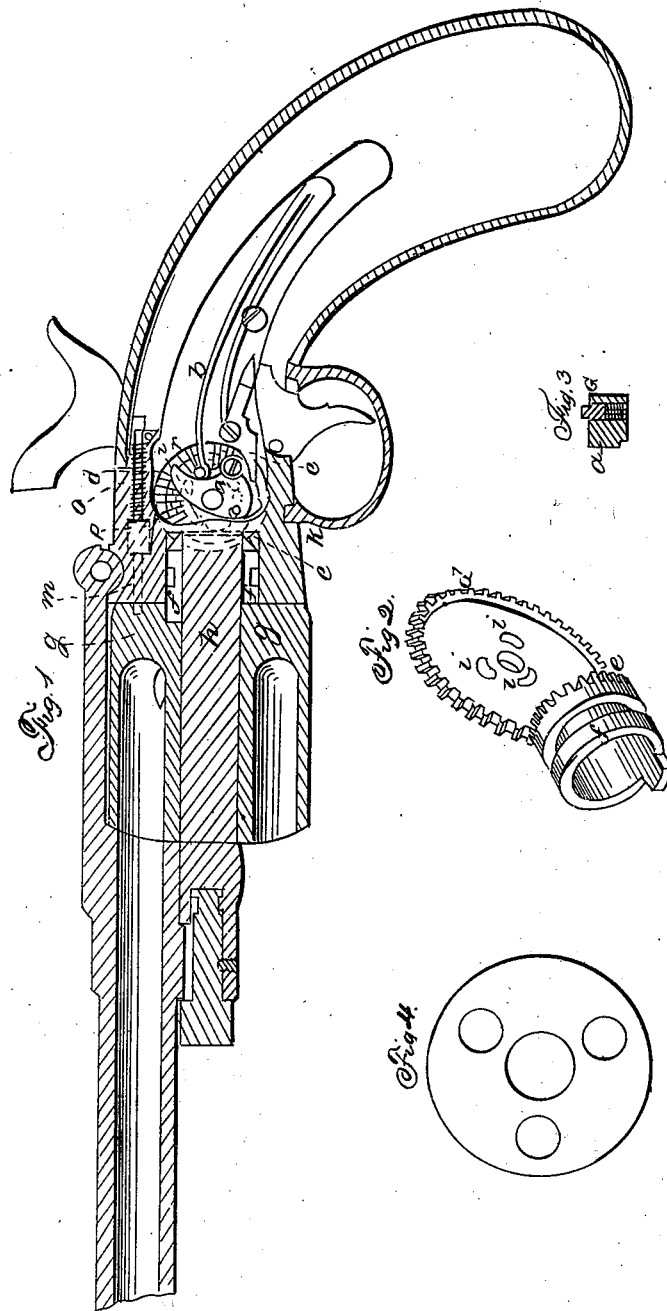


E. WESSON.

Revolver.

No. 6,669.

Patented Aug. 28, 1849.



UNITED STATES PATENT OFFICE.

EDWIN WESSON, OF HARTFORD, CONNECTICUT; EDWIN G. RIPLEY,
ADMINISTRATOR.

METHOD OF CONNECTING THE HAMMER WITH THE CYLINDER OF A REVOLVING FIRE-ARM.

Specification forming part of Letters Patent No. 6,669, dated August 28, 1849.

To all whom it may concern:

Be it known that I, EDWIN WESSON, of Hartford, in the county of Hartford and State of Connecticut, have invented a new and useful Improvement in Fire-Arms with Revolving Cylinders; and I do hereby declare that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known, and of the usual manner of making, modifying, and using the same, reference being had to the accompanying drawings, in which—

Figure 1 represents a vertical section through the axis of a four-chambered cylinder. Fig. 2 is the gearing which would be employed in a three-chambered cylinder, an end view of which is shown at Fig. 4. Fig. 3 shows the clutch with a portion of the tumbler.

My improvements in the construction of the hammer of the lock with the revolving cylinder of a fire-arm containing more than one charge consist in placing within the lock certain bevel-gear, hereinafter described, by which I am enabled to produce an equal leverage between the hammer and cylinder throughout their whole movement, and thus obtain a steadier action of the revolving cylinder, accompanied with less friction and danger of revolving too far, than any other method for effecting the same purpose with which I am acquainted. I can also, by the employment of the above-named gear, cause the cylinder to turn any given distance while cocking the hammer simply by changing the relative size of the bevel-wheels, so that I am enabled thereby to make a fire-arm with two, three, or any greater number of chambers in the cylinder, and make the chambers of any size and distance apart—unattainable in other arms—while I retain the same motion on the hammer and without increasing the friction on the working parts.

The construction of my improved fire-arm is as follows: The lock is like any common back-action lock and contains the same number of pieces. *a* is the tumbler, and *b* the main-spring. *c* is the screw. On the arbor of the tumbler, to which the hammer is attached, I place a bevel-wheel, *d*, which is loose thereon. The teeth of this bevel-wheel gear into a sec-

ond bevel-wheel, *e*, placed at right angles thereto, which latter wheel is attached to and forms one piece with a sleeve or collar, *f*, that is coupled with the revolving cylinder *g* in the usual way, and turns on the same arbor, *h*, therewith. To the inner face of the bevel-wheel *d* there are a number of holes, *i*, drilled, corresponding with the number of chambers in the revolving cylinder *g*, or, when the bevel-gear differs in size, at a sufficient distance apart to give the proper motion to the cylinder. One side of each of these holes is scarfed out, as clearly shown in the drawings, for the purpose about to be described: In the side of the tumbler *a* next to the bevel-wheel *d* there is a recess, (shown clearly in the section, Fig. 3, at *k*,) into which a bolt is inserted, having a spiral spring behind it to force it out. The outer end of the bolt projects into the recesses or holes *i* in the wheel *d*, so that when the hammer and tumbler are drawn back to cock it the bolt will enter one of the holes and clutch, so as to cause the wheel *d* on the same arbor to turn; and this, by its connection, before described, with the wheel *e*, causes the cylinder to revolve. By this arrangement the leverage is always the same during the revolution between the hammer and cylinder, and the cylinder being firmly bolted by a process to be described, when the arm is cocked. On discharging it the bolt in the recess *k* slips out of the hole in the wheel *d* without turning it, in consequence of their being scarfed out, as before named, and catches into the next hole, *i*, on said wheel. The revolutions are thus rendered steady and sure without any sudden start or danger of passing the point to which they should revolve; and by changing the relative size of the gear any-sized chamber may be used. To bolt the cylinder in place I employ a horizontal bolt, *m*, or one on a line with the barrel at the upper part of the stock, directly behind the breech of the chamber to be discharged, and shown in Fig. 1 in red lines. It is forced forward by a spiral spring, *o*, into a shallow hole in the cylinder opposite, or nearly so, to each chamber in rotation as it comes round, and fastens it till discharged. On the lower side of this bolt there is a spring

catch, *p*, that hooks onto a projection, *r*, on the tumbler when thrown forward; and as the tumbler is drawn back the bolt is carried with it till the cylinder is released and begins to turn, at which time the upper part of projection *r* strikes and unhooks the catch *p* and permits the bolt to project forward and be ready to enter the next hole that comes round, which specific mode is found in practice to be most efficient and durable and less liable to get deranged than any arm now in use with which I am acquainted, being entirely protected from the chemical action of the gases evolved by the discharge.

Having thus fully described my improved

method of connecting the hammer with the cylinder of a revolving fire-arm, what I claim therein as new, and for which I desire to secure Letters Patent, is—

The employment of the bevel-gear introduced into the lock, substantially in the manner and for the purposes set forth, so that two or more chambers can be employed in the cylinder, and chambers of any desired caliber, by changing the relative proportions of the gear without changing the motion of the hammer.

EDWIN WESSON.

Witnesses:

J. J. GREENOUGH,

WM. GREENOUGH.