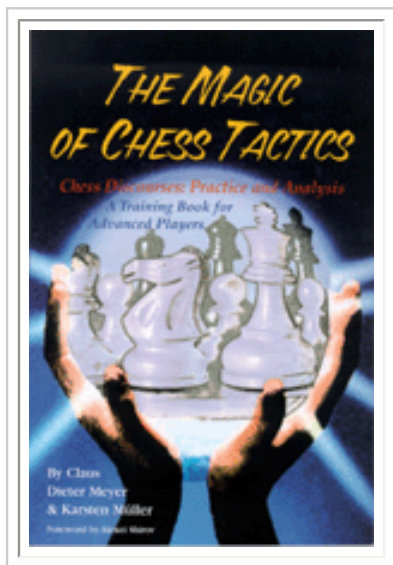




## COLUMNISTS

### *Endgame Corner*

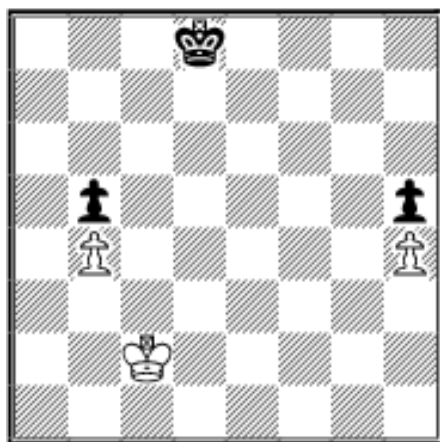
Karsten Müller



## The Mystical Sister Squares

The theory of corresponding squares (sometimes called sister squares) seems to be mystical to many players. Like an excursion to the magical world of the sorcerers or to mathematics. But the subject is not that difficult. You just need to sit down with the confidence that you will be able to understand it and concentrate hard to understand each step. This is really important: Please repeat each step until you have really understood its point. I will take a non-traditional approach here by choosing an example which could be solved by just applying the rules of (distant) opposition and hope that makes it easier for you. But you must follow the steps here. Don't cheat by only remembering the techniques of converting the opposition:

### 38.01 After Capablanca



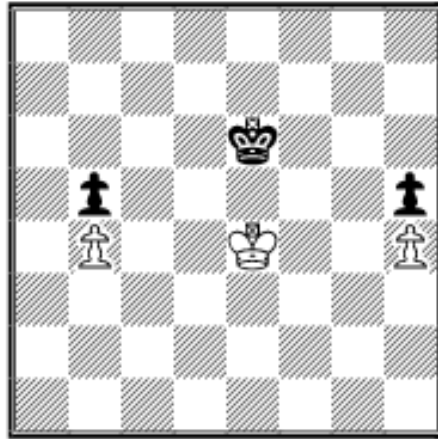
All pawns are blocked, so it is only a battle of the kings and the theory is applicable. The first step is always to determine the key squares, defined as follows: when the attacking king reaches a key square, then it wins no matter who is on move and no matter where the defending king is

(counterattacks are not allowed in this case. In reality you have to make sure that there is no counterattack, of course). So, if White's king could fly, where would it land? I hear you say b6 and you are of course right. But this is already too far. The border of the key squares is of



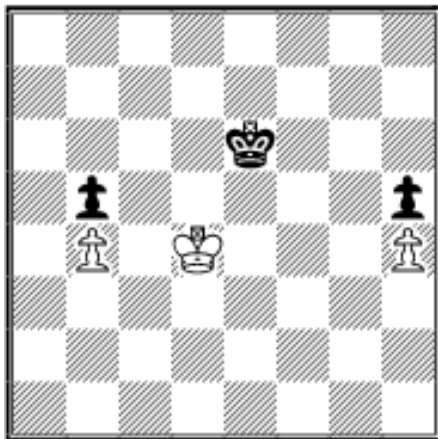
interest. So I suppose that your second guess is c5, d5, e5 and g5. To check that we must analyse the position:

### 38.02



with Black to move. White can reach one of your proposed key squares. So does he win? This has to be calculated: **1...Kd6** (1...Kf6 2.Kf4 Kg6 3.Ke5 and White wins as the pawn h5 falls: 3...Kg7 4.Kf5 Kh6 5.Kf6 Kh7 6.Kg5 Kg7 7.Kxh5+-) **2.Kd4!** (2.Kf5? blows it: 2...Kd5 3.Kg5 Kc4 4.Kxh5 Kxb4 5.Kg5 Ka3=) **2...Kc6**

(2...Ke6



loses as well as White queens with check after 3.Kc5 Kf5 4.Kxb5 Kg4 5.Kc4 Kxh4 6.b5 Kg3 7.b6 h4 8.b7 h3 9.b8Q++-) **3.Ke5 Kc7 4.Kd5 Kb6 5.Kd6 Kb7 6.Kc5 Ka6 7.Kc6+-**

As 38.02 with Black to move is drawn we can conclude that the right key squares are found. Now

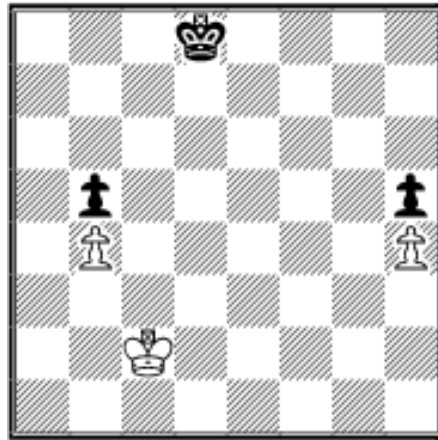
you should determine the corresponding squares. In the following I assume always that Black is on move. On which square must Black's king stand, if White's is on d4? Right on d6 as we have seen in 38.02. Similarly, e4 corresponds to e6 and f4 to f6. So d4 and d6 get the number 1, e4=e6=2 and f4=f6=3. That was relatively easy. Now it is best to look at squares, which have access to as many numbered squares as possible. So e7 is the first natural candidate. As it has access to 1, 2 and 3, e3 is the corresponding square and both are numbered 5. Similarly d7=d3=4 and f7=f3=6. The numbering scheme is of course arbitrary. You also say d7=d3=5 and continue accordingly. But to solve 38.01 this is still insufficient. So we must continue and get d8=d2=7, e8=e2=8

and  $f8=f2=9$ . Now we have the solution and we remember the following two guidelines:

**The attacking king must always move in such a way that Black can not reach the corresponding square (either because it is already on it or because it can't fly).**

If possible the attacker should approach the key squares.  
Figure out the solution yourself, before you read on:

### 38.03



Black's king is on  $d8=7=d2$  so the first move is easy: **1.Kd2! Ke8**

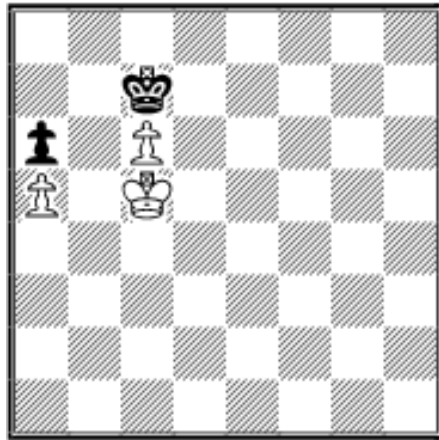
$1...Kc7$  is not in the system, but the king can reach  $d8=7$ ,  $d7=4$  or  $d6=1$ . So we could move to  $e1$ ,  $e2$  or  $e3$ . To determine the square you should now use the second guideline, which says that you should approach the key squares:

**2.Ke3! Kd6 3.Kd4!+-** and it is over (see 38.02).

**2.Ke2!** According to the system **2...Kf8** now you can choose between  $f2$ ,  $d2$  and  $d3$ . So you consider the second guideline and play **3.Kd3!** approaching the key squares **3...Ke7 4.Ke3!** According to the system **4...Kf7** ( $4...Ke6$   $5.Ke4$  +- as you reach a key square; see 38.02.) Now you can choose between  $f3$ ,  $d3$  and  $d4$  (looks familiar, doesn't it?) and must consider guideline no.2, which gives **5.Kd4! Kf6** Now you reach a key square and win: **6.Kc5 Kf5 7.Kxb5 Kg4 8.Kc4 Kxh4 9.b5 Kg3 10.b6 h4 11.b7 h3 12.b8Q++-**

But what happens if more than one square corresponds to another square? It depends whether the squares are connected or not (connected means that the king can move from one to the other in one go). This is illustrated as follows (please don't apply your knowledge about triangulation now):

## 38.04



As usually in this theory you start with the determination of the key squares. b6 is obviously one, but where is the other (is there any)? In a way d7 is the other, but you can also look at it this way: if White can meet 1...Kd8 with 2.Kd6 then he wins by reaching d7 after 2...Kc8 3.c7 Kb7 4.Kd7+-.

So  $c7=c5=1$  and  $d8=d6=2$  are corresponding squares. From  $d5=3$  White has access to both of them, so  $c8=3$  corresponds. I hear you asking: So far, so good, but what now? Now you should just at other square bordering the already numbered ones. So c4 and d4 come into play. White's king can go to  $c5=1$  and  $d5=3$ , so corresponding square for Black must border c7 and c8. Only b8 and d8 satisfy this condition, but they are not connected! Black's king can't fly from one to the other and the solution is found:

**1.Kd5 Kc8 2.Kd4 Kd8**

For 2...Kb8 3.Kc4 Kc8 4.Kd5 see the main line.

**3.Kc4** and Black is in a fatal zugzwang as he can't fly to b8  
**3...Kc8 4.Kd5 Kc7**

4...Kd8 5.Kd6 Kc8 6.c7 Kb7 7.Kd7 Ka7 8.Kc6 (Of course not 8.c8Q?? stalemate.) 8...Ka8 9.c8Q+ Ka7 10.Qb7#

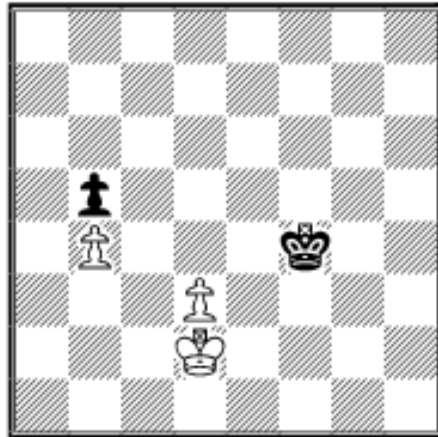
**5.Kc5 Kc8 6.Kb6 Kb8 7.Kxa6 Kc7 8.Kb5** (8.Ka7?? Kxc6=)  
**8...Kb8 9.Kb6 Kc8 10.a6 Kb8 11.c7+ Kc8 12.a7+-**

To be continued next month.

**Exercises (Solutions next month)**

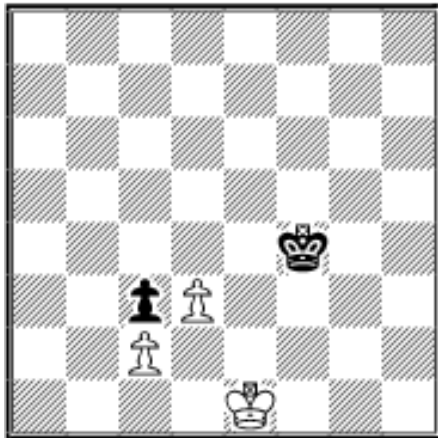
Solve the following exercises using the theory of

corresponding squares. Determine the key squares, the corresponding squares and deduct the solution from this information:



**E38.01 Grigoriev** *K novoi armii* 1920

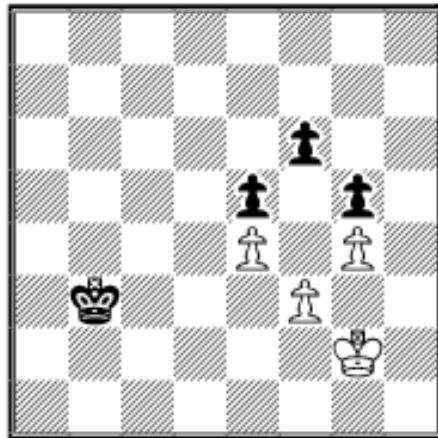
White to move



**E38.02 Grigoriev** *Isvestia* 1921

Black to move

Hint: The shortest route between the key squares is of importance and sometimes a defense on the key squares is possible.

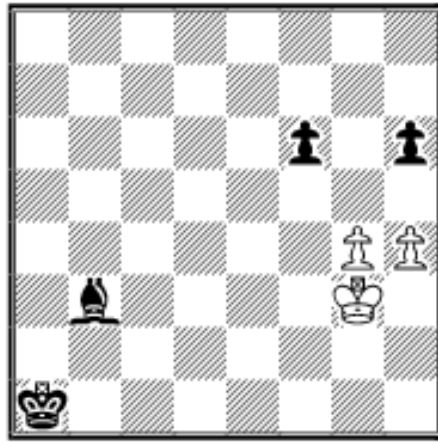


**E38.03 Instructive Example**

How to evaluate this position with White to move?

[Solution to last month's exercise](#)

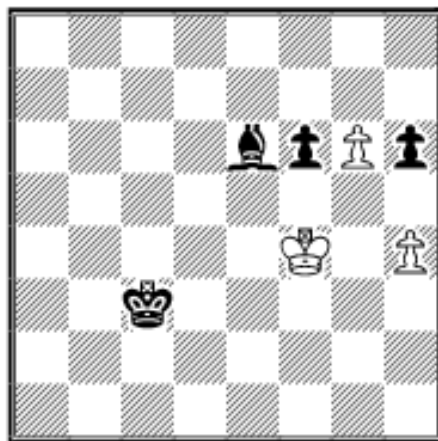




**E37.01 M.Stejskal (1671) - S.Abel (1761) Klubturnier (Championship) of the Hamburger SK 2003**

White could have drawn as follows as Sasha Abel has proved:  
**1.Kf4?**

1.g5! Kb2 (1...h5 2.gxf6 Kb2 3.Kf4 Kc3 4.Kg5 Bf7 5.Kh6 Kd4 6.Kg7 Bb3 7.f7 Bxf7 8.Kxf7 Ke5 9.Ke7 Kf5 10.Kd6 Kg4 11.Ke5 Kxh4 12.Kf4=; 1...fxg5 2.hxg5 h5 3.g6 Kb2 4.Kh4=; 1...hxg5 2.hxg5 f5 3.Kf4 Be6 4.g6 Kb2 5.g7 Kc3 6.g8Q Bxg8 7.Kxf5=; 1...Bf7 2.gxf6 Kb2 3.Kf4 Kc3 4.Ke5 Kd3 5.Kd6 Ke4 6.Ke7 Bh5 7.f7 Bxf7 8.Kxf7 Kf5 9.h5 Kg5 10.Ke6 Kxh5 11.Kf5=; 1...f5 2.g6 Kb2 3.h5 Kc3 4.Kf4 Be6 5.g7 Kd4 6.g8Q Bxg8 7.Kxf5 Bf7 8.Kf6 Bxh5 9.Kg7=) 2.Kf4! (2.g6? h5 3.Kf4 Be6 4.g7 Kc3 5.g8Q Bxg8 6.Kf5 Kd4 7.Kxf6 Ke4 8.Kg5 Bf7+; 2.gxf6? Kc3 3.Kf4 Kd4 4.Kf5 Bf7 5.Kf4 Kd5 6.Kf5 Kd6 7.Kf4 Ke6+; 2.gxh6? Bc2 3.Kf4 Kc3 4.h5 Kd4 5.h7 Bxh7 6.h6 Kd5 7.Kg4 Ke4+) 2...Kc3 (2...Bf7 3.gxf6 Kc3 4.Ke5 Kd3 5.Kd6 Ke4 6.Ke7 Bb3 7.f7 Bxf7 8.Kxf7 Kf5 9.h5 Kg5 10.Ke6 Kxh5 11.Kf5=) 3.g6! (3.gxh6? Bc2+; 3.gxf6? Kd4 4.Kf5 Bf7+; 3.Kf5? fxg5 4.hxg5 h5 5.g6 Bc2+ 6.Kg5 Bxg6+) 3...Be6



4.h5! (4.g7? h5 5.g8Q Bxg8 6.Kf5 Kd4 7.Kxf6 Ke4+) 4...Kd4 5.g7! Kd5 6.g8Q! Bxg8 7.Kf5 Bf7 8.Kxf6 Bxh5 9.Kg7 Ke6 10.Kxh6=

**1...Bc2! 2.g5 fxg5+ 3.hxg5 h5 4.Ke5 Kb2 5.Kf4 Kc3 6.Kg3 Kd4 7.Kh4 Bg6 8.Kg3 Ke4 9.Kh4 Kf5 10.Kg3 Kxg5 11.Kh3 h4 12.Kg2**

**Kg4 13.Kh2 h3 14.Kh1 Kg3 0-1**

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