Murder: Modeling the problem

Variables:

```
% the suspects
r: Ablaze ;          0
r: Burner ;          1
r: Curious ;         2
r: Dulles ;          3
r: Evilson ;         4


% the evidence objects
var r: pistol;       5
var r: umbrella;     6
var r: cigarette;    7
var r: diary;        8
var r: letter;       9
array[r] of var r: objects = [pistol, umbrella, cigarette, diary, letter];

% the actions
var r: argue;        10
var r: leave;        11
var r: rang;         12
var r: walk;         13
var r: murder;       14
array[r] of var r: actions = [argue, leave, rang, walk, murder];

% the motives
var r: harassed;     15
var r: abandoned;    16
var r: sacked;       17
var r: promotion;    18
var r: hate;         19
array[r] of var r: motives = [harassed, abandoned, sacked, promotion, hate];


% additonal clues
constraint
  cigarette = Burner /\      1 = 7
  letter != Curious /\       2 != 9
  sacked != letter /\        9 != 17
  pistol != Curious /\       2 != 5
  hate != Curious /\         2 != 19
  hate = diary /\            8 = 19
  umbrella = leave /\        6 = 11
  walk = Dulles /\           3 = 13
  argue = promotion /\       10 = 18
  harassed = Ablaze /\       0 = 15
  letter != Ablaze /\        0 != 9
  murder != Ablaze /\        0 != 14
```

2 != 8

```
all_different(actions) /\
all_different(objects) /\
all_different(motives)
```