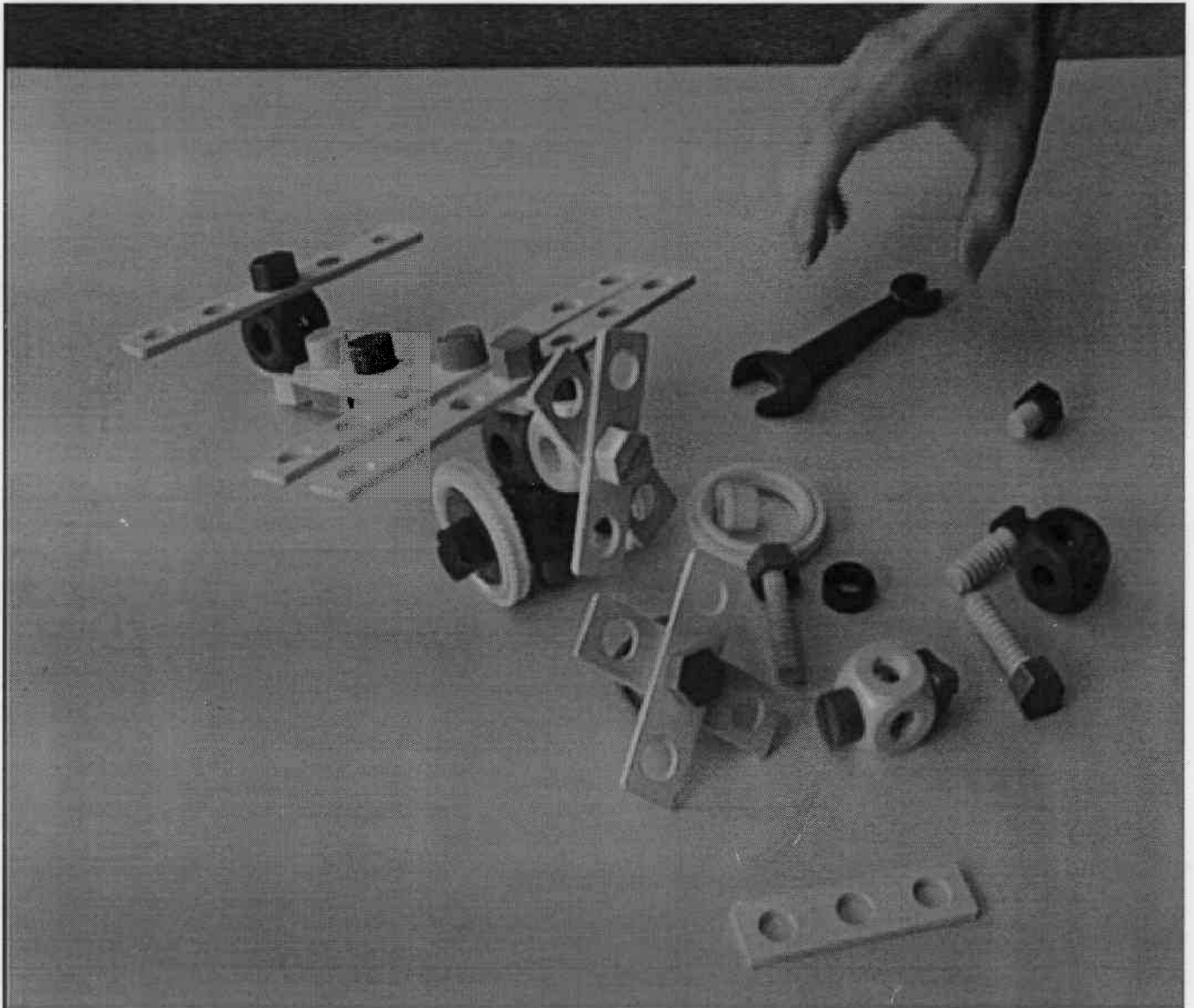


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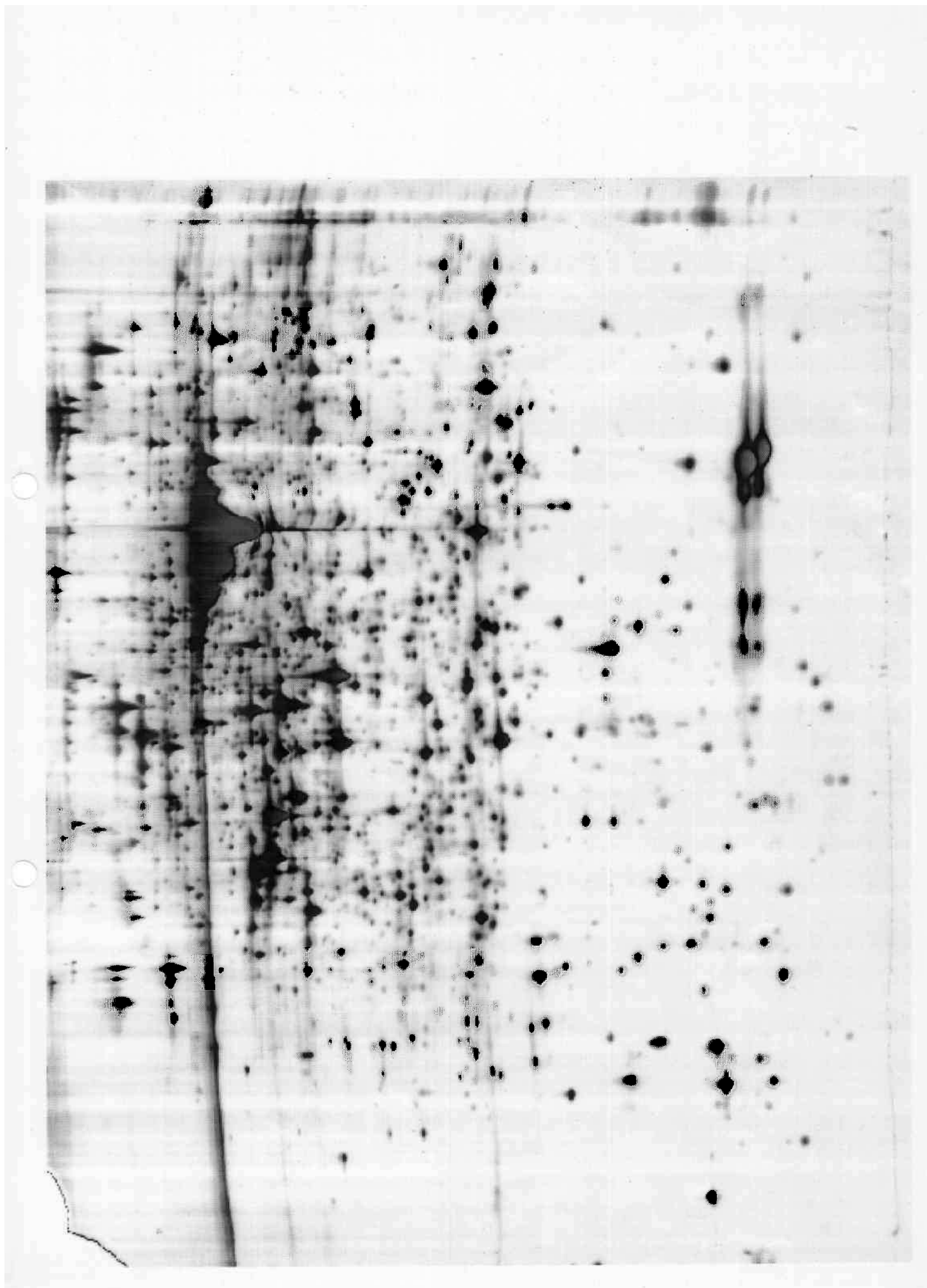
Baufix-Szene

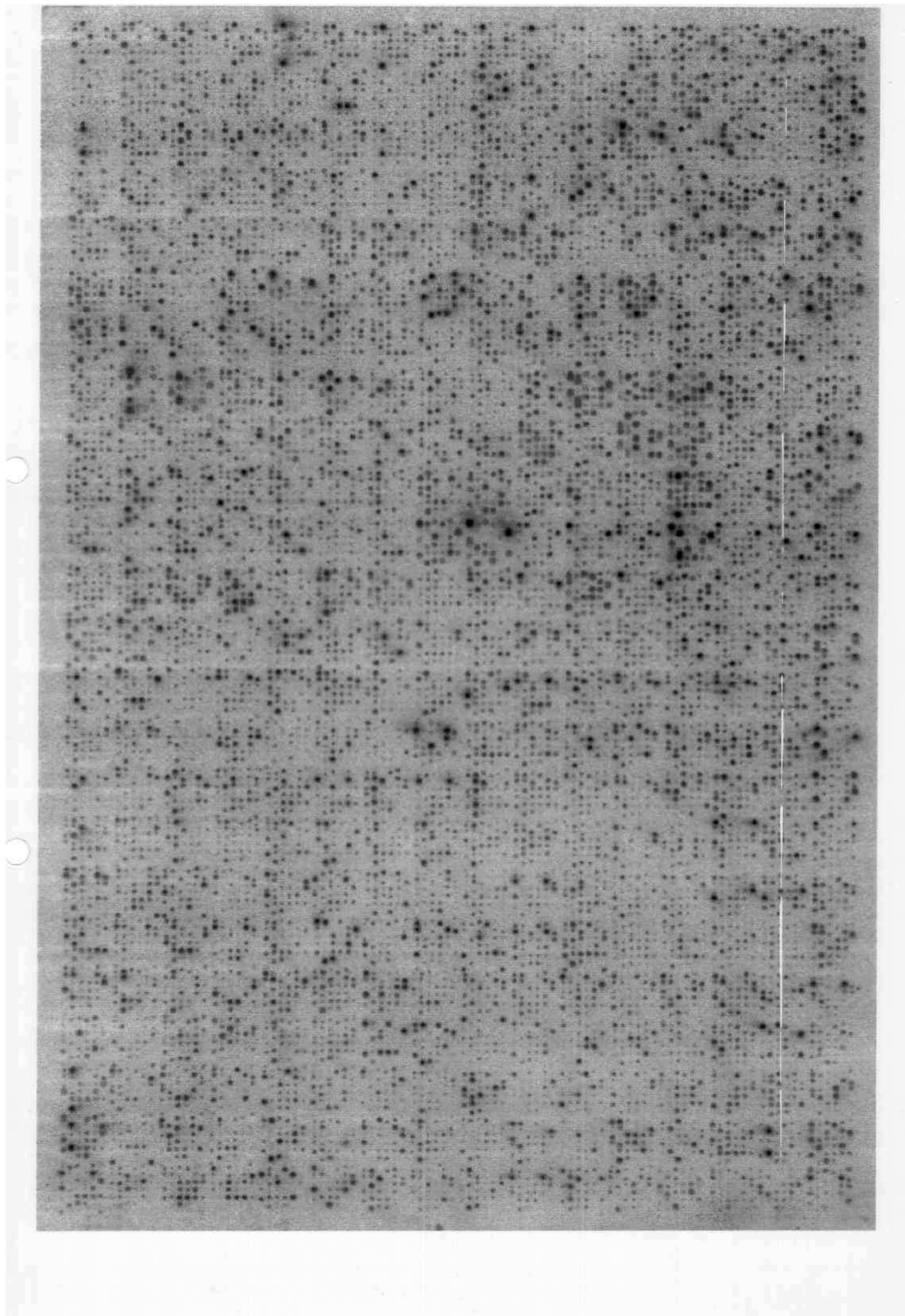


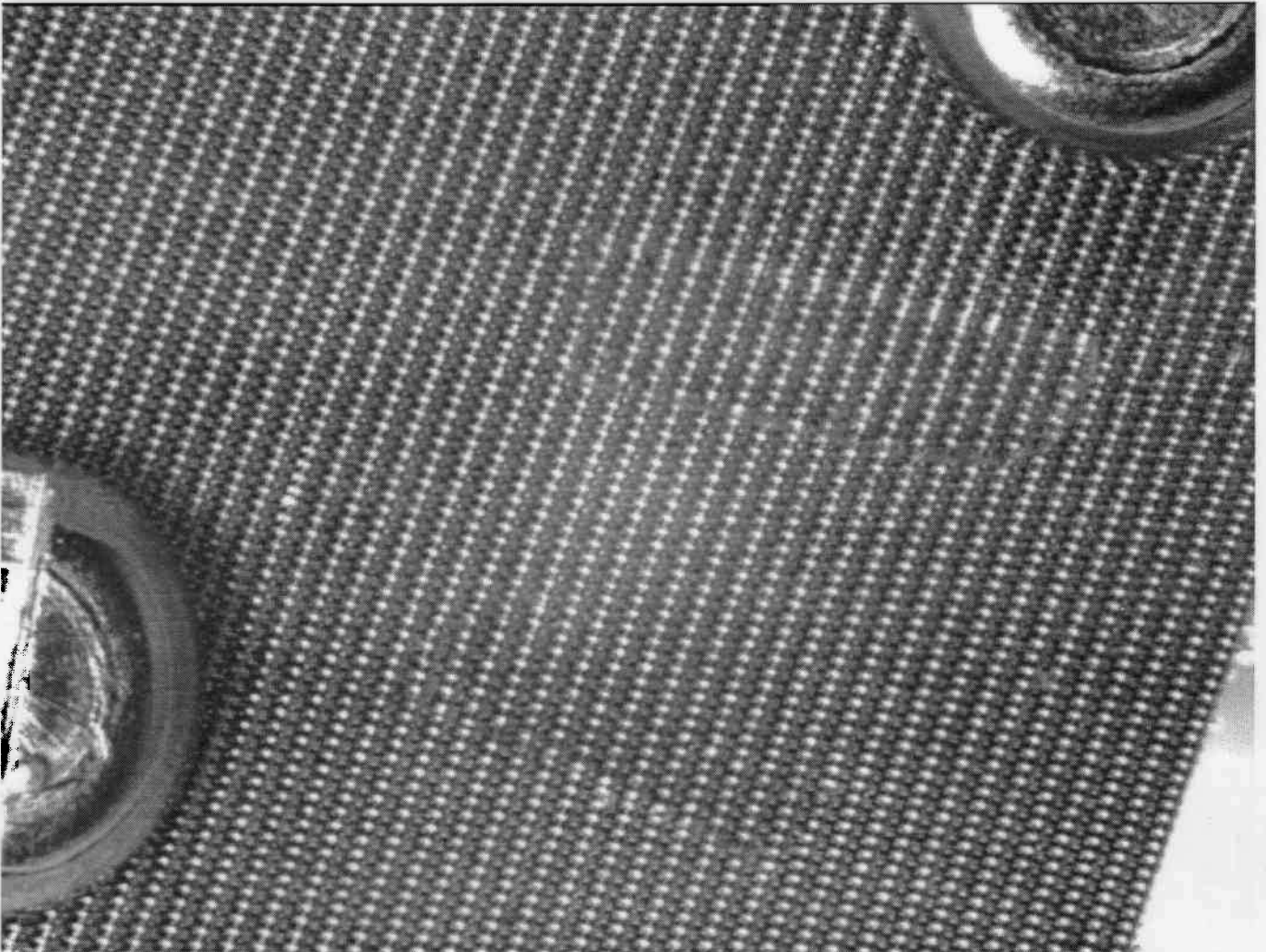
Wurzel, aufgenommen mit Minirhizotron-Technik



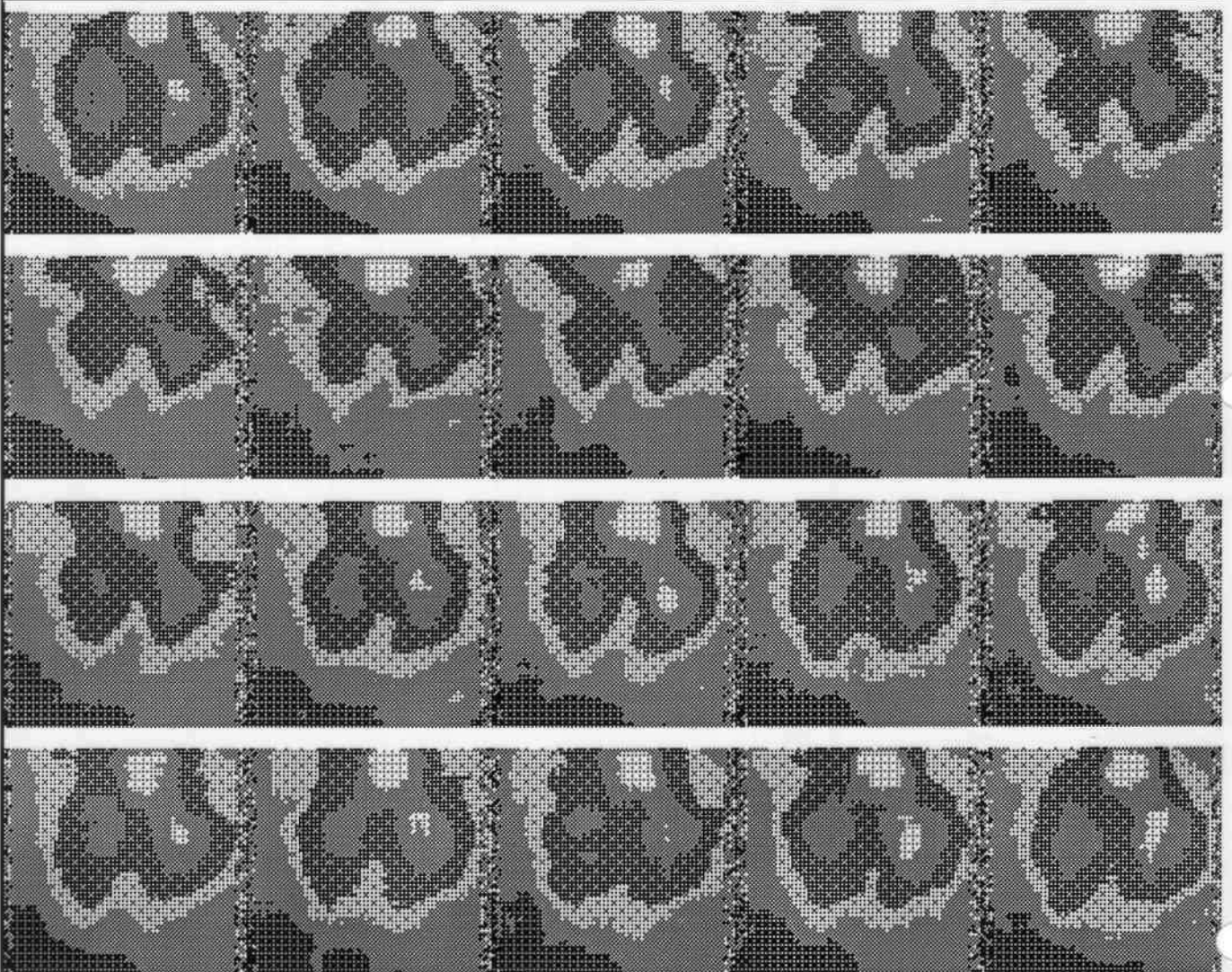
microbunt.ps







Hydrogel im Wasserbad

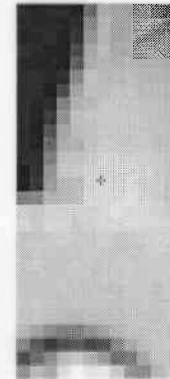
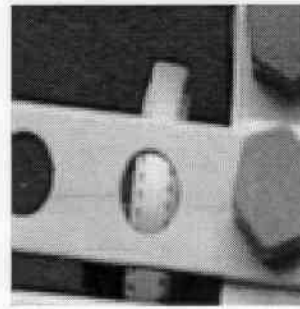
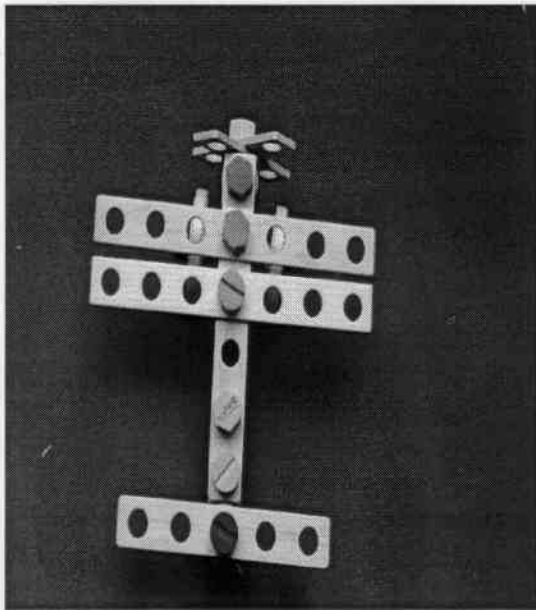


Sequenz eines Herz-Szinitgramms



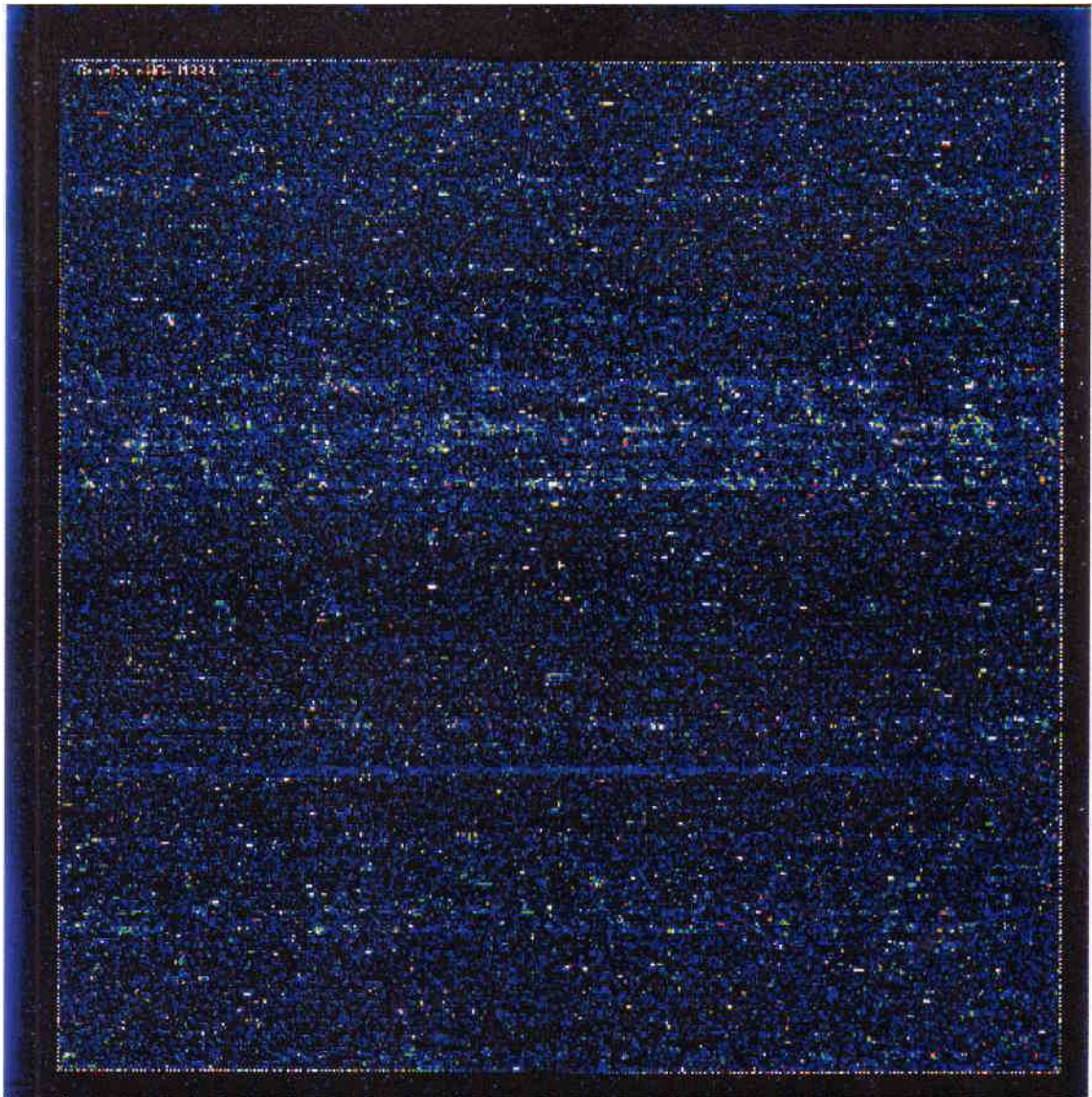
Ultraschallschans der Finger einer Hand

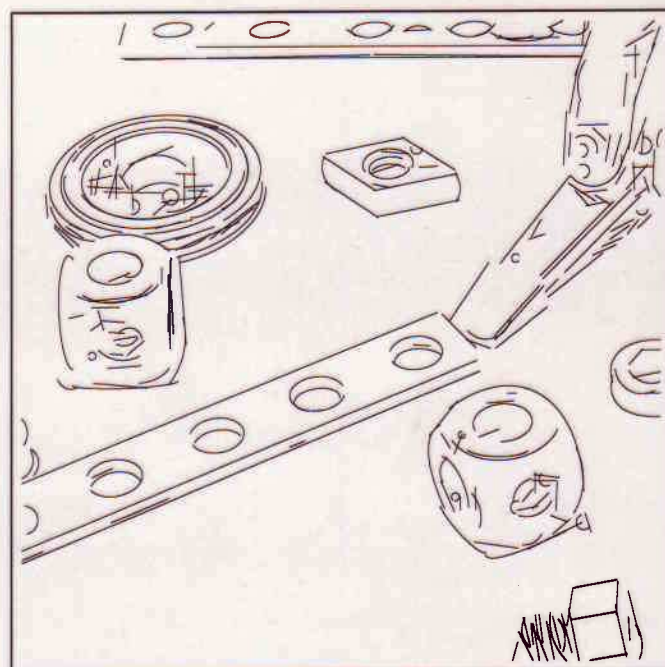
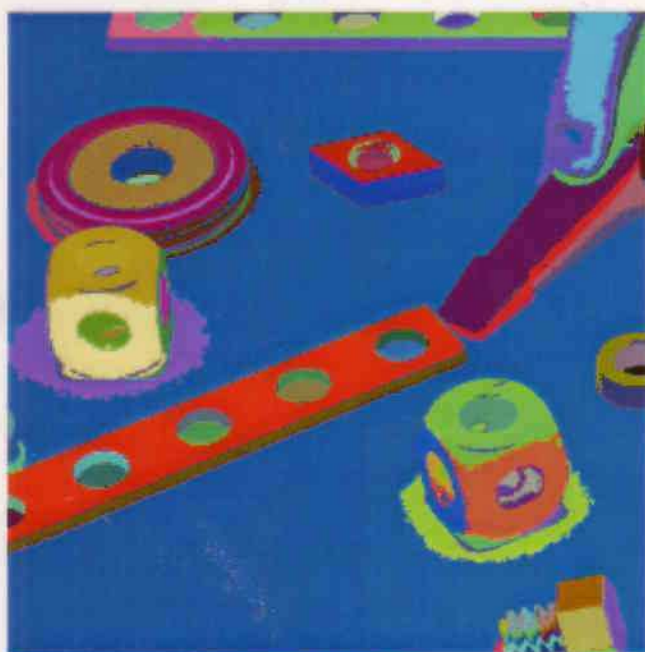
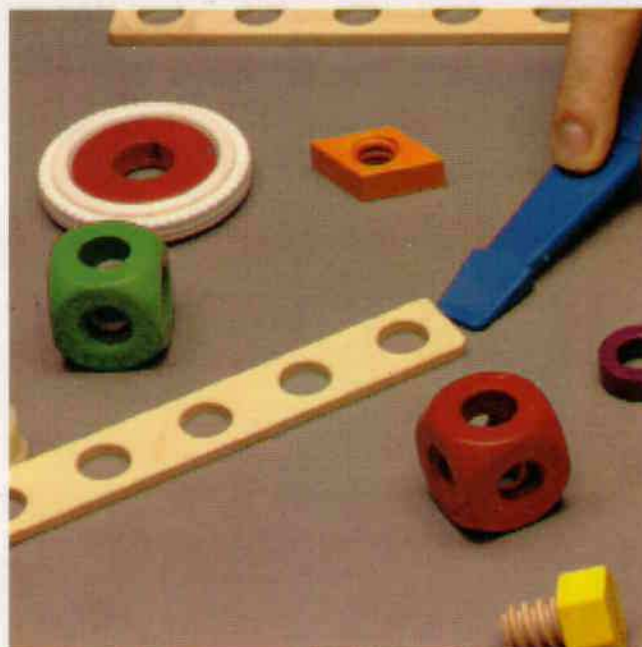




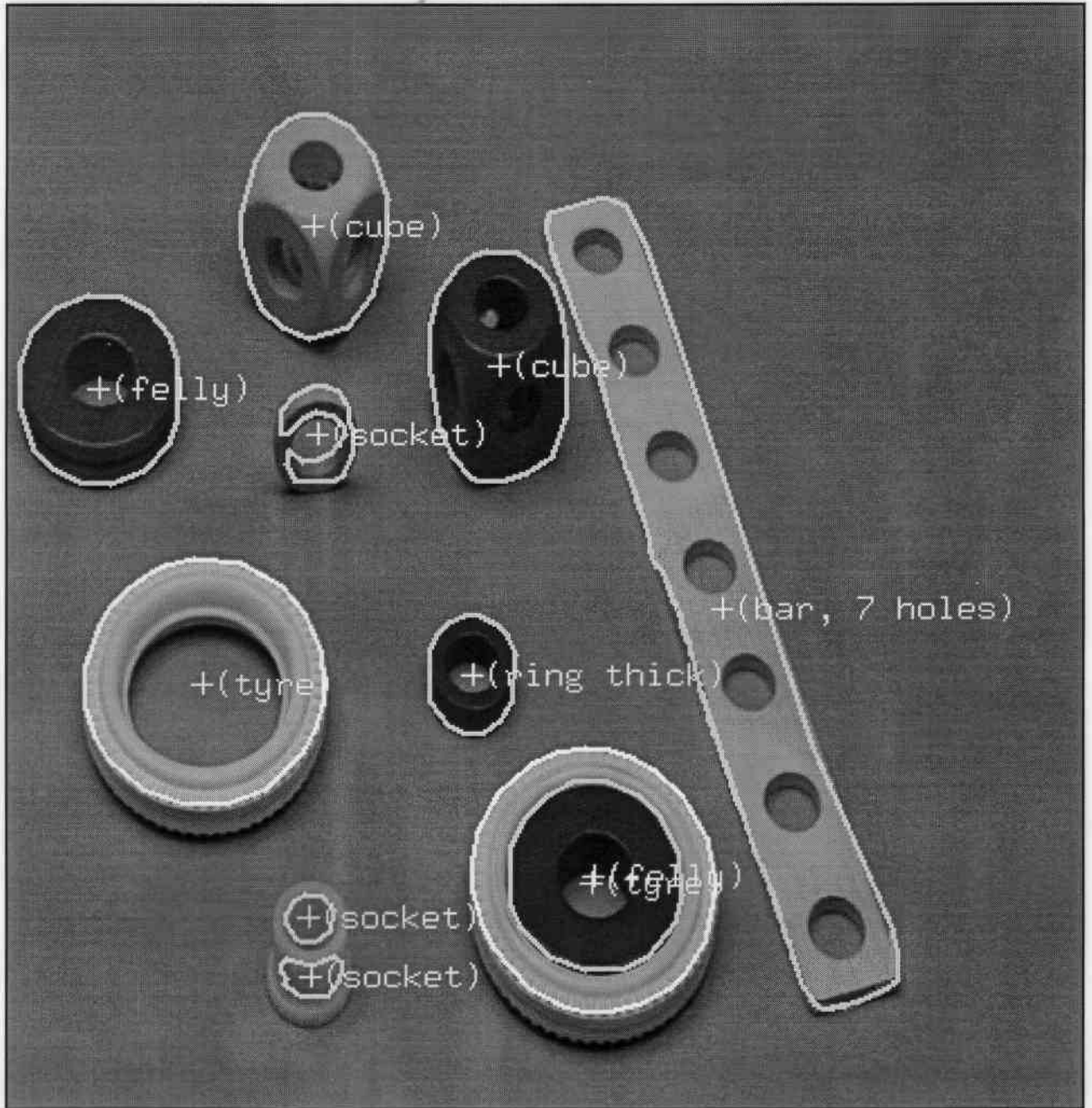
| | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 391 | 55 | 55 | 52 | 59 | 125 | 166 | 152 | 153 | 154 | 152 |
| 390 | 53 | 57 | 50 | 66 | 140 | 166 | 155 | 159 | 155 | 154 |
| 389 | 54 | 50 | 48 | 80 | 155 | 170 | 158 | 161 | 158 | 158 |
| 388 | 52 | 53 | 49 | 91 | 160 | 166 | 163 | 167 | 162 | 161 |
| 387 | 57 | 53 | 59 | 121 | 175 | 168 | 168 | 172 | 167 | 164 |
| 386 | 56 | 50 | 84 | 150 | 174 | 171 | 175 | 173 | 169 | 167 |
| 385 | 54 | 60 | 118 | 162 | 168 | 177 | 178 | 175 | 174 | 171 |
| 384 | 53 | 70 | 135 | 176 | 177 | 180 | 181 | 179 | 177 | 174 |
| 383 | 52 | 88 | 154 | 171 | 175 | 184 | 181 | 183 | 182 | 175 |
| 382 | 53 | 99 | 158 | 161 | 173 | 188 | 185 | 186 | 184 | 177 |
| 381 | 58 | 115 | 173 | 177 | 183 | 190 | 189 | 190 | 187 | 183 |
| 380 | 62 | 132 | 180 | 184 | 190 | 192 | 191 | 192 | 189 | 186 |
| 379 | 69 | 141 | 167 | 169 | 192 | 192 | 192 | 194 | 187 | 187 |
| 378 | 122 | 161 | 166 | 170 | 195 | 196 | 195 | 198 | 190 | 188 |
| 377 | 183 | 189 | 189 | 189 | 192 | 196 | 198 | 195 | 193 | 192 |
| 376 | 186 | 193 | 193 | 188 | 190 | 193 | 194 | 194 | 193 | 194 |
| 375 | 181 | 187 | 189 | 185 | 184 | 188 | 186 | 185 | 188 | 191 |
| 374 | 182 | 181 | 180 | 182 | 185 | 185 | 181 | 181 | 186 | 187 |
| 373 | 183 | 179 | 178 | 182 | 182 | 184 | 185 | 185 | 185 | 184 |
| 372 | 177 | 180 | 180 | 180 | 182 | 180 | 182 | 183 | 183 | 181 |
| 371 | 177 | 178 | 178 | 177 | 179 | 176 | 176 | 182 | 181 | 179 |
| 370 | 181 | 176 | 175 | 177 | 176 | 174 | 173 | 177 | 181 | 180 |
| 369 | 181 | 175 | 171 | 172 | 174 | 174 | 175 | 178 | 176 | 178 |
| 368 | 155 | 137 | 123 | 124 | 140 | 158 | 170 | 176 | 178 | 179 |
| 367 | 94 | 79 | 93 | 99 | 86 | 94 | 128 | 160 | 176 | 180 |
| | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 |

Grauwertmatrix eines Bildausschnittes

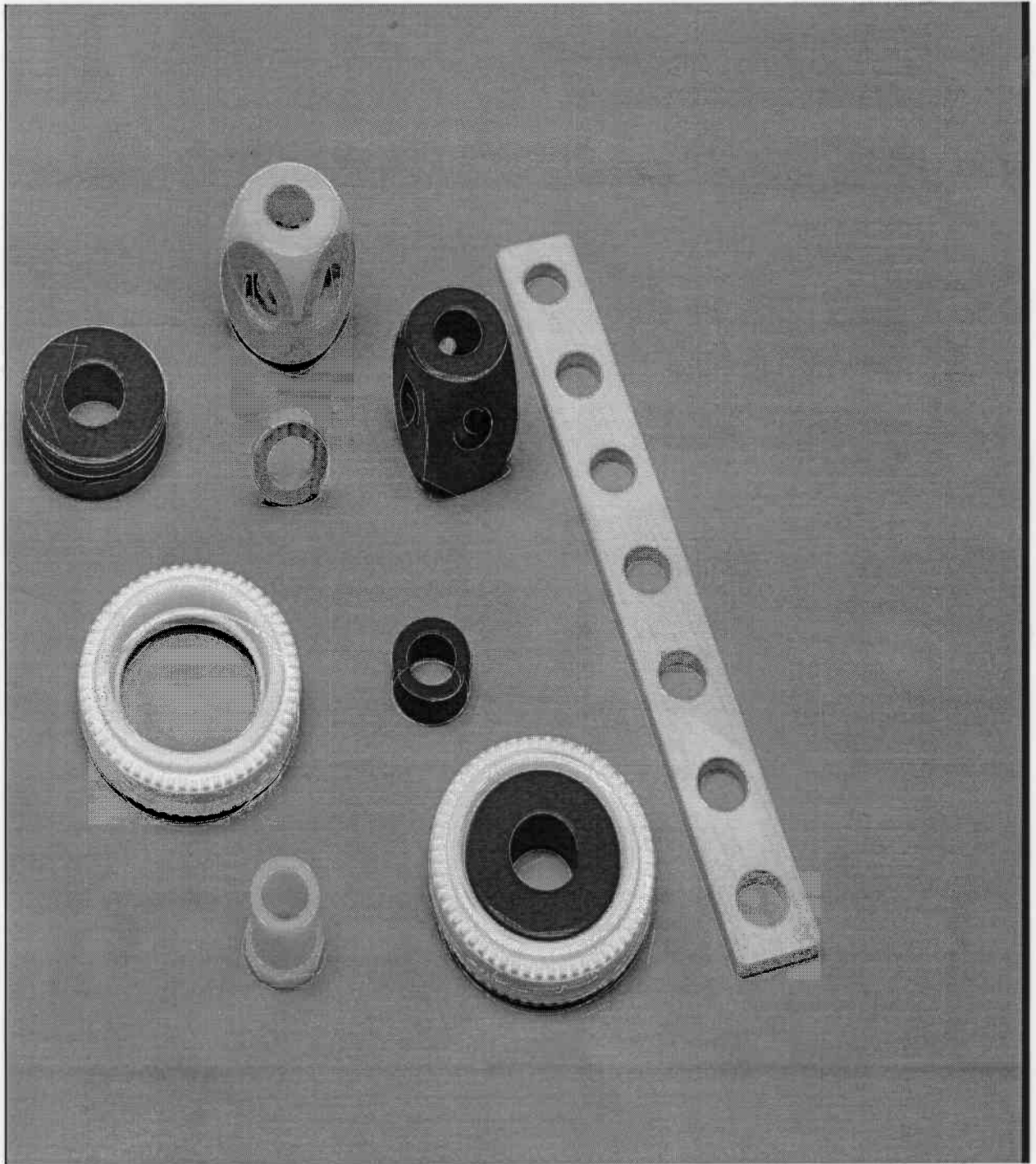




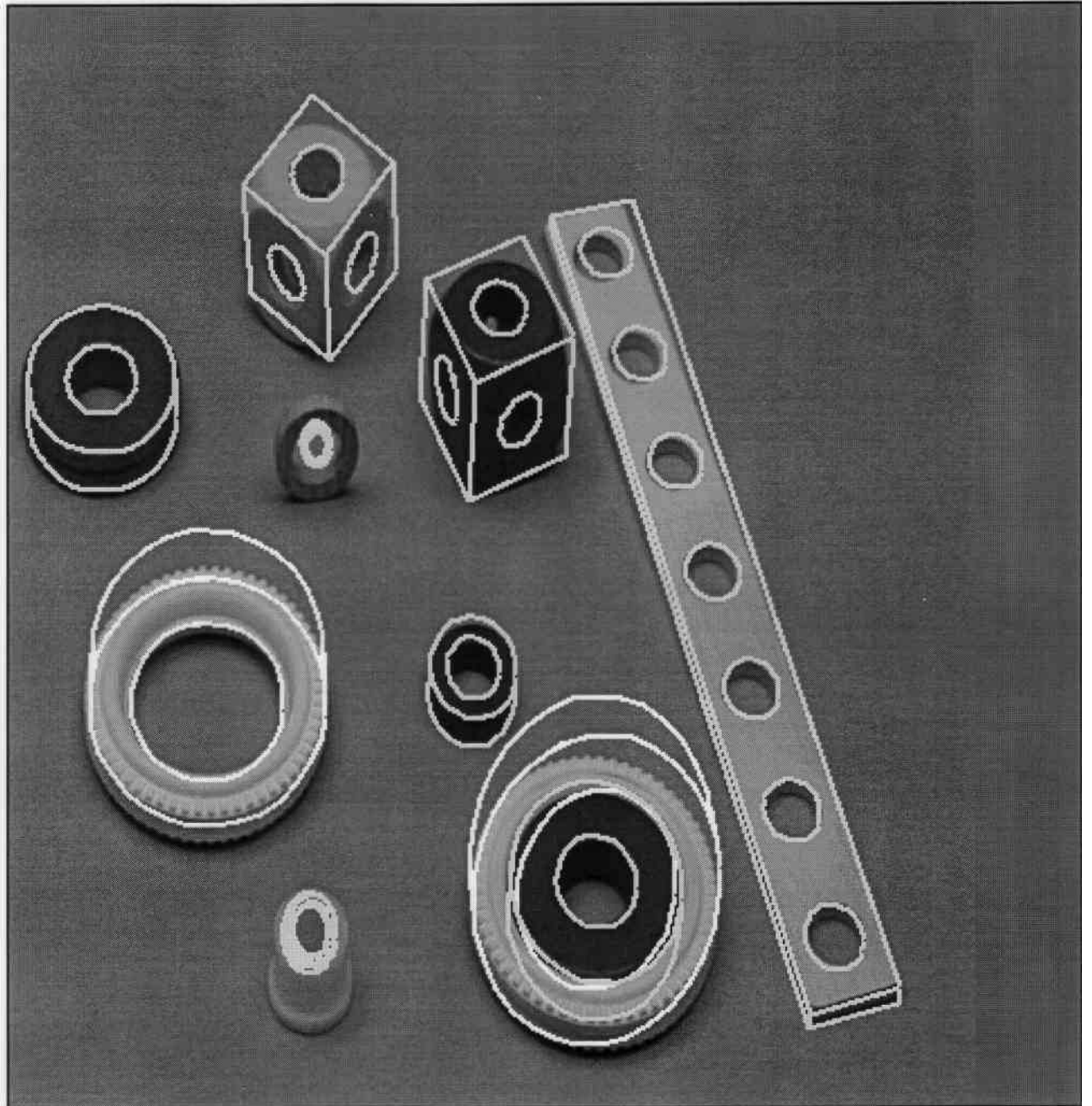
Beispiel für segmentierte Kontursegmente und Regionen



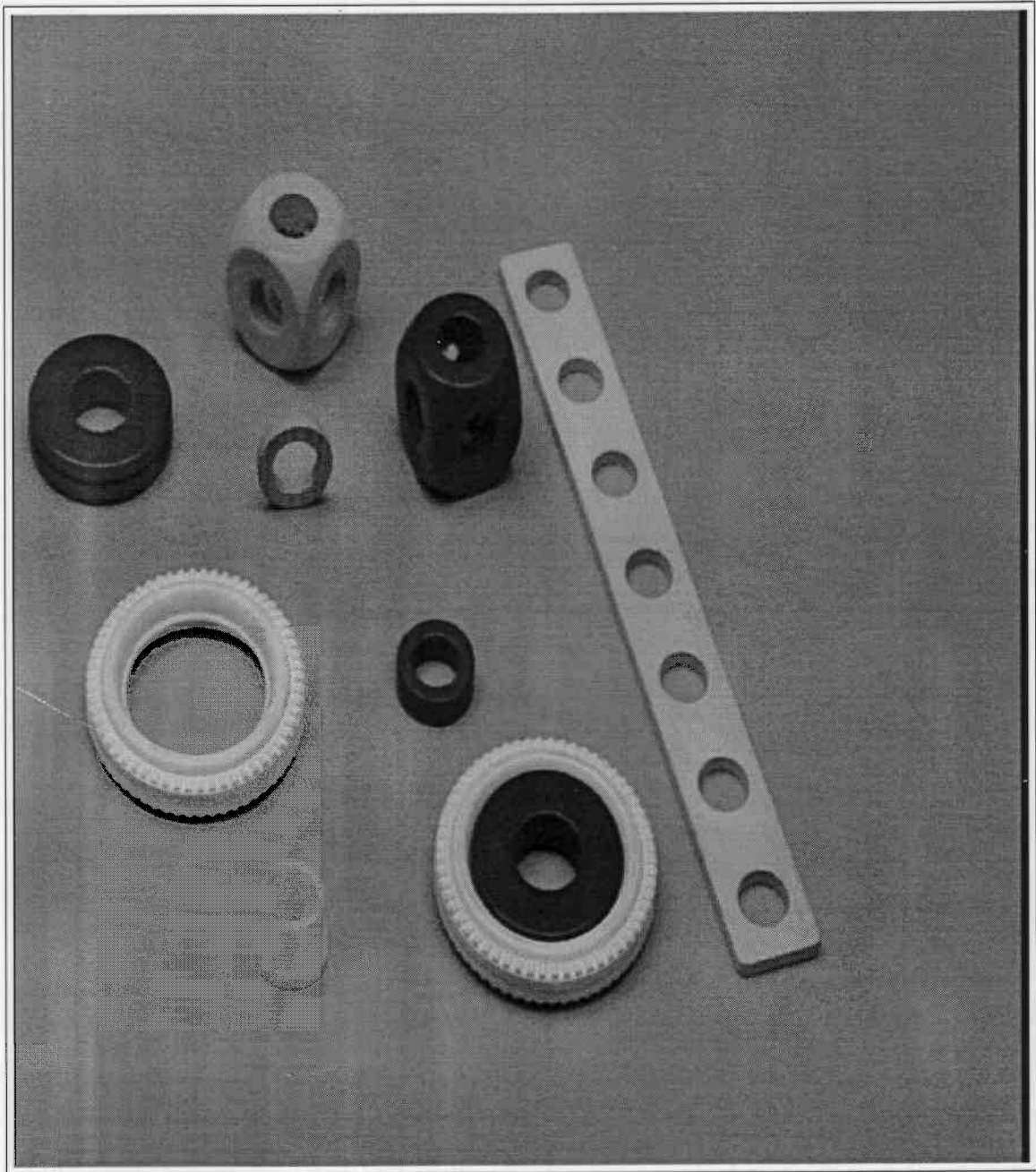
2D - Objekte



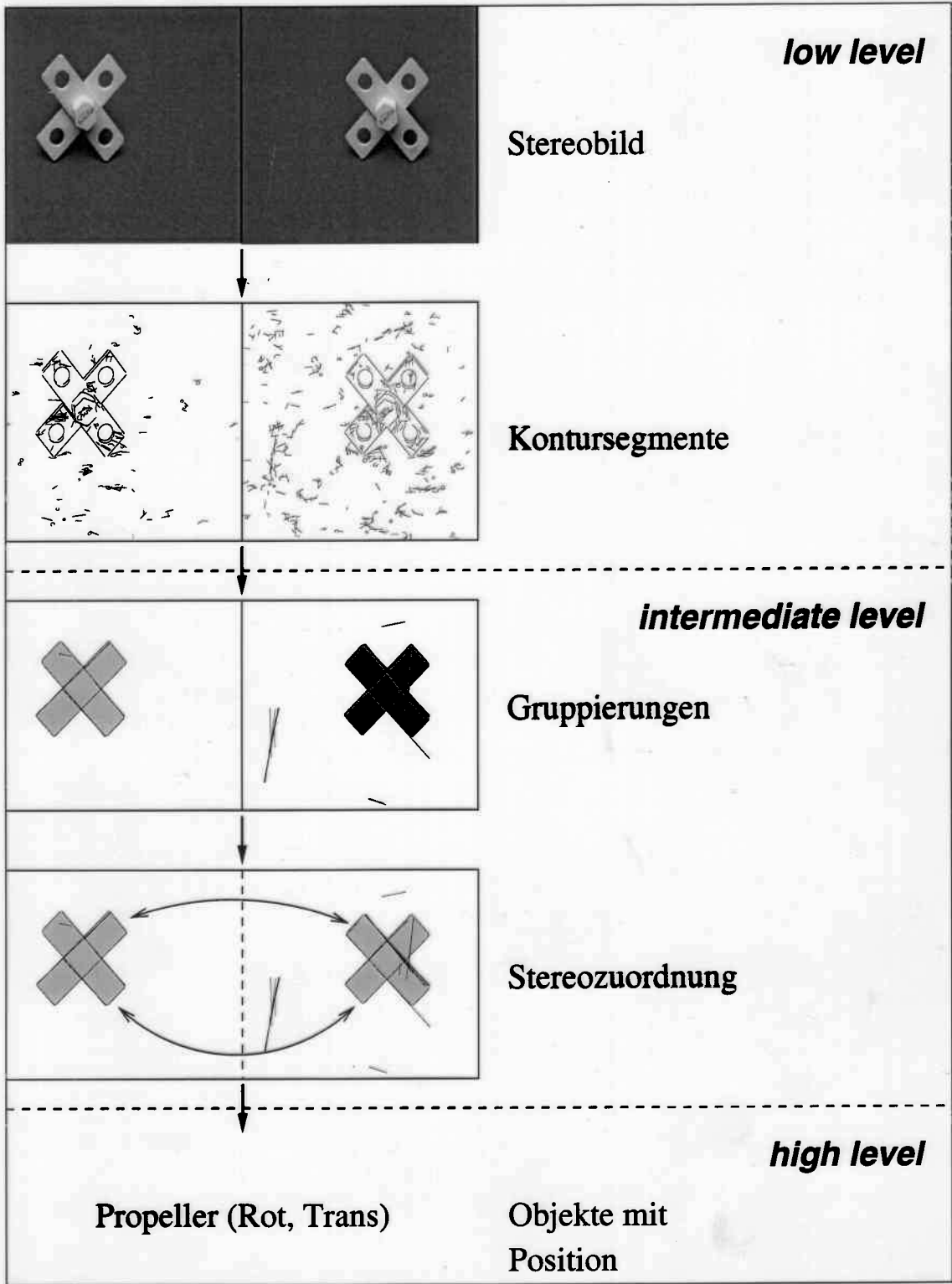
Kontürgrippen 2 Regionen

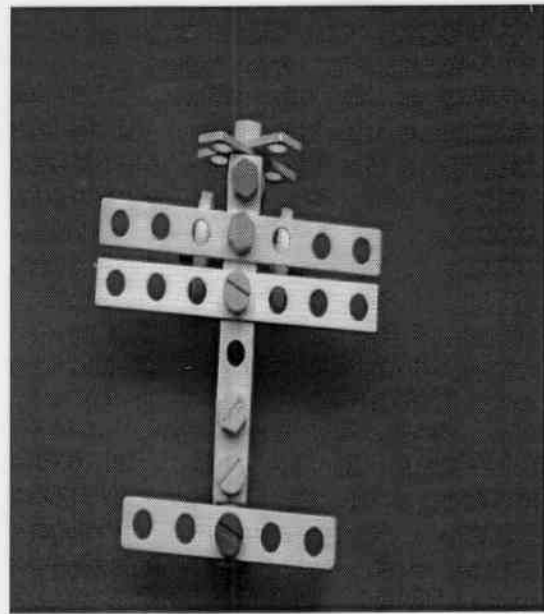
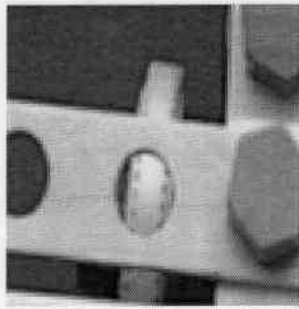


3D - Rekonstruktion



bild_rgb_2_0_0.eps





| | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 391 | 55 | 55 | 52 | 59 | 125 | 166 | 152 | 153 | 154 | 152 |
| 390 | 53 | 57 | 50 | 66 | 140 | 166 | 155 | 159 | 155 | 154 |
| 389 | 54 | 50 | 48 | 80 | 155 | 170 | 158 | 161 | 158 | 158 |
| 388 | 52 | 53 | 49 | 91 | 160 | 166 | 163 | 167 | 162 | 161 |
| 387 | 57 | 53 | 59 | 121 | 175 | 168 | 168 | 172 | 167 | 164 |
| 386 | 56 | 50 | 84 | 150 | 174 | 171 | 175 | 173 | 169 | 167 |
| 385 | 54 | 60 | 118 | 162 | 168 | 177 | 178 | 175 | 174 | 171 |
| 384 | 53 | 70 | 135 | 176 | 177 | 180 | 181 | 179 | 177 | 174 |
| 383 | 52 | 88 | 154 | 171 | 175 | 184 | 181 | 183 | 182 | 175 |
| 382 | 53 | 99 | 158 | 161 | 173 | 188 | 185 | 186 | 184 | 177 |
| 381 | 58 | 115 | 173 | 177 | 183 | 190 | 189 | 190 | 187 | 183 |
| 380 | 62 | 132 | 180 | 184 | 190 | 192 | 191 | 192 | 189 | 186 |
| 379 | 69 | 141 | 167 | 169 | 192 | 192 | 192 | 194 | 187 | 187 |
| 378 | 122 | 161 | 166 | 170 | 195 | 196 | 195 | 198 | 190 | 188 |
| 377 | 183 | 189 | 189 | 189 | 192 | 196 | 198 | 195 | 193 | 192 |
| 376 | 186 | 193 | 193 | 188 | 190 | 193 | 194 | 194 | 193 | 194 |
| 375 | 181 | 187 | 189 | 185 | 184 | 188 | 186 | 185 | 188 | 191 |
| 374 | 182 | 181 | 180 | 182 | 185 | 185 | 181 | 181 | 186 | 187 |
| 373 | 183 | 179 | 178 | 182 | 182 | 184 | 185 | 185 | 185 | 184 |
| 372 | 177 | 180 | 180 | 180 | 182 | 180 | 182 | 183 | 183 | 181 |
| 371 | 177 | 178 | 178 | 177 | 179 | 176 | 176 | 182 | 181 | 179 |
| 370 | 181 | 176 | 175 | 177 | 176 | 174 | 173 | 177 | 181 | 180 |
| 369 | 181 | 175 | 171 | 172 | 174 | 174 | 175 | 178 | 176 | 178 |
| 368 | 155 | 137 | 123 | 124 | 140 | 158 | 170 | 176 | 178 | 179 |
| 367 | 94 | 79 | 93 | 99 | 86 | 94 | 128 | 160 | 176 | 180 |
| | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 |

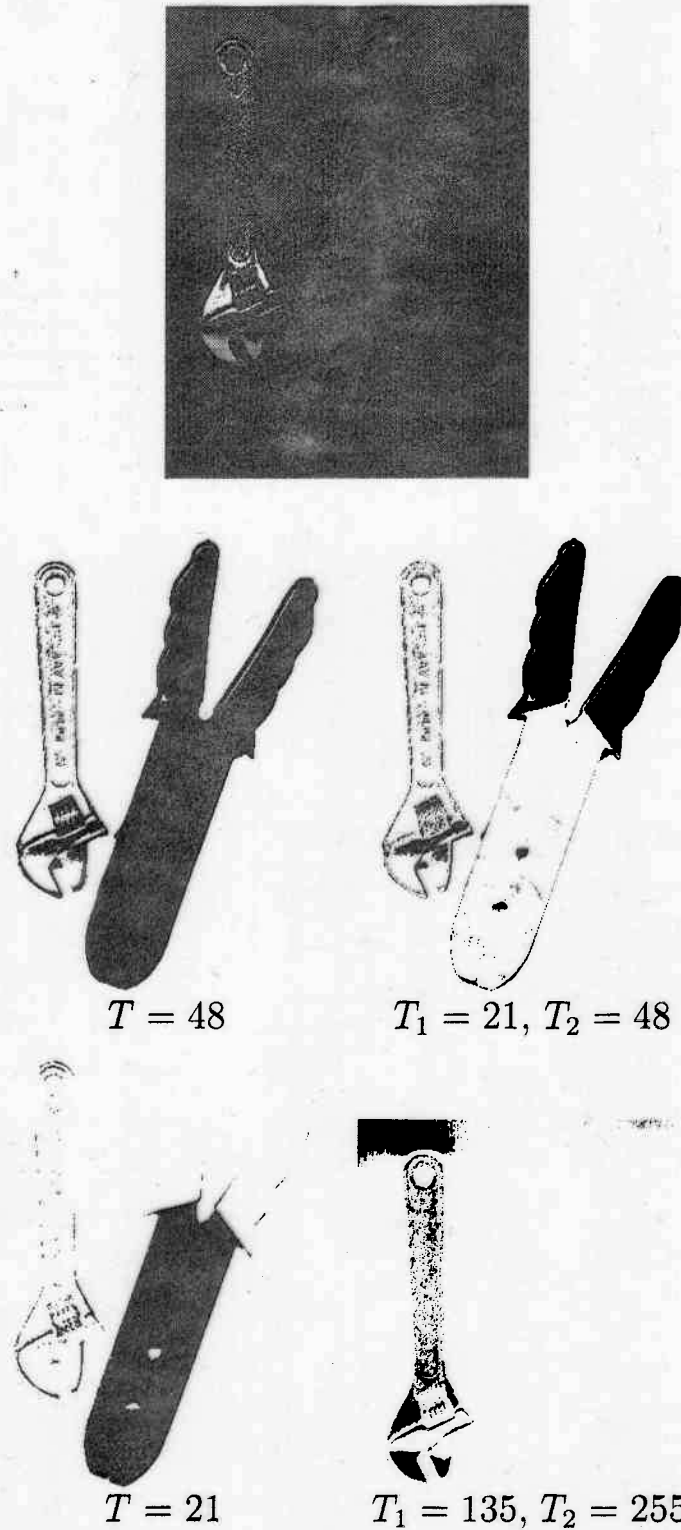


Figure 2.2: A gray level image and its resulting binary images using different thresholds. *Top*: Original gray-level image. *Middle left*: Original image thresholded with $T = 48$. *Middle right*: $T_1 = 21$ and $T_2 = 48$. *Bottom left*: $T = 21$. *Bottom right*: $T_1 = 135$ and $T_2 = 255$.

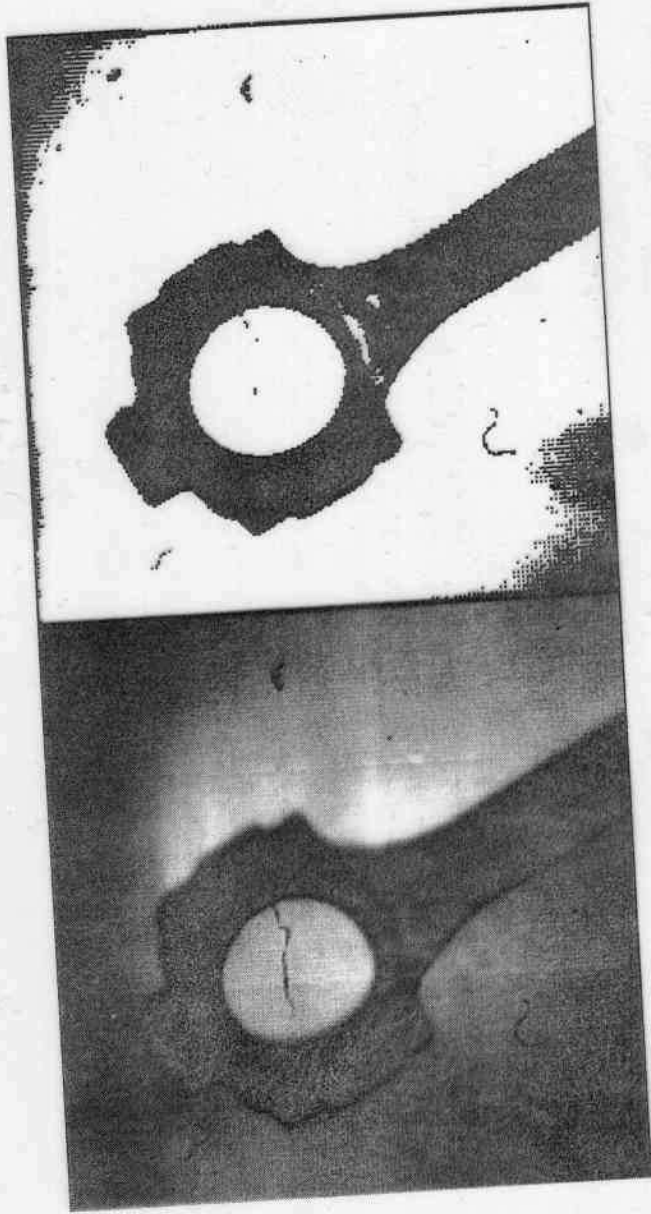


Figure 2.1: A gray level image and its corresponding binary image.

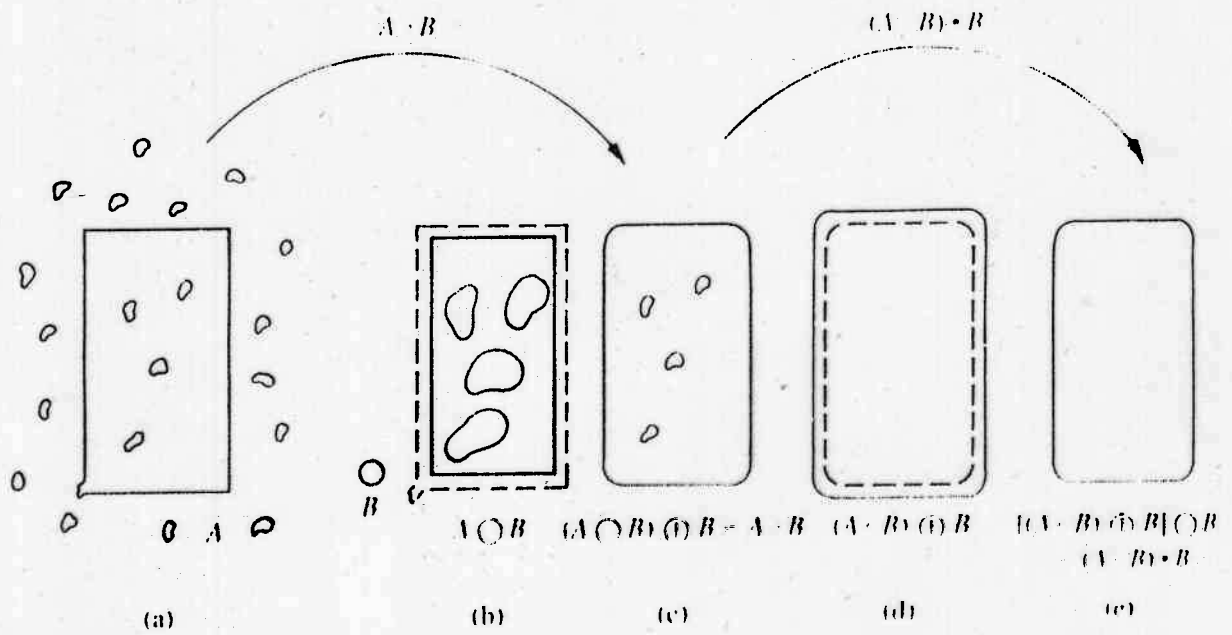


Figure 8.31 Morphological filtering: (a) original, noisy image; (b) result of erosion; (c) opening of A ; (d) result of performing dilation on the opening; (e) final result showing the closing of the opening. (Adapted from Giardina and Dougherty [1988].)