Metalex Manufacturing
L143-112000 BOM/ASSY Undulator
Purchase Order No. 5A10359

Assembly:

ANL Part/Revision Number: L143-112000-05
SLAC Part Number: SA-381-001-35
Assembly Serial Number: 5A10359-29

LCLS Undulator photographs per L143-00066 Sect. 4.1.3.3

L143-110800-02 Upper Left Magnet Structure Assembly

L143-110900-02 Lower Left Magnet Structure Assembly

L143-111000-102 Upper Middle Magnet Structure Assembly

L143-111000-202 Upper Middle Magnet Structure Assembly

L143-111000-302 Upper Middle Magnet Structure Assembly

L143-111100-102 Lower Middle Magnet Structure Assembly

L143-111100-202 Lower Middle Magnet Structure Assembly

L143-111100-302 Lower Middle Magnet Structure Assembly

L143-111200-02 Upper Right Magnet Structure Assembly

L143-111300-02 Lower Right Magnet Structure Assembly

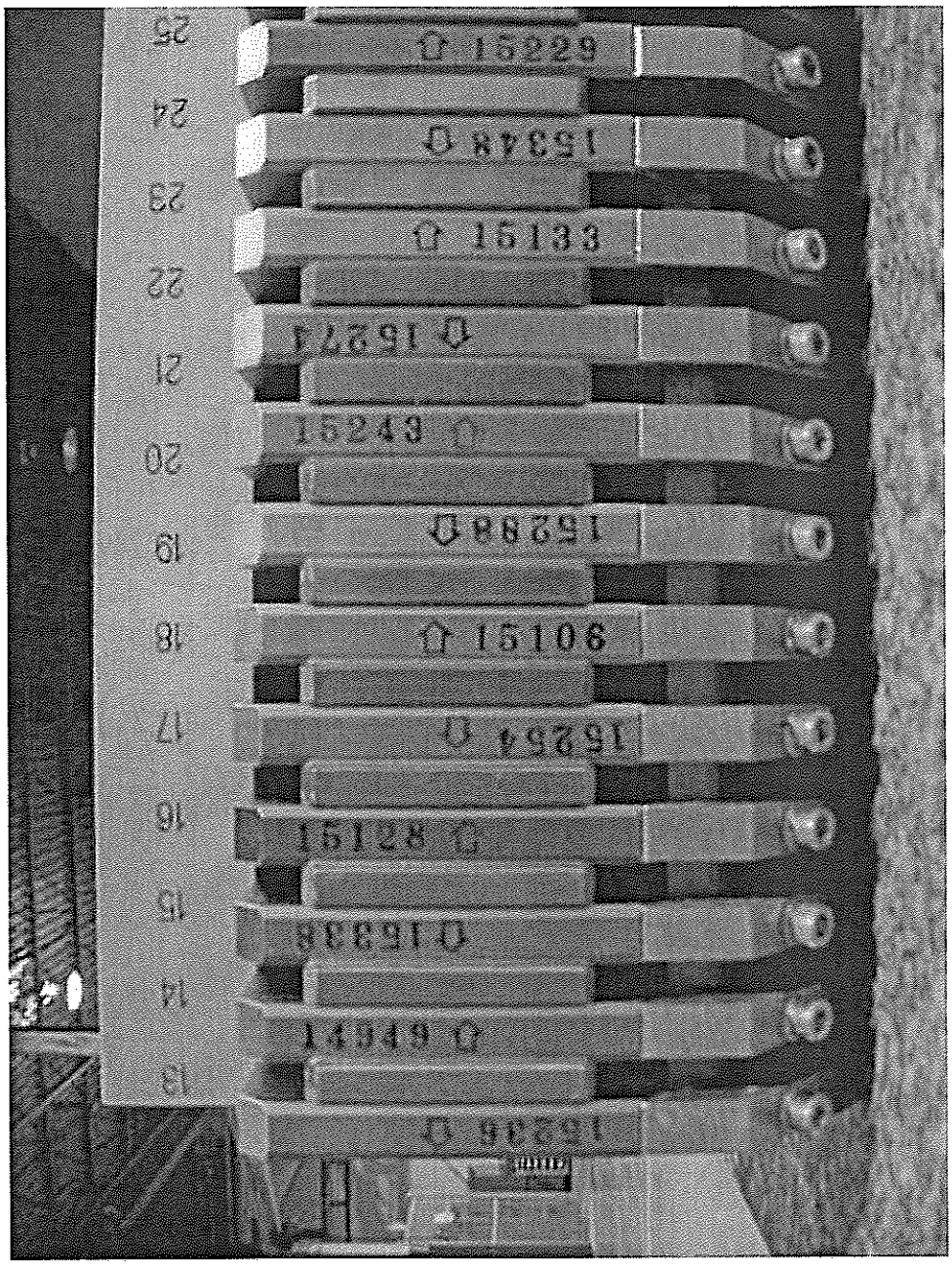
Rob Schuermann Date: 05/22/07

Rob Schuermann

5750 Cornell Road • Blue Ash Industrial Park • Cincinnati, OH 45242
Phone (513) 489-0507 • Fax (513) 489-1020

15257
14952
15323
14986
15316
14957
15270
14943
15308
15051
15349
15046
1
2
3
4
5
6
7
8
9
10
11
12

15072
15089
15076
15345
15105
15320
15251
15259
15064
15290
14989
15317
1
2
3
4
5
6
7
8
9
10
11
12


15229
15348
15133
15243
15106
15128
14949

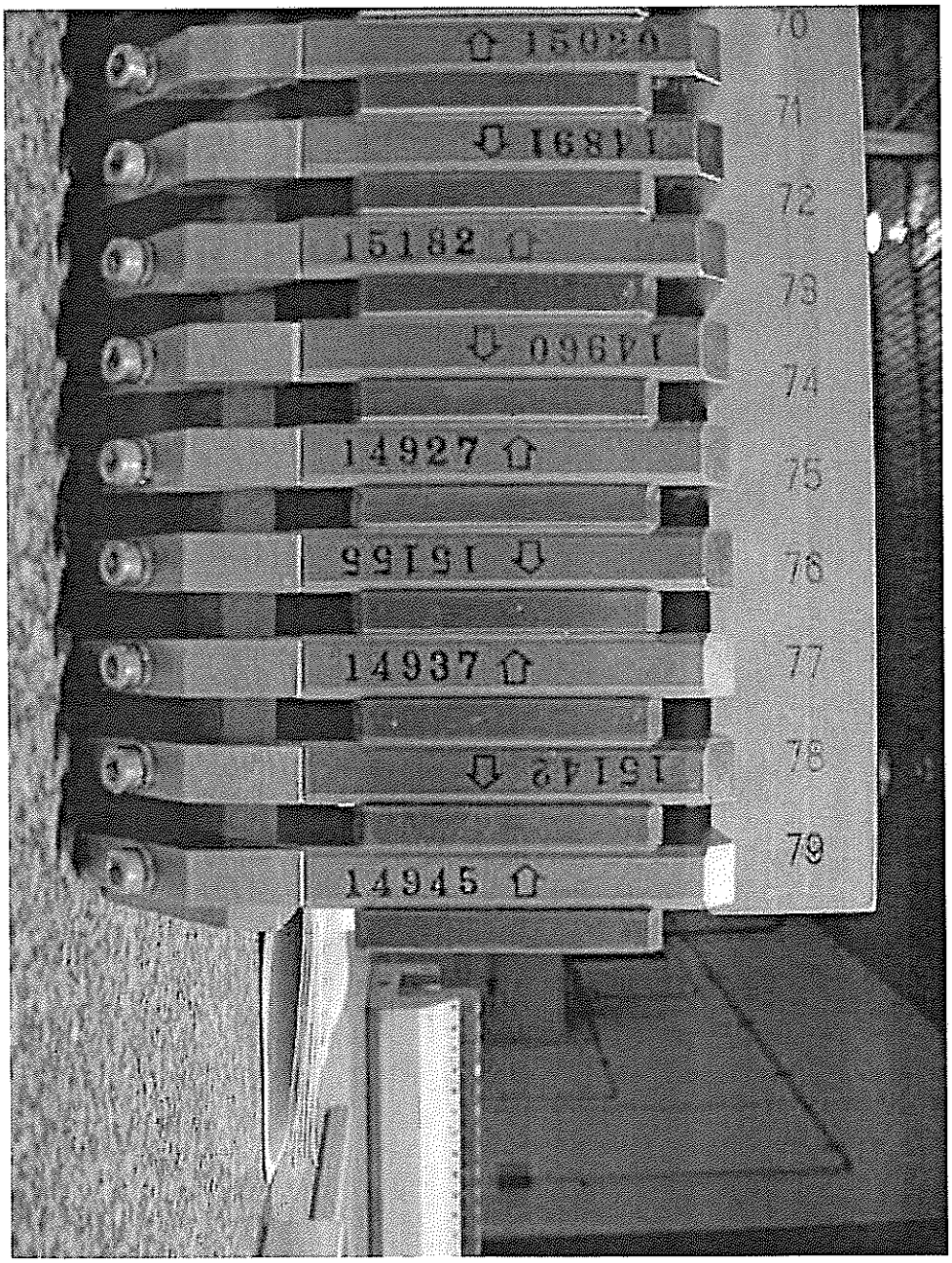
14889
15296
15113
15279
15016
15322
15055
15300
15195
15306
15229
15348
15133
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35

45
15197
44
15309
43
15102
42
15358
41
15070
40
15086
39
15178
38
15260
37
15208
36
14950
35
14889
34
15296
33
15113
32

55
14953
54
15324
53
15178
52
15353
51
15144
50
15134
49
15068
48
15172
47
15043
46
15159
45
15197
44
15309
43
15102
42

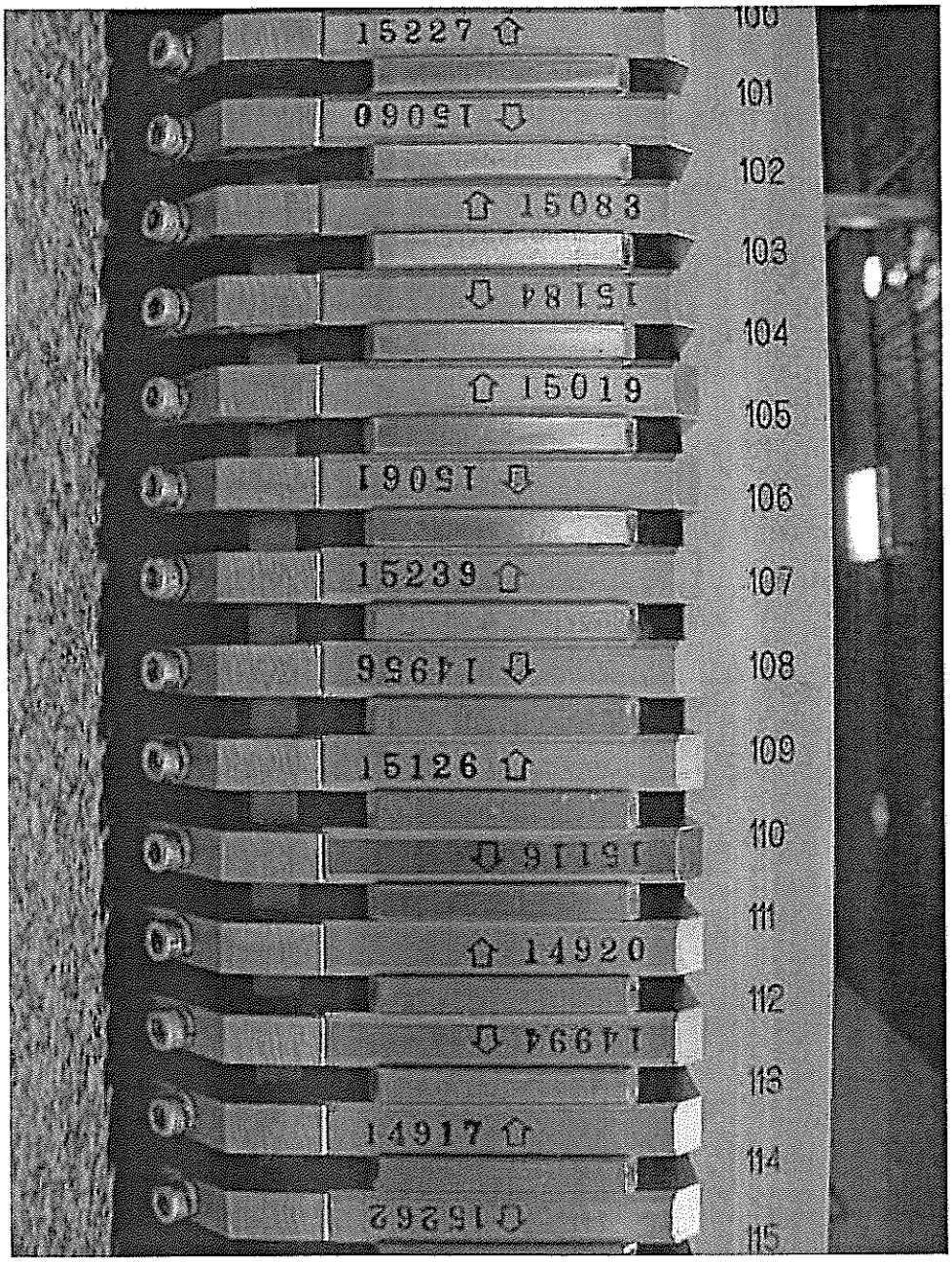
14897 Ω
15340 Ω
15031 Ω
15215 Ω
15018 Ω
15013 Ω
15339 Ω
14977 Ω
15108 Ω
14995 Ω
14963 Ω
14894 Ω
15178 Ω

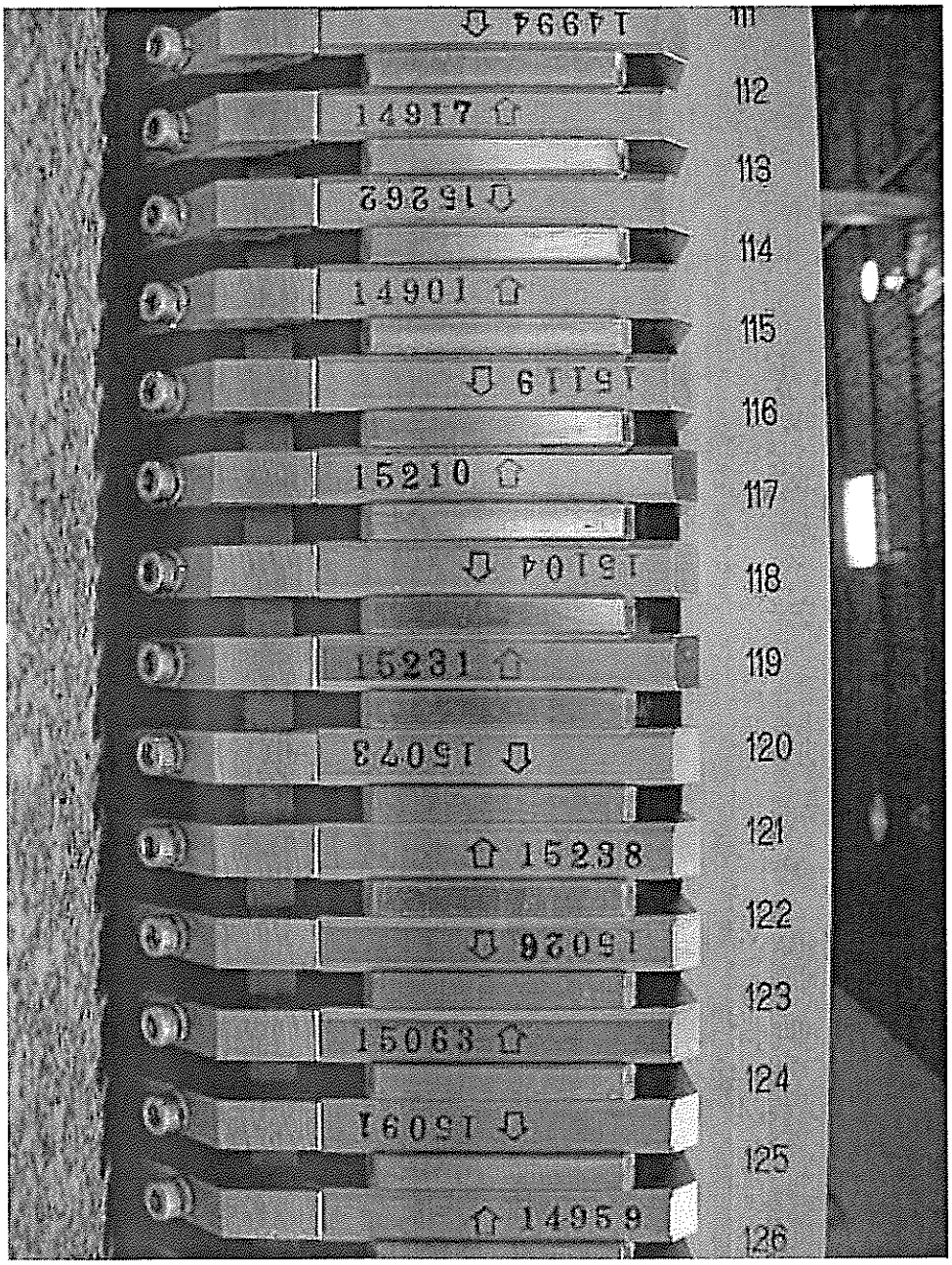
14960
15182
14891
16020
15100
14975
14909
15103
15115
15306
14897
15410
15031
62
63
64
65
66
67
68
69
70
71
72
73
74


15020
70
71
72
15182
73
74
14927
75
76
14937
77
78
79
14945

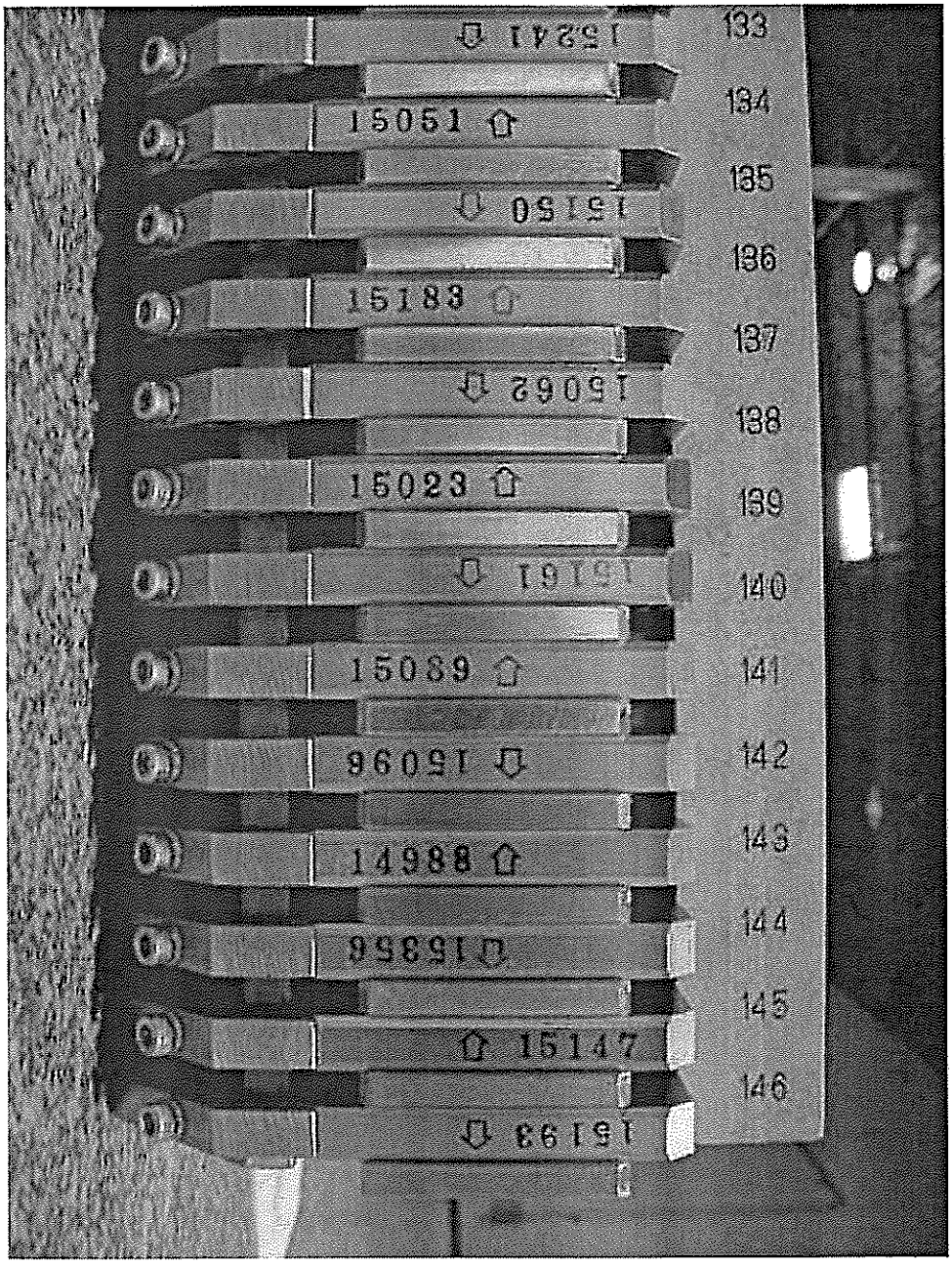
93
15244
92
15139
91
15157
90
15186
89
14900
88
15029
87
15092
86
15082
85
14921
84
14980
83
15217
82
15084
81
14884
80

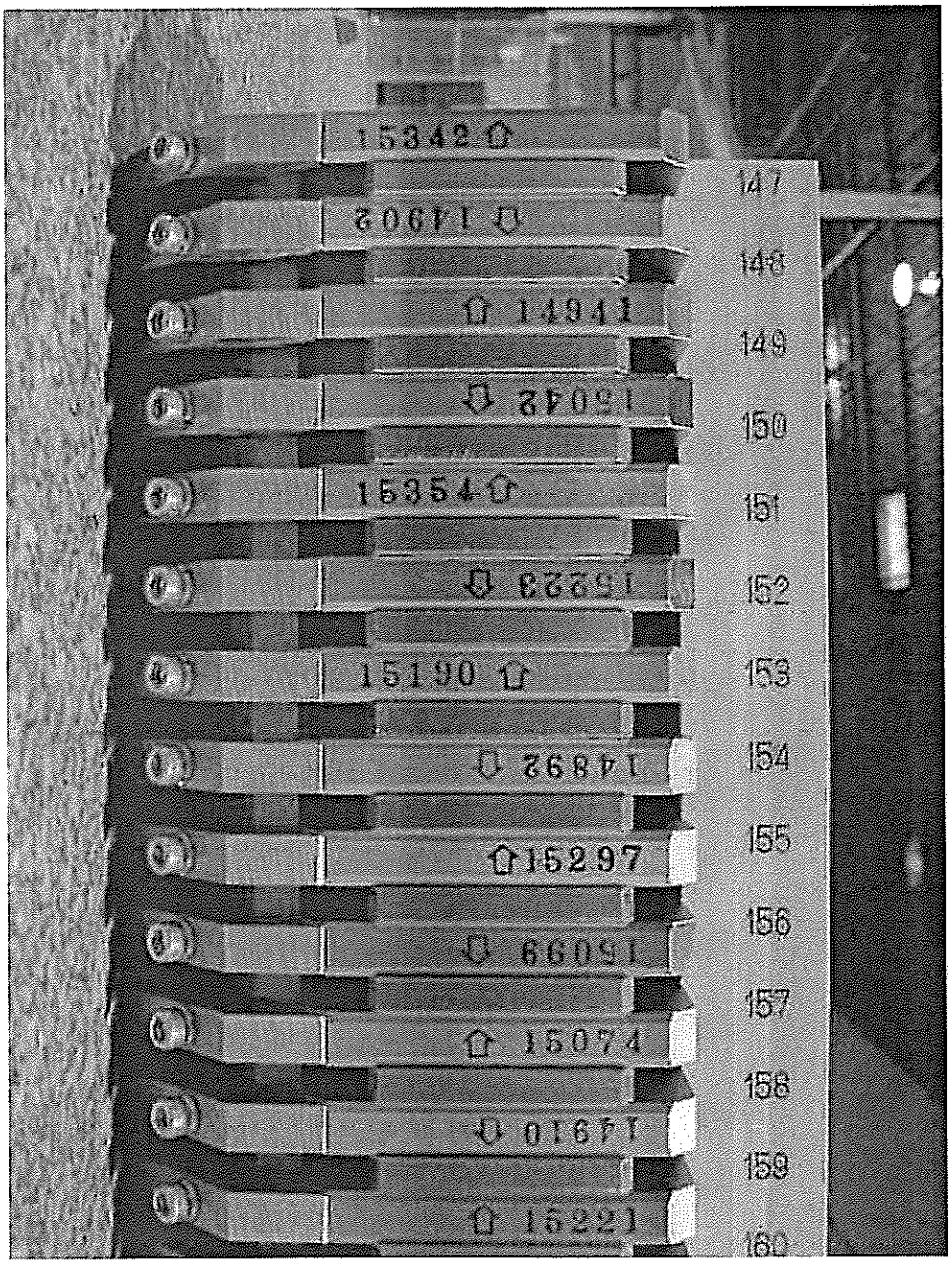
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
15157
15139
15244
15122
15080
14946
14918
15272
14885
15154
15202
15227
15060
15083


15227
15060
15088
15184
15019
15061
15239
14956
15126
15116
14920
14994
14917
16262
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115


111
14994
112
14917
113
15269
114
14901
115
15119
116
15210
117
15104
118
15231
119
15073
120
15238
121
15026
122
15063
123
15091
124
14959
125
126

122
15063
123
16091
124
14959
125
15190
126
15044
127
14888
128
15276
129
14934
130
14906
131
14940
132
14929
133
15241
134
15051
135
15150
136

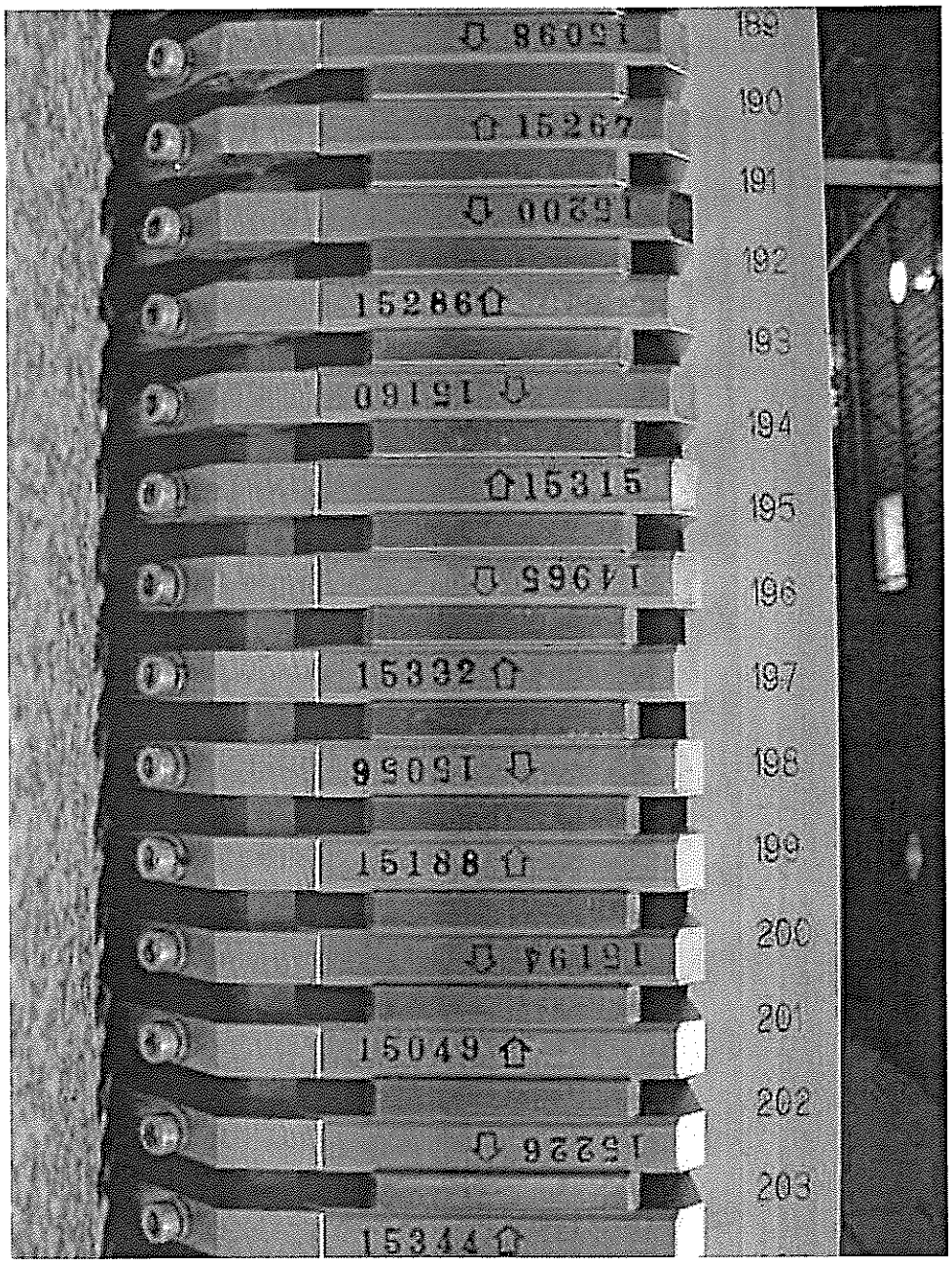

133
15241
134
15051
135
15150
136
15183
137
15062
138
15023
139
15161
140
15089
141
15096
142
14988
143
15856
144
15147
145
15193
146


15342
14902
14941
15042
15354
15223
15190
14892
15297
15099
15074
14910
15221
147
148
149
150
151
152
153
154
155
156
157
158
159
160

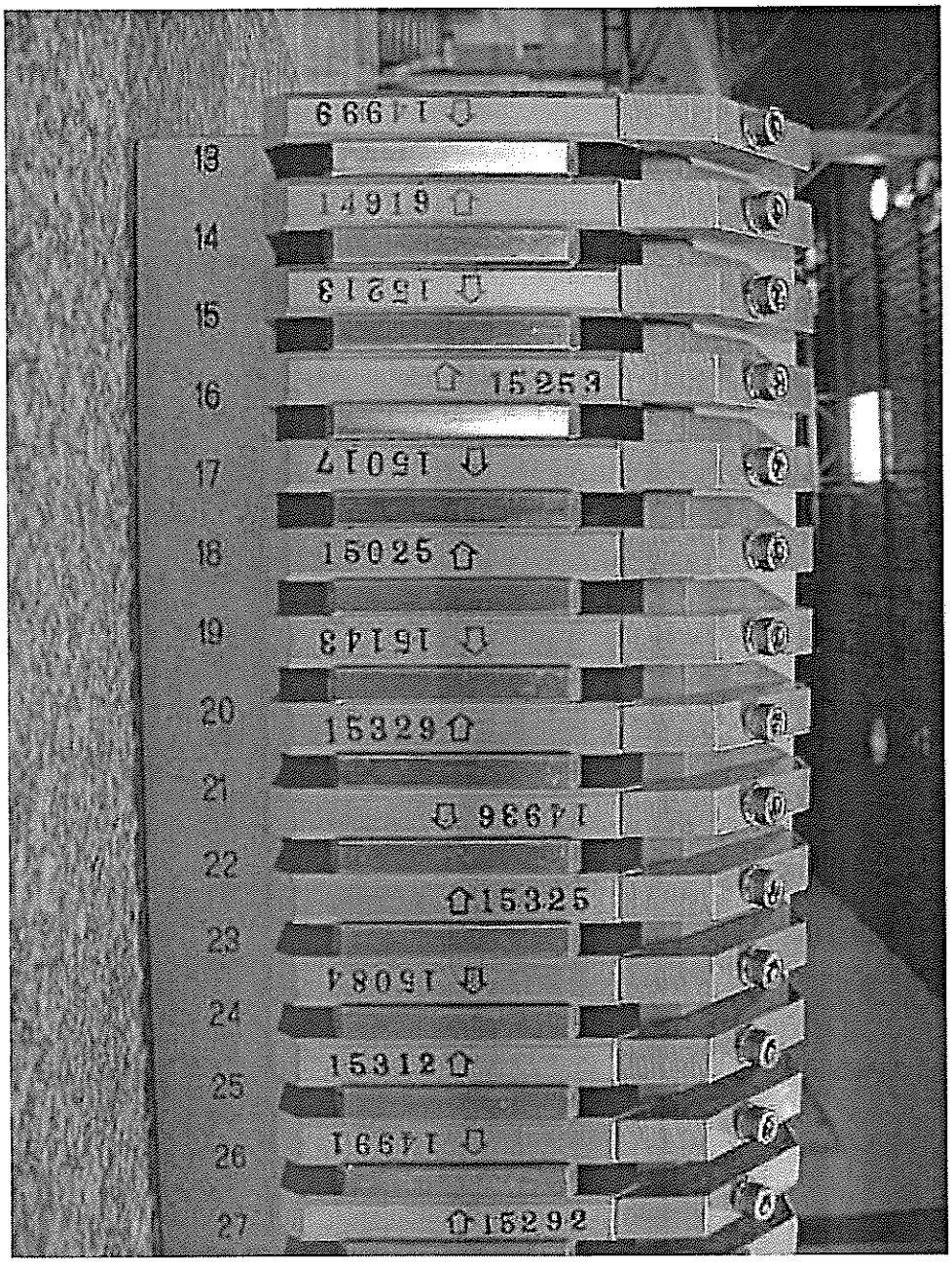
15048
15087
14904
15140
15038
14906
15196
15242
14898
15246
15247
15221
14910
15074
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171

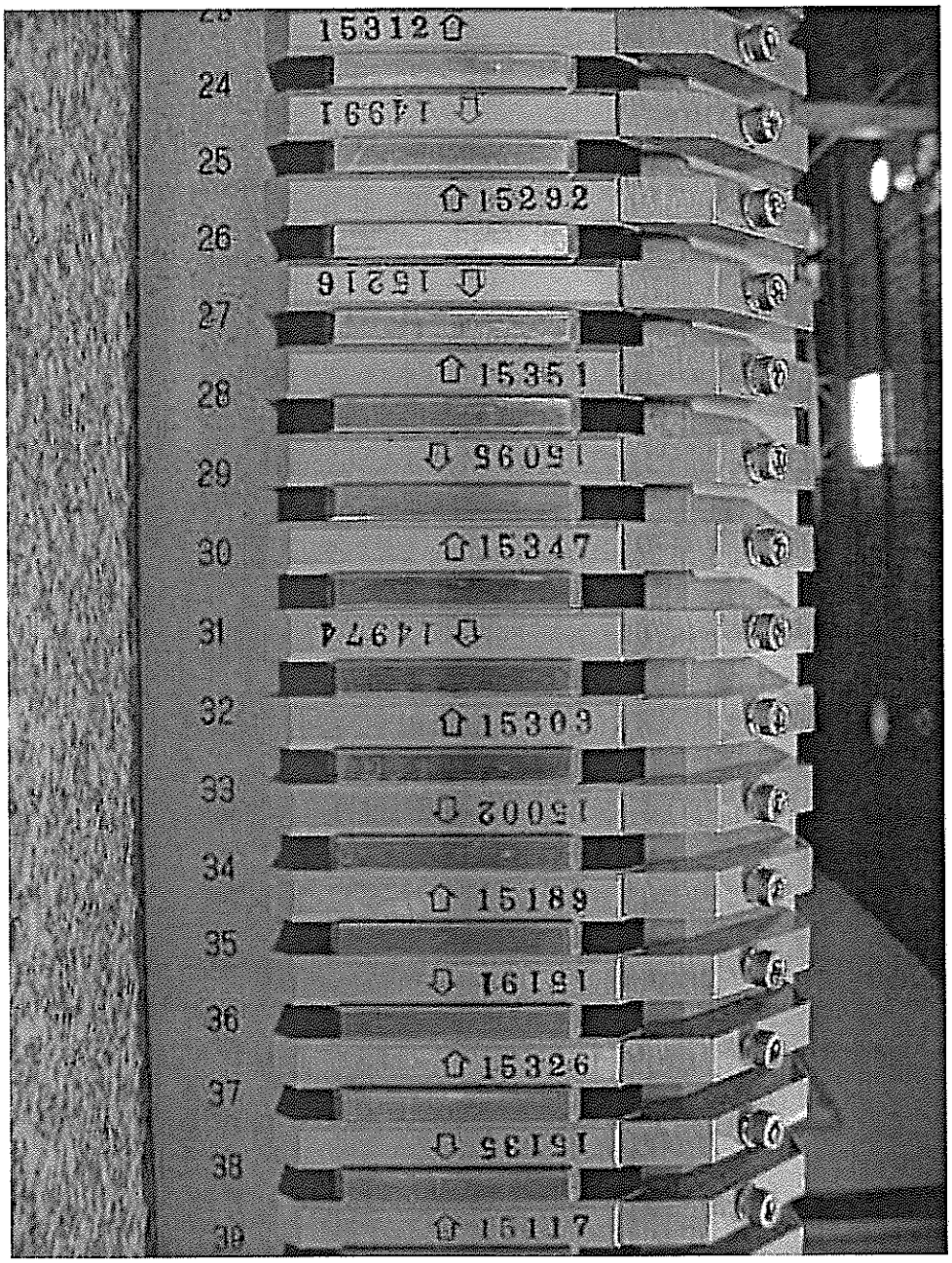
15158
15162
15170
15065
15098
15003
15357
15234
15330
14990
15004
15048
15087
14904

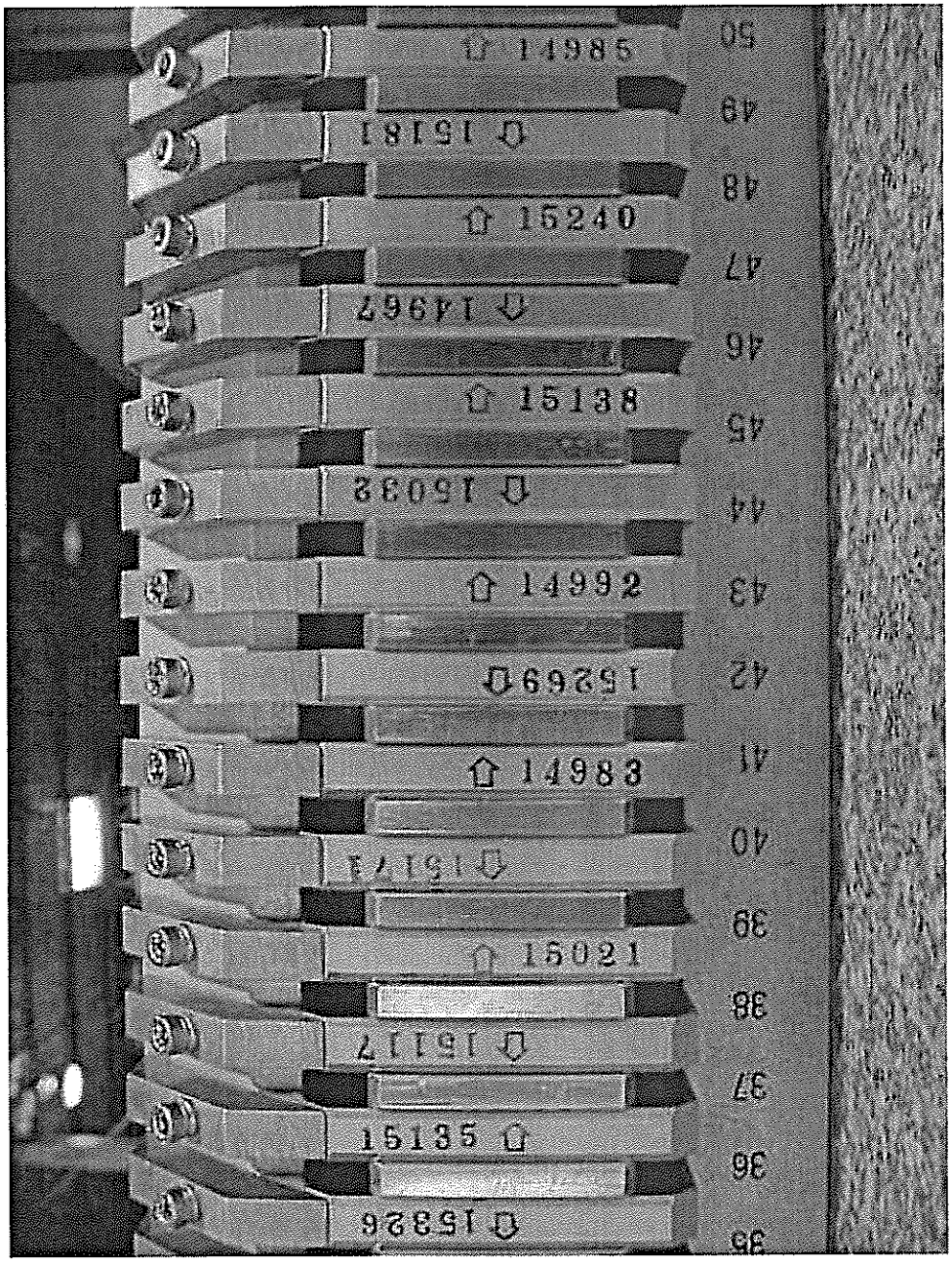
15200
15267
15098
14998
15174
15291
14962
15211
15141
15307
15206
15158
15162
15170
192
191
190
189
188
187
186
185
184
183
182
181
180
179
178


189
190
15267
191
192
15286
193
194
15315
195
196
15332
197
198
199
15188
200
201
15049
202
203
15344

200
201
202
203
204
205
206
207
208
209
210
211
212
213
15049
15226
15344
15292
15273
14939
15859
15151
15015
15121
15268
15198
15352


13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
15253
15025
15329
15325
15312
15292


24
15312
25
14991
26
15292
27
15216
28
15351
29
15095
30
15347
31
14974
32
15303
33
15002
34
15189
35
15191
36
15326
37
15135
38
15117
39


36
15326
36
15135
37
15117
38
15021
39
15174
40
14983
41
15269
42
14992
43
16082
44
15138
45
14967
46
15240
47
15181
48
14985
49
50

15097
60
14922
59
14896
58
15120
57
15146
56
15222
55
15348
54
15022
53
15199
52
14886
51
14928
50
14985
49
15181
48
15240
47
46

15053
71
15077
70
14890
69
14954
68
15006
67
15112
66
14987
65
14996
64
15169
63
15343
62
15249
61
15097
60
14922
59
14896
58

14948
79
14908
78
15152
77
14887
76
14982
75
15187
74
15080
73
72
15283
71
15053
70
15077
69
14890
68

15094
93
15109
92
15175
91
15149
90
15284
89
15177
88
15085
87
15125
86
14971
85
14928
84
15156
83
15192
82
15087
81
80

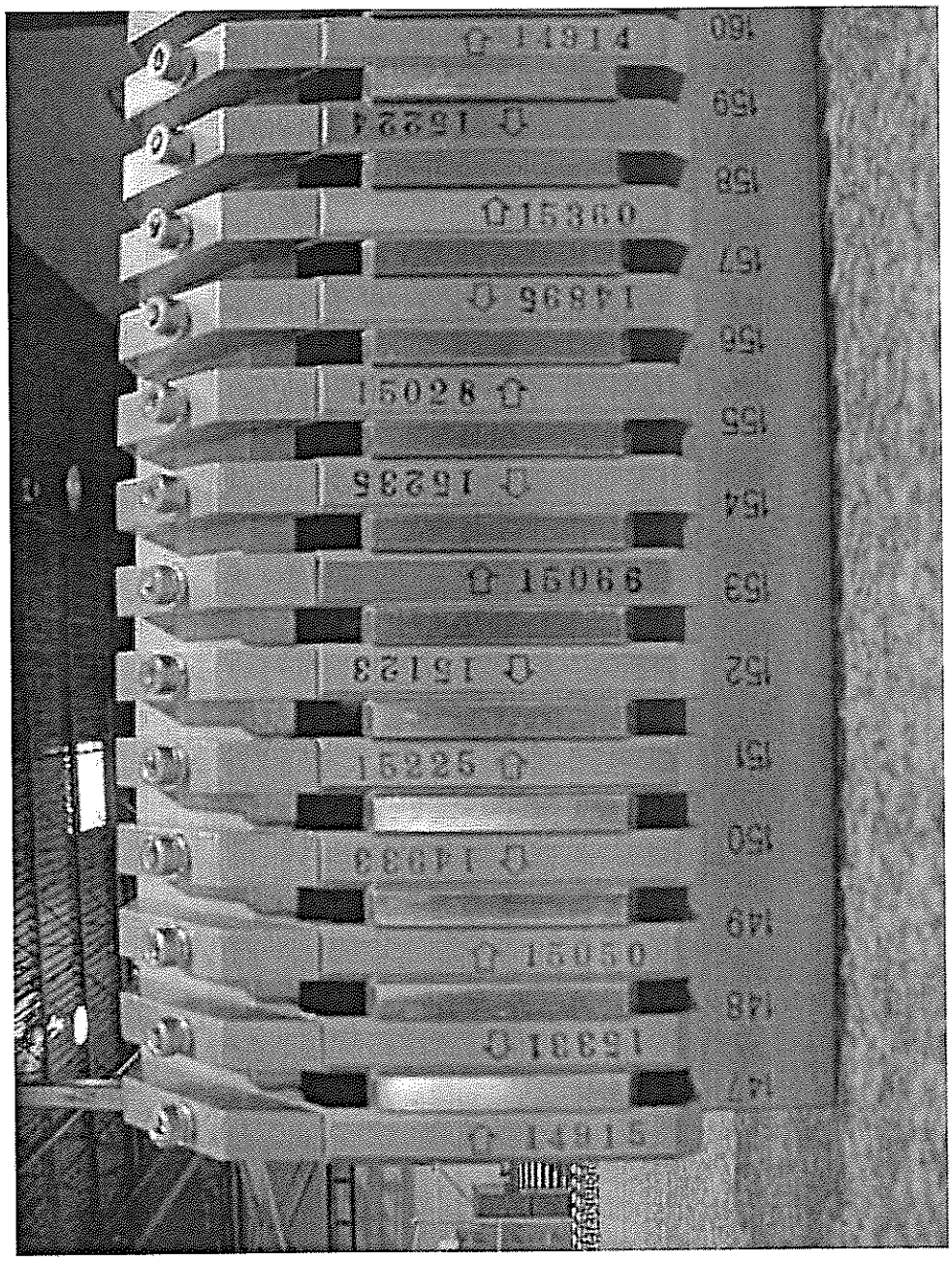
14958
14976
15058
15041
14881
15007
14907
14932
14942
15203
15250
15091
15109
104
103
102
101
100
99
98
97
96
95
94
93
92
91
90

14944
114
14947
113
14912
112
15005
111
16209
110
15153
109
15124
108
15081
107
15011
106
15294
105
15079
104
14958
103
14976
102
15058
101
100

15057
125
14966
124
15180
123
14899
122
15075
121
15024
120
14979
119
15127
118
15118
117
14925
116
15008
115
14944
114
14947
113
14912
112

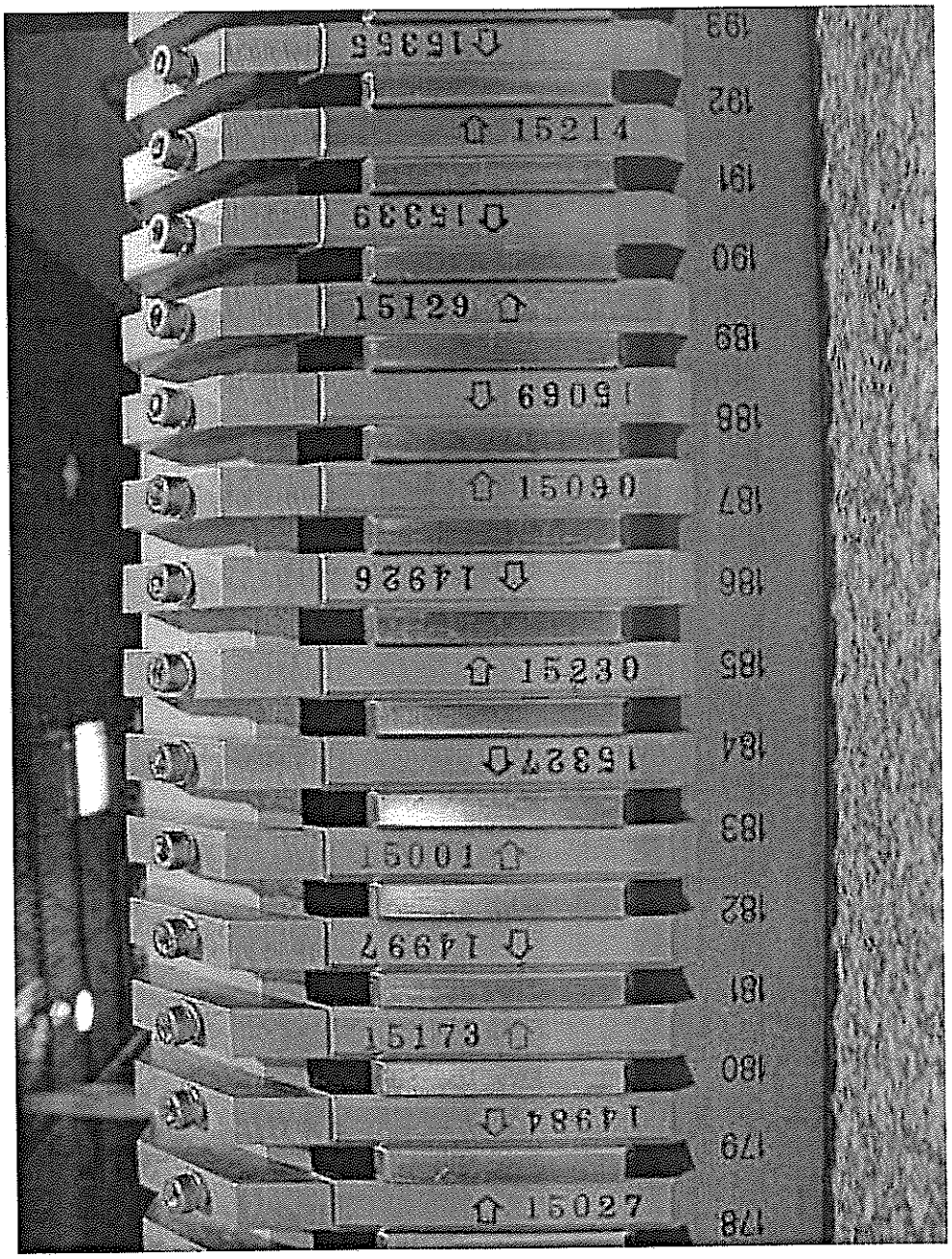
15186
136
15035
135
15062
134
15321
133
14918
132
14903
131
14935
130
15036
129
15248
128
15218
127
14978
126
15067
125
14966
124
15180
123

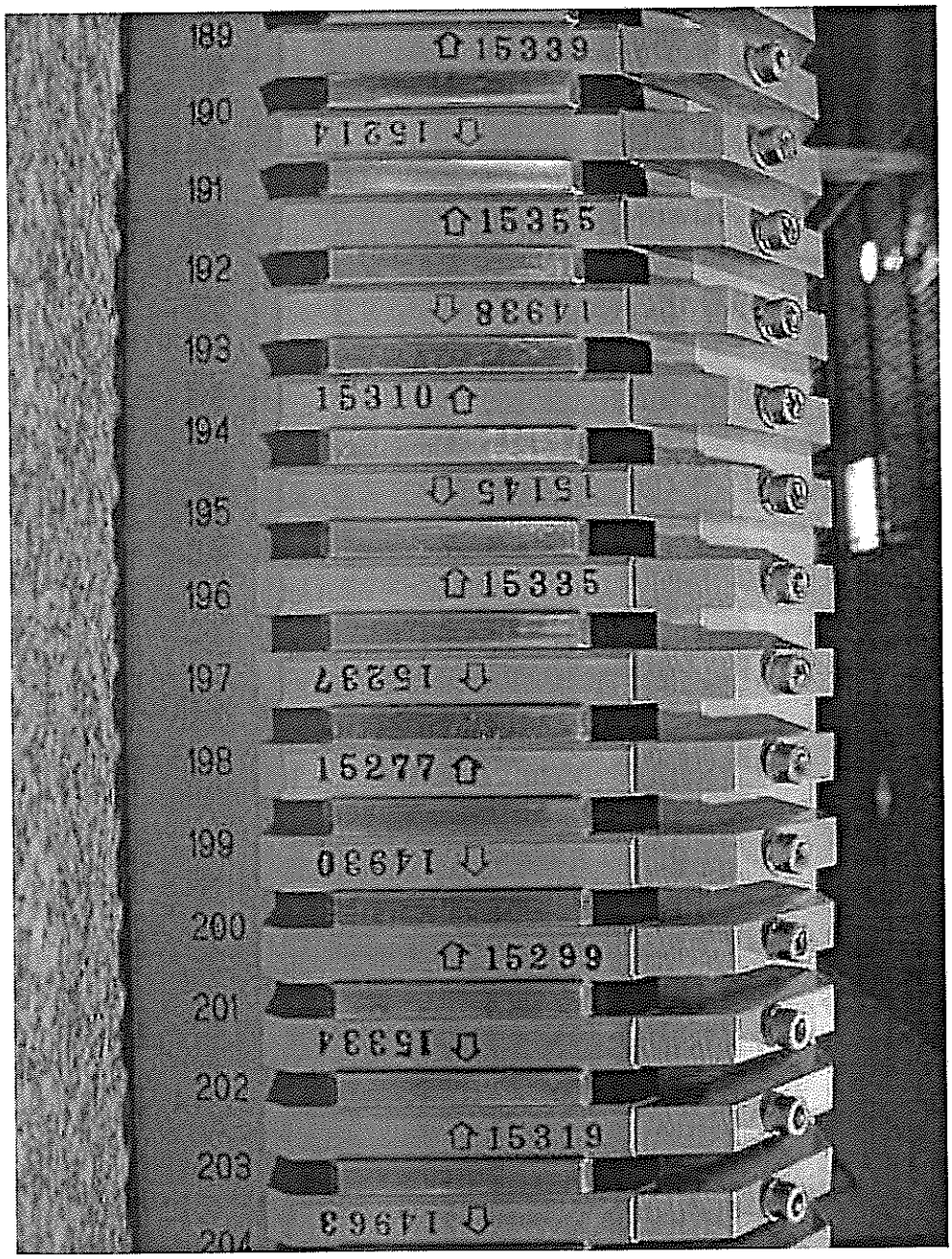
150 10
146
152 04
145
149 69
144
152 01
143
149 72
142
150 54
141
150 14
140
148 93
139
150 12
138
151 11
137
151 36
136
150 35
135
150 62
134



171
15148
170
15033
169
15985
168
15179
167
15187
166
15051
165
15271
164
15282
163
15304
162
15228
161
15101
160
14914
159
15224
158
15360
157
156

15173
14984
15027
15207
14964
14924
15219
15328
15078
15261
15114
15148
15033
15285
182
181
180
179
178
177
176
175
174
173
172
171
170
169
168
167


15355
15214
15339
15129
15069
15090
14926
15230
15327
15001
14997
15173
14984
15027
193
192
191
190
189
188
187
186
185
184
183
182
181
180
179
178


189
15339
190
15211
191
15355
192
14988
193
15310
194
15145
195
15335
196
15237
197
15277
198
14930
199
15299
200
15331
201
15319
202
14963
203
204

15040
213
15341
212
15059
211
15302
210
15071
209
15287
208
14993
207
15263
206
15220
205
15265
204
14963
203
15319
202
15334
201

15258
15030
15314
14973
15318
15107
15264
15185
15298
14981
15350
15110
214
215
216
217
218
219
220
221
222
223
224
225

15258
223
15030
224
15314
225
14973
226
15318
227
15107
228
15264
229
15185
230
15298
231
14981
232
15350
233
15110

15039
225
15293
224
14970
223
15278
222
15245
221
15295
220
15000
219
15255
218
15088
217
15275
216
14961
215
15281
214