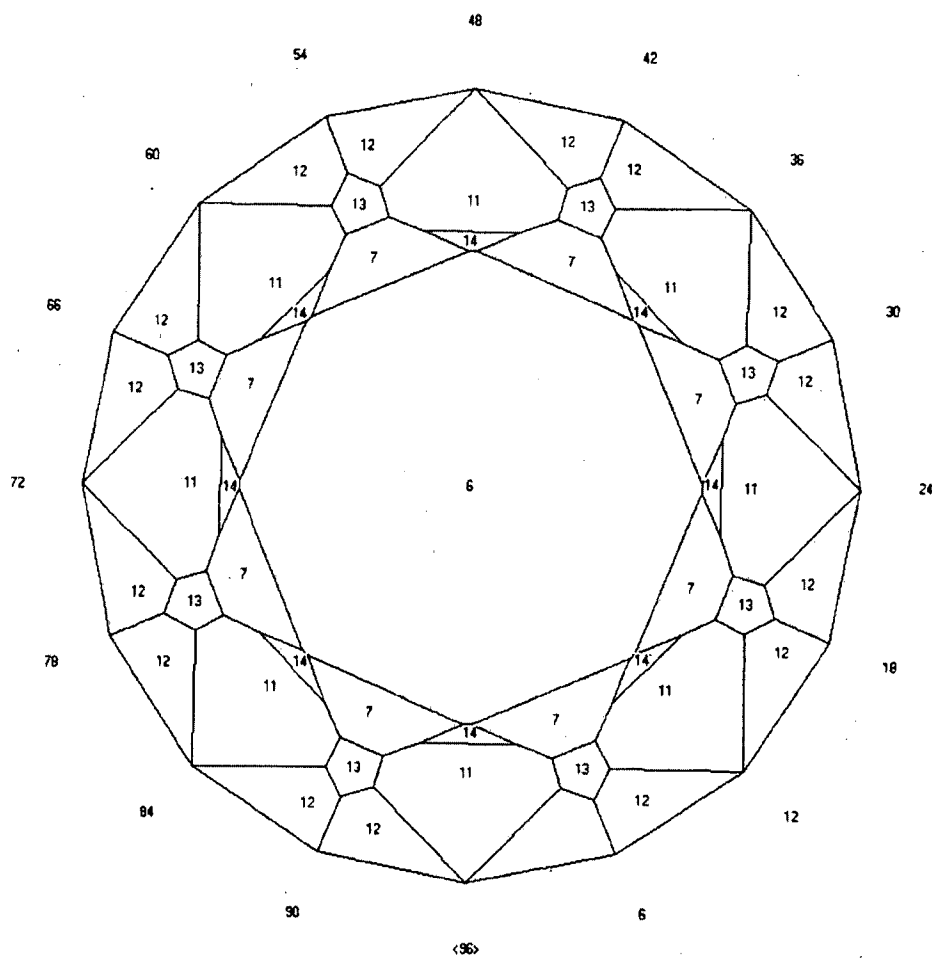


Figure 3a

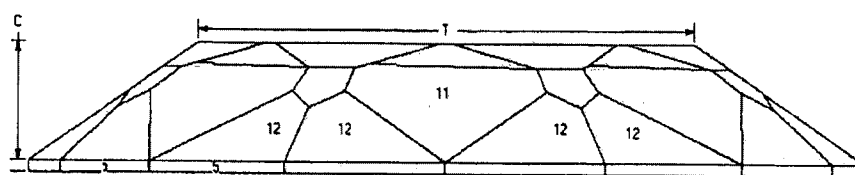


Figure 3b

4/30

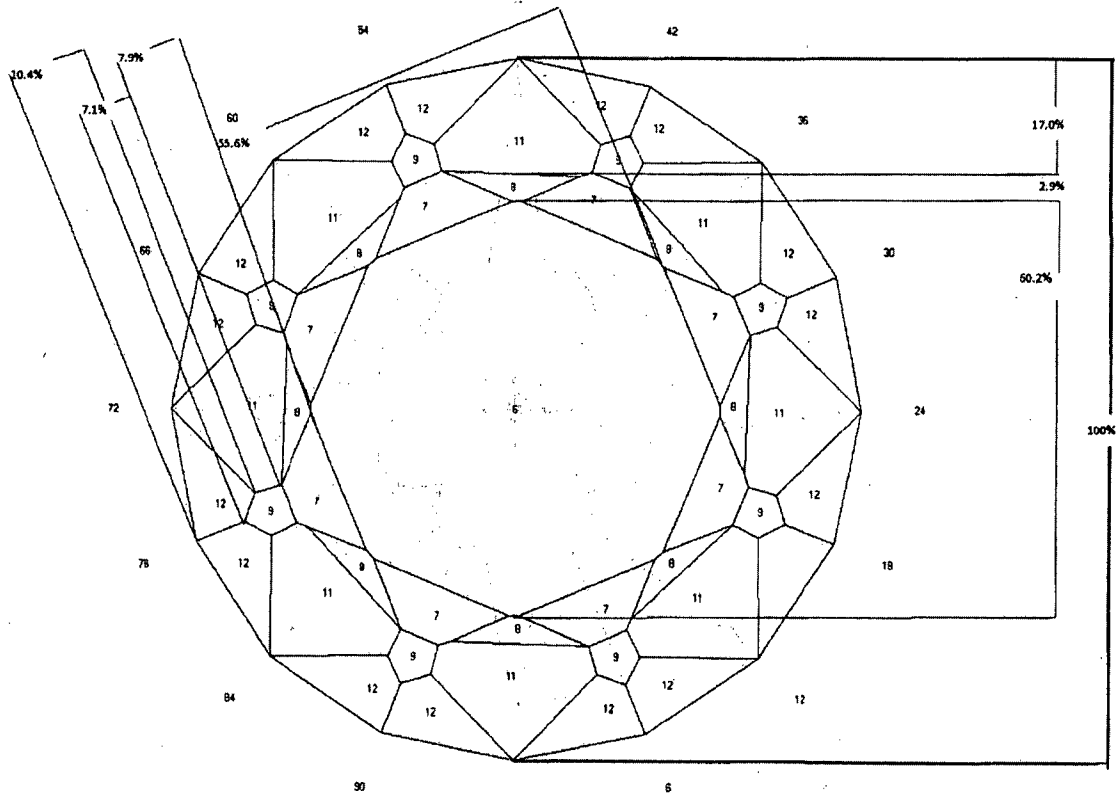


Figure 3c

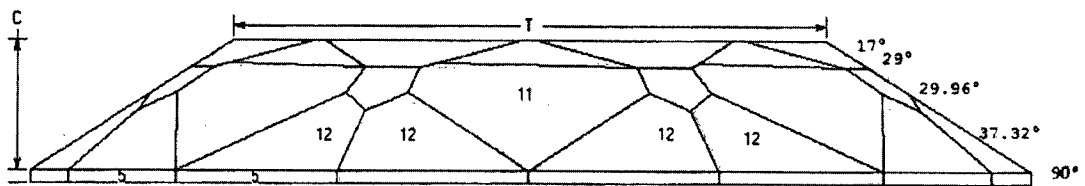


Figure 3d

5/30

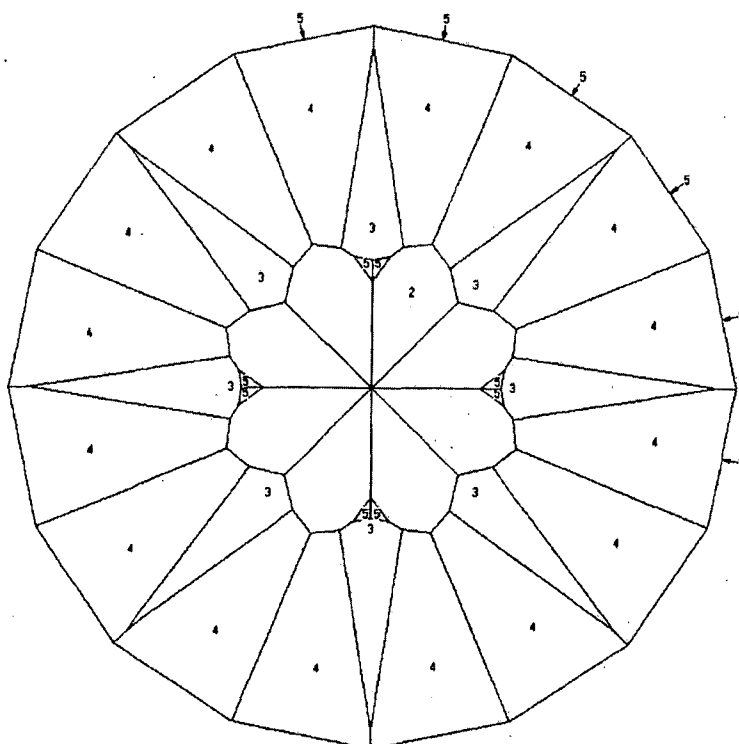


Figure 4a

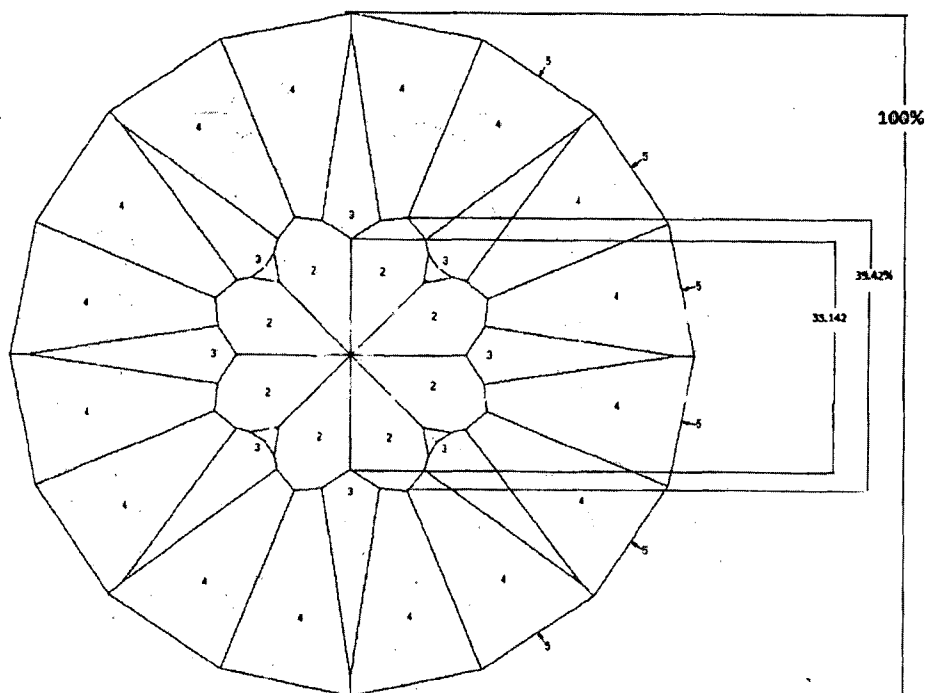


Figure 4b



6/30

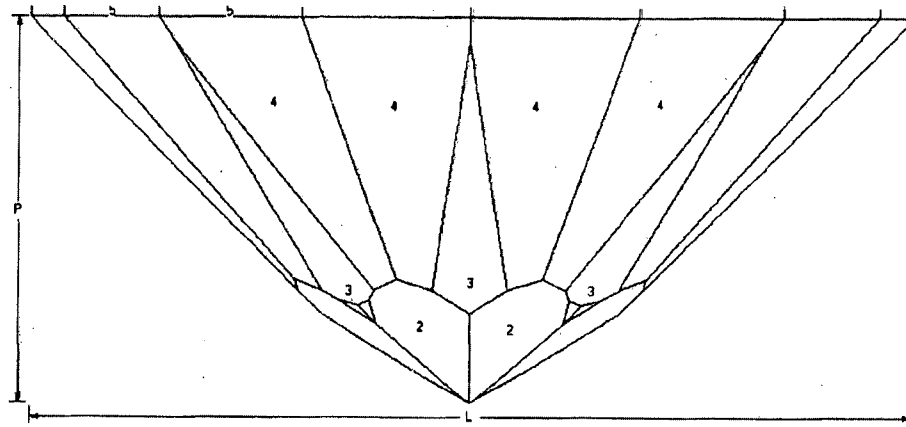


Figure 4c

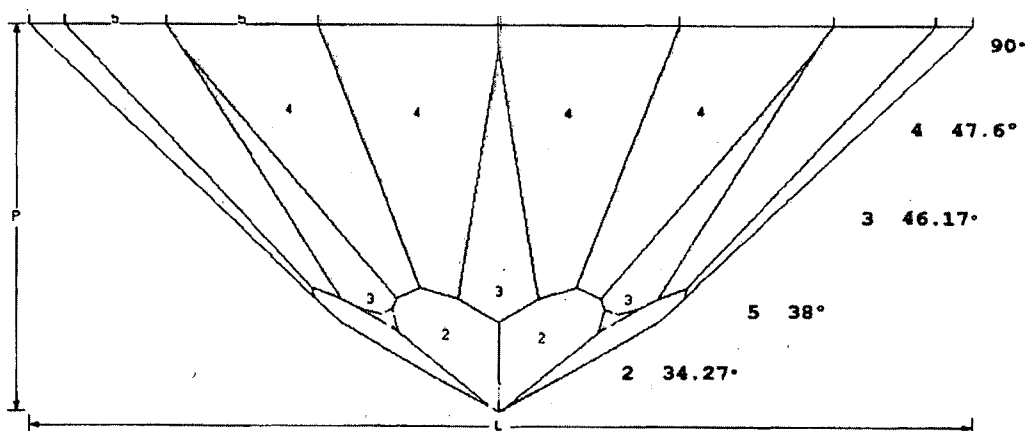


Figure 4d

7/30

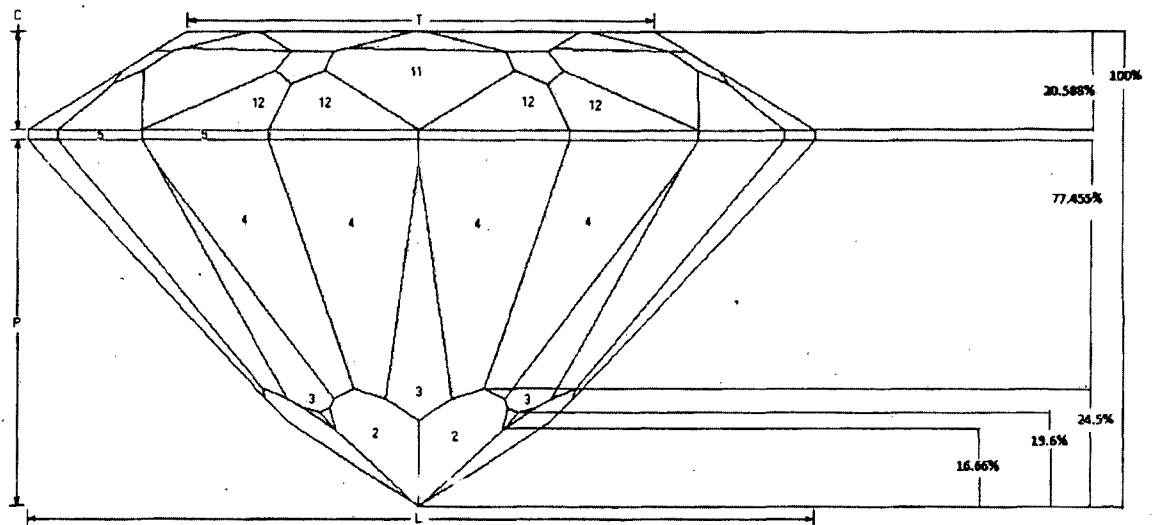


Figure 4e

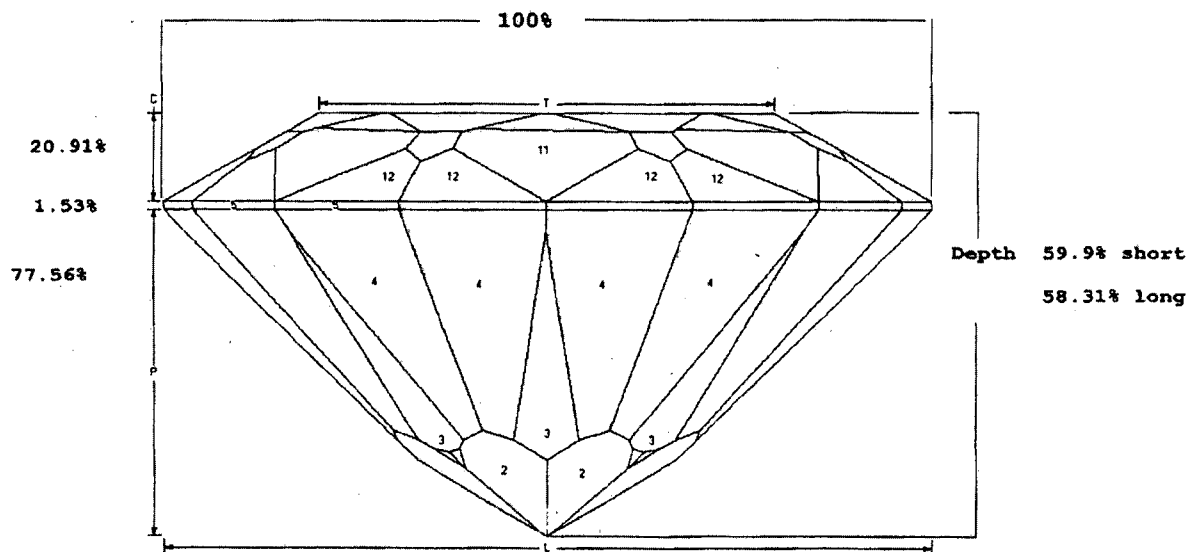


Figure 4f

8/30



Figure 5

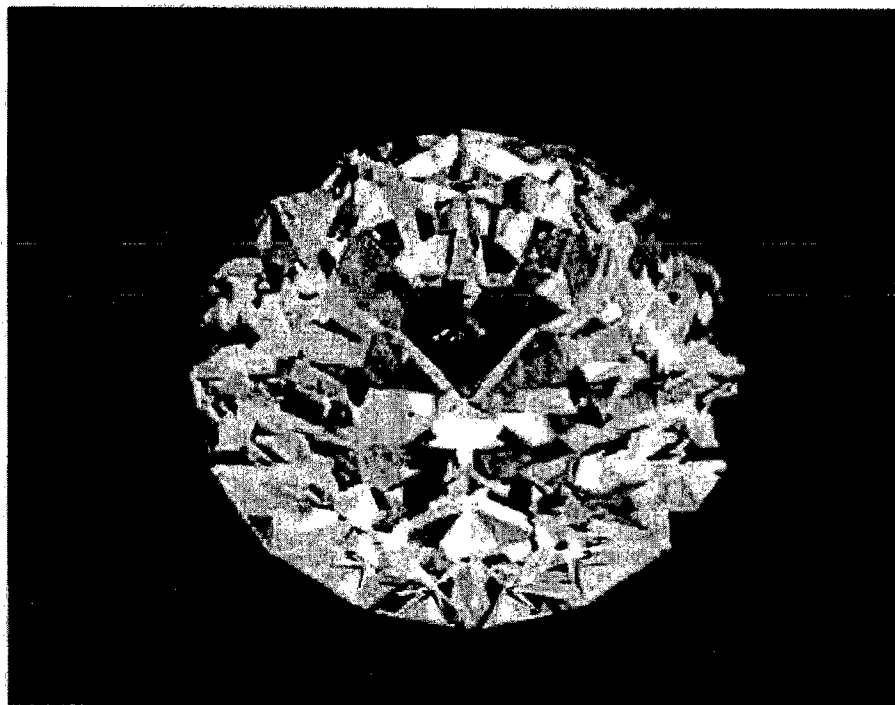


Figure 5b

9/30

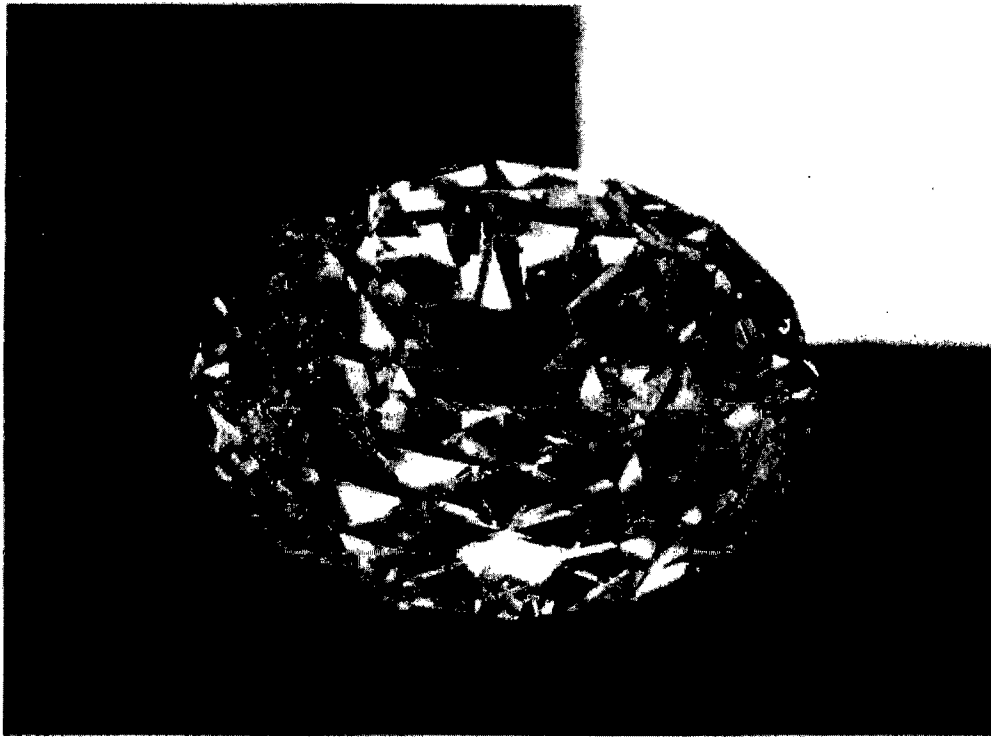


Figure 5c

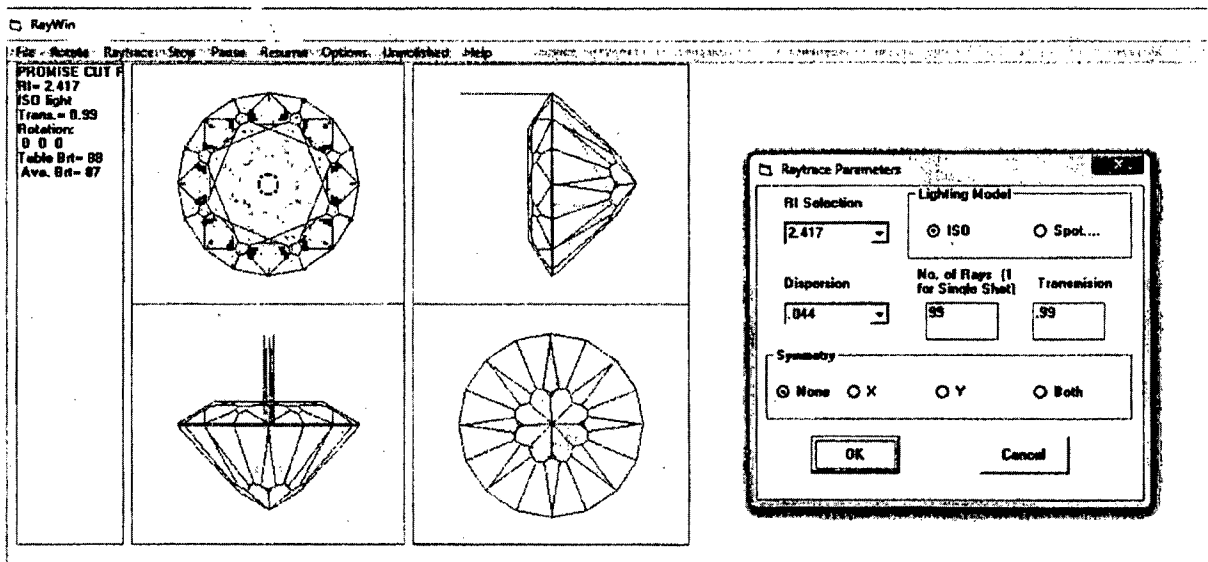


Figure 6a

10/30

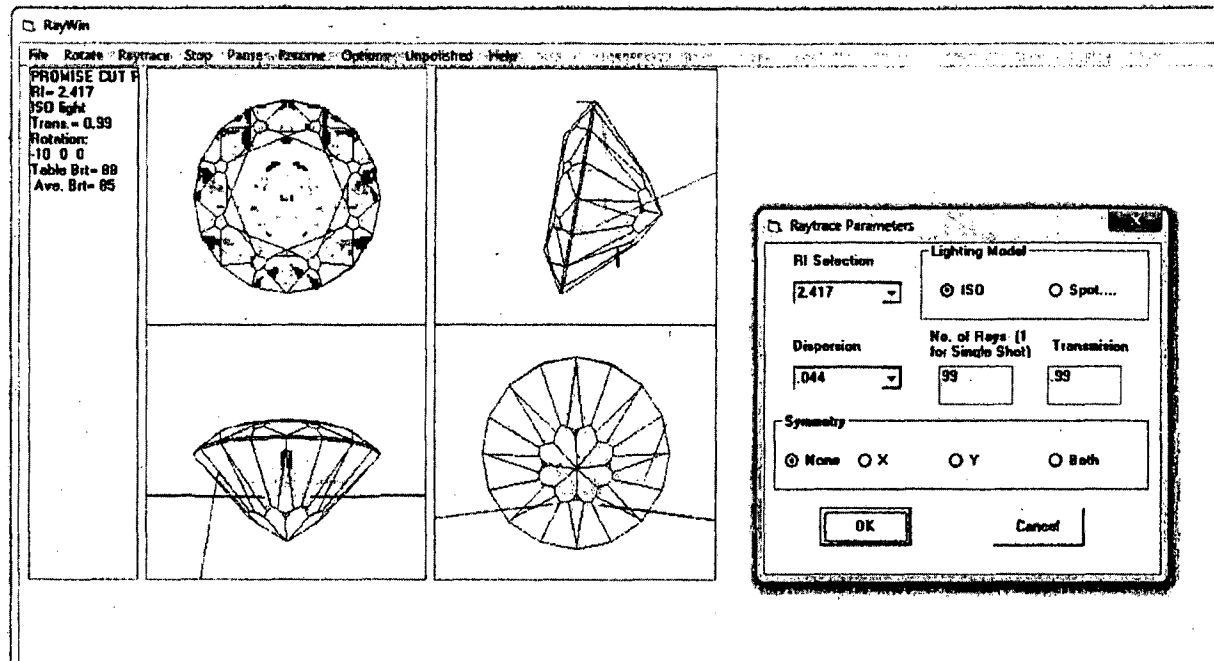


FIGURE 6b

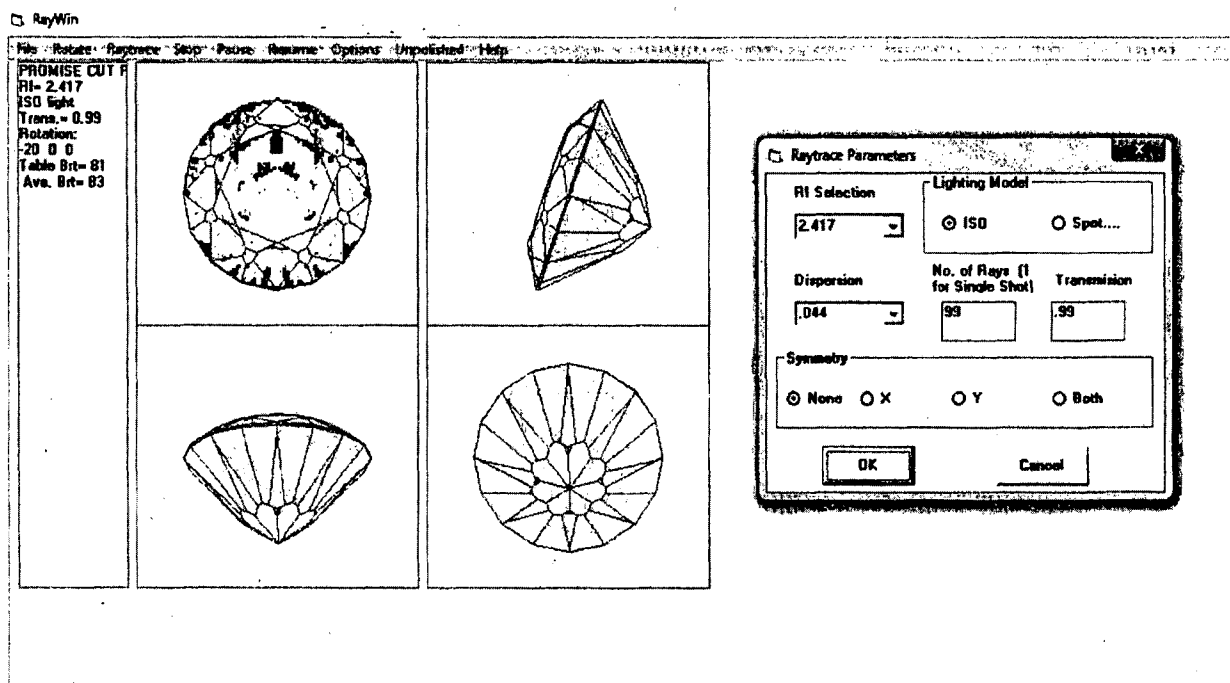


Figure 6c

11/30

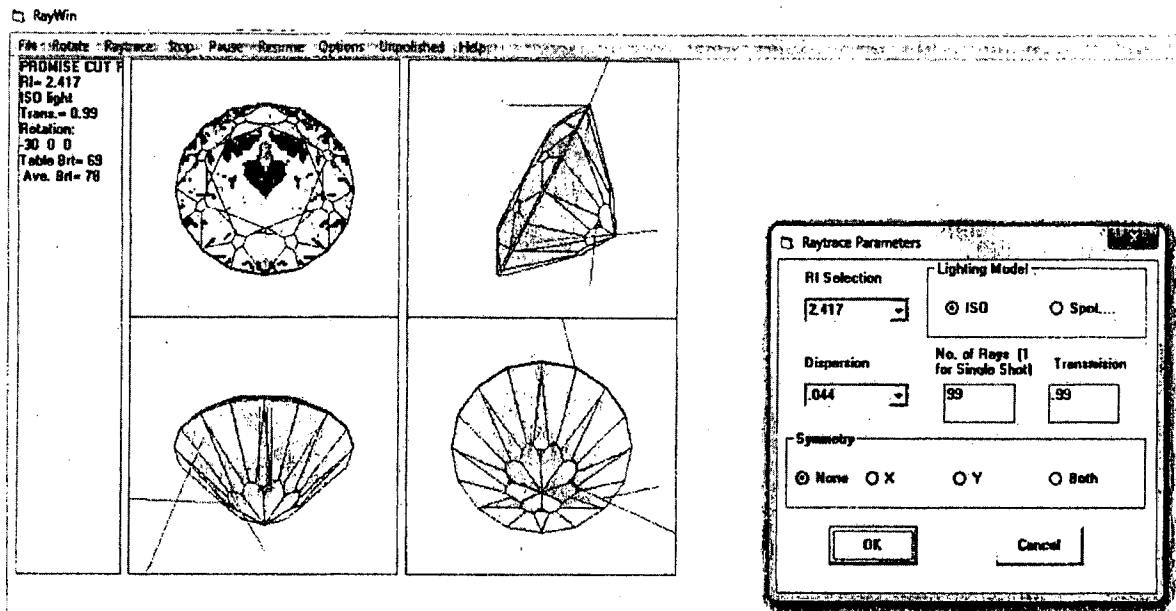


Figure 6d

12/30

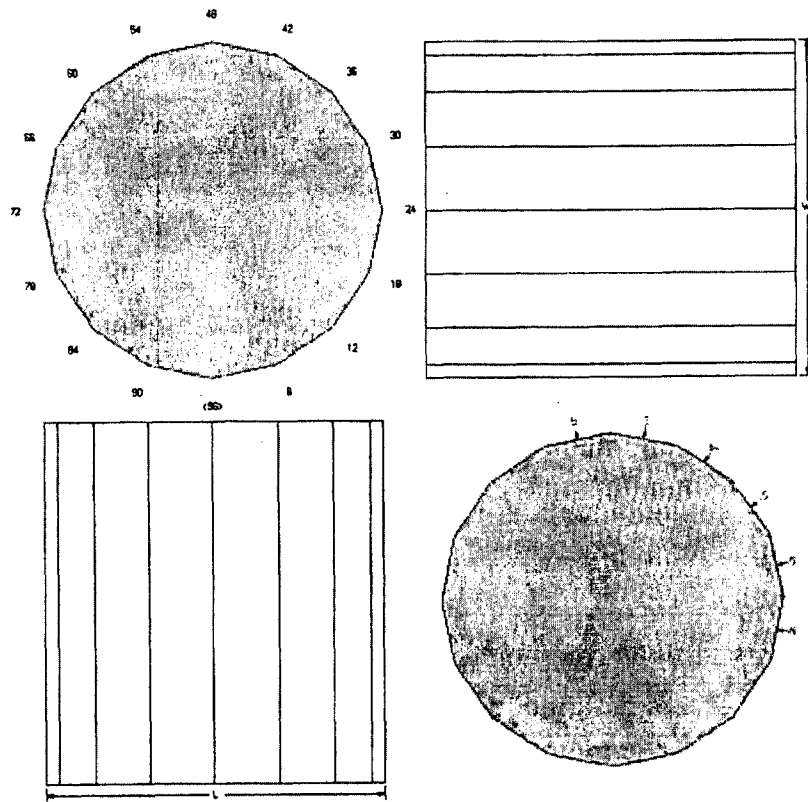


Figure 7a

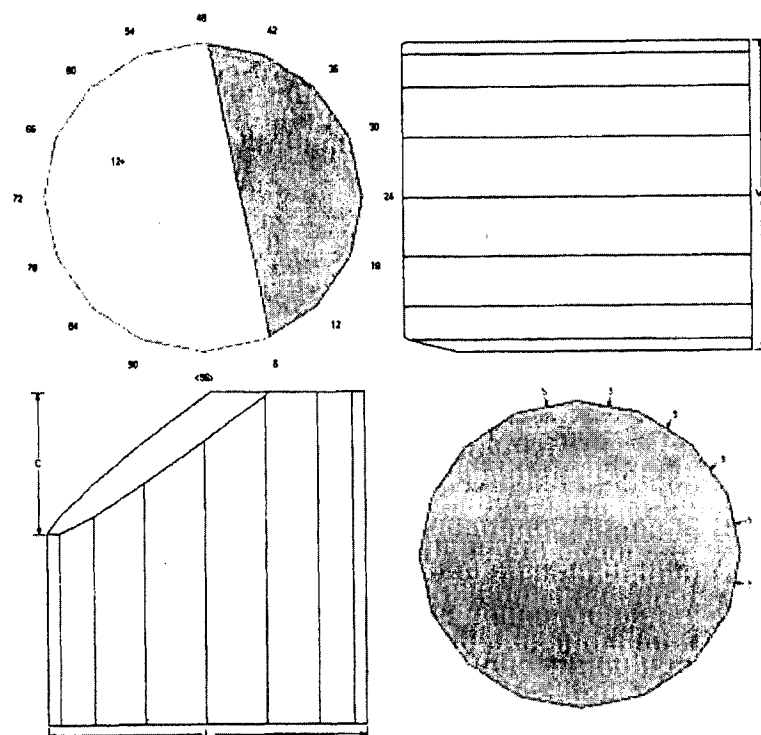


Figure 7b

13/30

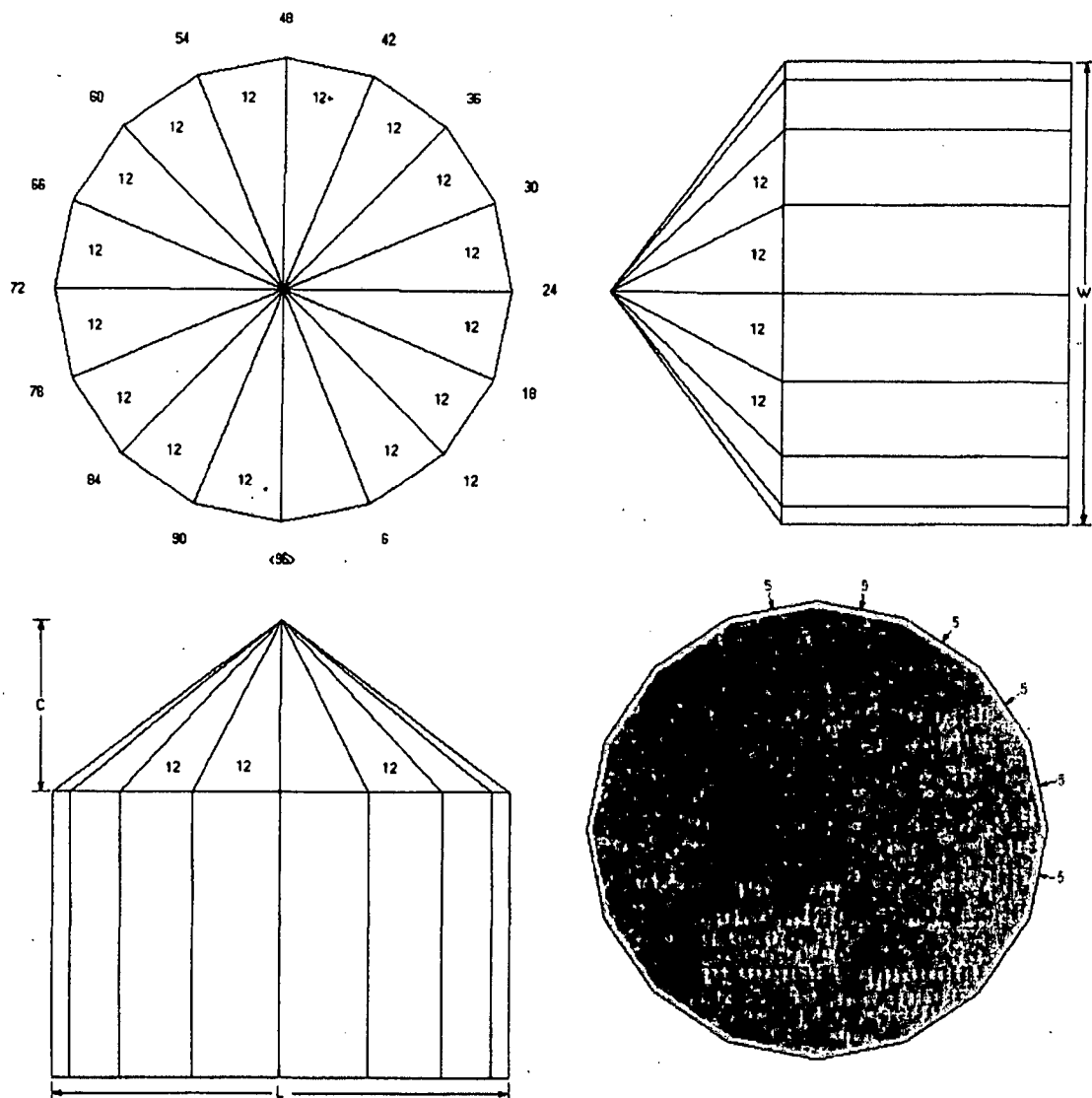


Figure 7c



14/30

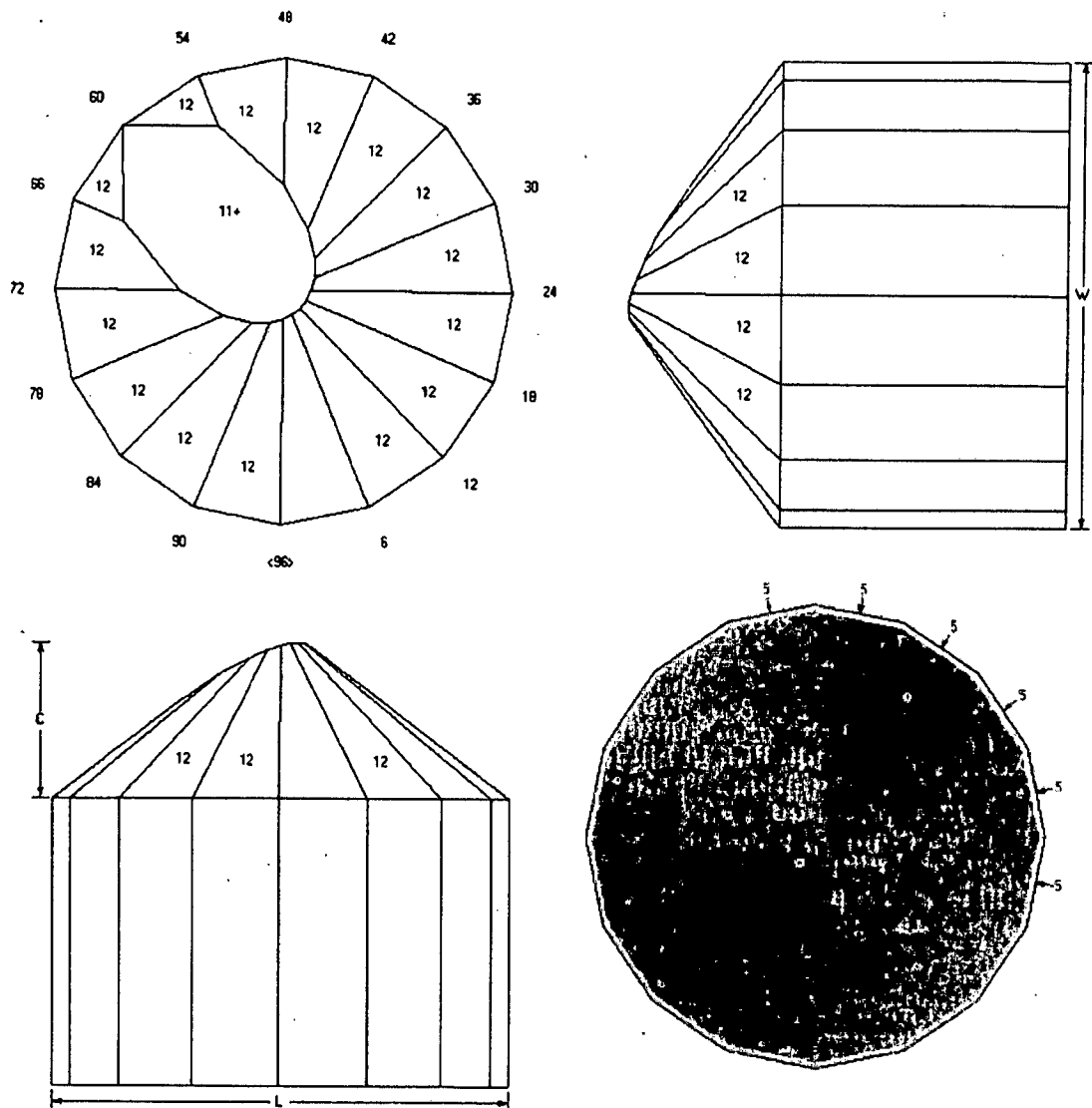


Figure 8a

15/30

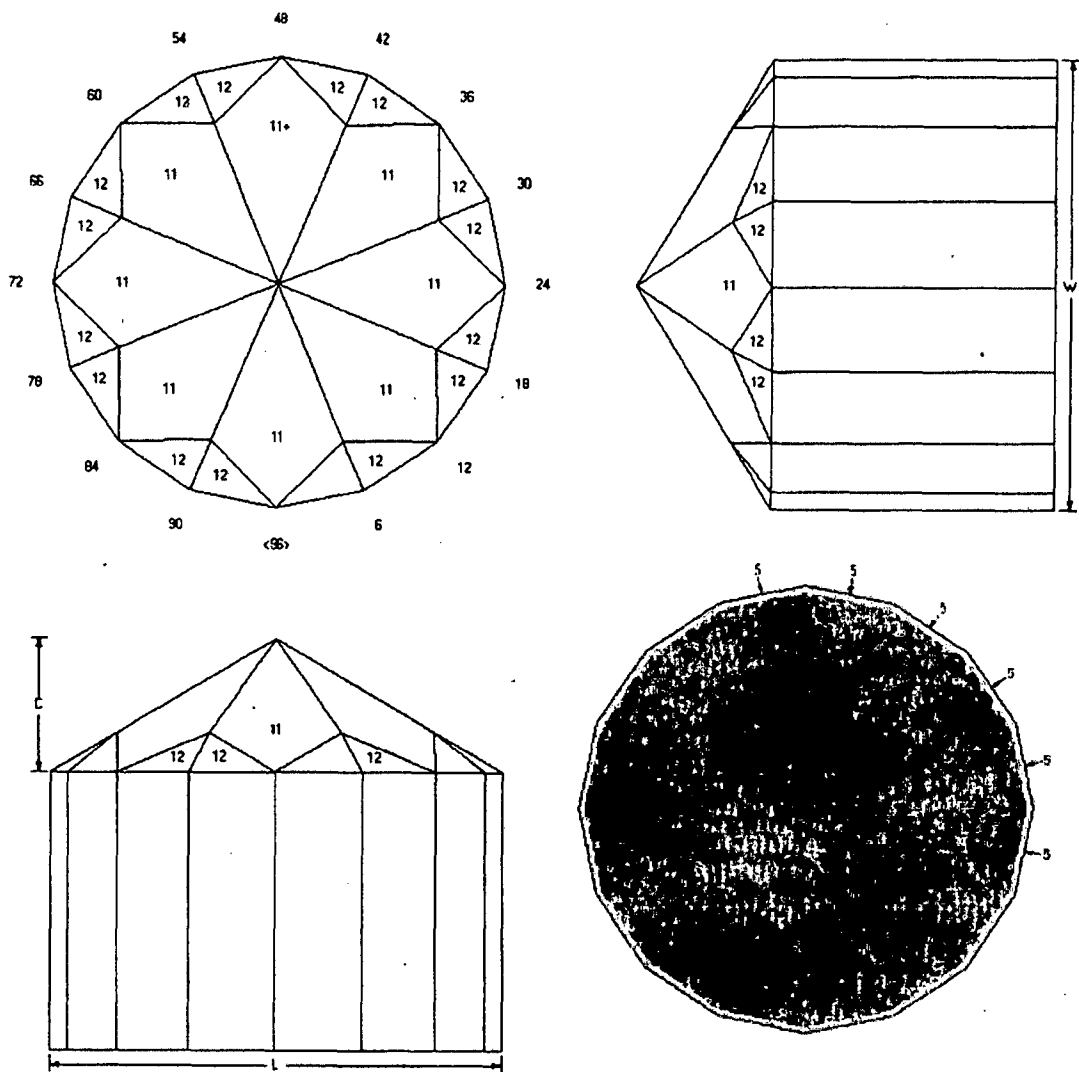


Figure 8b

16/30

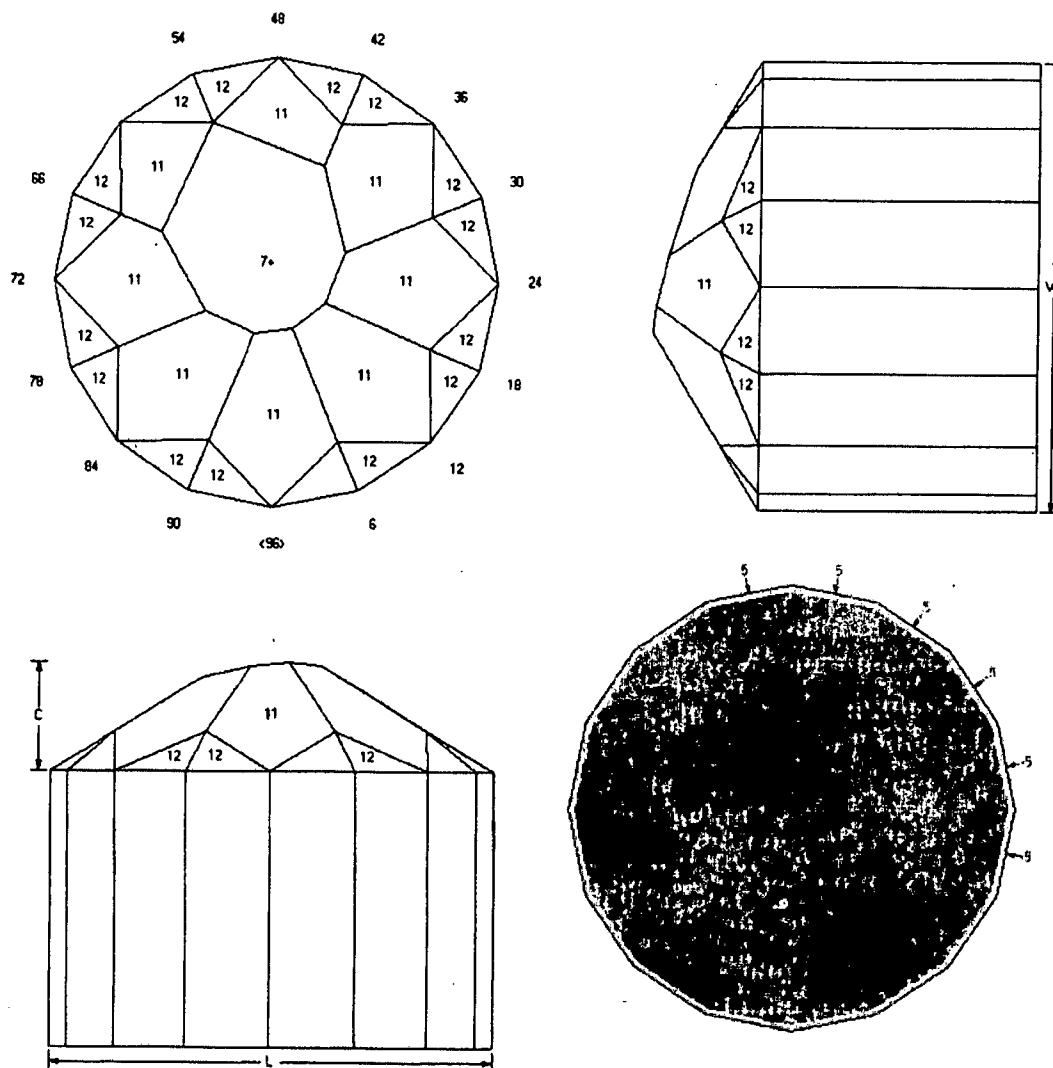


Figure 9a

17/30

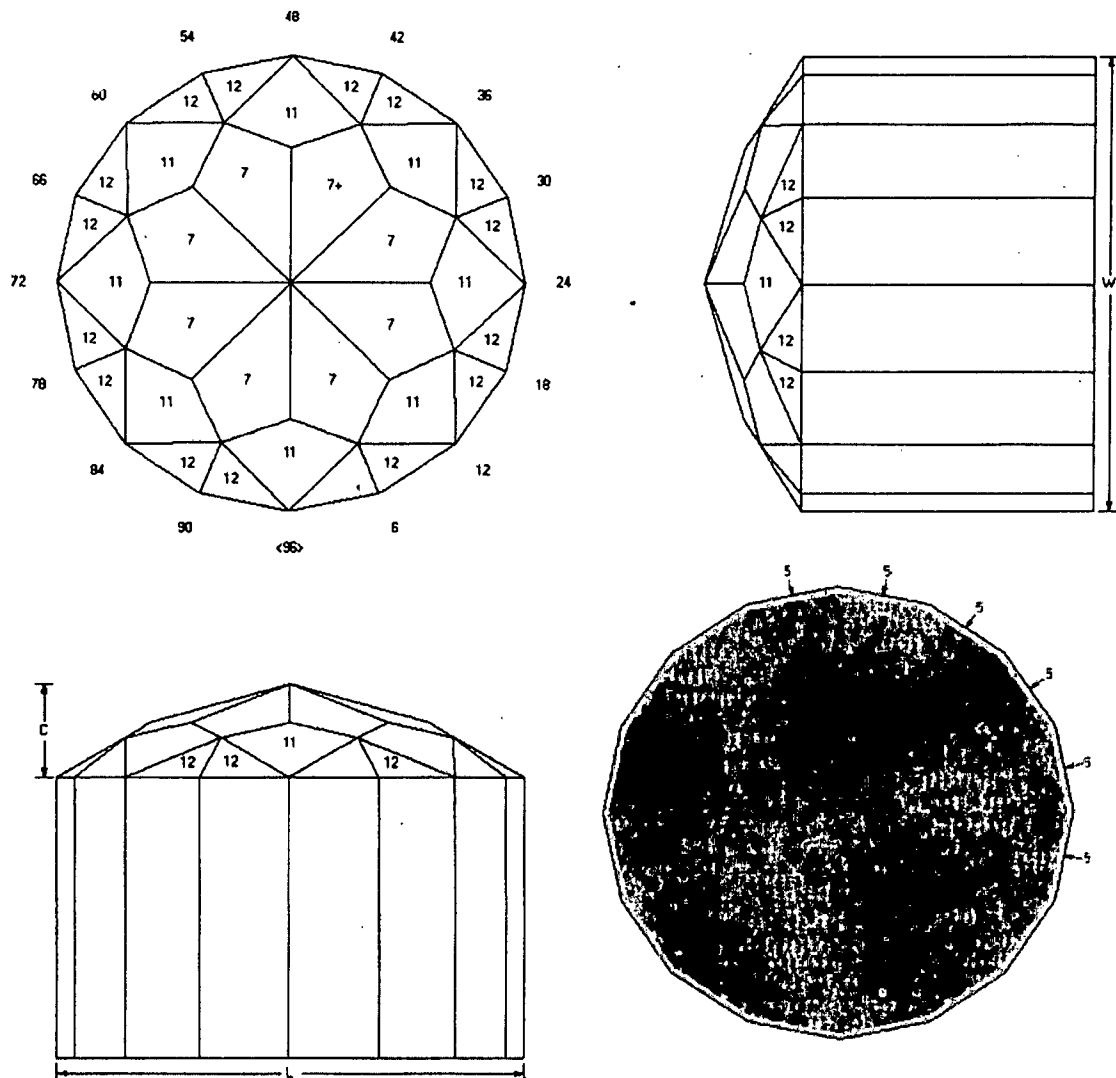


Figure 9b

18/30

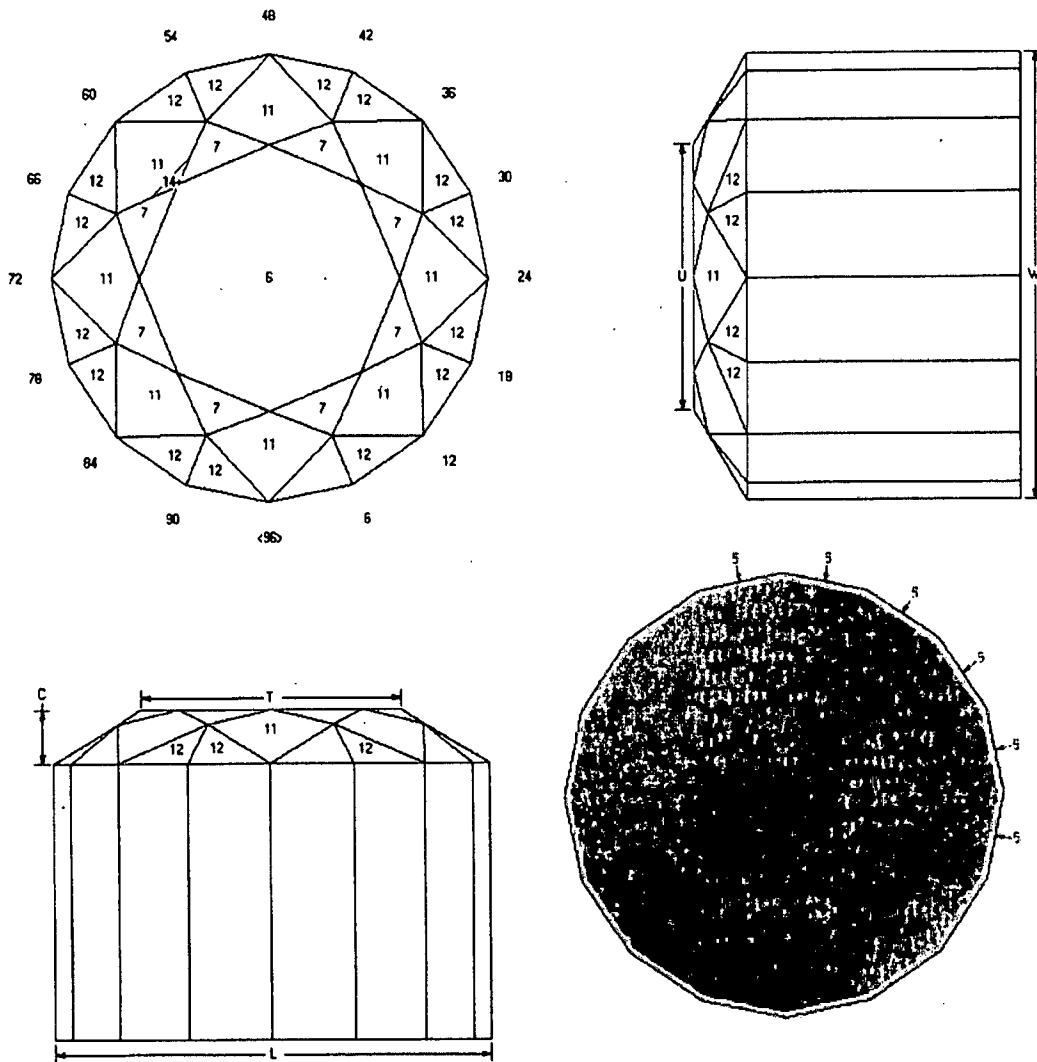


Figure 10a

19/30

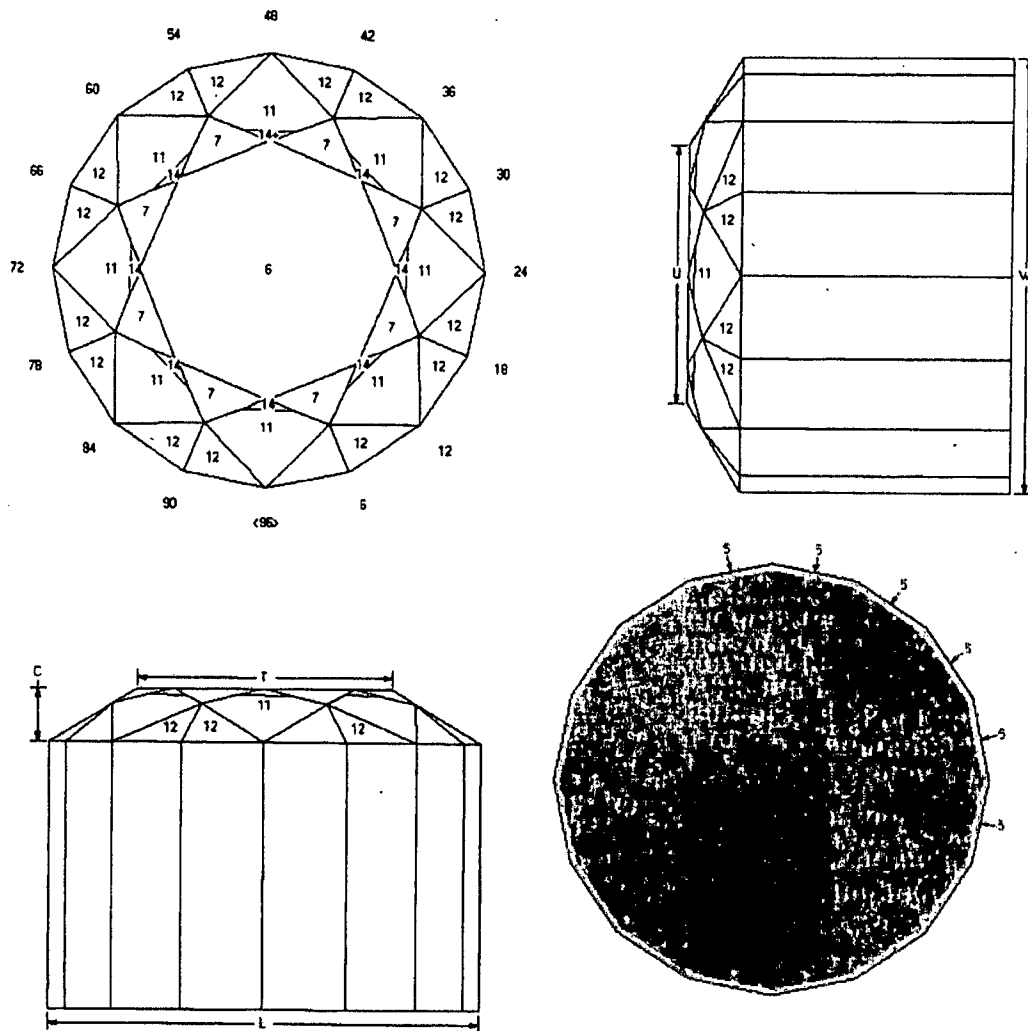
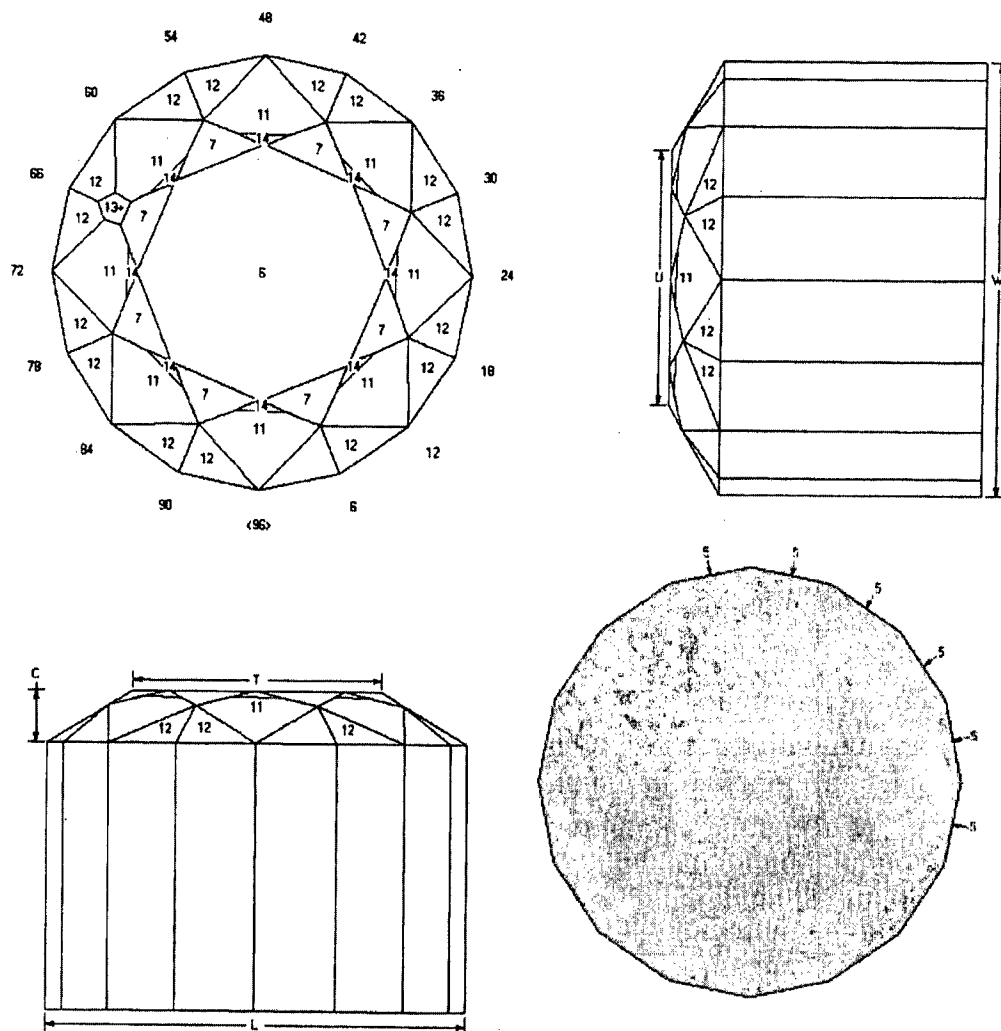


Figure 10b



**Figure 11a**

21/30

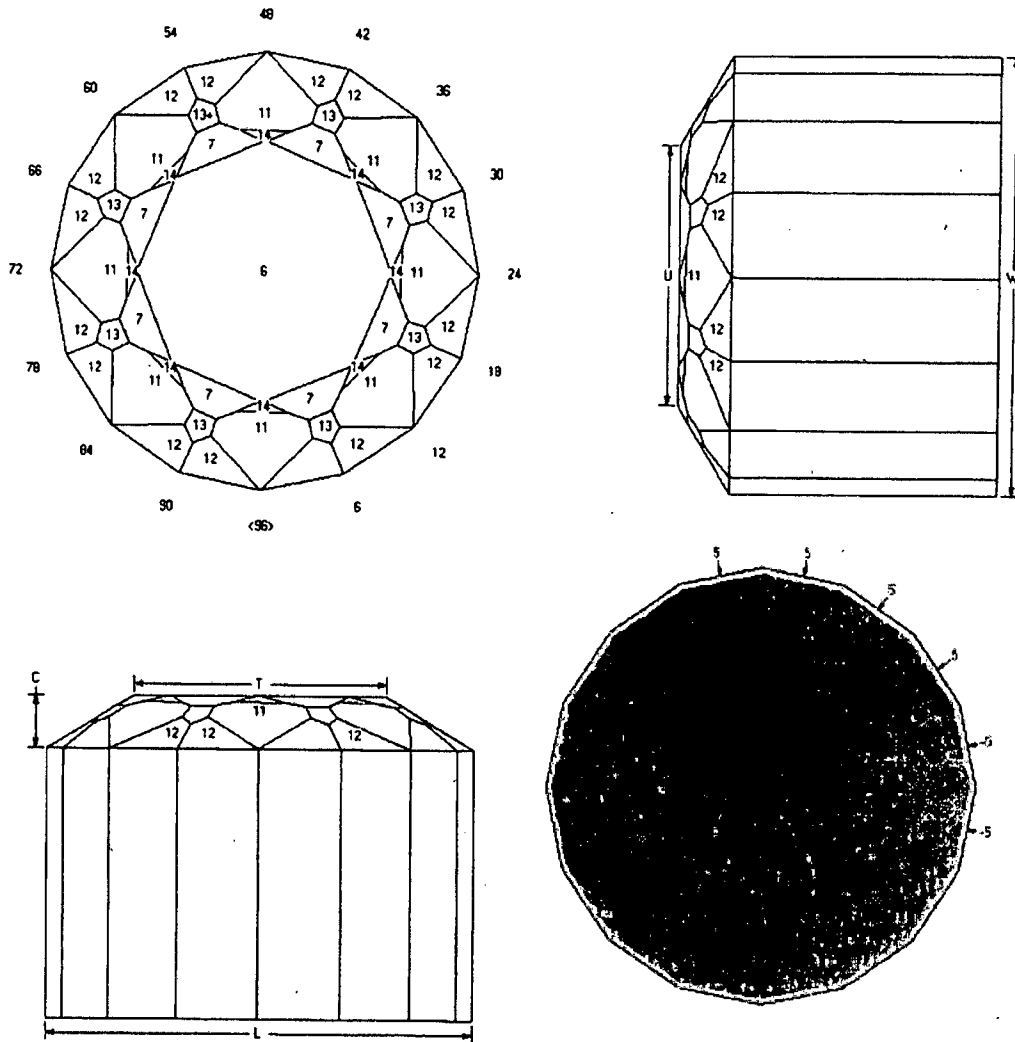


Figure 11b



22/30

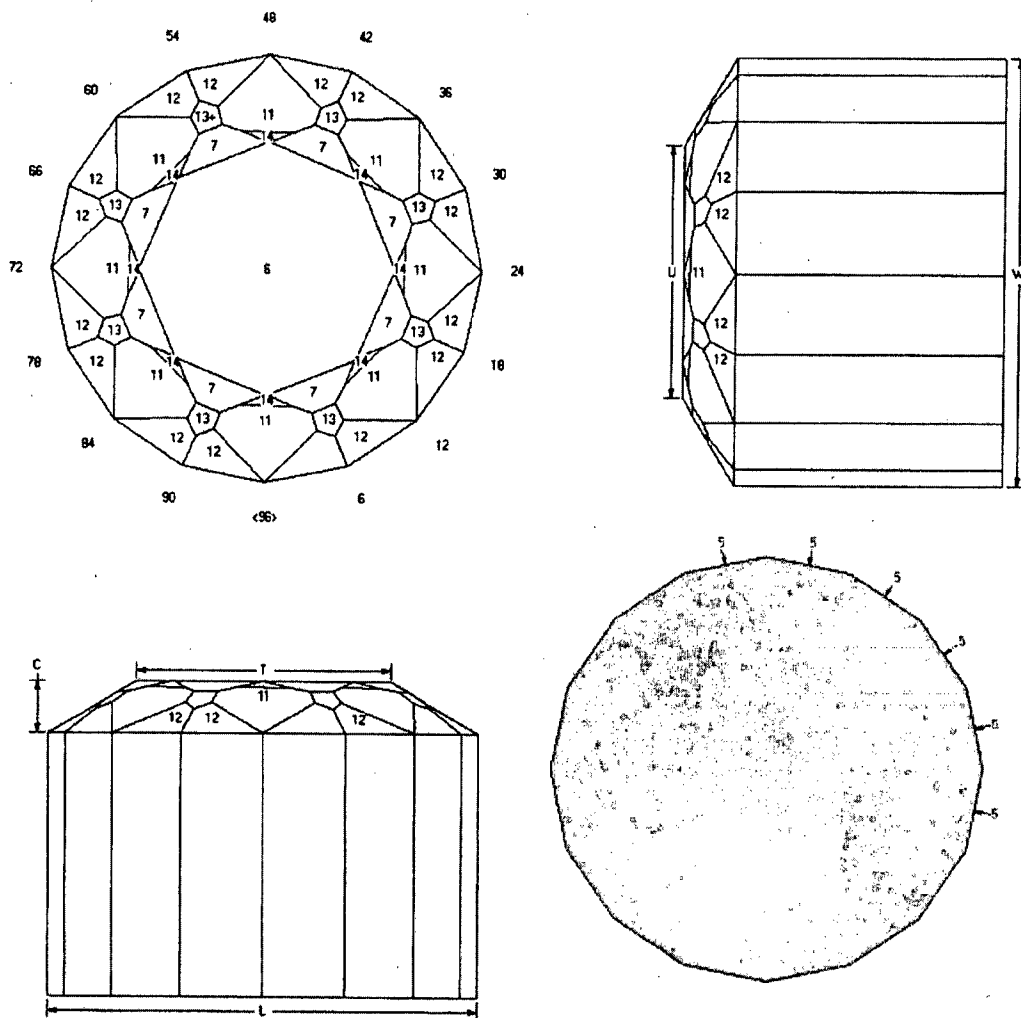


Figure 12

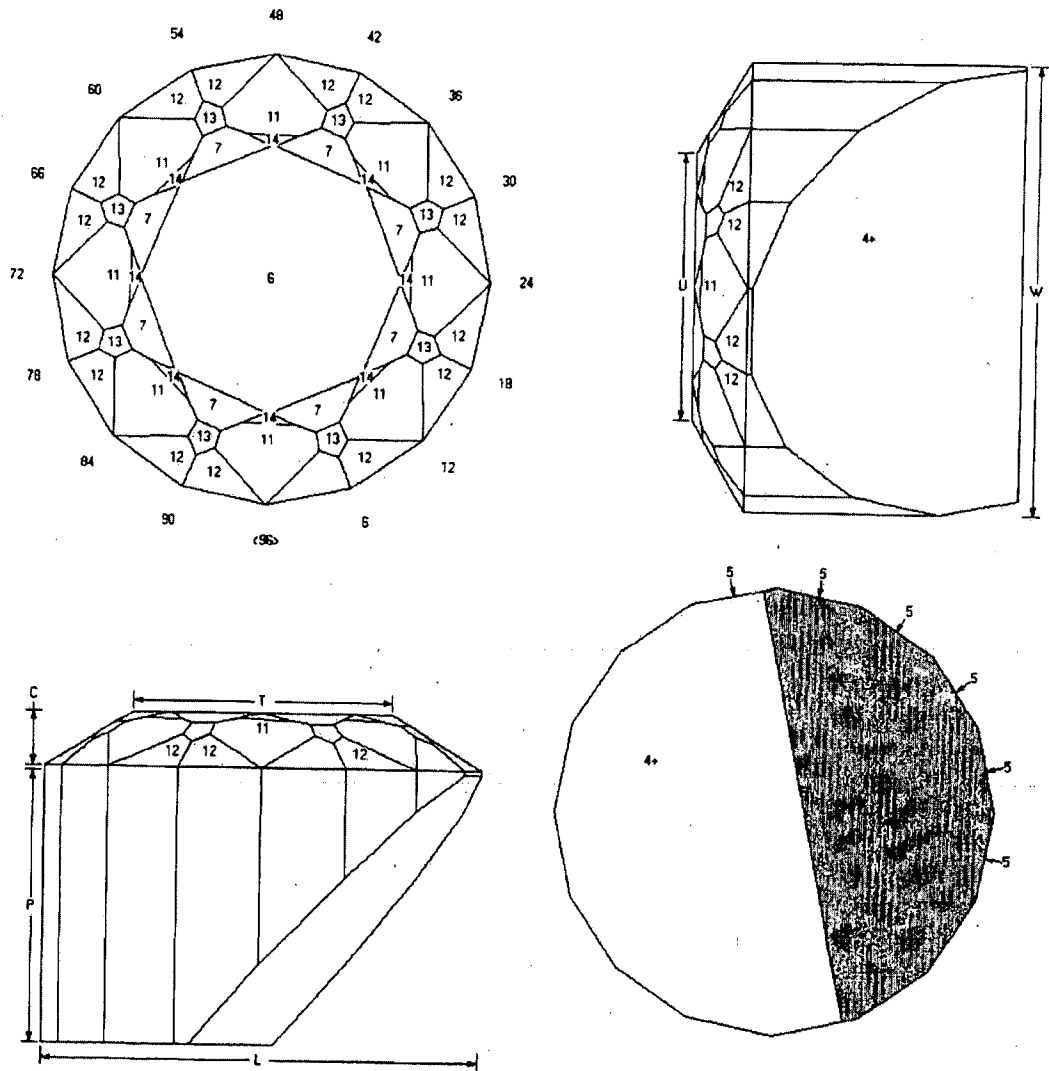


Figure 13a

24/30

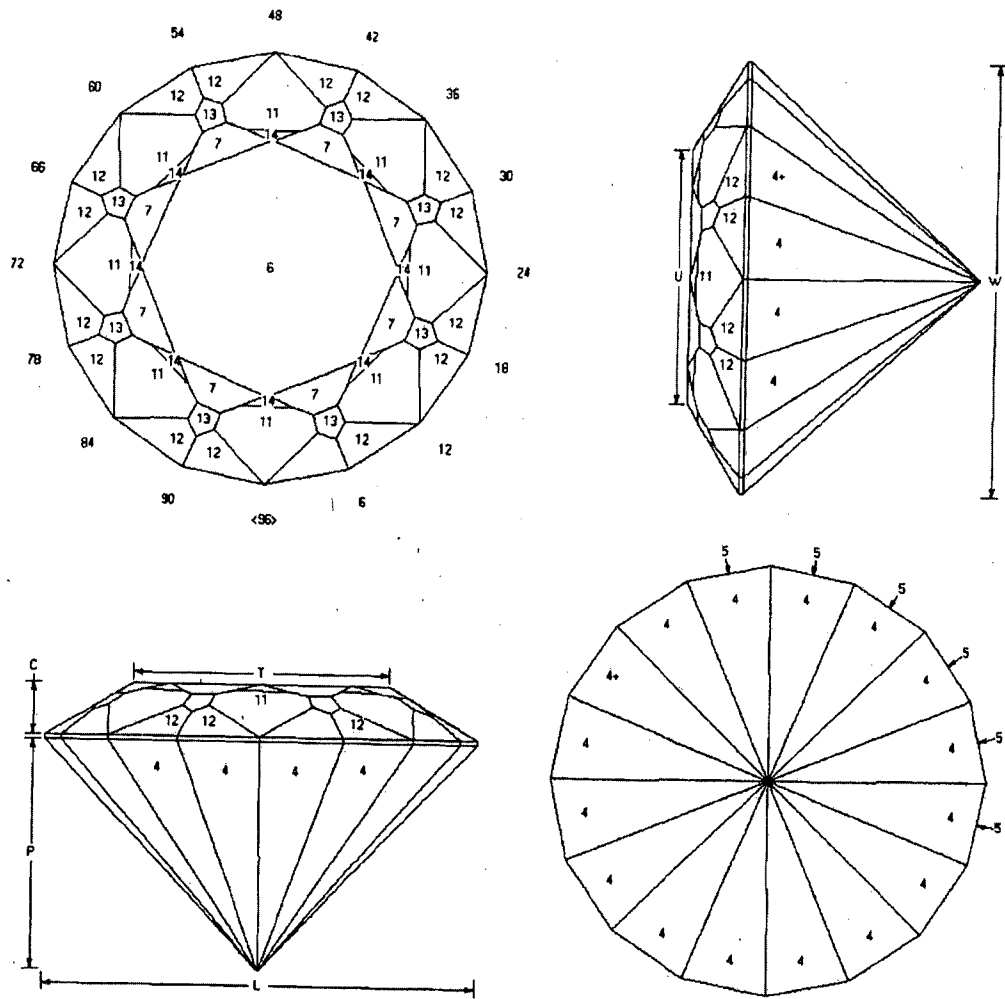


Figure 13b

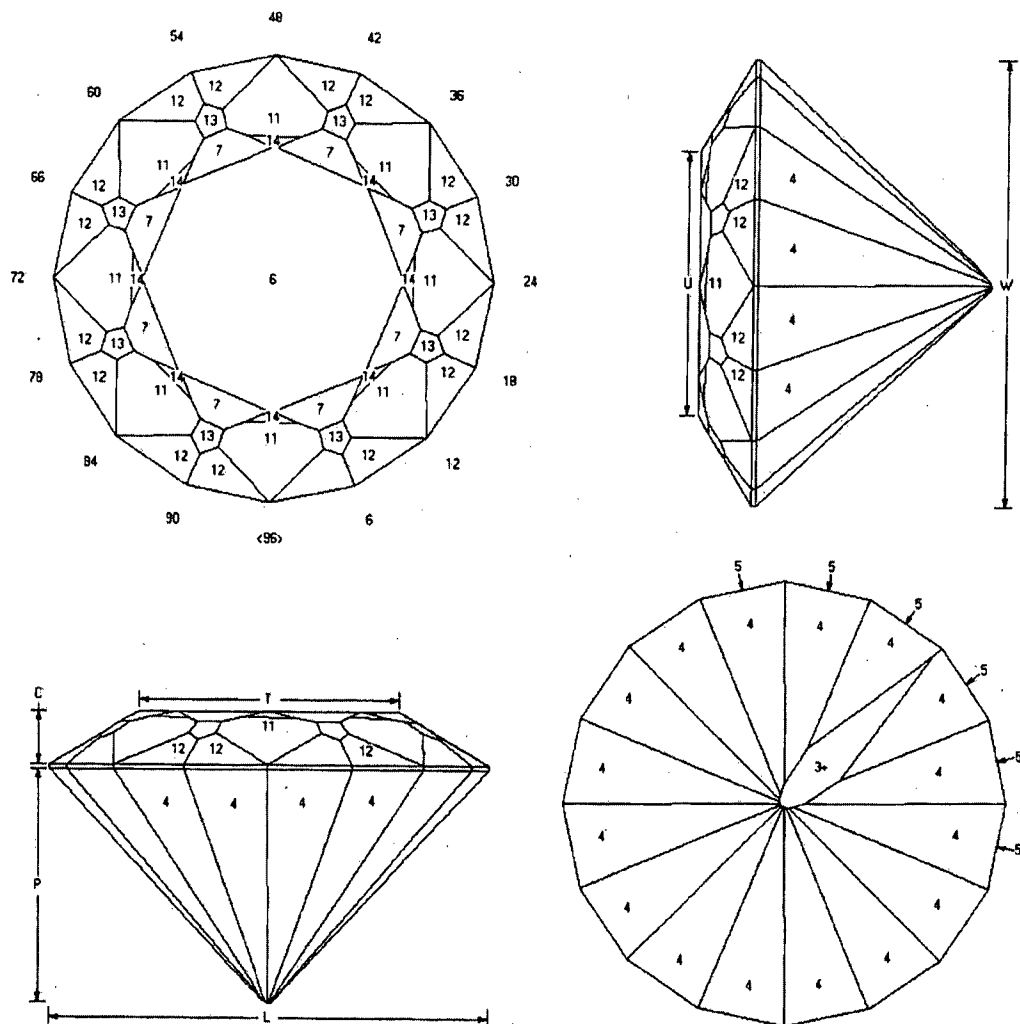


Figure 14a

26/30

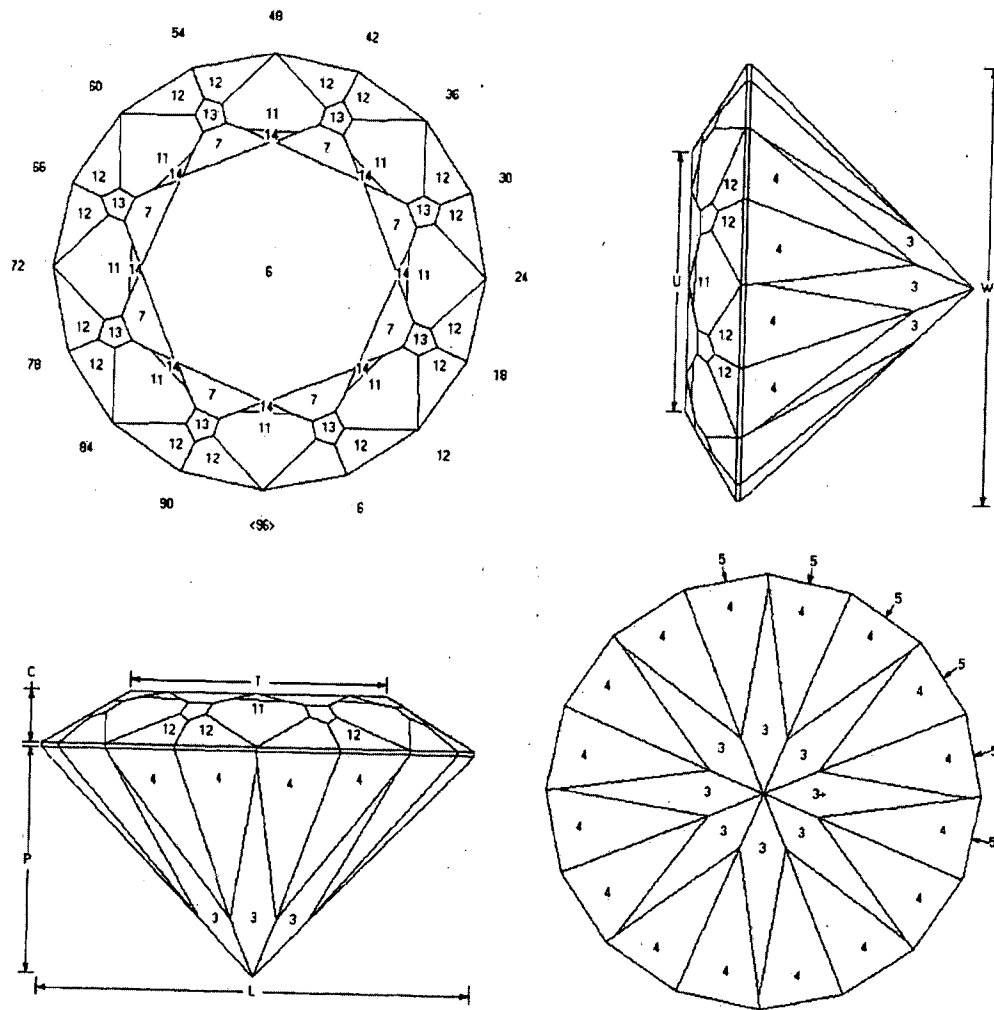


Figure 14b

27/30

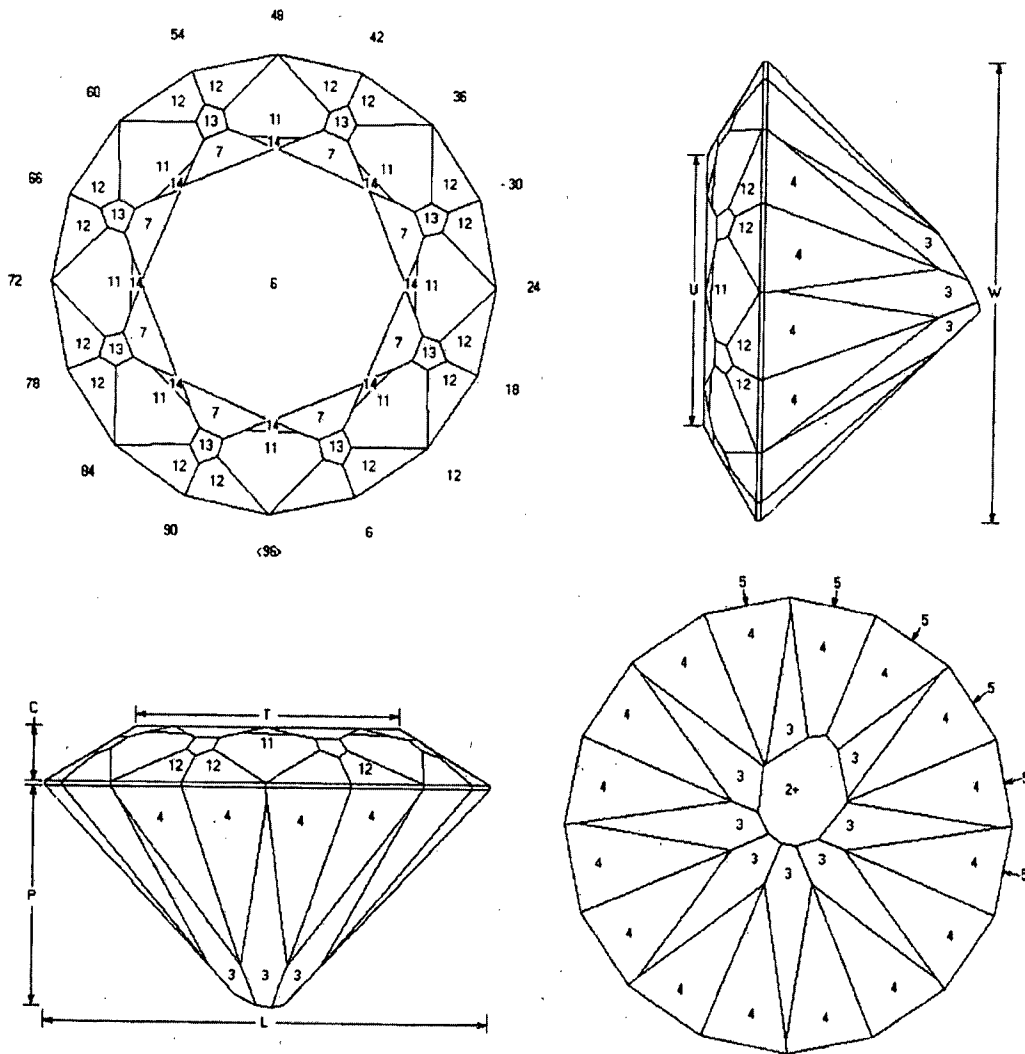


Figure 15a

28/30

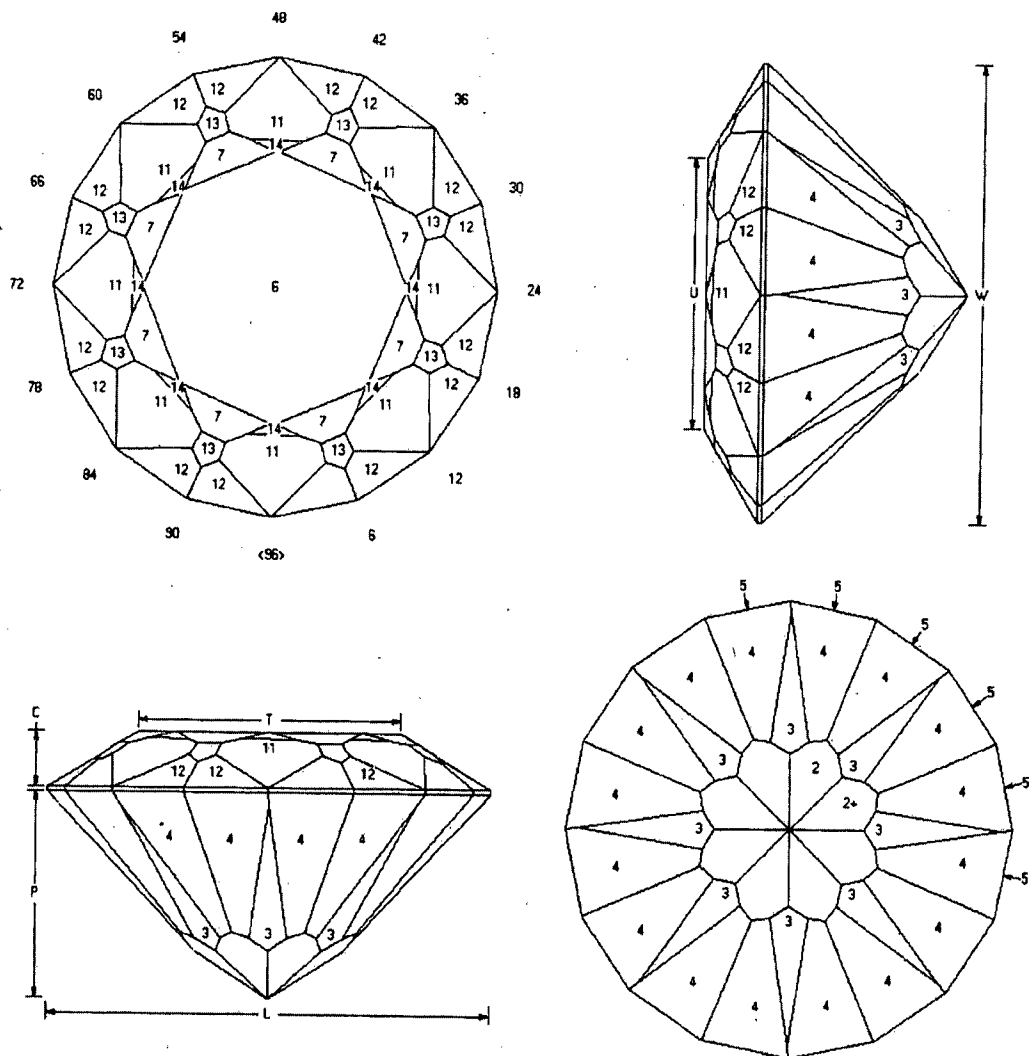


Figure 15b

29/30

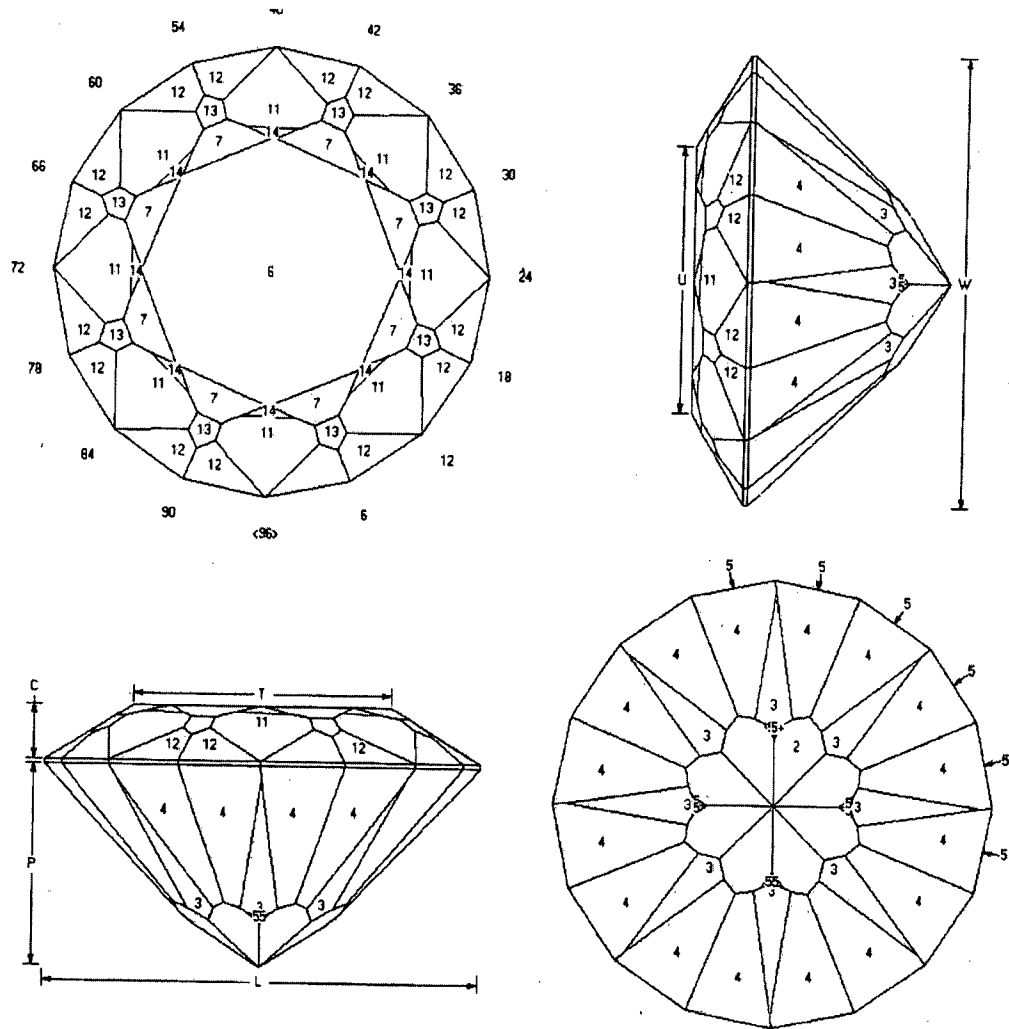
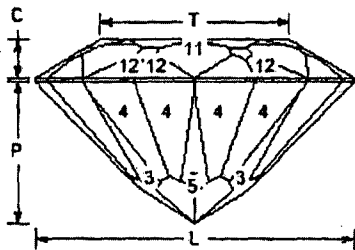
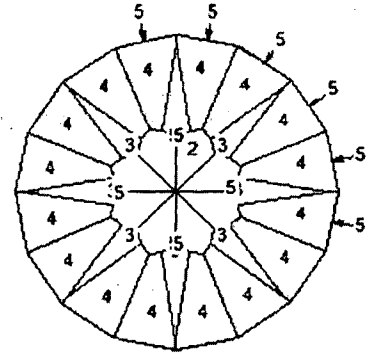
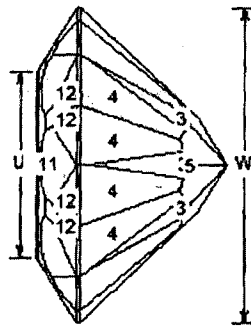
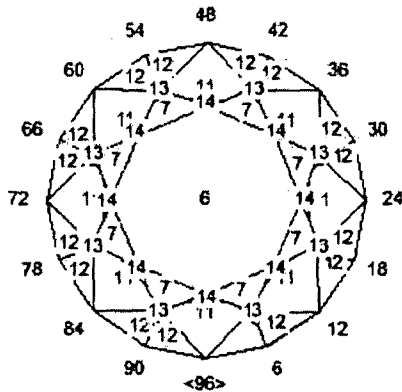


Figure 16a



30/30



Angles for R.I. = 2.420

89 + 16 girdles = 105 facets

8-fold, mirror-image symmetry

96 index

L/W = 1.000 T/W = 0.593 U/W = 0.593

P/W = 0.453 C/W = 0.121

Vol./W<sup>3</sup> = 0.205

## PAVILION

5	90.00°	03.0-09.0-15.0-21.0- 27.0-33.0-39.0-45.0- 51.0-57.0-63.0-69.0- 75.0-81.0-87.0-93.0
4	47.60°	03.0-09.0-15.0-21.0- 27.0-33.0-39.0-45.0- 51.0-57.0-63.0-69.0- 75.0-81.0-87.0-93.0

## CROWN

12	37.32°	03.0-09.0-15.0-21.0- 27.0-33.0-39.0-45.0- 51.0-57.0-63.0-69.0- 75.0-81.0-87.0-93.0
11	31.00°	12.0-24.0-36.0-48.0- 60.0-72.0-84.0-96.0
7	17.00°	06.0-18.0-30.0-42.0- 54.0-66.0-78.0-90.0
6	0.00°	Table

## PAVILION

3	46.17°	00.0-12.0-24.0-36.0- 48.0-60.0-72.0-84.0
2	34.27°	06.0-18.0-30.0-42.0- 54.0-66.0-78.0-90.0
5	38.00°	01.0-23.0-25.0-47.0- 49.0-71.0-73.0-95.0

## CROWN

14	29.00°	12.0-24.0-36.0-48.0- 60.0-72.0-84.0-96.0
13	29.96°	06-18-30-42-54-66-78-90

C:\Users\j\ Desktop\PROMIS~1\PROMIS~3.GEM

Figure 16b

## A. CLASSIFICATION OF SUBJECT MATTER

**A44C 17/00 (2006.01)**

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPODOC, WPI; IPC/EC: A44C 17/00 and keywords ( Gemstone, Table, Octagonal and similar terms)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	Documents are listed in the continuation of Box C	



Further documents are listed in the continuation of Box C



See patent family annex

* "A"	Special categories of cited documents: document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E"	earlier application or patent but published on or after the international filing date	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search 24 December 2012	Date of mailing of the international search report 24 December 2012
<b>Name and mailing address of the ISA/AU</b>  AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA Email address: pct@ipaustalia.gov.au Facsimile No.: +61 2 6283 7999	<b>Authorised officer</b>  Mark Olley AUSTRALIAN PATENT OFFICE (ISO 9001 Quality Certified Service) Telephone No. 0262832143

<b>INTERNATIONAL SEARCH REPORT</b>		International application No.
C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		<b>PCT/AU2012/001159</b>
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2008018121 A (HOHOEMI BRAINS INC) 31 January 2008	
Form PCT/ISA/210 (fifth sheet) (July 2009)		

<b>INTERNATIONAL SEARCH REPORT</b> Information on patent family members		International application No. <b>PCT/AU2012/001159</b>	
This Annex lists known patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.			
<b>Patent Document/s Cited in Search Report</b>		<b>Patent Family Member/s</b>	
<b>Publication Number</b>	<b>Publication Date</b>	<b>Publication Number</b>	<b>Publication Date</b>
JP 2008018121 A	31 Jan 2008	JP 2008018121 A	31 Jan 2008
		JP 4709088 B2	22 Jun 2011
<b>End of Annex</b>			
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001. Form PCT/ISA/210 (Family Annex)(July 2009)			