


ANASTASIA YOUNG

# THE WORKBENCH GUIDE TO Jewelry techniques



Engraving • Chasing and repoussé • Fusing • Riveting • Enameling  
Drilling • Piercing • Cutting • Filing • Annealing • Soldering • Pickling  
• Wirework • Fold forming • Bending metal • Hammering • Carving  
Mounting and setting stones • Polishing • Stamping • Dapping/swaging  
• Forging • Anticlastic raising • Hydraulic press • Wax carving and  
modeling • Vulcanized rubber molds • Casting resin • Precious metal  
clay • Silicone • Plaster • Carving natural materials • Textiles • Plastic  
• Bending acrylic • Beads and pearls • Hinges • Findings • Catchers  
Chain • Etching • Rolling mill textures • Hammer textures • Frosting  
wheel • Plating • Reticulation • Granulation • Patination • Anodizing  
• Tooling leather • Patinas • Dyes • Laminating • Metallic powder  
Gold leaf • Inlay • Mokume gane • Cone-shaped settings • Bezel  
settings • Prong settings • Flush settings • Pavé and grain setting  
Channel settings • Illusion settings • Spectacle settings • Face  
settings • Stringing beads • Transforms • Strap shapes • Dartwork



About This Book	8
Health and Safety	10
<b>Jewelry Making: A Brief History</b> by Melanie Eddy	12
<b>CHAPTER 1:</b> <b>Work Space, Tools, and Materials</b>	<b>26</b>
<b>Work Space and Tools</b>	28
Setting Up a Small Workshop	29
Cutting and Filing	32
Marking and Measuring	34
Hammers and Mallets	36
Forming: Stakes, Formers, and Marking Punches	38
Forming: Pliers	40
Hand Drills, Bits, and Burrs	42
Soldering Tools	44
Abrasives and Polishing Materials	46
Tools for Precious Metal Clay	49
Wax and Wax Carving Tools	50
Stone-Setting and Engraving Tools	52
Stringing Tools	55
Enameling Equipment	57
Chemicals	60
Machinery and Bench Tools	62
Health and Safety Equipment	64
<b>Materials</b>	67
Precious Metals: Silver	68
Precious Metals: Gold	70

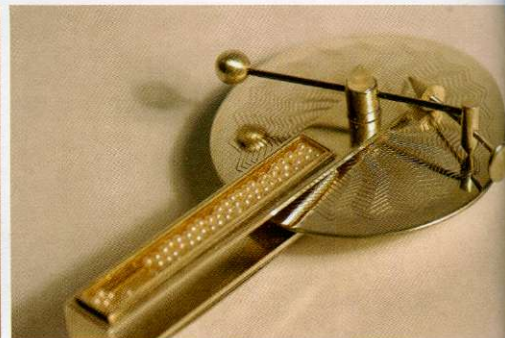
Precious Metals: Platinum, Palladium, and Rhodium	72
Base Metals	74
Refractory Metals	76
Ferrous Metals	78
Synthetic Materials	79
Natural Materials	82
Gemstones	84
<b>CHAPTER 2:</b> <b>Techniques</b>	<b>86</b>
<b>Core Techniques</b>	88
Cutting and Piercing	89
Drilling	91
Filing	93
Annealing	95
Soldering	97
Pickling	104
Bending Metal	106
Cleaning Up	110
Polishing	112
<b>Construction</b>	115
Folding and Scoring Metals	116
Fusing	118
Riveting	120
Screw Threads	124
<b>Forming Techniques</b>	126
Wirework	127
Dapping and Swaging	130

**TECHNIQUE FILE**



Technique File Number		Page
1	Piercing a Fretwork Design	90
2	Drilling Holes with a Pillar Drill	92
3	Filing a Metal Ring	94
4	Annealing Metal	96
5	Pallion Soldering	98
6	Stick Feeding Solder	99
7	Sweat Soldering a Hollow Form	100
8	Multiple Solder Joins in One Piece	101
9	Soldering an Earring Stud	102
10	Soldering Mixed Metals	103
11	Cleaning Metal Using Pickle Solution	105
12	Bending Sheet Metal into a Ring	107
13	Bending Wire into a Ring	108
14	Bending Metal Using Pliers	109
15	Cleaning Up with Abrasive Media	111
16	Polishing on a Motor	113
17	Barrel Polishing a Pierced Form	114
18	Scoring and Folding Sheet Metal	117
19	Fusing Silver	119
20	Riveting Mixed Materials with Wire	121
21	Tube-Riveting Mixed Materials	122
22	Decorative Rivets	123
23	Cutting a Screw Thread	125
24	Drawing Down Wire with a Draw Plate	127
25	Forming Repeated Wire Units on a Jig	128
26	Making Head Pins	129
27	Forming Tubing Using a Swage Block	130
28	Dapping Metal Disks	131
29	Forging: Squaring and Tapering Rod	133





# Contents

*Continued*

Forging	132	Inlay	223
Fold Forming	136	Mokume Gane	225
Anticlastic Raising	140	Lamination	229
Chasing and Repoussé	144	Enameling	231
Hydraulic Press Forming	148	<b>Stone Setting</b>	237
Bending Acrylic	152	Basic Bezel or Tube Settings	238
<b>Carving and Casting</b>	154	Cone-Shaped Bezel Settings	240
Wax Carving and Modeling	155	Prong Settings	242
Mold Making	157	Flush Settings	244
Casting Metal	160	Pavé and Grain Settings	246
Precious Metal Clay	163	Fancy Settings	248
Casting Resin, HAC, and Plaster	165	<b>Stringing Beads</b>	251
Carving Natural Materials	169	Stringing Materials	252
Carving Metal	171	Stringing and Knotting	254
<b>Mechanisms</b>	173	<b>Outwork</b>	257
Findings	174	Plating and Polishing	258
Catches	180	Casting	260
Chain	186	Electroforming	262
Hinges	191	Stone Setting	264
<b>Color and Texture</b>	193	Engraving	265
Rolling-Mill Textures	194	Laser and TIG Welding	266
Hammers and Punches	196	Laser Cutting and Water Cutting	267
Etching	198	Photoetching	268
Engraving	203	CAD/CAM	270
Surface Finishes	207	<b>CHAPTER 3:</b>	
Reticulation	209	<b>Design</b>	<b>272</b>
Granulation	210	Inspiration	274
Patination	211	Drawing	277
Dyes for Mixed Materials	215	Design Checklist	280
Anodizing	217	Design Realization	281
Gold Leaf and Metallic Powders	219		
Tooling Leather	221		





**CHAPTER 4:**  
**Going Into Business** **284**

<b>Photography and Promotion</b>	286
Basic Photography	287
Photographing Jewelry	290
Promotional Material	293
<b>Selling and Exhibiting</b>	294
Practical Advice and Costing	295
Exhibiting Jewelry	298

**CHAPTER 5:**  
**Reference** **300**

Directory of Gemstones	302
Stone Shapes	306
Conversions	308
Tool Shapes	308
Standard Sizes and Measurements	310
Glossary	311
Suppliers and Services	313
Further Reading	315
Galleries, Fairs, and Organizations	315
Index	316
Credits	319

Technique File Number (continued)	Page	Technique File Number	Page
30 Twisting Square-Section Rod	134	70 Rolling-Mill Textures	195
31 Forging: Spreading	135	71 Texturing Metal with Hammers, Stamps, and Punches	197
32 Fold Forming: Making a Single-Fold Form in the Rolling Mill	138	72 Etching Brass with Ferric Chloride	199
33 Fold Forming: Hammering Multiple Folds	138	73 Etching with PnP Resist	200
34 Making an Anticlastic Bangle	141	74 Etching Pen	201
35 Anticlastic Raising: Open Forms	142	75 Etching Shell	202
36 Anticlastic Forming with Dapping Punches	143	76 Engraving: Setting Up a Graver	204
37 Setting Up—Put the Piece in Pitch	145	77 Engraving: Textures	205
38 Chasing on the Design	146	78 Engraving: Lines and Lettering	206
39 Defining a Chased Form	147	79 Surface Finishes	208
40 Forming Over an Object	149	80 Reticulation	209
41 Hydraulic Press Forming	150	81 Granulated Earrings	210
42 Forming Using a Carved Insert	151	82 Patinas: Verdigris	212
43 Forming an Acrylic Bangle	153	83 Patinas: Liver of Sulfur	213
44 Carving a Ring in Wax	156	84 Patinas: Platinol	214
45 Making a Vulcanized Rubber Mold	158	85 Coloring Polyester Resin	216
46 Making a Cold-Cure Mold	159	86 Anodizing	218
47 Cuttlefish Casting	161	87 Gold Leaf and Metallic Powders	220
48 Sand Casting	162	88 Embossing Leather	222
49 Modeling Precious Metal Clay	164	89 Shell-Inlaid Silver	224
50 Casting a Resin Form	166	90 Mokume Gane: Making the Billet	226
51 Casting HAC	167	91 Mokume Gane: Revealing the Layers	227
52 Casting Plaster	168	92 Mokume Gane: Completing the Effect	228
53 Carving Natural Materials	170	93 Laminating Mixed Materials	230
54 Carving a Design in Metal	172	94 Enameling: Preparation	232
55 Findings: Earring Hooks	175	95 Counter-Enameling	233
56 Findings: Hinged Earrings	176	96 Enameling: Gold Foil Opal Cufflinks	234
57 Findings: Swivel Cufflink Backs	177	97 Enameling: Cloisonné	236
58 Findings: Simple Brooch Pin	178	98 Bezel-Setting a Cabochon Stone	239
59 Findings: Riveted Brooch Pin	179	99 Cone-Shaped Bezel Setting a Faceted Stone	241
60 Catches: S-Hook	181	100 Prong-Setting a Faceted Stone	243
61 Catches: T-Bar	182	101 Flush Setting	245
62 Catches: Barrel Snap	183	102 Grain Setting	247
63 Catches: Magnetic Clasp	184	103 Setting Fancy-Cut Stones	249
64 Catches: Sprung Clasp	185	104 Spectacle Setting	250
65 Chain: Basic Links	187	105 Knotting: Stringing with Cord or Silk	255
66 Chain Mail	188	106 Stringing Beads with Beading Wire	256
67 Chain: Repeated Units	189	107 Image Enhancement with PhotoShop	289
68 Chain: Mixed Metal Links	190		
69 Making a Hinge for a Press-Form Locket	192		