Edwardian Splendour

A Kriegspiel for Toy Soldiers

For my son, Calum, in the hope that he may someday play this game with me, and to his mother, Joanna, who will no doubt think the whole thing is silly but will let us do it anyway.

If you have questions or comments, please contact Arofan Gregory by e-mail at ilg21@yahoo.com.

Introduction:

Traditional toy soldiers possess a charm that is not duplicated by their smaller 15mm and 25mm brethren. No matter how many wargaming figures one collects, there is an attraction to the larger figures which remains un-sated. Whether you are talking about 42mm semi-rounds or the larger 54mm full-round figures, they possess an evocative quality that smaller figures lack. It is something which says "toy soldier" and reminds us that, no matter how complex our rules are, in the final analysis, miniature wargaming is still on some level "playing with toy soldiers." At the same time, a miniatures wargamer needs a reason to collect armies – there must be a game to play, and it should simulate something historical, at some level, to capture the imagination. I am a miniatures wargamer first, and a collector of toy soldiers second: these rules represent my solution to the problem presented by this fusion of interests.

This is a simple game for use with full-round and semi-round toy soldiers from 40mm to 54mm in height. Created in the spirit of H.G. Wells' *Little Wars,* H.G. Dowdall's *Shambattle,* and the kriegspiel games of that era, it represents combat during the late 19th/early 20th centuries, the periods for which traditional toy soldiers are often made. All dice are six-sided dice, and figures are individually mounted as indicated below.

While games such as *Little Wars* and *Shambattle* are fun to play, they are not – even in their updated forms – what most historical miniatures gamers today would consider wargames, even of the more abstract sort. These rules are an attempt to introduce that taste of simulation which is missing in the earlier games, while keeping the rules and mechanics as simple as possible. One criticism which the advocates of *kriegspieler* level at modern miniatures wargames is that they violate the scales of time and distance which are important to maintaining a simulation of combat. These rules pay attention to the representation of these factors in the combat of the last decade of the 19th century and the first decade of the 20th century, while still producing a simple games system. The design notes provide a description of their approach to the warfare of the period.

The end result is certainly not a detailed simulation, but it does provide a realistic abstraction of combat similar to that found in some popular fast-play rules sets. In the end, a miniature is a miniature regardless of its size or the style in which it is painted, and we can play satisfying games with traditional toy soldiers as well as with 15mm or 25mm miniatures without sacrificing a modicum of simulation. And – which is perhaps most important – we can still have fun in the process.

SECTION I – THE BASIC RULES

Troops:

This game has only four basic troop types: infantry, cavalry, machineguns (MGs), and artillery. Each soldier represents a platoon (for infantry) or a troop (for cavalry) of approximately 40-50 soldiers, with infantry battalions at full strength of from 500 to 1200 men, and cavalry regiments of from 300 – 600 men. Each artillery piece or machinegun represents a battery, typically of six guns.

Additionally, small parties of soldiers tasked with special functions such as scouting and spotting for the artillery are also fielded, with units typically consisting of a figure or two. Note that figures of different types may not be mixed in a single unit.

Each figure should be mounted on a base 1" – 1.5" square (foot) or 1" - 1.5" wide and 3" long (cavalry). Guns should be mounted on a base 3" wide and deep enough to fit the model. Units of 12 to 24 infantry (battalions), and 6 to 16 cavalry (regiments of from 3 to 8 squadrons) are recommended. Each artillery piece or MG and crew is a unit.

Artillery has a crew of 3 or more soldiers; MGs have a crew of 2 or more soldiers. Regular infantry and cavalry may be "drafted" into an artillery or MG crew during movement – they must move into contact with the base of the artillery or MG unit. Additionally, ad-hoc artillery and machinegun units may be formed from pieces which have been abandoned by their crews as a result of morale failure.

All figures within a unit must attempt to remain within 2" of another figure in their unit at all times. Crew for artillery or MGs are not counted as crew for firing purposes unless they are touching the base of the gun they are serving. Infantry and cavalry figures touching another base in their unit are in close order. Units not touching another base of their unit are in open order.

The basic troop types represented in this game are disciplined armies as seen throughout Europe, North America, and some other parts of the world. There is also a class of undisciplined troops, such as tribal warriors or revolutionaries. These troops may be allowed to fire or not, depending on whether they have firearms. They are only allowed to operate in open order because they lack the training to operate in formations. In many cases, they should be fielded in larger units than regulars – my rule of thumb is to use units of twice the size. If it makes sense, these types of troops may be denied the benefit of dice modifiers resulting from open order, to represent the "mass" type of formations they sometimes used. Boers and Afghan tribesmen, for example, operated in true open order, and should be given the benefit of dice modifiers versus rifle fire. Dervish spearmen did not operate in open order, and so should not be given this benefit.

Each unit is given a quality rating: Elite, Veteran, Average, Fair, or Poor.

There is one other optional troop type – general headquarters. General headquarters is a base 3" – 4" square, with models depicting general officers, aides, and similar troops. It is not necessary to have a specific number of figures on general headquarters, because it functions more as a marker than as a game piece: it marks the location of the headquarters of each side, and neither moves nor attacks.

Turn Sequence:

Repeat until game is complete.

1. Each player rolls 1 six-sided die to determine move order. Ties are re-rolled until a move sequence is established, with the high roll choosing first or second move.

2. Players go through the move sequence, each moving a single unit. Repeat sequence until all units have moved. Players may declare that a unit (or figures within a unit) will be stationary, which takes the place of a move.

3. All fire is conducted by unmoving figures. Fire is simultaneous: casualties are marked - but not removed - while this fire is resolved, as freshly killed unmoving figures are allowed to fire before being removed. Casualties go into effect after all unmoving fire is resolved. Note that this phase includes defensive fire from unmoving figures who have been frontally charged. After all casualties have been removed, units suffering casualties must check morale, and those units which fail are removed from play.

4. All fire by moving figures is conducted, simultaneously, using the same procedure as above, and morale is checked for units taking casualties from fire. Note that machineguns and artillery units may not fire if they have moved.

5. All melee is resolved. Any figures in contact with the enemy general headquarters roll for outcomes. Check morale for all units taking casualties from melee, and remove units which fail from play.

Movement:

All figures may move in any direction or combination of directions during their move, up to the limit of their base movement as adjusted by terrain. Any change in the position or facing of a figure or artillery or MG base is considered movement. Artillery pieces and MGs may only move if one or more crew figures are in contact with the gun's base at the start of the movement phase. Maximum movement distances are:

Foot and MGs: 6", but half speed while in rough
Cavalry: 12", but quarter speed while in rough
Artillery: 4", quarter speed while in rough

Roads double movement for figures while traveling along them. Movement may not be made through enemy figures; any movement within 1" of an enemy figure not already in contact with a friendly figure must either be directly away, or directly into contact for the purposes of melee. Movement through friendly figures is permitted, but at the end of a move bases must not overlap.

As described above, all units must move so as to remain within 2" of another figure in their unit at the end of movement, if any such exist on the board.

Rifle Fire:

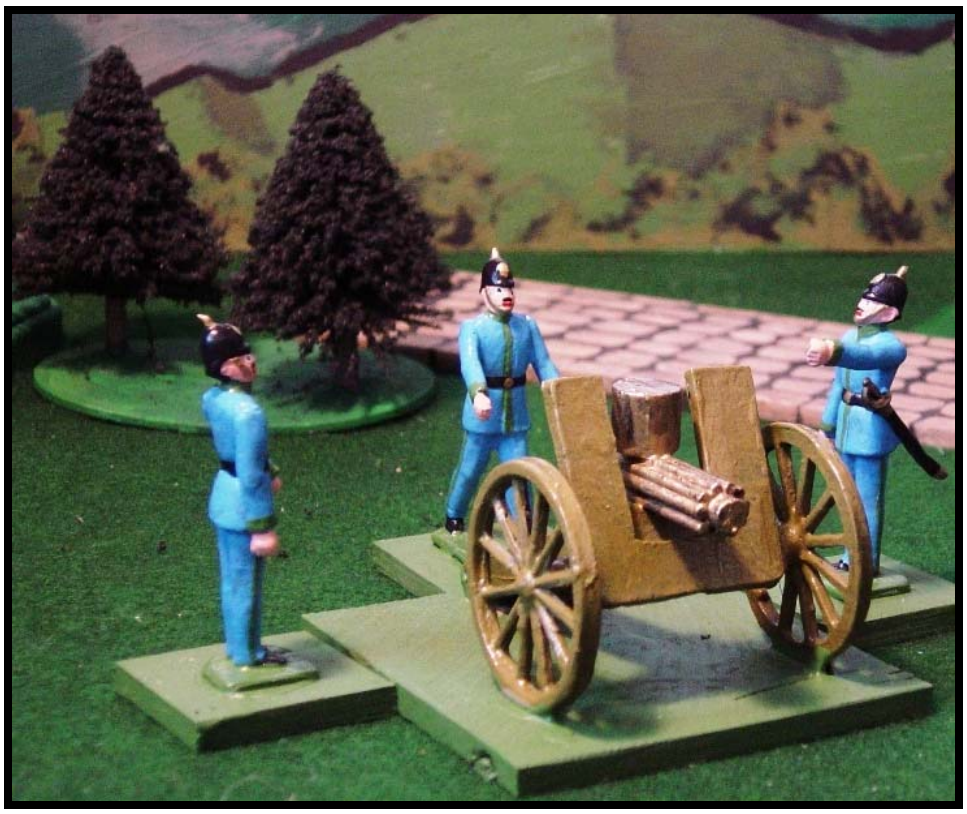
Direct fire may be made by all foot and cavalry figures. Each figure may fire at any target (enemy foot, cavalry, or crew figure) in range, and within an arc described by a 45-degree angle going outward from the front corners of its base (see figure). Any target within this arc is a potential target, so long as there is a connecting line between the front of the firing figure's base *other than the corners* and some point on the target figure's base which does not pass over any other figure's base, or through an obstruction (see Terrain, below). In close order, only the front rank may fire. Enemy figures in combat contact with friendly figures are not eligible targets.

Rifles may fire up to 24”. Rifles will choose a single target and roll a die.

If range is up to 8", target is killed on a 4 or more
If range is more than 8" and up to 16", target is killed on a 5 or more
If range is more than 16", target is killed on a 6 or more

Modifiers to dice:

-1 if target is in soft cover
-2 if target is in hard cover/fortifications
+1 if target is cavalry
-1 if firer is cavalry
-1 if target is in open order, or is an artillery or MG crewman



Machinegun Fire:

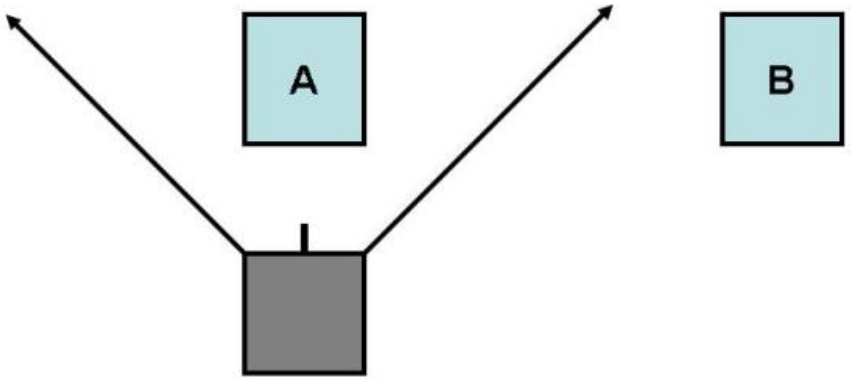
Before a machine gun fires each turn, roll one die to see if it jams. A roll of 6 indicates a jam, and the weapon may not fire. Machineguns must have at least one crew figure in contact with their base in order to fire, and ideally should have at least two. MGs cannot fire in a turn in which they move.

MGs may fire up to 24”. MGs will roll on every enemy figure within their arc of fire, as described above, and which are in range. MG fire is not obstructed by enemy figures – only friendly ones. Otherwise, obstructions are as for rifle fire. Enemy figures in combat contact with friendly figures are not eligible targets.

If range is up to 8", target is killed on a 4 or more
If range is more than 8" and up to 16", target is killed on a 5 or more
If range is more than 16", target is killed on a 6 or more

Modifiers to dice:

-1 if target is in soft cover
-2 if target is in hard cover/fortifications
+1 if target is cavalry
-1 if target is in open order, or is an artillery or MG crewman
-1 if only one crewman is touching the MG base



Firing Arcs: *The gray firing figure can shoot at target A (assuming it is within range and there are no obstructing figures or terrain) while it cannot shoot at target B because it is out of arc.*

Artillery Fire:

Artillery may not fire without at least one (and ideally at least three) crew figures touching its base. Neither crew figures nor the gun itself may be in combat contact with the enemy when it fires. It may not fire in a turn during which it moves. An artillery piece has a range of 108" (9 feet), divided into three range brackets as described below. It selects a target point within its arc of fire and range. Artillery may fire over obstructions and troops so long as it or an associated artillery spotter figure who is not in combat contact with the enemy (designated at start of play for each battery) can see the desired target. A target is not restricted only to enemy figures, but may also include any spotted point on the battlefield within range and arc of fire.

Roll two dice: one for lateral deviation, and one for overshooting/undershooting. There is a deviation factor for each range bracket:

Short range - up to 36": 1" deviation
Medium range - more than 36" and up to 72": 2" deviation
Long range - more than 72" up to 108": 3" deviation

Deviation Rolls:

1: Twice deviation factor to left (for lateral) or long (for overshoot)
2: Single deviation factor to left (lateral) or long (for overshoot)
3, 4: On target (laterally or for undershoot/overshoot)
5: Single deviation factor to right (for lateral) or short (for undershoot)
6: Twice deviation factor to right (for lateral) or short (for undershoot)

For each subsequent turn on which the same target point is aimed at, firer may adjust deviation by 1 on each dice (second firing, adjust by 1; third firing adjust by 2). Thus, fire will "zero in" on the target.

All figures within 2" of the impact point for artillery will be considered "hit", including MGs and artillery pieces.

Roll a die for each figure hit: 4-6 kills figure or destroys gun/MG. Subtract 1 for soft cover, and 2 for hard cover. Add 1 if target is cavalry. Subtract 1 for each artillery crewman less than 3 firing (cannot fire with no crewmen).

Note that figures which move may fire, with the exception of artillery and MGs. Another exception is figures which move into close combat - they are not allowed to fire (although standing figures which are contacted frontally may still fire at their attackers at close range.)

Charges:

The only way to move into contact with an enemy figure is to make a charge move. A charge move always ends up in base-to-base contact with an enemy figure, and is made by moving forward in a straight line from the start of the charge until contact. Note that a charge move may form only a portion of a figures' full move – a figure may maneuver, and then make a charge into contact. Cavalry may add 6" to the charge portion of a move.

Artillery and MGs may never charge.

Charging figures do not fire in the turn in which they charge. Non-moving figures not already in combat contact from a preceding turn which are contacted by charges may fire at their attacker if contacted frontally, at the shortest range. Charging figures do not get the benefit of terrain or cover of any sort.

When charging an un-moving MG or its crew, any figures which cross any part of the MGs arc of fire during their charge move may be fired on by the MG, unless the MG is already in combat contact from a previous turn. Note that when charging artillery and MGs, contact with any of the crew figures or the gun model allows targeting of any of the crew figures, as they are assumed to be in amongst the guns. Specific targets for each charging figure must be specified as part of the charge, even though one-to-one base contact has not been established.

Melee:

When two enemy figures are in base-to-base contact, a close combat occurs. Each figure may select one figure with which it is in base-to-base contact along the front edge of its base as a target. Each figure which is either attacking, a target, or both rolls one die. Any figure whose roll is greater than the roll of its target destroys that figure. Note that figures which are both attacker and target use a single roll for both. Note that it is possible for a figure to both destroy its target and be destroyed as the target of some other enemy figure. It is also possible (common, in fact) for two figures to select each other as targets.

Cavalry in the open attacking targets in the open get a +1 to close-combat die rolls. In charge situations, where they have moved into contact that turn, they get an additional +1, and a further +1 for each continuously descending terrain level they have crossed during the charge movement into combat.

Terrain advantage (breastworks, defending steep river bank or hill, etc.) give a +1 to non-cavalry figures' die rolls.

Cavalry and infantry figures in close order get a +1 against frontally-contacted opponents. Any close-order infantry or cavalry figure with a full-base-side contact to the rear with a figure sharing the same facing gets a further +1 for support against frontally-contacted opponents.

Morale:

As indicated in the turn sequence above, units will need to check morale after taking fire or melee casualties. Troops are assigned a quality rating, to which a morale number is assigned:

- Elite: 12
- Veteran: 11
- Average: 10
- Fair: 9
- Poor: 8

To check morale, roll two dice. A score greater than the number given above indicates a morale failure, and the unit is removed from play. For each 25% casualties the unit has suffered in total, add 1 to the die roll. Additionally, add 1 to the die roll for each 25% casualties the unit suffered in the fire or melee phase which has caused the check. Troops in fortifications/hard cover get a -1 to the die roll.

When an MG or artillery unit fails morale as a result of fire (but not of melee), roll a die: on a 4 or better, the gun model is destroyed by the crew before they flee, and cannot be captured or re-used. This die roll is modified by troop quality:

Elite: +2
Veteran: +1
Fair: -1
Poor: -2

Morale Example:

A fresh 12-figure infantry unit of Average quality in the open has been machine-gunned at close range and has lost 8 figures. To check morale, the following computation is needed:

Total casualties = 8/12 or 66%, giving a +2 to the die roll
Casualties this fire phase = 8/12 or 66%, giving a further +2 to the die roll
The unit is not in hard cover, so no modifier for that.

An Average unit must roll a modified 10 or below to pass. With modifiers of +4, the unit would need to roll a 6 or less to avoid failing morale.

Transferring Figures Between Units:

There are several circumstances during play when soldiers may be transferred between units. Infantry and artillery figures may be drafted as artillery or MG crewmen, either to supplement surviving crews, or to re-crew friendly or abandoned enemy guns to create new units. Additionally, crews may be transferred between friendly artillery and MG units, especially in cases where their own guns have been destroyed. There are rules governing these situations.

Whenever a figure leaves one unit to join an artillery or MG unit as crew, they are considered a casualty for the purposes of calculating morale modifiers for the unit they are leaving. Figures drafted into a new unit are at first replacements for any losses, but afterwards will actually increase the size of the unit for the purposes of calculating morale modifiers. Thus, a 4-figure artillery unit which takes two losses, and then has 6 new draftees added to it, will determine morale based on a "full size" of eight figures. The first two draftees replace the two figures which have been lost, but the next four are added to the unit's original strength of four.

The quality of a unit can be impacted by the addition of drafted soldiers.
When new units are composed of drafted soldiers of several morale grades, crewing abandoned weapons, or soldiers of different morale grades are drafted into an MG or artillery unit, use the following system to determine the resulting unit quality: Total the points for each soldier (Elite = 5, Veteran = 4, Average = 3, Fair = 2, Poor = 1). Divide by the number of soldiers, and round off. The resulting number will dictate the quality of the new unit: < 1.5 is Poor, 1.5 to <2.49 = Fair, 2.5 to 3.49 = Average, 3.5 to 4.49 = Veteran, 4.5 or more = Elite.

Thus, a unit composed of two Fair-quality soldiers, a Veteran soldier, and an Elite soldier will have it's quality determined as follows: 2 x 2 = 4 (for the two Fair soldiers) + 4 (for the Veteran soldier) + 5 (for the Elite soldier) = 13. Divide 13 by 4 and you have a result of 3.25. This is closest to 3, so the unit is of Average quality.

When a new unit is created by the crewing of an abandoned gun (which may be either friendly or enemy), it may neither move nor fire in the turn in which the unit is formed. The gun is "claimed" by the side which first has a figure in contact with its base, at which point it becomes a new unit on that side. Drafted soldiers crewing weapons may leave and re-join their old unit if desired, or may be drafted into other artillery/MG units.

Terrain:

Terrain is an important consideration in any battle. It is discussed here in two sections: how to construct terrain, and then how it functions during play. Note that while terrain of any sort can be used, it should be thought of in the terms presented here, as the rules of the game assume that terrain will be represented in the fashion suggested.

Creating Terrain:

Hills should be represented as sets of concentric elevation levels, each representing a 20-foot change in height, as seen sometimes on maps. Hills are constructed by taking rounded pieces of foam or wood, and building them up. Hills can be of any size, from a few inches across to cover entire sections of the table. It is recommended that the width of each level be at least 1.5"-2", to allow figures to stand there easily. Hills are of two types – grassy, smooth slopes, and rough, rocky ones. The difference here is obviously in the speed of movement they permit figures. Rocky hills can be represented by the addition of small stones or bits of lichen when the table is set up. These can be moved to allow figures to stand, which is more convenient than attaching them in a permanent fashion.

Woods are created by gluing a pair of tree models to a round or oval base from 2" – 6" across. Large woods should be represented as a set of smaller patches of wood, unless they represent very dense woods. This is important because you can see into, but not through, woods, as determined by the individual bases. Trees can easily be created by gluing some lichen to twigs, or can be purchased at hobby stores.

Swamps are created in a fashion similar to woods, taking a round or oval base 2"-6" across and gluing some grassy foliage to it and painting it brown. Note that artificial plants can be purchased at hobby shops and florists which provide a supply of appropriately reedy-looking material – similar things can be purchased from pet stores, where they are sold for use in fish tanks. A hot glue gun is very useful for attaching clumps of reeds to the base.

Towns are represented using model buildings. It is suggested that these buildings be constructed such that roofs can be lifted off and figures placed inside them. If this is not possible, then figures must be placed around the outside, and their "real" location indicated, but this can be both unattractive on the table and confusing. Some hobby stores sell inexpensive, unfinished wooden bird-houses and similar which can be easily converted into useful buildings with a bit of sawing and painting.

Rivers should be at least 2" across, and can be constructed of anything from strips of fabric or paper to fancier painted latex rubber models.

Roads (and bridges) should be 1.5" – 3" wide, and can be represented in a variety of ways, from strips of paper or fabric to more sophisticated, painted models in various materials. One easy way to make roads is to paint 2" – 3" wide strips of 1/8"-thick wood with a cobblestone pattern. These are durable and easy to place on the table, but thin enough that they don't ruin the look of the tabletop.

Other common terrain features include stone walls, hedges, entrenchments, and barbed wire. These can either be purchased or constructed as needed, and the dimensions are unimportant, as they affect movement in the same fashion regardless of their width (see below). They should generally be modeled in strips approximately 1" – 1.5" wide, however, to fit the other features of the tabletop.

As a final word on creating terrain, it is useful to try to keep the look of the tabletop simple and clean, so as not to ruin the "toy soldier" effect. We prefer to use solid green felt as a ground-cloth, and to paint bases a solid green color to match, for both soldiers and terrain, without a lot of fancy texturing. This both keeps a uniform look across the whole table, and makes the creation of terrain easier.

Effects of Terrain on Play:

Terrain effects play in various ways: it has an effect on what is visible to the troops, it affects how they can maneuver, and it affects fire, charges, and close combat. Each of these types of effects will be discussed for each kind of terrain.

Visibility is critical on the battlefield, as it affects what enemy units can be targeted with various types of fire. Some types of terrain count as obstructions to visibility, but these will not always obstruct visibility when the observer and/or the observed are on high points such as hills. There is a concept called "Line of Sight" (LOS) which captures how to judge visibility on the battlefield.

Each type of obstruction is given a rating in terms of terrain levels, which correspond to the elevation levels of hills. Thus, each terrain level represents approximately 20 feet in height. The following table shows the terrain levels of each type of obstruction:

Terrain Type	**Obstruction/Terrain Level**
Hills	Each altitude level on a hill is a terrain level. Note, however, that hills have ridge lines which will affect how visibility operates – any target of observation on a reverse slope may be obscured by the ridgeline (see below).
Woods	Woods are a half terrain level tall, and cannot be seen through. Woods can be seen into, however.
Buildings	Buildings are a half terrain level tall. Buildings cannot be seen through, but, like woods, they can be seen into.
Swamps	Swamps do not obstruct visibility unless specified by scenario
Hedges, stone walls, and similar linear obstacles	Linear obstacles do not obstruct visibility unless specified by scenario

The way LOS functions is as follows:

An observer can see an observed unit if they are on the same terrain level, and there are no obstructions along a line connecting the bases of the observer and the observed on that same terrain level. If the observed is in a woods or building, the line may enter, but may not completely cross and exit, that woods or building. Note that troops do not present an obstruction to LOS except for rifle fire.

If there is a single terrain level of difference between the observer and the observed, then the line of sight is not obstructed so long as there are no obstructions at the level of the higher unit or above, and any obstructions at the terrain level of the lower unit are completely within the half of the connecting line which is closer to the higher unit.

If there are two terrain levels of difference between the observing and observed units, the line of sight is not obstructed so long as there are no obstructions on the level of the higher unit or above, and any obstructions at lower levels are entirely within the closest three-quarters of the line of sight to the higher unit.

For each additional level of difference which exists between the observed and observing unit, the "shadow" – that is, the portion of the line which may not contain lower-level obstructions without having them block line of sight – is divided by half. The figure illustrates how this works.

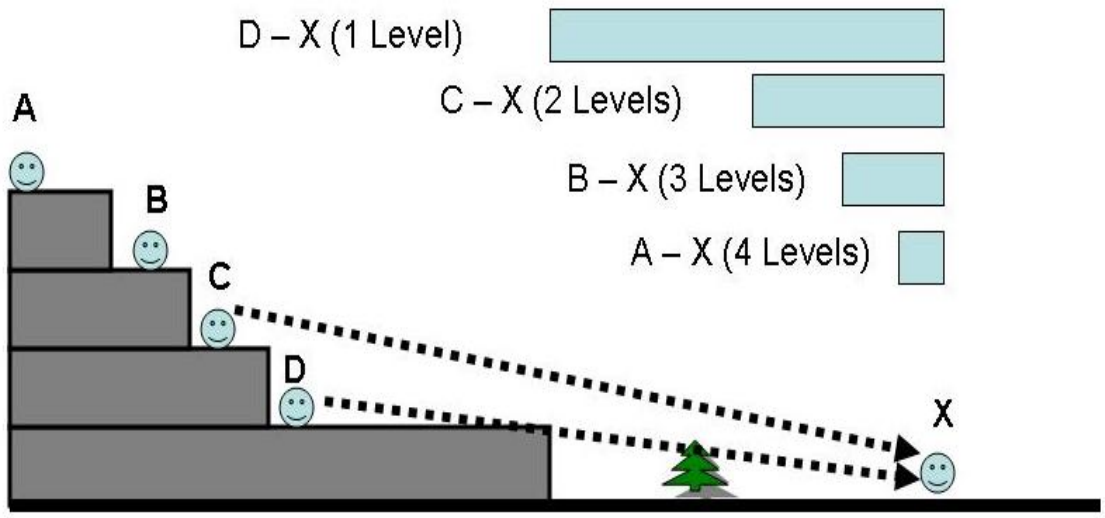


Figure D cannot see Figure X, because the woods – which are a half terrain level tall – are an obstruction within the half of the connecting line closest to Figure X (the shadow). Figure C ***can*** *see Figure X, because even though there is an obstruction, it is not within the quarter of the line closest to Figure X (the shadow). Figures A and B can easily see X as the length of the shadow decreases. The boxes in the upper right-hand corner show how the length of the shadow decreases as the difference in height increases.*

Note that the hill – although represented in the figure as a set of steps – is in fact a slope. Hills are assumed to slope down from their central point in all directions, as their altitude levels drop away, but particularly in two opposite directions which form the sides of a ridge. This means that between any two units on a hill, there may be a "reverse slope"

effect. These rules have a simple convention for determining whether the slope of a hill blocks LOS. A line is imagined, passing through the center of the hill, which connects the two points of the hill which are furthest apart. This is the ridgeline of the hill.

This divides the hill into halves. Assuming that the LOS is otherwise clear, any two units which are at least partly on the same side of the ridgeline can see each other. If they are entirely on different sides, they cannot. The figure below shows how this is done. Any figure not on the hill must be able to see over the highest terrain level of the hill where LOS crosses the ridge line, in order to see over the hill. Non-ridge-line portions of the hill count as a terrain level lower than the ridge line at their level.

When figures are on hills, they may fire over the heads of troop below them so long as the target of fire is at least 1" away from any intervening friendly figure.

As a final rule, it is always the case that LOS is bi-directional. If A can see B, then B can see A.

Although these rules may at first seem complex, they are fairly straightforward, and will become easier to understand if you take some time to think about how elevation and terrain block LOS. Remember that by game scales, the figures are not to scale in terms of height: how tall is a 6-foot man when 1" = 50 yards?

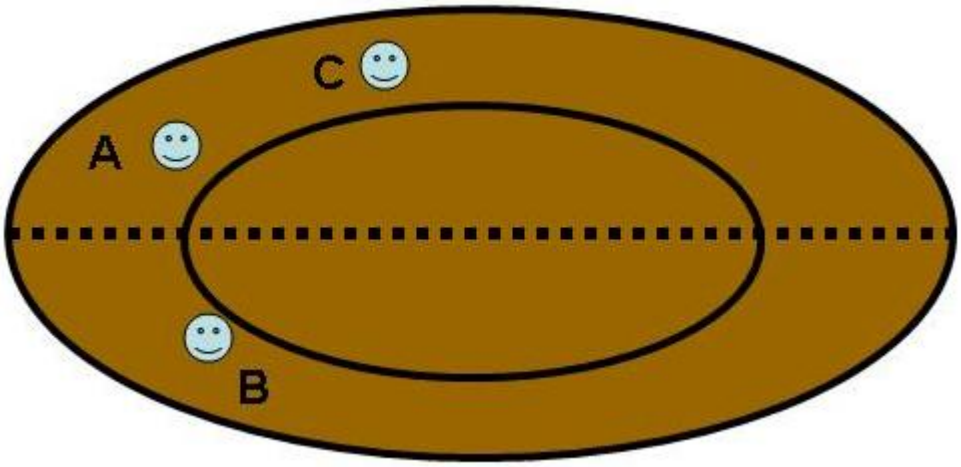


Figure A can see Figure C because they are on the same side of the hill's ridge line. Figures A and B cannot see each other, nor can Figures B and C, because they are on separate sides of the ridgeline.

The effects of terrain on movement are primarily determined by whether the terrain being crossed is considered rough or not, and whether it is a road. Rough terrain will multiply the cost of moving through it for the units concerned, based on their type. For artillery and cavalry, each inch moved through rough terrain detracts 4 inches of movement from the base rate. For infantry and MGs, each inch moved through rough terrain detracts two inches from the base movement rate. If units are moving along a road, then each inch moved only subtracts half an inch from the base movement.

Linear obstacles such as hedges, entrenchments, and walls may be crossed as if they are 1" of rough. Barbed wire requires a full move to cross. Rivers may be described as fordable or non-fordable. If fordable, they can be crossed at indicated points as if they are rough; otherwise they cannot be entered. Swamps are always considered rough, as are woods.

Hills are sometimes rough, sometimes not, per scenario. Buildings may be entered through any side, and count as rough within for movement purposes.

The effects of terrain on combat are mainly determined by the cover offered by terrain features. There are two classes of cover: soft cover, such as underbrush, logs, wooden structures and fences, etc. ; and hard cover, such as entrenchments, stone walls, and houses built of stone or brick. Woods provide soft cover, as do rough hills, and some buildings. The tabletop terrain should be completely agreed between players before the start of play. Also, the effect of "open" terrain (that is, non-rough terrain) may affect how cavalry function in melee.

When troops are using cover, any fire or melee directed at them must come from across whatever linear shape the cover has in order for them to benefit from it, and they must be in contact with the feature providing such cover. In the case of artillery shells, this is the line between the shell's point of impact and the affected figure.

SECTION II – ADVANCED AND OPTIONAL RULES

General Headquarters:

This is an option which players may agree to use. Each army will have one general headquarters base. This will be placed in the area controlled by each player at the start of play. If at any point during the game the enemy is able to come into combat contact with the enemy general headquarters, a single die is rolled during the melee phase for each figure:

1-3: The contacting figure is destroyed by the headquarters guard.
4, 5: The contacting figure must make an immediate, full move away from the enemy general headquarters.
6: The enemy headquarters is overrun, enemy generals and staff are killed or captured, and plans and papers are seized. The game is now over, decided in favor of the player who has overrun the enemy general headquarters.

Obsolete Weaponry and Optional Artillery Rules:

Artillery Equipment Types:

In some types of battle – either because the period is slightly earlier, such as the Zulu War, or because one side may be using antiquated equipment – you may have earlier types of artillery in use, as agreed by players before the game starts. There are two relevant facts about artillery for our purposes: (1) whether it can fire exploding shell, or whether it uses solid shot and canister; and (2) whether it is breech-loading or muzzle-loading. This produces four combinations:

Breech-loading, shell-firing guns: These are exactly as described in the normal artillery rules, and should be treated as such, except that the range is be reduced by half, to reflect the earlier state of their development (as, for example, the Krupp guns used in the Franco-Prussian War).

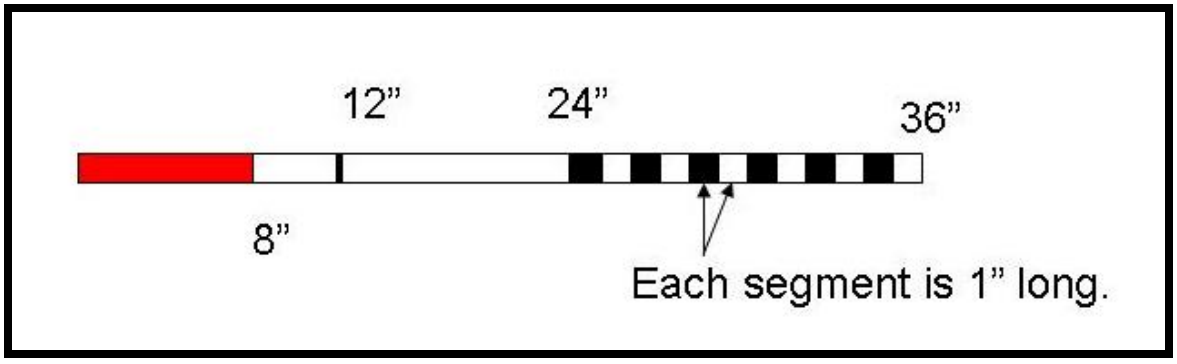
Muzzle-loading, shell-firing guns: These are the type used by the British in the Zulu War. These guns use the firing mechanism as per the rules, except that they can fire canister as well, as described below. Their range is reduced to a third of normal guns, that is, each range bracket is only 1 foot. Additionally, they are only allowed to fire every other turn, it taking a crewed gun an entire move to reload. If canister is to be used, this must be stated at the time the guns are loaded. Crews which are in combat contact with the enemy may not also load or fire a gun. These guns can only fire at targets which some member of the gun crew can see – they may not use remote observers.

Breech-loading, solid-shot-firing guns: This is not a very common category, but it did exist – for example, guns of this type were used in the American Civil War. These guns may fire every turn, but each range bracket is only 1 foot, and they must fire solid shot or canister as described below. These guns can only fire at targets which some member of the gun crew can see – they may not use remote observers.

Muzzle-loading, solid-shot-firing guns: This was the predominant category of gun for many decades leading up to the end of the 19th Century. Most wars fought in the 1860s and well into the 1870s employed guns of this type. They have only 1 foot of range per bracket, may only fire every other turn (see muzzle-loading, shell-firing guns, above), and they must fire canister or solid shot. The type of fire must be specified when the gun is loaded. These guns can only fire at targets which some member of the gun crew can see – they may not use remote observers.

Firing Solid Shot and Canister: These mechanisms use a yard-long stick marked as follows:

The first eight inches are painted red. A mark is made at the 12" point, marking the end of short range. A second mark is made at the 24" point, marking the end of medium range. The area between 24" and 25" is painted black, as are the areas between 26" and 27", 28" and 29", 30" and 31", 32" and 33", and 34" and 35".



The firing stick used for solid shot and canister fire (not particularly to scale).

To fire canister, every figure in the gun's arc of fire which is within the red portion of the stick (that is, within 8") and within unobstructed line of sight must roll a die: on a 4-6 they are killed, with a -1 to the die roll if they are in soft cover, and a -2 if in hard cover. Line of sight is not obstructed by friendly or enemy figures.

To fire solid shot, the firer must lay the stick on the table within the guns arc of fire, so that the near end (painted red) touches the front of the artillery base, and the entire stick is in the guns arc of fire. Roll a die for deviation:

- On a 1, the far end of the stick moves 2" left.
- On a 2, the far end of the stick moves 1" left.
- On a 3 or 4, it remains as placed.
- On a 5, the far end of the stick moves 1" right.
- On a 6, the far end of the stick moves 2" right.

At short range, any figure touched by the stick must roll a die: on a 4-6 they are killed, with a -1 for soft cover and a -2 for hard cover. At medium range, they roll the same way, but are only killed on a 5 or 6. The same modifiers apply. For long range, roll a die: if the die roll is even, then figures touched by an unpainted portion of the stick must roll. If the die roll is odd, then figures touched by a painted portion of the stick must roll. Figures are killed as for medium range.

Horse Artillery:

A distinction may be made between horse artillery and foot artillery. Horse artillery was faster than regular artillery, but tended to use lighter guns. Horse artillery units function like regular artillery units with these exception: (1) they have a base move of 12", and go ¼ speed in rough; and (2) they have only two-thirds the range of regular guns, so that each range bracket is 24" long. For obsolete types with a reduced range, shorten the ranges given above by a third.

Obsolete Rifles:

Some early breech-loading muskets such as the Snider and the Dreyse Needlegun had a shorter range than the rifles used by the end of the century. To represent this, reduce the range of these rifles to 18" (that is, each range bracket is 6" instead of 8"). Otherwise, the rules for rifle fire remain exactly the same.

Optional Morale Rules - Officers and Standard Bearers:

If both players agree, the following additional rules may be added regarding morale rolls. Both rules may be used, or only one or the other. Also, it can be agreed to only give standards to either infantry or cavalry.

Each infantry or cavalry unit may have an officer and a standard bearer. If an officer figure is killed, the unit suffers an additional +1 to their morale rolls. While the officer is alive, he confer a -1 to morale rolls.

If a standard bearer is killed in melee, the standard has been captured by the enemy. Any unit which has had its standard captured suffers a +1 to morale rolls. While the standard is with the unit, it confers a -1 to morale rolls. If a standard bearer dies from fire, another figure in the unit becomes the standard bearer. Standards must be carried by a specific enemy figure (who does not himself become a standard bearer), and it can be re-captured.

Be aware that these rules tend to make it harder to fail morale rolls, which may or may not be desirable. They are not particularly accurate in historical terms, as during this period units did not necessarily carry their standards in the field, and they were no longer the powerful emblems they had been during earlier periods of warfare. Also, well-disciplined units can arguably survive the death of their commanding officer without undue effect.

Mexican semi-rounds prepare for a cavalry clash.

Optional Rule - The Mad Minute:

This rule accommodates the British tactic of firing as fast as possible for brief periods, typically against the rushes of native troops armed with close-combat weapons. It may be restricted to British armies, or may be used by both sides if players decide this is appropriate. Historically, this was only done by the British.

When the "mad minute" is used, the firing unit must be an infantry unit in close order. When they fire, the results of fire are treated as MG fire within their arc, rather than as rifle fire. After fire is resolved, roll a die: the unit may not fire again in any fashion until they have waited for more ammunition to be brought up: after they have spent a number of turns equal to the number rolled on the die, they may again fire normally.

Optional Rule - Army Morale:

This rule introduces a mechanism for determining when one side or the other is beaten. It is not in the "die to the last man" spirit of toy soldier wargames, but does reflect the fact that real-life armies will stop when they have suffered an unacceptable number of losses.

When half or more of the units on one side have been removed from play at the end of the turn, that side has lost the game. New artillery and MG units created by manning abandoned guns increase the total number of units when figuring what is half of the whole army. If both sides are reduced below half during the same turn, the game is a draw.

SECTION III - ADDENDUM

Design Notes:

In any miniatures wargame, decisions must be made about the ability of troops to maneuver and the manner in which they do so, about the lethality of weapons, and about how these factors affect the balance of attack versus defense. Because this game is designed to be played with toy soldiers, but still claims to provide some basic simulation, we feel it is important to be explicit about how these decisions have been made.

The type of combat which we are simulating can be seen in several historical conflicts of the period: The Russo-Japanese War, the Anglo-Boer Wars, the Spanish-American War, the Balkan Wars, and various colonial conflicts. While we do not extend our rules to cover the opening days of WWI, they certainly serve as a model of what a continental conflict might have looked like in the first decade of the 20th century.

When we look at these conflicts, there are several aspects which are apparent:

(1) The defense had become more powerful vis-à-vis the offense, due to improved weapons, including machineguns.
(2) Cavalry, while no longer the force it had been earlier in the century, was still a useful commodity on the battlefield, if only as a result of its high mobility.
(3) Artillery was used in an indirect-fire role much of the time, and techniques for remote spotting of artillery fire had been developed. Cannister and round-shot had been replaced by shell fire.

Let us look at the typical ranges and capabilities of the weapons of the period. Rifles were of two sorts: later breech-loading models, and repeating weapons. The Springfield, Lee-Enfield, and Mauser can serve as useful examples. In general, these weapons had an effective range of at least 1200 yards. The Mauser and Lee-Enfield were both sited out considerably further, but the effectiveness of rifle-fire at the longer ranges is very

dependent on the quality of the marksmanship, which was often not up to the task. Also, tactically, engagement ranges tended to be lower than the maximum sited range of the weapons. As for rates of fire, it was possible to achieve a very high rate of fire with weapons such as these – the British "mad minute" stands as a testimony to this, which achieved a rate of 15 - 25 rounds a minute. In general, however, the rate of aimed fire was Lower, on the order of 10 to 12 shots a minute, maximum, and probably lower than that in combat.

As for the deadliness of musketry, we must consider several factors. Post-Napoleonic tests had shown that within its effective range, under ideal conditions, and against a formed opponent the hit ratio was something on the order of 15%. Consider that higher muzzle velocities allowed for a flatter trajectory – and therefore a longer effective range – and we can probably use this basic figure as the basis of our calculation.

The first factor we must consider is the lack of ideal conditions on the battlefield, which would probably halve the effectiveness of fire – therefore, a 7.5% kill rate. Factor in also the looser formations used during the period – even in "close order" – and we can perhaps halve the effectiveness of fire again, to 3.25%.

If we have a turn of 2 minutes (as used in the period kriegspiel) and multiply by the rate of fire, we can come up with a percentage for a kill probability in a single turn. The post-Napoleonic tests which we use as our basis assumed a rate of fire of 2-3 shots per minute. We can reasonably quadruple this, given the capabilities of bolt-action rifles with magazines. Thus, our 3.25% chance of a kill at long range becomes again 15% within effective range.

Historically, however, we know that the effect of modern rifles was to strengthen the defense relative to the Napoleonic period, so it is reasonable to assume that at shorter ranges our kill rates would increase considerably. For a simple game mechanic, let's split ranges into three zones: short, medium, and long, and increase the kill probability evenly:

At long range, 15%; at medium range, 30%; at short range, 45%. Using six-sided dice, this translates into a 1 in 6, 2 in 6, and 3 in 6 probability of a kill, respectively, which is probably not too huge a distortion. At least it does produce the historically correct effect of making it very dangerous for close-order bodies of troops to attack across open terrain.

Let us consider formations and movement, so as to get a feel for the appropriate ground scale. The loose formations of the period would give each man perhaps a yard of frontage. If each model soldier represents a platoon of 50 soldiers, and has a frontage of 1", then in a line formation one rank deep we have approximately 50 yards. Fifty yards to the inch means that our musketry ranges will, at 1200 yards, be 24". This seems to be a reasonable starting point for our ground scale. Extended order, of course, would provide a good deal more frontage.

We must then look at rates of movement. The quick-march of 120 paces per minute can, at this period, probably be used as a base. Looser formations allowed for faster movement, similar to the practice of light troops earlier in the century. Indeed, under combat conditions it was probably possible to move a good deal faster than this, although perhaps not for sustained periods. Thus, the idea that troops could cover 300 yards in two minutes as an upper limit seems acceptable. Using our ground scale, this gives us 6", which is a nice round figure.

Let us look at cavalry, then. Cavalry typically maneuvers at a walk, with charges delivered first at a trot and then a gallop. Horses walk at approximately 4 miles per hour (mph), and trot at about 8 mph. A gallop can go as fast as 35 mph, but this is not sustainable over long

distances, and has the effect of destroying the coherence of a charging formation. If we consider that a mile is approximately 1800 yards, then at 8 miles an hour cavalry could go 480 yards in two minutes. Per our ground scale, we can translate this into 10" of movement per turn. In the interests of simplicity, we could round this up, to account for the maneuver conducted at a fast trot, or partly at a gallop. Thus, let's say 12", with an additional 6" added for charges to account for the use of the gallop.

To the extent possible, the actual position of the figures on the table should account for modifiers resulting from formations – that is, the fact that figures in line are less susceptible to being machine-gunned and shelled than those in column should result naturally from the mechanics, rather than being the result of dice modifiers. The major difference in formation – that between extended and close order – is so significant, however, that it will require some dice modifiers to realistically describe.

Let us turn to artillery and machineguns. Artillery, as a result of the increased range and effectiveness of rifle fire, was during this period increasingly being used as an indirect-fire weapon employing spotters. The range of field guns during the Anglo-Boer War was in the region of 5,000 yards; the heavy guns were capable of twice that range. For our game, we can abstract the artillery types into a single type, with a range sufficient to allow it to hit anything on the table: 5,000 yards equals about eight feet in our game scale. If we increase this to nine feet, we have a number that is easily divided into three range brackets.

In terms of use, we can represent dedicated spotters on the table-top. Thus, if the dedicated spotter can see a target, or if the artillery unit itself can, then it has a target. The accuracy of fire will decrease as the range increases, with a simple mechanism for fire deviation. In terms of effect, it should be possible for artillery units to destroy or seriously degrade a target unit in a single turn of fire, under optimum conditions. To simulate this, we allow for a 50% kill probability for all figures within a blast area which is a circle 4" across (that is, a 2" blast radius). Artillery would be poor in melee, and if effectively attacked would be easy to put out of action.

Machine guns are a different proposition. They would always be used in a direct-fire capacity, and would be devastating defensive weapons against close-order attacks. They are essentially area-fire weapons, and would simulate rifle fire over an arc of fire, with similar kill probabilities. Because they are not aimed in the same way as rifle fire, however, they would not be subject to the same rules regarding line of sight. They are also somewhat unreliable, and will be prone to jamming. Like artillery, it is easy to put a machinegun crew out of action, either with rifle fire or in melee, once contact is achieved. Attacking across the arc of fire should be difficult, however.

In considering the turn sequence, it is important to capture the strength of defensive firepower. This demands that we use a turn sequence which gives an advantage to units standing on the defensive and firing at attackers. The turn sequence used here allows that, even though it makes the game slightly more complex.

The Generic Battle Game:

It is possible to set up games with whatever forces and victory conditions you desire. In the spirit of *Little Wars* and S*hambattle,* however, we offer rules for the generic battle game.

Both sides are made up of equal forces. We suggest 3 infantry units, 2 artillery pieces each with 4 crewmen, a spotter for each artillery unit, an MG unit with 3 crew, and a cavalry unit. The infantry units can be from 12 – 24 figures, and the cavalry units from 6 – 12. One infantry or cavalry unit may be Veteran – the rest are Average. Use of general headquarters is optional.

One player arranges terrain on the tabletop from whatever is available; the table should be at least 4' on each side. The other player selects one of the long table sides as a base, and his opponent takes the opposite side. A screen is erected separating the two sides, and figures are placed within 12" of their base side. The battle is fought out until one side or the other is completely destroyed, or the one player concedes defeat. If general headquarters are used, the destruction of the enemies' GHQ may be given as the only victory condition.

Gaming Historical Conflicts:

In order to represent some historical conflicts, players may wish to make some scenario-specific additions and changes to the rules. The following are offered as suggestions and examples only – any rules changes for a specific game should be made clear before play starts, based on research of the conflict being gamed.

The Second Anglo-Boer War:

The Boers were a largely irregular army, but a highly effective one. They were excellent marksmen, very brave and dedicated, and were highly mobile, acting as a force of mounted infantry. The Boers commandos should probably be represented as infantry – in most cases, they fought from protected positions on foot with their mounts sent to the rear. They can certainly be represented as cavalry, of course, for all or part of a force. They will suffer a -1 in melee with regular cavalry, however, lacking training and weapons to fight in this type of combat effectively. The Boer artillery and machineguns (pom-poms) were regular units.

Boer infantry and cavalry are considered to be marksmen, and are given an extended range, able to fire effectively out to 36 inches (12 inches per range bracket). They may only operate in open order, as they lacked the training to operate in close-order formations. Most commandos will be rated Veteran, although the urban ones may be Average early in the war. Artillery and MG units should be rated Average.

Dutkins' Zulus from the author's collection.

The Zulu War:

Zulus are a difficult army to model, as they were very much a regular force, but one which was not constituted along the lines of European militaries of the time. Zulu "regiments" can be of various sizes, but tend to be larger than British battalions – from 500 to 6000 men, with an average strength of 1500. Thus, 30-figure units would be normal. The Zulu regiments spanned the range of quality: the unmarried (black shield) regiments would count as Average, while the more experienced regiments would be either Veteran (red shield regiments) or Elite (white shield regiments). Small units of a dozen or so rifle-armed figures operating only in open order can also be fielded, but otherwise units are not allowed to fire. Because of the inaccuracy of the Zulu marksmen, their range should be restricted to 6" per range bracket as for obsolete rifles. Zulus have no cavalry, but were incredibly fast. You may choose to allow them an 8" base movement, with an added 4" of charge bonus if desired. They had no artillery or MGs.

Zulus should not be given the supporting figure modifiers for close order in melee, even though they can operate in close order. This retains the advantage of the tighter British formations.

British infantry would be organized into 900-man battalions (18 figures) of eight companies, which were sometimes sub-divided into smaller units. Most had been in South Africa and had experience fighting during the Kaffir Wars, and could be considered Veteran. Others – including the 24th – were sent from Britain, and would be classed as Average. British cavalry regiments would be made up of four squadrons, each of eight figures, and would be rated Average. Local "police" units such as the Natal Native Horse would generally be small – from four to eight figures - but would be classed as Veterans. The Natal Native Contingent, if fielded, would be organized as British battalions, but without firearms and with a rating of Poor. British artillery and MG units are Average or Veteran, with the artillery guns being muzzle-loading, shell-firing ones as described in the obsolete artillery rules, above.

Bolshevik Revolutionaries and Bomb-Throwing Anarchists:

There are few images of this period as evocative as those of Bolsheviks and Anarchists clashing with the forces of law & order. Here are a few ideas for running such a game, taken from our own.

The Revolutionaries should operate in large units of 24 to 48 figures. They are classed as anything from Poor to Elite, based on their degree of fanaticism. Players may wish to field "demonstrators" (Poor-to-Average) and "party members" (Veteran or Elite) as distinct units. They are generally not armed very completely, so firing is allowed for every pair of figures shooting on a particular target, using the least-advantageous modifiers. However, at short range they are allowed to fire normally, to accommodate pistol fire and bomb-throwing activities.

A Revolutionary army should have several figures designated as Leaders, who have a special ability. The first time any enemy figures come within 6" of this type of figure, before fire commences, the figure must roll to see if they have been swayed to the Bolshevist cause by charismatic oratory, which will happen on a 1 in 6. If they are so swayed, they immediately become members of the Revolutionary force, and should be marked with a piece of red yarn. From that point forward, they will become members of the Revolutionary army, and fight against their former comrades. If any members of an MG or artillery crew are so swayed, then the loyal members must fight it out with them in melee for control of the gun – no firing is allowed until the loyalty of the crew has been settled.

Depending on the scenario, you may wish to have special rules which disallow the regulars from firing on or meleeing any protestors until the Revolutionaries have attacked. This allows the Revolutionaries to try to convert the regulars to their cause, while waiting until they are well-positioned for an attack.

The Northwest Frontier:

The Pathans and other Afghan tribes of these campaigns would have the marksmanship benefits described for Boers, above, but would be allowed to operate only in open order, for which they will receive the benefit of dice modifiers. Afghans would generally be Veteran. Indian troops would be armed with obsolete rifles as per the optional rules, this being British policy after the Indian Mutiny.

Madhists:

The Dervishes are an example of mass troops which operate in open order, but are not given benefit of dice modifiers. They may be given firearms, and operate in open order. Camelry functions as cavalry. The artillery (and possibly MG) guns were manned by crews trained by Europeans, and will function as regular artillery. Guns would be obsolete guns of the muzzle-loading, shell-firing type (for the British in the Khartoum campaigns) or of the breech-loading, shell-firing variety (for the early Madhist armies, as these were captured Krupp guns). For Omdurman, use the regular artillery rules for the British.

Campaign Game:

This is a simple campaign game, to provide a context within which to conduct battles. It is a "mapless" game, assuming that every country has access to every other country in some fashion should they wish to fight.

Each player chooses to be one of the major countries of late 19th Century Europe. Each country is allotted an army:
- Six 24-figure infantry units, all of which are average except the Guard, which is Veteran.
- Two 12-figure cavalry units, both of which are Average.
- Two artillery pieces, each with four gunners, which are Average.
- One machinegun, with three gunners, which are Average.
- Two infantry spotters – one for each artillery piece – which are Average.

By agreement, the size of the armies may be increased or decreased, but all armies are equal. Each unit is given a card which specifies how many figures it currently has, and what its win/loss record in battle is: how many battles it has fought in, how many times it has failed morale, and which battles were victories, which were losses, and which draws.

Each campaign turn follows this sequence:
(1) Players roll for re-enforcements: for each unit which is below full strength, roll one die:
1 = 1 infantry figure, but none for cavalry or artillery
2 = 2 infantry figures or 1 cavalry figure, but no artillery crew
3 = 3 infantry figures or 1 cavalry figure, but no artillery crew
4 = 4 infantry figures, 2 cavalry figures, or 1 artillery figure
5 = 5 infantry figures, 2 cavalry figures, or 1 artillery figure
6 = 6 infantry figures, 3 cavalry figures, or 2 artillery figures

Units may never be re-enforced above the strength at which they started the campaign, but figures may be transferred between units of the same type, and infantry and cavalry may be transferred to the artillery to act as crewmen. If more than half of the figures in a unit are either re-enforcements (by default, Average) or transfers from a unit of lower quality, then the unit will drop a grade in quality. All activities concerning troop transfers must be made at this point in the campaign turn, for the duration of the turn.

(2) Players announce any attacks on other countries. Any two countries may fight, and there will be a battle if either player wishes to fight between each pair of countries. If a battle is declared, at least one unit must be assigned to that front by the declaring player.

(3) When all attacks have been announced, troops are allocated to the different "fronts". A front is defined as existing between each pair of countries between which a battle will be fought this turn.

Players may allocated troops in one of three ways:

(a) To a specific front in which their country is fighting
(b) To an allied countries' front
(c) To the Reserve

Units in reserve do not fight any battles in the current turn.

(4) Battles are fought. The battles may be fought in a random order, or the order may be agreed between players based on schedules, etc. For each battle, either player may concede the battle without a fight. In this case, it is not counted as a battle for the purposes of troop quality, but only for the purposes of strategic victory. If players choose to fight the battle, then a randomly chosen player arranges the terrain, and the other player chooses a starting side. Set-up is simultaneous and hidden, using a screen.

The battle is fought until one side concedes victory, or both players agree that it is a draw. If all of the figures on one side are killed or belong to units with broken morale, then that side has lost the battle.

If any allied units are involved in the battle, then the player who owns those troops may play them during the battle, or may allow the player to whom they are on loan to do so.

Strategic Victory Conditions:

A running total of battles won and lost is kept for each pair of countries. When one country has beaten an enemy country three more times than it has lost to that country, then the losing country has been conquered. All of that countries' troops are removed from play, beginning on the following turn.

The campaign is conducted until only one country remains unconquered - the winner. Alternately, the campaign may be won by a coalition of more than one country, if they announce their intention to form such a coalition.

Unit Quality Levels:

Each unit begins the game as an Average unit, unless it is the single Guard infantry unit, which is Veteran. Units should be given names, to make it easier to record their history.

When a unit fails morale during a battle, and is removed from play, it drops a quality level, until it is rated Poor.

If a unit has taken part in three consecutive battles wthout failing morale, then it goes up a skill level.

If a unit takes part in two consecutive battles, at least one of which is a victory, and it does not fail morale, then it goes up a quality level.

If a unit takes part in a battle which results in the capitulation of a country and it does not fail morale, then it goes up a quality level.

No unit may go higher than Elite, or lower than Poor.

Obtaining Toy Soldiers:

Buying traditional 54mm toy soldiers is potentially an expensive proposition. The most reasonable ones from collector sources can cost more that $10.00 (USD) apiece, which puts the size of armies contemplated in these rules beyond the touch of most wargamers. Fortunately, there are ways around this difficulty.

The simplest process is to buy toy soldiers from Irregular Miniatures (http://www.irregularminiatures.co.uk/) and paint them yourself. Their 42mm line has a series of "toy soldier style" ranges which are sold as unpainted lead miniatures sculpted in imitation of the old Britains "B" size. Additionally, they sell a range called "Deutsche Homage" (also in their 42mm line) which is sculpted in imitation of the old Heyde and Haffner figures. The figures cost 1 GBP each (for infantry), which means that they are no more expensive than high-end 25mm figures. They make infantry, cavalry, machineguns, and artillery, so everything needed is available. The Franco-Prussian and Balkan Wars ranges are particularly useful.

Irregular Miniatures 42mm Russians from their Balkan Wars range. (Photo by Donald & Gaelyn Hauser, used by permission of Irregular Miniatures)

If you are – like myself – a fan of 54mm figures, then you have a couple of options. The best, in my opinion, is to buy moulds and cast them yourself. One source is the "traditional toy soldier" range from Prince August (http://www.princeaugust.ie) also available from the Dunken Company (http://www.dunken.com) in the US. They make a set of traditional toy soldier moulds for useful infantry and cavalry figures, with swappable heads, bodies, and arms for some of the figures. These are solid figures, however, and they use a lot of metal. It is strongly recommended that you

find a source of below-market-price white metal before embarking on casting a few hundred 54mm figures. Another good resource are the 54mm "Lil Army" moulds available from Dutkins (http://www.dutkins.com). They have a wide range, which includes Zulus, a gatling gun, and some artillery pieces.

It is also possible to purchase Britains reproductions, unpainted. Perhaps the best US source for these is London Bridge Collector's Toys, Ltd. (http://www.londonbridgetoys.com). They have a comprehensive line of Britains parts and figures (and some from other manufacturers), which cost $4.00 - $5.00 per figure, unpainted.

Another option is plastic 54mm figures. Obviously, these are available in profusion from makers such as BMC, Armies in Plastic, Classic Toy Soldiers, Marx, and others. I have a piece of advice regarding these: use Rustoleum's Specialty Plastic Primer before painting plastic figures. This is the best thing I have found, by far. I learned of this product from the Michigan Toy Soldier Company site (http://www.michtoy.com) which I also recommend as a reasonable source of figures in the US. (This is also a great site for getting a feel for what metal collector figure ranges are out there.)

One of my favorites is BMC's "San Juan Hill" set. These figures are very cheap ($8.00 USD for 50 plus a couple of MGs at Michigan Toy Soldier Company) and they are sculpted in a reasonably naïve toy soldier style. Any other US 7th Cavalry line can be adapted for the period, and American Civil War artillery is readily available from manufacturers like Imex who make 1:32 soft plastic figures. These BMC Spanish-American War figures can be used for both sides, distinguished mostly by their paint jobs. Armies in Plastic does a wide range of late-19th-Century figures which are also useful.

There are many different options in plastic 54mm, including pre-painted Britains Deetail figures (they make US and French Foreign Legion figures) but these can get a bit pricey as well. This is too big a topic to cover in detail here, so I will leave it at that.

Another option which is probably less well-known is to find reproduction moulds of the semi-round or full-round figures which were sold in the US in the early 20th century. These include one of my favorite sets – a semi-round German marching band, with mounted officer, which allows me to make every basic type I need (except for MGs and artillery). One place where these reproduction moulds can be found is Castings, based in Eastsound WA in the US (www.webmolds.com). They sell a range of different moulds, and are worth checking out.

There is still a thriving European business in zinnfiguren, those flat 30mm figures. They can be purchased painted or unpainted, and are not necessarily that expensive. They are a bit smaller than other figures I would use for this game, but they certainly have a toy soldier feel to them! Just Google "zinnfiguren" and you will get a wide range of sites from which to choose.

As a final note, the "LittleWars" Yahoo! Group is a great place to get tips and information for wargaming with toy soldiers.

Irregular Miniatures 42mm Germanic cuirassier from their Franco-Prussian range. (Photo used by permission of Irregular Miniatures)

QUICK REFERENCE SHEET

Turn Sequence

Repeat until game is complete.

1. Each player rolls 1 six-sided die to determine move order. Ties are re-rolled until a move sequence is established, with the high roll choosing first or second move.

2. Players go through the move sequence, each moving a single unit.

3. All fire is conducted by unmoving figures. Units suffering casualties must check morale.

4. All fire by moving figures is conducted, simultaneously and morale is checked for units taking casualties from fire.

5. All melee is resolved. Any figures in contact with the enemy general headquarters roll for outcomes. Check morale for all units taking casualties from melee.

Movement

Foot and MGs: 6", but half speed while in rough
Cavalry: 12", but quarter speed while in rough
Artillery: 4", quarter speed while in rough

Roads double movement for figures while traveling along them. Figures must move to remain within 2” of another figure in their unit.

Rifle Fire

Rifles may fire up to 24”. Rifles will choose a single target and roll a die.

If range is up to 8", target is killed on a 4 or more
If range is more than 8" and up to 16", target is killed on a 5 or more
If range is more than 16", target is killed on a 6 or more

-1 if target is in soft cover
-2 if target is in hard cover/fortifications
+1 if target is cavalry
-1 if firer is cavalry
-1 if target is in open order, or is an artillery or MG crewman

MG Fire

MGs may fire up to 24”. MGs will roll on every enemy figure within their arc of fire.

If range is up to 8", target is killed on a 4 or more
If range is more than 8" and up to 16", target is killed on a 5 or more
If range is more than 16", target is killed on a 6 or more

-1 if target is in soft cover
-2 if target is in hard cover/fortifications
+1 if target is cavalry
-1 if target is in open order, or is an artillery or MG crewman
-1 if only one crewman is touching the MG base

Artillery Fire

An artillery piece has a range of 108" (9 feet). Identify the target point. Roll two dice: one for lateral deviation, and one for overshooting/undershooting. There is a deviation factor for each range bracket:

Short range - up to 36": 1" deviation

Medium range - more than 36" and up to 72": 2" deviation
Long range - more than 72" up to 108": 3" deviation

Deviation Rolls:

1: Twice deviation factor to left (for lateral) or long (for overshoot)
2: Single deviation factor to left (lateral) or long (for overshoot)
3, 4: On target (laterally or for undershoot/overshoot)
5: Single deviation factor to right (for lateral) or short (for undershoot)
6: Twice deviation factor to right (for lateral) or short (for undershoot)

For each subsequent turn on which the same target point is aimed at, firer may adjust deviation by 1 on each dice. All figures within 2" of the impact point for artillery will be considered "hit", including MGs and artillery pieces.

Roll a die for each figure hit: 4-6 kills figure or destroys gun/MG. Subtract 1 for soft cover, and 2 for hard cover. Add 1 if target is cavalry. Subtract 1 for each artillery crewman less than 3 firing.

Melee

Each figure which is either attacking, a target, or both rolls one die. Any figure whose roll is greater than the roll of its target destroys that figure. Note that figures which are both attacker and target use a single roll for both.

Cavalry in the open attacking targets in the open get a +1 to close-combat die rolls. In charge situations, where they have moved into contact that turn, they get an additional +1, and a further +1 for each continuously descending terrain level they have crossed during the charge movement into combat.

Terrain advantage (breastworks, defending steep river bank or hill, etc.) give a +1 to non-cavalry figures' die rolls.

Cavalry and infantry figures in close order get a +1 against frontally-contacted opponents. Any close-order infantry or cavalry figure with a full-base-side contact to the rear with a figure sharing the same facing gets a further +1 for support against frontally-contacted opponents.

Morale

- Elite: 12
- Veteran: 11
- Average: 10
- Fair: 9
- Poor: 8

To check morale, roll two dice. A score greater than the number given above indicates a morale failure, and the unit is removed from play. For each 25% casualties the unit has suffered in total, add 1 to the die roll. Additionally, add 1 to the die roll for each 25% casualties the unit suffered in the fire or melee phase which has caused the check. Troops in fortifications/hard cover get a -1 to the die roll.

When an MG or artillery unit fails morale as a result of fire (but not of melee), roll a die: on a 4 or better, the gun model is destroyed by the crew before they flee, and cannot be captured or re-used. This die roll is modified by troop quality:

Elite: +2
Veteran: +1
Fair: -1
Poor: -2