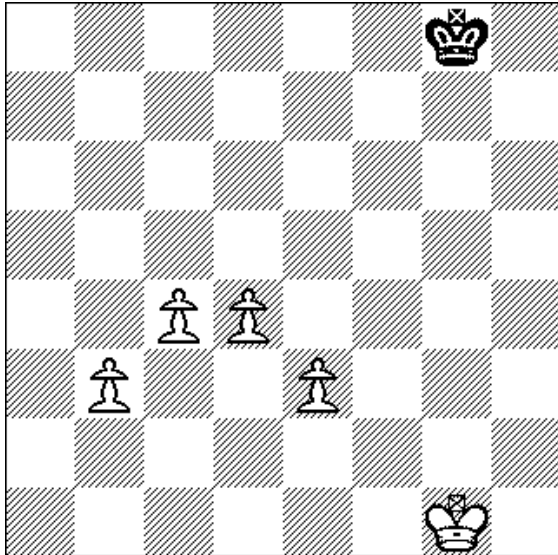
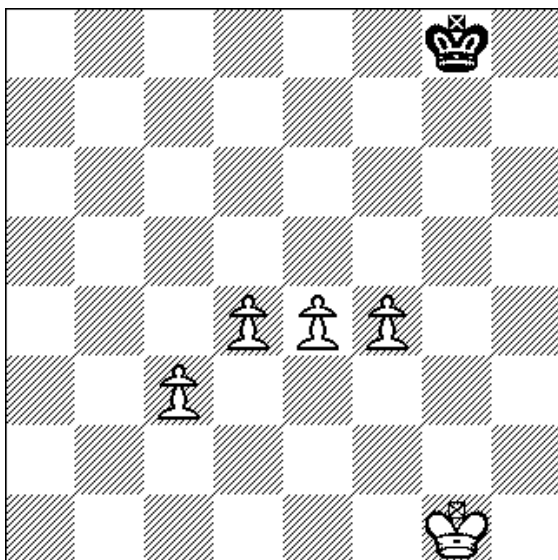


Compact pawn structures

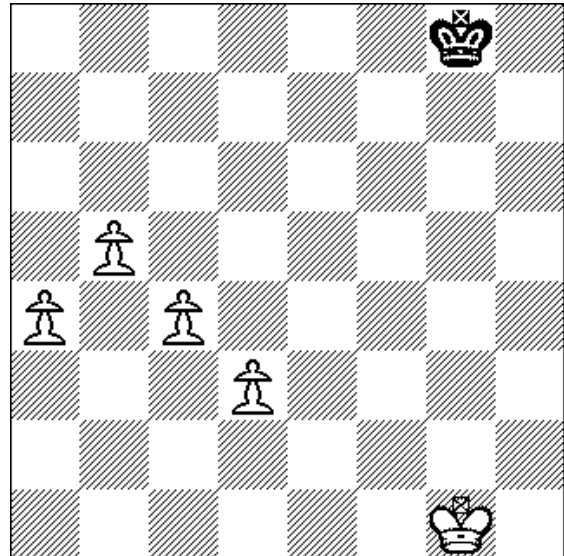
Definition: compact pawn structures are larger groups of at least 2 twice aligned, twice defended, defended aligned, defending aligned or long chain pawns



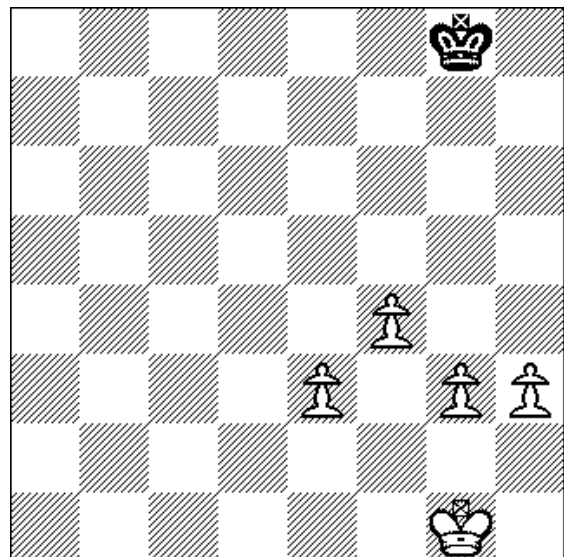
the b3,c4,d4 and e3 pawns are a larger group of 2 defended aligned pawns, c4 and d4



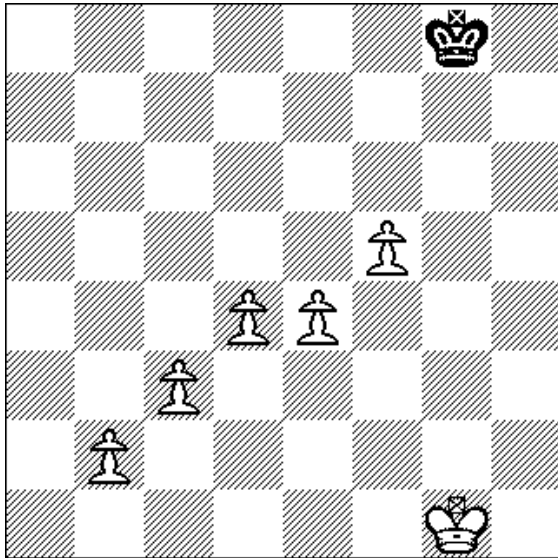
this time, the larger group of pawns includes one defended aligned pawn, d4, and one twice aligned pawn, e4



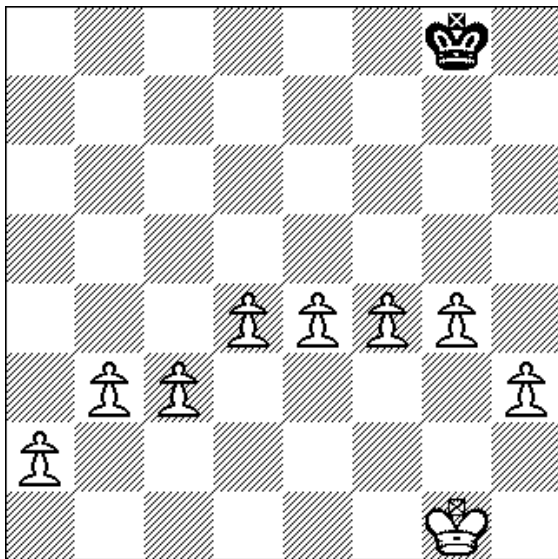
the larger group of pawns includes one twice defended pawn, b5, and one long chain pawn, c4



one twice defended pawn, f4, and one defending aligned pawn, g3



larger compact group of pawns, including one long chain pawn, c3, one defended aligned pawn, d4, and one defending aligned pawn, e4



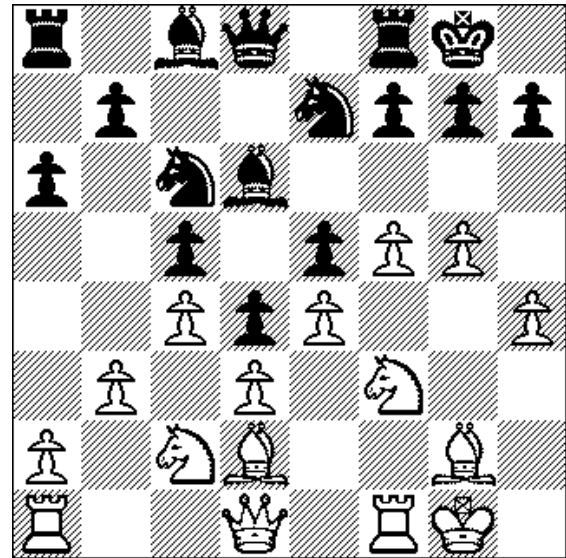
very large compact pawn structure, consisting of 3 defended aligned pawns, b3, d4 and g4, 2 twice aligned pawns, e4 and f4, and one defending aligned pawn, c3

Value: such structures get their very nice bonus through the already existing bonus points for twice defended pawns, twice aligned pawns, defended aligned pawns, defending aligned pawns and long chain pawns. The larger the structure, the bigger the cumulative bonus.

Additional information: the bonus is given for the following reasons:

- the pawns co-exist as a compact mass, supporting each other, and thus being less vulnerable to enemy attacks
- the pawns are able to move forward in harmony and mutual support, posing bigger problems to the opponent in terms of stopping their advance
- the larger group very efficiently restricts enemy pieces' mobility, the larger the group, the more pronounced the effect, as the pawns almost leave no holes, undefended squares, which enemy pieces could use to penetrate

Such larger structures are very efficient both in attack and defence.



white has a compact very large pawn structure, including 5 connecting pawns: b3, long chain pawn, c4, twice defended pawn, e4, long chain pawn, f5 and g5, defended aligned pawns.

Much in contrast, although many humans and engines might not be quite able to realise it, black has only 2 connecting pawns: d4, which is twice defended, and g7, which is twice aligned.

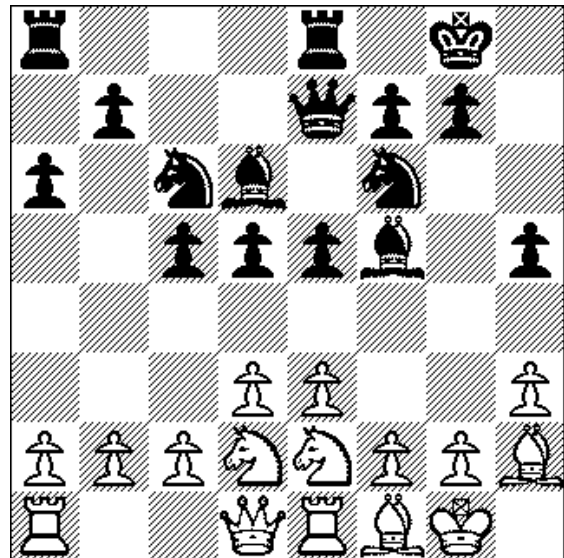
In this way, white enjoys big advantage in terms of much more compact pawn structure. This is certainly decisive, and white has excellent winning chances.

Please note, how efficient the connecting white pawns on the king side are. f5 and g5 pawns are defended and strong, the g5 pawn supports a possible f5-f6 push, the f5 pawn, a possible g5-g6 push, those pawns plus the e4 long chain one considerably limit the mobility of a large pool of black pieces.

The compact mass of white pawns on the queen side, on the other hand, is very handy in preventing possible quick black counterplay there, as the b3 and c4 defended pawns are ready for any enemy pawn assault, just waiting and gaining time, as any enemy pawn attack, for example after b7-b5, or a6-a5-a4, is quite unsubstantial, as captures like b5-c4 or a4-b3 will only reproduce the attacked defended pawn after a recapture.

The structure as a whole also very much simulates closedness of the position, although there are just a few blocked pawns. The larger pawn structures are simply very much conducive to later fuller closure or at least will ward off for quite some time possible enemy tries at opening the game.

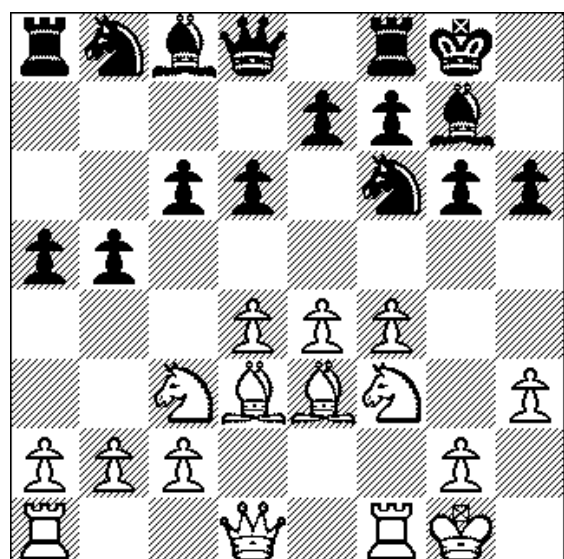
For this very same reason, the simulated closedness, the white king, although playing completely without pawn shelter, is feeling extremely well and healthy, with enemy threats just a distant reminder. So, larger compact groups of pawns are also extremely beneficial to king safety. This is a subtle king safety term, allowing for successful play with almost completely insecure king.



compact pawn structures are very useful in defence too.

Although black has substantial lead in development, and very robust pawn center, the game is about equal. The reason is that it is very difficult to break through the white defensive bastion of connecting pawns. Black has just a single connecting pawn, d5, which is twice aligned, while white enjoys the presence of 6! such pawns: b2, which is twice aligned, c2, which is defending aligned, d3, which is defended aligned, e3, similarly so, f2 and g2 defending aligned.

This compact mass of pawns wards off any possible enemy piece penetration, so black will have to work very hard to find a potential exploitable weakness.



one last example for utter enjoyment.

In spite of the enormous lead in development and massive center, white is actually a bit worse. How many engines/humans would assess the position in this way?

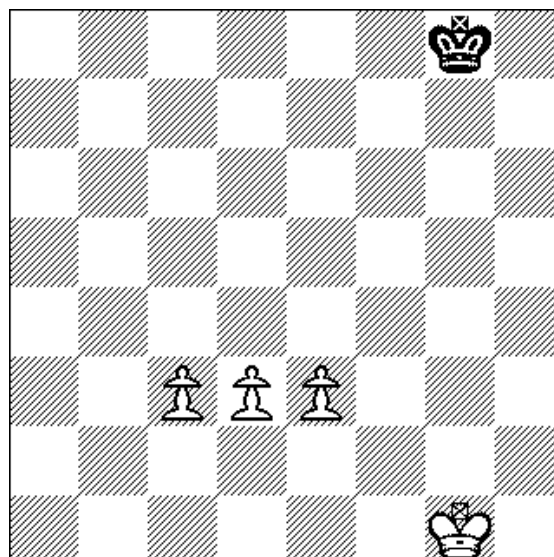
Fact is, that white's pawns are quite broken-down in different very small groups, while black has a great number of interconnecting pawns. Look at the h7-g6-f7-e7-d6-c6-b5-a5 weaving snake! It is so inseparable and so powerful. I guess this time you will be able to make out yourselves what the 6 connecting black pawns are. This structure threatens attack on the queen side, counterplay in the center, significantly limits the mobility of the white pieces, and would not allow easy access to its king.

While white will have to spend quite some time searching for an exploitable weakness, black will be able to develop, and the white lead in development will disappear in and of itself. In this way, a single pawn feature turns the whole game around.

Frequency: very frequent

Twice aligned pawns

Definition: a pawn that has 2 other own pawns next to it on the same rank on adjacent files



twice aligned pawn on d3

Value: bonus valid in terms of psqt

8	0	0	0	0	0	0	0	0
7	0	30	35	40	40	35	30	0
6	0	19	22	25	25	22	19	0
5	0	10	15	20	20	15	10	0
4	0	6	8	10	10	8	6	0
3	0	3	4	5	5	4	3	0
2	0	1	2	3	3	2	1	0
1	0	0	0	0	0	0	0	0
	a	b	c	d	e	f	g	h

twice aligned pawn psqt(mg)

8	0	0	0	0	0	0	0	0
7	0	20	22	25	25	22	20	0
6	0	12	14	16	16	14	12	0
5	0	7	10	13	13	10	7	0
4	0	4	5	7	7	5	4	0
3	0	2	3	4	4	3	2	0
2	0	1	2	3	3	2	1	0
1	0	0	0	0	0	0	0	0
	a	b	c	d	e	f	g	h

twice aligned pawn psqt(eg)

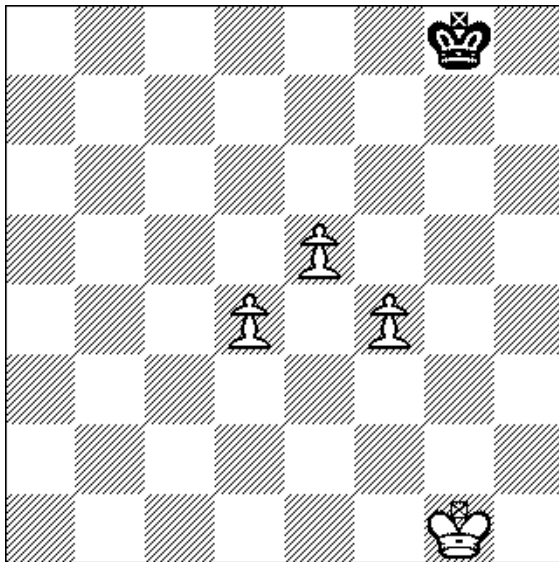
Additional information: twice aligned pawns are an extremely powerful asset. They should get a beautiful bonus in view of a variety of reasons:

- very nice compact structure; no matter what pawn of the three moves ahead, the structure as a whole still remains very flexible and very valuable. Upon moving one square upwards, the twice aligned pawn becomes twice defended one, another asset, while if one of its neighbours goes forward one square, the twice aligned pawn is transformed into a defending aligned pawn, also an asset
- massive control of consecutive squares on the rank in front
- beautiful king shelter feature, if available
- if both the twice aligned pawn, as well as its neighbours are passers, they represent a tremendous force on their march to the square of promotion

Frequency: frequent

Twice defended pawn

Definition: a pawn defended by 2 own pawns



twice defended pawn on e5

Value: bonus valid in terms of psqt

8	0	0	0	0	0	0	0	0
7	0	30	40	50	50	40	30	0
6	0	20	25	30	30	25	20	0
5	0	10	15	20	20	15	10	0
4	0	5	7	9	9	7	5	0
3	0	2	3	4	4	3	2	0
2	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
	a	b	c	d	e	f	g	h

twice defended pawn psqt(mg)

8	0	0	0	0	0	0	0	0
7	0	20	25	33	33	25	20	0
6	0	13	17	20	20	17	13	0
5	0	7	10	13	13	10	7	0
4	0	3	5	6	6	5	3	0
3	0	2	3	4	4	3	2	0
2	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
	a	b	c	d	e	f	g	h

twice defended pawn psqt(eg)

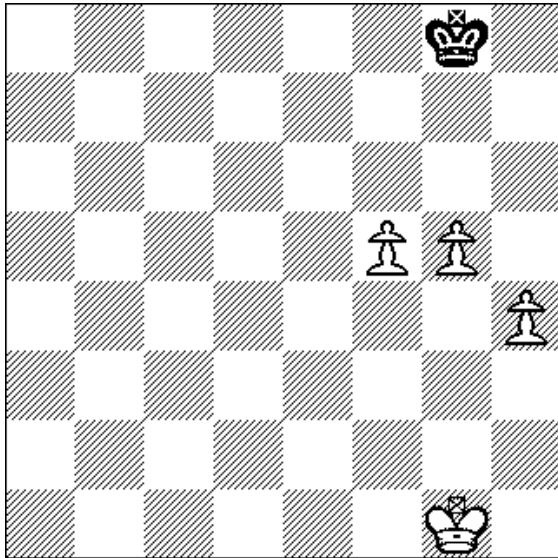
Additional information: twice defended pawns get their well-deserved bonus due to a couple of weighty factors:

- they are extremely strong, meaning also durable
- they are flexible, in case one of the pawns defending the twice defended pawn moves ahead, the whole structure will still be valuable, with the twice defended pawn becoming defended aligned and still connected to 2 other own pawns
- of course, such pawns, if the defending pawns are also passers, represent a very powerful advancing unit

Frequency: frequent

Defended aligned pawn

Definition: a pawn that is defended by an own pawn placed on one of the adjacent files and has another own pawn next to it on the same rank on another adjacent file



defended aligned pawn on g5
(this one is additionally a storming pawn)

Value: bonus valid in terms of psqt

8	0	0	0	0	0	0	0	0
7	0	25	30	35	35	30	25	0
6	0	15	18	21	21	18	15	0
5	0	8	10	12	12	10	8	0
4	0	4	5	6	6	5	4	0
3	0	2	3	4	4	3	2	0
2	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
	a	b	c	d	e	f	g	h

defended aligned pawn psqt(mg)

8	0	0	0	0	0	0	0	0
7	0	17	20	22	22	20	17	0
6	0	10	12	14	14	12	10	0
5	0	5	7	9	9	7	5	0
4	0	3	4	5	5	4	3	0
3	0	2	3	4	4	3	2	0
2	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
	a	b	c	d	e	f	g	h

defended aligned pawn psqt(eg)

Additional information: salient pawn feature, part of a very nice compact and

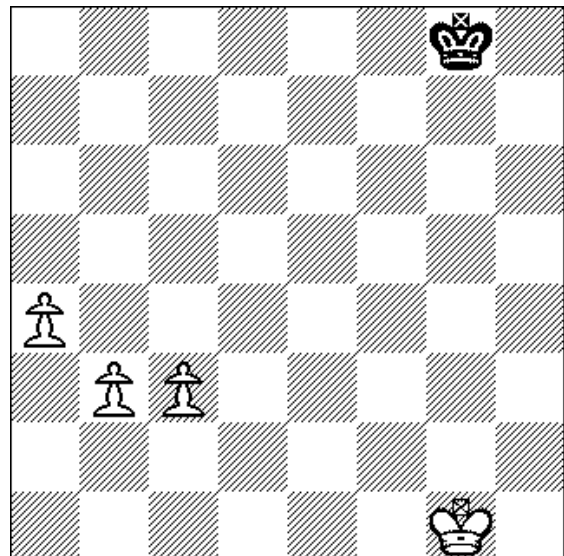
valuable structure. Should be bonised due to a mix of assets it creates:

- the pawn itself is strong, durable, and difficult to attack by opponent pieces
- binds together a beautiful compact structure, which is at the same time very flexible
- in case the pawn next to the defended aligned pawn moves forward, the defended aligned pawn is transformed into a long chain pawn, another valuable asset, while if the pawn defending it advances, the defended aligned pawn assumes the form of a twice aligned pawn, a cherished asset in all stages of the game(on the diagrammed position, if f5 pawn advances, we have the h4-g5-f6 white long pawn chain, with the g5 pawn at its center, while when h4 pawn advances, we have g5 at the center of the f5-g5-h5 aligned pawn structure)
- g5 itself moving ahead gets us to a more advanced defended pawn on g6

Frequency: frequent

Defending aligned pawn

Definition: a pawn that has one own pawn on the same rank next to it on one adjacent file and another own pawn that it defends on another adjacent file



b3 is a defending aligned pawn

Value: bonus valid in terms of psqt

8	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0
6	0	15	18	21	21	18	15	0
5	0	8	11	14	14	11	8	0
4	0	4	5	6	6	5	4	0
3	0	2	3	4	4	3	2	0
2	0	1	2	3	3	2	1	0
1	0	0	0	0	0	0	0	0
	a	b	c	d	e	f	g	h

defending aligned pawn psqt
(same values mg and eg)

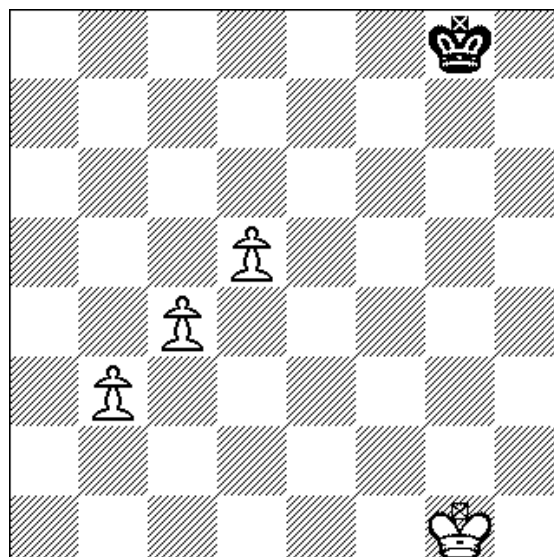
Additional information: bonised due to following considerations:

- binds together a compact structure, which simultaneously controls a number of consecutive squares
- apart from being compact, the structure is flexible; if the pawn next to the defending aligned pawn moves forward, it will be defended, while in case the defending aligned pawn itself goes forward, it transforms into a defended aligned pawn(see c3 and b3 pawns advancing above)

Frequency: frequent

Long chain pawn

Definition: pawn that is defended and defends another own pawn along the same diagonal



c4 is a long chain pawn
(see how beautiful, even outwardly, the structure is)

Value: bonus valid in terms of psqt

8	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0
6	0	24	35	48	48	35	24	0
5	0	12	18	24	24	18	12	0
4	0	6	12	17	17	12	6	0
3	0	2	3	5	5	3	2	0
2	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
	a	b	c	d	e	f	g	h

long chain pawn psqt(mg)

8	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0
6	0	16	25	33	33	25	16	0
5	0	8	12	16	16	12	8	0
4	0	5	8	13	13	8	5	0
3	0	2	3	4	4	3	2	0
2	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
	a	b	c	d	e	f	g	h

long chain pawn psqt(eg)

Additional information: Long chain pawns are extremely useful assets, whose

real value is way underestimated by both top human players and top chess engines alike.

The lines such structures lead to are simply too deep and multi-branched.

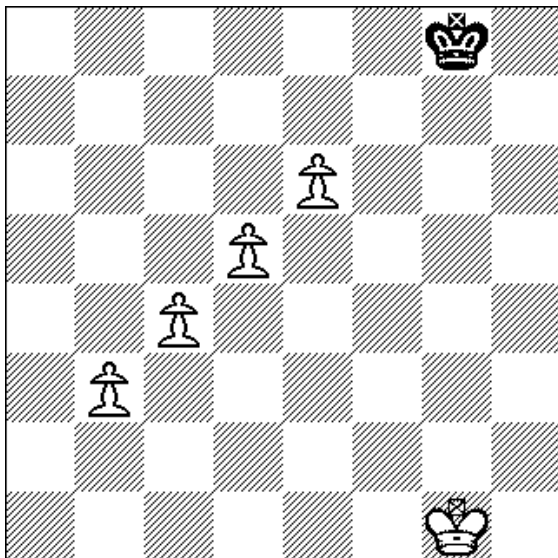
Nice bonus over the bonus for a simple defended pawn is due because:

- the pawn itself is strong, and the pawn it defends is strong too
- being long and connected means the structure as a whole is compact, it is difficult for enemy pieces to break through such a bastion, and apart from that it supports a wide range of friendly pieces activities, which are sheltered in their movements and attacks upon the enemy side
- the structure is also reasonably flexible, in spite of the fact it might look otherwise; if the pawn defending the long chain pawn advances, the long chain pawn itself is transformed into a defending aligned pawn, while if the long chain pawn itself budges, it becomes a more advanced aligned pawn

Frequency: frequent

Very long chain pawn

Definition: a long chain pawn defending another own long chain pawn



this time, apart from being long chain pawn, c4 is also a very long chain pawn, and the bonus for a long chain pawn should be added to the bonus for a very long chain pawn(the chain structure is much larger now, you see, much stronger, occupies much bigger space, restricting enemy pieces and giving freedom to own ones, so it has a per se value, which the accumulation of simpler bonus points alone is not able to fully capture)

Value: bonus valid in terms of psqt

8	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0
5	0	24	36	48	48	36	24	0
4	0	12	24	34	34	24	12	0
3	0	4	6	10	10	6	4	0
2	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
	a	b	c	d	e	f	g	h

very long chain pawn psqt(mg)

8	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0
5	0	16	24	32	32	24	16	0
4	0	9	16	22	22	16	9	0
3	0	3	4	8	8	4	3	0
2	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
	a	b	c	d	e	f	g	h

very long chain pawn psqt(eg)

Additional information: very long chain pawns are valuable because:

- they are part of and represent an intrinsically solid structure
- the sheer size of the structure will largely restrict opponent pieces while supporting friendly ones at the same time
- the larger size of the whole structure determines to a great extent also its durability, and durability in chess is usually an asset

- yes, the structure is partially flexible too, in spite of its large size(see long chain pawns); of course, if one of the constituent pawns moves, the structure as a whole will crumble

Frequency: infrequent