

PALMER V. THE GATLING GUN COMPANY.

Circuit Court, D. Connecticut.

July 16, 1881.

1. PATENT No. 37,052—REPEATING GUNS—INFRINGEMENT.

Letters patent No. 37,052, granted December 2, 1862, to Charles H. Palmer, for improvement in repeating guns, *limited* as to its *first* claim, and *held not infringed* as to its *first* and *sixth* claims by devices constructed under letters patent No. 47,631, granted May 9, 1865, to Richard J. Gatling, for a battery gun.

2. SAME—CLAIM—CONSTRUCTION—LIMITATION.

The first claim of complainant's patent, for "presenting and thrusting the cartridges into the rear of the revolving barrels, or series of such barrels, in one point of the circuit, confining and discharging them at another point in such circuit, and removing the shells or cases at another point in such circuit, in the manner substantially as set forth," *construed* not to cover a process or mode of operation, but *limited* to the particular combinations described effecting the specific result.

3. SAME—INFRINGEMENT.

A battery gun, which consisted of a series of independent guns, each with its separate barrel, and loading, confining, firing, and shell-extracting devices, each operation of loading, firing, and ejecting covering a certain part of the circle of revolution, and being completed as to each barrel by one circuit in which the cartridges were fed *against* the rear of the barrels, confined by a plunger in a *cartridge chamber*, from which they were discharged *without being inserted in the barrels*, and in which the hook for extracting the shells was attached to the plunger and snapped over the flanges of the cartridges in its forward movement, retained in position until the discharge and then moved backward with the plunger, releasing the shell, *was a prior invention*. Complainant's device, consisting of a series of continuous revolving barrels, with a single set of loading, firing, and extracting mechanisms, operating upon each barrel in turn, the motion of the barrels being intermitted while the operations of loading, firing, and extracting are being performed, the cartridge or charge being *thrust directly into the rear and of the barrel* from which it is discharged, and the shell being extracted by means of a hooked bar reciprocated back-wardly by a

tappet on the operating crank-shaft and thrust against the breech,

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when released, by a spring, *held, not infringed* by defendant's device constructed substantially similar to the prior battery gun, except that the cartridge chamber is discarded and the cartridge *thrust directly into the rear of the barrel*.

Henry Parsons, for plaintiff.

Wm. Edgar Simonds and *A. P. Hyde*, for defendant.

SHIPMAN, D. J. This is a bill in equity, founded upon the alleged infringement of letters patent issued to the plaintiff December 2, 1862, for an improved repeating or machine gun. The first and sixth claims of the patent are said to have been infringed, and are as follows:

(1) Presenting and thrusting the cartridges into the rear of the revolving barrel or series of such barrels in one point in its circuit, confining and discharging them at another point in such circuit, and removing the shells or cases in another part of such circuit, in the manner substantially as set forth. (6) The clearing hooks, *t t*, arranged and operated as described in connection with the revolving barrels, *G*, or their equivalents.

The defendant's gun is made under letters patent to Richard J. Gatling, of May 9, 1865. The difference in the construction of the two guns is tersely and correctly explained by Mr. Edward H. Knight, one of the defendant's experts, as follows:

"The Palmer gun consists of a series of revolving barrels with one set of loading, firing, and extracting mechanisms operating upon each of the barrels in turn, the motion of the barrels being intermitted while these various operations are performed. It may, therefore, for practical purposes, be called one gun with four barrels. It has the advantage over a gun with one barrel in allowing the various operating mechanisms

for loading, firing, and extracting, to operate upon the barrels consecutively as they pause for that purpose, during their circuit of revolution. The Gatling gun may be considered as having as many gun mechanisms as barrels, being a system of a number of independant guns revolving together on a common axis. Each gun has its own barrel, loading, and shell-extracting devices, as well as its own firing pin. Each gun is so far independent that it may be made inoperative by the extraction of the loading plunger and firing pin without affecting the action of the other guns. The loading and firing can only take place while the revolution is proceeding, as these actions depend upon the contact of the revolving parts with certain stationary cams on the inside of the hollow stationary breech casing. Each loading apparatus and firing pin and ejector belongs to its own barrel, with which it is in constant alignment. Each operation of loading, firing, and ejecting covers a certain part of the circle of revolution, being completed as to each barrel by one circuit. One circuit delivers a volley of balls equal in number to that of the barrels.”

It was testified on the part of the defendant, without contradiction, that a search into the state of the art through the United States and

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British patents, and other foreign patents accessible at the United States patent-office—

“Did not develop the existence, prior to Gatling’s patent of 1862, of any gun having a continuously revolving barrel, nor of any gun which could be loaded while the barrels were in revolution, or fired while the barrels were in revolution, or the shells removed while the barrels were in revolution. And prior to the Palmer patent mentioned, and aside from Richard J. Gatling’s invention, this search did not develop the existence of any gun with revolving barrels having a device for presenting cartridges to the barrels, consisting of a combination of a carrier case, for the cartridges,

with a grooved rotating cylinder, such as is shown in the Gatling gun, nor the existence of a thrusting-in device, consisting of a longitudinally moving plunger revolving at the same time with a cylinder carrying the plunger, nor the existence of a confining device, consisting of the combination of revolving barrels with a longitudinally moving plunger, at the same time revolving with the cylinder which carries such plunger, nor the existence of a discharging device consisting of a longitudinally moving firing pin at the same time revolving synchronously with the barrel, to which it is appurtenant, nor the existence of an extracting device consisting of a longitudinally moving hook revolving synchronously with the barrel to which it is appurtenant.”

The gun made under the patent to Richard J. Gatling, of November 4, 1862, was, in general terms, like the gun of 1865, except that cartridge cases or cartridge chambers were fed against the rear of the revolving barrels, and the powder was discharged in the cartridge chamber without being inserted into any other barrel, so that prior to the plaintiff's invention a machine gun was in use so constructed that the cartridges were presented and thrust *against* the rear of a revolving barrel during one *part* of its circuit, were confined and discharged during another part of the circuit, and were removed at another part of the circuit.

It was claimed by the plaintiff, and was admitted by Mr. Knight to be true, that prior to the Palmer patent there was no machine gun which contained a device for thrusting the cartridge or charge into the rear end of a continuous revolving barrel as distinguished from a chamber to be brought in line with the barrels. It was insisted by the defendant that the operation of the loading, firing, and clearing mechanism, and the mechanism, are the same whether a continuous or a chambered barrel is used.

The Gatling gun of 1865 discarded cartridge chambers, and thrust the copper cartridge into the rear of the barrel.

It is not claimed by the counsel for the plaintiff that the respective devices in the Gatling gun for loading, confining, and discharging the cartridges are equivalents for the loading and firing mechanism of the

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Palmer gun. It is obvious that the two guns are constructed upon a different system; but it is claimed that the thrusting a cartridge into the rear of a barrel without joints, as distinguished from a chamber or a barrel having joints, was an important advance in the art, and constituted the essence of Palmer's invention; and if that principle or mode of operation is used by the defendant, there is an infringement of the first claim of the patent, even though the particular devices in the two guns for accomplishing this mode of operation differ so much that one device or series of devices is radically unlike the other. If the claim was of such broad character it would not be sustained. *O'Reilly v. Morse*, 15 How. 62; *Matthews v. Schoenberger*, 18 O. G. 14, 651.

An examination of the specification and claim shows that the latter did not undertake to cover so wide a field. The claim literally read is for a result; but that is not its meaning. It is for the combination of devices, substantially as described, for effecting the specified result. It being borne in mind that revolving guns were old, and that revolving guns which were loaded, discharged, and cleaned at different parts of their circuit antedated the Palmer, the claim is for a combination of three sub-combinations, one for loading cartridges into the rear of the barrel of a revolving gun at one point in its circuit, another for confining and firing such cartridges at another point, and the third for extracting the shells of the cartridges at another part of the circuit. It is not a claim for a

continuous barrel in a revolving gun, as distinguished from a chamber, or a barrel with joints, and in such relations to the loading mechanism that the cartridge can be thrust into the rear of the barrel, but it is a claim for the loading, firing, and extracting mechanism; and such mechanism or combinations of mechanism as entirely differ from the plaintiff's, are not within the claim. If the patentee was led to believe that he could cover any mechanism which should load a revolving gun by thrusting cartridges into the rear end of the barrels, and which should discharge and thereafter extract the cartridges, the three operations being effected at different points in the circuit, he was in error.

The remaining point is as to the infringement of the sixth claim. The extracting devices in the two guns are dissimilar. The operation of the respective devices is thus explained by Mr. Knight:

"In the Palmer gun the bar, to the forward end of which the extractor hooks are attached, is reciprocated backwardly by a tappet on the operating crank shaft, and when released is thrown forward by a spring so that the hooks come 517 against the breech-plate carrying the rear ends of the barrels. The hooks being thus in position against the breech-plate, the revolution of the barrels brings the shell last discharged within the grasp of the hooks, they forcing themselves between the flange of the cartridge and breech, thereby loosening the shell to that extent. When the tappet described, in the course of its revolution, again operates rearwardly the extractor bar, the hooks on the end of the latter withdraw the shell completely from the barrel, and a tumbler hung to the frame and operated by a projection on the extractor bar discharges the shell from the grasp of the hooks, allowing it to fall to the ground. In the Gatling gun the extractor hook is attached to the plunger, which forms the breech closer and snaps over the flange

of the cartridge during the operation of driving the cartridge into the rear of the barrel. The extractor hook retains its position during the firing and for some time subsequently, until the plunger commences its rearward motion, carrying backward with it the hook and the shell in its grasp. The shell is either freed by its own action and falls to the ground, or is ejected by a plate with which it comes in contact, and, tipped out of the grasp of the hook, falls to the ground.”

There is no infringement, and the bill is dismissed.

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