

# LITTLE WARS

When H. G. Wells committed to paper the rules for his *Little Wars* in 1913, one suspects he had some inkling of the course the field was steering. Games derived from the Prussian *Kriegsspiel* were not at all uncommon in the Europe of his day. By that time, Oxford's University *Kriegsspiel* [sic] Club dated back forty years.

Unlike *Kriegsspiel* and its descendants in the dice, tables, and hefty rulebooks tradition, which have their roots in battlefield simulation, Little Wars began with pure *play*: knocking over a toy soldier with a toy cannon. This spark of whimsy courses through the game's veins. Which victory is sweeter: rolling well on the combat results table, or sending an enfiladed column of miniature soldiers flying with a well-aimed cannon shot? Your author knows which one he prefers. What it gives up in accuracy it gains back—with interest—in the sheer joy of the thing.

Which brings us to the matter at hand. Why this text, when Wells' original is freely available? Because I stand on the shoulders of giants—not merely Wells, but also a half-century of board game and wargame designers, who have established a language and structure for the clear articulation of rules that Wells lacked, and innovated on the foundation of *Little Wars* besides. I have borrowed some of these innovations, and endeavored to lay out the rules in modern style.

## INTRODUCTION

Little Wars is a miniatures wargame for two or more players organized into two **coalitions**, played with toy soldiers (infantry and cavalry) and spring-fired, breech-loading toy cannon.

The smallest unit of play is the **battle**: two armies face off on a miniature battlefield, playing for score. Several battles may be organized into **campaigns**, in which the scores from several battles are summed to declare an overall winner.

## THE BASIC GAME

The rules given here constitute the basic game as designed by H. G. Wells.

The advanced game, whose rules begin on page 6, contains my revisions and expansions to Wells' original.

### 1. TROOPS

**1.1. Unit Types and Terminology.** Little Wars is played with three kinds of **unit**: infantry, cavalry, and artillery. Infantry and cavalry (collectively, **men** or **troops**) may be represented by toy soldiers of the appropriate kind. Infantry should be of uniform size, as should cavalry. Foot soldiers of between one and a half and two inches tall work well.

Artillery (or **guns**) should be of the breech-loading, spring-firing variety<sup>1</sup>.

**1.2. Point Values.** Each of the three kinds of unit has a **point value**.

**Infantry** 1 point  
**Cavalry** 1.5 points  
**Cannon** 10 points

**1.3. Strength and Size.** The **strength** of a force is the sum of its point values. The **size** of a force is the number of men it comprises.

### 2. BATTLE SETUP

Before battle, the players lay out the terrain on which it will be fought, and choose the armies they will bring to the contest.

**2.1. Battlefield Design.** Choose a coalition (by coin toss or mutual agreement) to design the battlefield.

**2.1.1.** The coalition designing the battlefield should lay out scenery, cover, and other props on the floor of a room, or other playing surface. A playing surface of at least 4' by 8' is recommended.

**2.1.2.** By mutual agreement between coalitions, determine which cover is passable by troops and which is impassable. (All cover is impassable by guns.)

**2.1.3.** Mark the sidelines and back lines of the battlefield, as well as the center line (equidistant from each back line).

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<sup>1</sup>The author's design can be found at:  
[www.thingiverse.com/thing:4665728](http://www.thingiverse.com/thing:4665728)

**2.2. Army Selection.** After the battlefield has been laid out, each coalition selects an army.

**2.2.1.** Each coalition receives a certain number of points with which to buy troops. Allot each coalition between 10 and 20 points per foot of battlefield width, depending on the desired density of forces.

**2.2.2.** To add a unit to your army, pay its point value from your allotment of points.

**2.2.3.** If insufficient troops are available for each coalition to spend its points as desired—for instance, if each coalition wants 20 cavalry, but only 30 toy cavalymen are available—divide the forces in question evenly between the coalitions.

**2.3. Measuring Tools.** Provide each player with three lengths of string: one of six inches, one of one foot, and one of two feet.

**2.4. Choice of Side.** After both coalitions have built their armies, the coalition which did not design the battlefield must either choose which side of the battlefield it wishes to fight from, or decide to move first. The coalition which designed the battlefield makes the remaining choice.

**Example** The Red coalition designs the battlefield. The Blue coalition decides it wishes to fight from the north side of the field, leaving the Red coalition the first move.

### 3. BATTLES

Battles are fought in time-limited **turns**, alternating by coalition. If a coalition includes multiple players, those players act simultaneously. After each turn, off the clock, close combat is resolved and any upset scenery on the battlefield is returned to its proper place.

**3.1. Deployment.** Before the battle begins, players must **deploy** their forces.

**3.1.1.** Deployed forces must be laid out behind the back line.

**3.1.2.** On their first moves, measure all units' movements from the back line, not their physical positions.

**3.1.3.** If possible, deployment should be done in secret. Divide the battlefield with a curtain, or place units in boxes and place those boxes to hide their composition and number.

**3.1.3.1.** If using boxes, place the edge of the box touching the back line. On the first turn, measure the movement of units within the box from any point on the edge of the box.

**3.2. Time Limits.** Before a coalition's turn, determine the time limit. Determine which player in the coalition controls the largest force, then count the number of men and the number of guns he controls. For every 5 men alive, rounded up, the coalition receives 10 seconds. For every gun in action, the coalition receives 60 seconds.

**Example** The Blue coalition has 62 soldiers alive, two guns in action, and one gun insufficiently crewed. 63 men rounds up to 65, granting 130 seconds. Two guns in action grant a total of 120 seconds, for a grand total of 250 seconds, or 4:10.

**3.2.1.** A player from the other coalition should serve as timekeeper, watching the clock and providing warnings at 2 minutes, 1 minute, and 30 seconds, and calling "Time!" when time expires.

**3.3. Timed Turn Phases.** The timed portion of a turn comprises two phases: the **artillery phase** and the **movement phase**. These phases occur in strict order: except as allowed in the rules for the artillery phase, guns must be moved or fired *before* moving any infantry, and after moving infantry, guns may not be moved or fired.

**3.3.1.** When time expires, all players in the moving coalition must immediately cease handling guns and troops.

**3.3.2. Artillery Phase.** A gun is **in action** if there are at least four men within six inches of it (its **crew**). A gun may not be moved or fired unless it is in action.

**3.3.2.1.** A gun's crew may comprise no more than eight men.

**3.3.2.2.** In the artillery phase, each gun may be either moved or fired, but not both.

**3.3.2.3. Moving Guns.** A gun moves as fast as the slowest member of its crew. Measure a gun's movement from the center of its axle.

**3.3.2.3.1.** A gun's crew (and only its crew) moves with it, and may be placed anywhere within six inches of the gun's destination.

**3.3.2.3.2.** If a gun's crew comprises mixed infantry and cavalry, the gun may only move more than one foot if there are at least four cavalry among its crew. If a gun moves more than one foot, accompanying infantry must be left behind.

**3.3.2.3.3.** After moving, a gun must be placed with its barrel pointing the direction from which it came.

**3.3.2.4. Firing Guns.** A gun which is not moved may fire up to four times. It may be trained by rotating it in place around the center of its axle, and elevated by using the gun's elevation control.

**3.3.2.4.1.** Guns may not open fire until the start of their controlling coalition's third turn.

**3.3.2.4.2.** The gun's crew, along with nearby men, may be laid down to facilitate aiming and firing.

**3.3.2.4.3.** A shell kills all the men knocked over by its firing, including men knocked over as a chain reaction (i.e., if one man is hit by a shell and knocks over another, the second man is also killed.)

**3.3.2.4.4.** Men who are hit by a shell and partially knocked over, but remain propped up on scenery or other soldiers, are also killed.

**3.3.2.4.5.** If a shell strikes at least one man but fails to knock any men over, the first man struck by the shell is killed.

**3.3.2.4.6.** Friendly men in the line of fire may be laid down so that guns may fire over them.

**3.3.2.4.7.** After a gun finishes firing, two of its accompanying soldiers must be placed on either side of the very rear of its trail, directly behind the wheels.

**3.3.3. Movement Phase.** Once guns have moved or fired, men may move.

**3.3.3.1.** Infantry may move up to one foot per turn. Cavalry may move up to two feet per turn.

**3.3.3.1.1.** Measure movement with the string of appropriate length, routing it around obstacles impassable to troops.

**3.3.3.1.2.** Men may not be placed directly up against obstacles, other men, or guns, or packed into tight spaces between battlefield scenery.

**3.3.3.2.** When men are moved into close contact (separated by an inch or less) from men of the opposing coalition, a **melee** forms around the first **point of contact**.

**3.3.3.2.1.** The melee includes all points of contact within six inches of the first, and any man within six inches of those points of contact.

**3.3.3.2.2.** If a man is within six inches of points of contact belonging to two or more separate melees, include him in the melee to which the *nearest* point of contact belongs.

**3.3.3.3.** Any unit moved backward across its own back line **retreats** from the battle. Retreated men may not return to the battlefield, nor may they be killed by cannon fire or involved in melees. They count as surviving forces for the purposes of scoring.

**3.4. Isolation and Support.** A body of men is either **isolated** or **supported**, depending on how near it is to other forces of its coalition. It is isolated if it cannot reach a force half or more its own size (round down) in one move, and supported otherwise.

**Example** A force of 21 infantry is 11 inches from a force of 10 men. Half of 21 rounded down is 10. The force of 21 men is supported.

**Example** A force of 21 cavalry is 25 inches from a force of 15 men. The smaller force is large enough to support the larger, but too far away. The force of 21 men is isolated.

**3.5. Capturing Guns.** Guns may be captured by eliminating all enemy men within six inches of the center of the gun's axle, then moving at least four of your own men to within six inches of the gun. Two of the men capturing a gun must be in 'firing position', placed on either side of the trail as though they had just fired the gun.

**3.5.1.** A gun is yours as soon as you have captured it: if the enemy wishes to retake it, he must eliminate all of your men within six inches of it, then move his own men into position.

**3.5.2.** During the artillery phase of your next turn, provided you still have sufficient crew with the gun to put it in action, you may fire or move it.

**3.6. Untimed Turn Phases.** After time has expired, two untimed phases occur before the next coalition's turn begins: **cleanup** and **close combat**.

**3.6.1.** Though untimed, these phases should be kept as brief as possible. In the ideal case, they should not exceed four minutes.

**3.6.2. Cleanup Phase.** In the cleanup phase, players replace any scenery knocked over during the turn, remove any artillery casualties left on the field, and stand up any men accidentally knocked over or laid down to facilitate gun handling.

**3.6.3. Close Combat Phase.** In the close combat phase, melees are resolved.

**3.6.3.1.** Determine if the smaller force involved in the melee is supported or isolated, measuring from the first point of contact. If it is supported, each man in the smaller force kills one man and is himself killed.

**Example** 15 men attack 10 supported men. Each man in the smaller force kills one attacker and is killed, leaving five attackers and zero defenders alive.

**3.6.3.2.** If it is isolated, each man in the smaller force kills one man and is himself killed, until the smaller force is half the size of the larger. The larger force then takes the remaining men in the smaller force prisoner<sup>1</sup>.

**Example** 15 men attack 10 isolated men. Five men on each side are killed, leaving 10 attackers against 5 defenders. The attackers take the remaining defenders prisoner.

**3.6.3.3.** The attacking coalition selects which men are killed and which are captured (if applicable).

### 3.7. Prisoners and Surrender.

**3.7.1.** Any isolated body of men may **surrender** at any time on their coalition's turn, or on the other coalition's turn at any time before the start of the movement phase. Surrendered men are immediately removed from the field and placed behind the other coalition's back line.

**3.7.2.** Men made **prisoner** through combat must be escorted by at least one man per eight prisoners, kept within six inches of the prisoners.

**3.7.2.1.** Prisoners under escort are controlled by the escorts' coalition, moving at their ordinary speed.

**3.7.2.2.** If prisoners are moved behind their escorts' back line, they are removed from play and placed with any surrendered men. Prisoners removed from play no longer require escorts.

**3.7.2.3.** Prisoners may be freed by killing their escorts, but are not freed immediately. Any of your men held prisoner in excess of eight per escort escapes at the start of your coalition's next turn.

**3.7.2.3.1.** Your men who escape may not contribute to melees until they have returned to your back line to rearm themselves.

<sup>1</sup>The number of casualties taken by each side, if A is the size of the larger force and B the size of the smaller, is  $2B - A$ .

**3.8. Ending Battles.** Battles may end in one of two ways.

**3.8.1. Control of the Field.** If one coalition, between retreats made and casualties taken, has no forces remaining on the battlefield, the other coalition wins.

**3.8.2. Stalemate.** If both coalitions agree, at the end of either coalition's turn, that they can make no further progress toward the objective, a stalemate occurs.

## 4. SCORING

For two reasons, Little Wars is played for score rather than simple victory or defeat. First: scoring enables the play of longer campaigns, totaling each coalition's scores from several battles to crown an overall victor. Second: the design of the scoring system encourages such behaviors as prisoner-taking, surrendering, and retreating from hopeless situations.

A coalition's total score comprises two elements: its **survivor score**, determined by its surviving forces and prisoners at the end of a battle, and its **objective score**, determined by the choice of objective and its battlefield performance.

**4.1. Survivor Score.** For each unit alive or retreated at the end of the battle, score its point value.

**4.1.1.** For each prisoner held by *either* coalition, *each* coalition scores half a point.

**Example** The Blue coalition retreats from the field, ending the battle. Its retreated forces include 18 infantry, 2 cavalry, and 1 gun. It holds 3 Red prisoners.

The Red coalition has 31 infantry, 7 cavalry, and 3 guns (one captured from Blue) at the end of the battle. It holds 10 Blue prisoners.

The Blue coalition's survivor score is 37.5: 18 for 18 infantry, 3 for 2 cavalry (1.5 points each), 10 for 1 gun, and 6.5 for prisoners (13 between both coalitions, 0.5 points each).

The Red coalition's survivor score is 78: 31 for 31 infantry, 10.5 for 7 cavalry (1.5 points each), 30 for 3 guns (10 points each), and 6.5 for prisoners (13 total, 0.5 points each).

**4.2. Objective Score.** 100 objective points are distributed between the coalitions based on the selected objective and each side's battlefield performance.

**4.2.1.** Unless the chosen objective's rules say otherwise, in case of a stalemate, the coalitions split the objective points 50-50.

**Example** In the above example, Red has won the day in a Fight to the Finish battle, securing all 100 objective points. Its grand total is 178, to Blue's 37.5.

## 5. OBJECTIVES

**5.1. Fight to the Finish.** Two armies meet. The only objective is victory.

**5.1.1. Scoring.** If the battle ends by 3.8.1 Control of the Field, the victorious coalition receives all 100 objective points. If the battle ends by 3.8.2 Stalemate, each coalition receives 50 objective points.

**5.2. Strategic Locations.** Two armies meet in the field, aiming to secure commanding positions from which to force their opponents back.

**5.2.1.** Important positions are represented by **strategic locations**, objectives marked on the battlefield with small flags, tokens, or other visible objects.

**5.2.2.** Each *player* (not coalition) places three strategic location markers as follows. Each marker is worth a particular number of objective points, totaling 72 in a two-player game.

- Anywhere more than two feet from his own back line (6 points).
- Anywhere within two feet of the center line *on the opposing coalition's side* (12 points).
- Anywhere on the center line (24 points).

**5.2.2.1.** If the coalitions are not of equal size, the smaller coalition places the same number of markers as the larger coalition.

**5.2.3.** During the battle, each coalition attempts to take **control** of strategic locations. To control a strategic location, you must have at least twice as many men as your enemy within six inches of it.

**5.2.4.** If, at any point in the battle, a coalition controls more than half the strategic locations, start a countdown. Each coalition receives two full turns after the countdown begins. At the end of the countdown, each coalition receives the objective points for the strategic locations it holds at that moment.

**5.2.4.1.** If a coalition has multiple players, total the strategic location points, then divide by the number of players in the largest coalition to get the result.

**Example** Coalition A has three players, and coalition B has two. During battle setup, each coalition placed a total of 9 strategic locations (three per player in A, the larger coalition), for a total of 18.

A holds 78 points of strategic, and B holds 102. To determine the number of objective points each receives, the players divide each figure by 3, the number of players in the larger coalition. A receives 26 points, and B receives 34.

**5.2.5. Scoring.** After the countdown ends, play the rest of battle in the same manner as in Fight to the Finish. The coalition which controls the field in the end receives the remaining 28 objective points (or, in case of stalemate, the coalitions split them 14-14).

**5.2.5.1.** If neither coalition secures more than half the strategic locations and the game ends by 3.8.2 Stalemate, each coalition receives 50 objective points, without respect to the strategic locations it holds.

**5.3. Defense.** One coalition occupies the field. The other aims to evict them.

**5.3.1.** After the battlefield has been designed but before troops are purchased, choose a coalition to defend by coin toss or mutual agreement.

**5.3.2.** The defending coalition receives  $\frac{2}{3}$  as many points as the attacking coalition to purchase its troops.

**5.3.3.** The defending coalition may deploy its troops on its side of the battlefield, no closer than 2 feet to the center line.

**5.3.4.** The attacker moves first.

**5.3.5.** The defending coalition's guns may open fire immediately, not on its third turn. (The attackers still must wait until their third turn.)

**5.3.6. Scoring.** The attacking coalition receives all 100 objective points if it reaches the defender's back line with at least  $\frac{1}{4}$  its starting men. Otherwise, the defending coalition receives 100 points.

**5.3.6.1.** When calculating survivor score, the defending coalition multiplies the value of its surviving troops by 1.5.

**5.4. Strategic Location Defense.** As 5.3 Defense, with the following adjustments.

**5.4.1.** The defending coalition places five strategic location markers, each worth 16 points, as follows.

- No more than 2 feet, 6 inches from the center line (2 markers).
- No more than 2 feet from an objective previously placed (2 markers).
- At least 2 feet from the defender's back line.

**5.4.1.1.** After the defender places the strategic location markers, the attacker may move any one marker up to six inches from its original location.

**5.4.2. Scoring.** The attacking coalition may call off the assault at the start of its turn. If it does so, the battle ends. The attacking coalition receives 16 objective points for each strategic location it controls (see 5.2.3), and 20 objective points if it has reached the defending coalition's back line with  $\frac{1}{4}$  its total force. The defender receives all remaining objective points.

**5.4.2.1.** If the attacking coalition wins by 3.8.1 Control of the Field, it receives all 100 objective points.

**5.4.2.2.** When scoring, the defending coalition multiplies its troop counts by 1.5 before calculating its survivor score.

## THE ADVANCED GAME

These rules are provided in the spirit of the "Extensions and Amplifications" section in Wells' *Little Wars*. Some of them are borrowings from the latter chapters of that book, while others are your author's, filling in what he perceives to be gaps in the classic rules.

Use them or don't, as you like; the playtesting supporting this document indicates that the Basic Game is more than adequate on its own.

## 6. LIMITED AMMUNITION

This rule replaces 1.2 Point Values and interacts with 3.1 Deployment, 3.3.2 Artillery, and 3.3.3 Movement.

**6.1.** Cannon ammunition is not unlimited, and must be purchased while building your army.

**6.2.** Unit point costs are as follows

- Infantry** 1 point
- 2 Shells** 1 point
- Cavalry** 1.5 points
- Cannon** 6 points

**6.3.** Cannon ammunition must be placed on or behind the back line during deployment, along with the other units in each coalition's army.

**6.3.1.** A cannon may fire any ammunition within six inches of it. Fired ammunition is removed from play.

**6.3.2.** Cannon ammunition is invulnerable. If it is struck by cannon fire, return it to its original position.

**6.3.3.** Cannon ammunition is immobile, and must be moved by troops.

**6.3.3.1.** During your Movement phase, an infantryman or horseman may take up to two cannon shells no more than three inches from a point on his move, and drop them at his feet at the end of his move.

**6.3.3.2.** Two horsemen moving together constitute an ammunition wagon, and may move up to six shells between them.

## 7. LESS LETHAL MELEES

This rule replaces rule 3.6.3.1.

**7.1.** If the smaller force in a melee is supported, each man in the smaller force kills one man and is himself killed, until the smaller force is  $\frac{1}{2}$  the size of the larger. The larger force then takes the remaining men in the smaller force prisoner<sup>1</sup>.

**Example** If 15 men attack 10 supported men, eight men of each force are killed, leaving 7 against 2. The remaining 2 men in the smaller force outnumbered by 3-1 or more, and are made prisoner by the 7 surviving men of the larger force.

## 8. INFERIOR ATTACKERS

This rule interacts with rule 7.1 and 3.6.3 Close Combat.

**8.1.** If a smaller force attacks a larger force, each side takes half the usual casualties.

**8.2.** The remaining men in the smaller force are not taken prisoner, instead falling back to the positions they held prior to their move into close combat.

**Example** 10 infantry attack 15 supported infantry. Ordinarily, eight men of each force would be killed. Instead, four men are killed on each side, and the attackers fall back to their starting positions.

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<sup>1</sup>The number of casualties taken by each side, if A is the size of the larger force and B the size of the smaller, is  $(3B - A) / 2$ .

## 9. FORMATIONS AND CHARGES

This rule interacts with 3.3.3 Movement and 3.6.3 Close Combat.

**9.1. Infantry Formations.** Two men are in **close order** if they are separated by less than an inch. Otherwise, they are in **extended order**.

**9.1.1.** A force is in close order only if a majority of its men are in close order. Otherwise, it is in extended order.

**9.1.2.** A group of at least four infantry in close or extended order can **form a square** by moving into a square formation, facing outward. Infantry in square formation moves at half speed, unless it is moving from square formation into close or extended order.

**9.2. Cavalry Charges.** A **cavalry charge** is an attack by a cohesive body of cavalry. To make a charge, every cavalryman participating in the attack must be within three inches of another cavalryman also participating in the attack.

**9.2.1.** If cavalry charges infantry while the infantry is in extended order, each cavalryman counts double when resolving the melee.

**9.2.2.** If cavalry charges infantry while the infantry is in close order, and the cavalry charge starts from a distance of more than one foot, each cavalryman counts as one and a half men when resolving the melee.

**9.2.2.1.** If cavalry attacks infantry in close order from one foot or less, each cavalryman counts as one man.

**9.2.3.** If cavalry charges infantry while the infantry is in square formation, each cavalryman counts as half a man when resolving the melee.

## 10. RIFLE FIRE

This rule interacts with 3.3.3 Movement.

**10.1.** Five infantrymen arranged in a line, if they are all facing the same direction, may, during their Movement phase, engage a target in front of them with rifle fire instead of moving.

**10.2.** To resolve rifle fire, take a single shot with a toy cannon from anywhere behind the line of men firing, so that the shot passes over the center man.

**10.3.** Infantry in square formation cannot fire rifles.

## 11. LONG MELEES

This rule interacts with 3.3.3 Movement and 3.6.3 Close Combat.

**11.1.** When you move troops into close contact with the enemy, place a token next to the melee that forms.

**11.1.1.** Tokens need not be unique to each player.

**11.2.** During the Close Combat phase, any melee marked by a token is only *partially* resolved. Determine the number of casualties that the melee will result in, and remove half that many men (rounding up) from both forces involved. Then, remove the token.

**11.3.** Any unmarked melee is resolved in full.

**11.4.** You may interact with an ongoing melee in two ways.

**11.4.1. Reinforce.** During your Movement phase, move more men into the melee. If you move men into the melee, place a token next to it. In the subsequent Close Combat phase, the melee will again be partially resolved per 11.2.

**11.4.2. Fall Back.** During your Close Combat phase, move your men out of the melee instead of resolving casualties. The first man falling back is taken prisoner, along with every fifth man.

**Example** Six men fall back from combat. Two are taken prisoner: the first and fifth.

Eleven men fall back from combat. Three are taken prisoner: the first, fifth, and tenth.

**11.4.2.1.** The coalition remaining in combat determines which men are taken prisoner.

**11.4.2.2.** To fall back, men *must* make a full-length move that ends no closer to the opponent's back line than their current position and leaves them at least six inches from the nearest enemy man. If any one requirement cannot be met, the men may not fall back.

**Example** Red moves 15 men into close contact with 15 of Blue's men, placing a token next to the melee. Both forces are supported.

This melee will result in 15 losses on each side, but it has a marker, so it is only partially resolved during Close Combat. Half of 15 rounded up is 8, leaving 7 men on 7.

During his Movement phase, Blue moves an additional 5 men into combat, placing a token next to the melee, giving him a 12-7 advantage. This

melee will result in 5 casualties on both sides, but it is marked, so it is only partially resolved. Half of 5 rounded up is 3, leaving 9 men on 4.

Red does not reinforce the melee, but falls back during Close Combat. The first of his four remaining men is taken prisoner. Three make a full move toward Red's back line.



## NOTES FROM THE FIELD

I have long been fascinated by *Little Wars* (the book) and Little Wars (the game it describes), but only recently have I found myself with the tools and skills required to make something of that fascination.

In the following few pages, I hope to share some knowledge I have gleaned in the course of the playtesting (and simple play) that yielded this document.

### MAKING ARTILLERY

The critical pieces in a Little Wars set are the cannon. The cost of such prized antique toy artillery was, until recently, the most proximate obstacle preventing me from playing a game. A month or two after obtaining a 3D printer, I had the dawning realization that I could *make* one, given a bit of time invested in learning how to draw things in FreeCAD.

So arose my modern reproduction of the Britains Ltd. 4.7" naval gun. Simpler in design, perhaps, and less evocative of the real thing than the old toy, but also attainable by the average home craftsman for a mere few dollars in material. Shortly thereafter followed my original 12-pounder Whitworth rifle, somewhat more pleasing to the eye and a bit more in keeping with the early 18th-century toy soldier models to be found on Thingiverse. Both designs<sup>1</sup> owe a debt to the 1915 Britains Ltd. patent drawings, which clarified some elements of the mechanism to the point where I felt comfortable drawing them up for printing.

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<sup>1</sup>In a rare case of intellectual property law serving its design purpose.

Two tweaks I intend to try focus on correcting two flaws<sup>2</sup> in the existing cannon design. Tweak the first: a lighter-weight spring. This may help reduce the power of the cannon when conducting enfilading fire. A rank of cavalry, seen from the end, presents far too juicy a target at present, and a body of infantry advancing, too, can be thinned quite dramatically. Tweak the second: a projectile, akin to that fired by full-scale Whitworth rifles, with a helical profile cut into it. Polygonal rifling, in combination with such a projectile, might well yield improved accuracy.

### INFANTRY AND CAVALRY

### SCENERY

### BATTLEFIELD DESIGN

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<sup>2</sup>Or at least, things I perceive as flaws based on my interpretation of the battle reports in *Little Wars*.