Mini Quincala Knocking End Game Tactics with Many Towers

Edit 30 January 2013: Expand the simple exchanges theory to unforced scenarios and general defence tactics. All previous successful short dart attacks beaten, broken examples removed.

To load a score into Quincala Game Viewer, just *copy* the relevant "QSF-string" (enclosed by < >), then click the *Paste* button in the software (or use the keyboard to type Alt + v). If you cannot see the Paste button click the "Fn:" button until you see it.

In Acrobat Reader, to enable selection and copying, you might have to click "Select" on the top bar before you can highlight and copy the QSF-string. (Note: loading game scores will be much easier with the next version of the software.)

Introduction – the simple exchanges

The fundamental end game tactics in mini-Quincala knocking game for positions with lots of built up potential are based on the three simple types of endgame exchanges, which are:

1. *twin response* – defender wins quickly
2. *twin attack* – attacker wins quickly
3. *exhausting material* - attacker wins if at least equal force/connectedness and it starts with a knock

Type 1 and 2 depends largely on "geography", the third type happens when neither player can make a twin in the two turns following the attack; in this case the outcome depends on if the initial attack involved knocking, as well as the potential and connectedness of the pieces on the board. Here are some examples (with nonsense moves to build example starting positions):

Twin response

Twin response is when the defender when clearing the locking pieces puts two largest pieces next to the attacking one:

<=QSF;0.1&Quincala;KM;8696a6a64636262696a6a6362626
33445555998877774455558877779384757539485757847575
485757646362626869 6a6a636262696a6a5554546a6969a696
96697979626363264848968686x778786639686877997878 69
687;0.2&title=Exchange%3A_twin_response>

This is a strong defence which will usually win.

Twin attack

Twin attack is when the defender cannot put two largest pieces next to the attacking one as in twin response, but the attacker can do it in the following turn:

<=QSF;0.1&Quincala;KM;8696a6a64636262696a6a6362626
33445555998877774455558877779384757539485757847575
485757646362626869 6a6a636262696a6a5554546a6969a696
96697979626363x778796638596877997879654848596978796;0.2&title=Exchange%3A_twin_attack>
This is a strong attack which will usually win.

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Exhausting material

When neither twin response or twin attack is possible after an initial double knock, there might be an exhausting exchange of material. It seems like the attacker wins if there are equal forces and the first attack ends in a double knock:

<=QSF;0.1&Quincala;KM;8696a6a64636262696a6a6362626
33445555998877774455558877779384757539485757847575
485757646362626869 6a6a636262696a6a5554546a6969a696
9669797962636326484896a6a6796a6a636262x7797a66295a
6976a8897a6548495a69748688897a6758595a697575868889
7a6r0;0.2&title=Exchange%3A_exhausting_material_knock_start>

Exhausting material with a first attack on a single largest piece without knocking seems to be a loss if the players have equal forces:

<=QSF;0.1&Quincala;KM;8696a6a64636262696a6a6362626
33445555998877774455558877779384757539485757847575
485757646362626869 6a6a636262696a6a5554546a6969a696
9669797962636326484896a6a6796a6aa69686866a797996a6
796969636262696a6a868484x7797a684a6976a8897a66295a
69748688897a6548495a6975758688897a6758595a697r1;0.
2&title=Exchange%3A_exhausting_material_no_knock_start>

This is a further example of an exhaust exchange; by attack on tower in a corner:
<=QSF;0.1&Quincala;KM;6463636a69696263632637a69557
484886969668696996959577888844555539484875848499 88
8893848488585855333336373784757537464695a6a6x46443
3635344484544537573534458364544 53a6847353446947364
54453;0.2&title=exhaust_exchange_attack_on_full_tower_in_
corner_example>

Conclusion on Simple Endgame

So, in an endgame with lots of potential on the board, a player is looking to find an angle from which a twin attack or a successful exhaust attack can be launched. The defender guards to by ensuring twin response in case of an attack – this is different from chess where guarding is by ensuring “knock-back”. Interestingly, as can be seen from the second exhaust exchange example, not having all pieces in full towers can be stronger!

Sometimes a player can lock the attacker but not clear the own largest piece; often that only buys time, since the attacker keeps the initiative. There will be an example of this at some point.

However, it seems quite easy to keep ones fringe towers guarded against a successful simple attack; for instance, in the first drawn game of the 2010 tournament (*2010-09-12 Rnd 2 Brd 1 Andrew Br v Aled*), there seems to be no twin attack or successful exhaust attack possible.

Unforced Exchanges

When the exchanges are unforced, there is still something to learn from the forced exhausting

material exchanges: if the attack starts by a double knock, the defender should clear but not be tempted to leave his pieces on the cleared large piece threatening to knock the sown large piece – as long as that sown piece is *connected*, this invites an unforced exhaust exchange and a loss. The defender should even consider spreading his pieces in order to avoid a follow-on double knock from the attacker. Theoretically though, inviting a double knock in an unforced scenario might in specific positions be good, since the sequence of knocking can be broken and restarted with the defender as attacker. Knocking the last piece of a kind is usually good, even if it is performed with a single knock dart.

On the Short Straight Dart Attack

The short straight dart attack now looks much less powerful than I first thought – if the defender can knock two pieces as a response and knows how to avoid the unforced exchange he could get a hard-to-beat material advantage. However, the positive strength of the short straight dart is that it usually compels (almost forces) the defender not to delay clearing it, since retreating the middle piece usually creates a threat to win whilst separating the pieces enough to avoid a double knock defence.

All previous example attacks listed as “guarded dart attacks” could possibly be defended like this:
<=QSF;0.1&Quincala;KM;6463636a69696263632637a69557
484886969668696996959577888844555539484875848499888938484885858553333363737335555463737845454373645
54x5544455444444846454495846454444554646458474645454454546958474645546353544554543747474536473
74645544546r1;0.2&title=guarded_dart_attack_4_branch_1>

To date, I have not seen any short straight dart attack that holds against the new theoretical knowledge outlined above.