THE WHIP IN RIFLE BARRELS.

It Is Caused by the Pressure of Modern High Power Powder.

The use of high power powder in rifles has given rise to a phenomenon which did not exist in black powder days. This is known as "whip" and is due to the pressure and vibration set up by the powder. It is constant with given loads and is always in the same direction.

Sights are aligned by the manufacturer to compensate for this whip in proportion to the powder charge used. In firing auxiliary cartridges it will often be found that the rifle shoots off center. As a matter of fact the bullet from the auxiliary is traveling in a true line with the bore, and it is the sights that are wrong. The lighter charge of the auxiliary does not produce the usual whip, with the result that the line in prolongation of the bore of the rifle along which the bullet travels is not the line given by the alignment of the sights.

Two other rifle terms that must not be confused are upsetting and keyholing. Keyholing is the tendency of the bullet to turn over in flight, while upsetting is the slight shortening of the major axis of the bullet due to the force of the charge. It was peculiar to black powder used behind lead bullets and does not exist to any appreciable extent in metal jacketed bullets with smokeless powder. In the latter case the charge burns more slowly and the jacket stiffens the bullet against the sudden blow from behind.—Outing.

ORIGIN OF THE PERISCOPE.

The Reflecting Spyglass Used at the Siege of Sebastopol.

Speaking of the origin of the periscope, the following extract from the writings of the well known inventor of "Pepper's Ghost" gives the credit to the clerical profession. Pepper wrote soon after the Crimean war:

"During the siege of Sebastopol numbers of our best artillerymen were continually picked off by the enemy's rifles as well as by cannon shot, and in order to put a stop to the foolhardiness and incautiousness of the men a very ingenious contrivance was invented by the Rev. William Taylor, the coadjutor of Mr. Denison in constructing the first 'Big Ben' bell. It was called the reflecting spyglass, and by its simple construction rendered the exposure of the sailors and soldiers who would look over the parapet or other parts of the works to observe the effect of their shots perfectly unnecessary, while another form was constructed for the purpose of allowing the gunner to lay or aim his gun in safety.

"The instruments were shown to Lord Panmure, who was so convinced of the importance of the invention that he immediately commissioned the Rev. William Taylor to have a number of these telescopes constructed, and if the siege had not terminated just at the time the invention was to have been used no doubt a great saving of the valuable lives of the skilled artillerymen would have been effected."—London Express.

Gam's Dry Humor.

When the gallant Welsh captain, David Gam, was sent forward by Henry V. to reconnoiter the French army before the battle of Agincourt he found that the enemy outnumbered the English by about five to one. His report to the king is historic:

"There are enough to be killed, enough to be taken prisoners and enough to run away."

This quaint forecast of the result of the battle at once spread through the camp, and doubtless every yeoman archer of the valiant company felt an inch taller. We know that it was almost literally justified by the event. Poor Gam's dry humor was equaled by his courage. He was killed while in the act of saving the life of his prince.—London Standard.

VICTORIA'S LETTERS.

Royal Secrets That Are Stored Away In Buckingham Palace.

"We may wonder if the world will ever be allowed to see the private correspondence amassed by the late Queen Victoria," says a writer. It is stored away in a strong room built into the walls of Buckingham palace, and the queen shared her confidence with no one.

So long as she was physically able to do so she opened and closed the safe herself and arranged its contents. When she was too feeble to do this she employed an old and trusted secretary, but even he had to work under the royal eye. He was never allowed to keep the keys nor to read the letters that he handled.

Queen Victoria was always a voluminous letter writer, and she was in constant communication with most of the royalties in Europe. Every domestic secret and intrigue of royalty during half a century is said to be represented by the contents of this wonderful safe, and it is easy to believe that the modern historian would find his hands full if he were permitted to browse among these letters.

But probably he will have to wait a few hundred years, and then his popular audience will be a limited one. It is one of the ironies of life that we can never have a thing when we want it.—Pittsburgh Press.

A Royal Snake Slaughterer.

The "secretary bird" is one of the most precious birds in South Africa. It is royal game, and any person destroying one is liable to a fine of £10. Majestic looking birds, they stand about three feet high and generally go in pairs. They are of drab color, with black feathery legs, and are valued for their propensity for killing snakes. Where the secretary bird is seen there are sure to be many reptiles about. The bird beats down its adversary first with one wing and then with the other, at the same time trampling on it with its feet until the snake is sufficiently stunned to catch it by the head with its claws. Then the bird rises far up in the air and drops its victim to the ground to be killed. By this means thousands of venomous reptiles are destroyed.—London Scraps.

Carrots.

Carrots were first introduced into England by Flemish gardeners in the time of Elizabeth, and in the reign of James I. they were still so uncommon that ladies wore bunches of them on their hats and on their sleeves instead of feathers.

Much Entertained.

Said Cholly—I have just been looking over a volume of revised statutes.

Quoth Algy—Well?

Cholly—I had no idea there were so many interesting ways of breaking the law.—Louisville Courier-Journal.

The lessons of life are lost if they do not impress us with the necessity of making ample allowances for the immature conclusions of others.

Distilled Water.

Distilled water after having been exposed to the air is one of the most salubrious of drinks. Its daily use in measured quantities is helpful in cases of dyspepsia and greatly assists the general functions of the body. Every large steamer carries a water distilling apparatus by which sea water is made fresh. In the days before steamers primitive distilling apparatus was used on warships and vessels carrying passengers.

Well Fitted.

"Yes, grandma; I am to be married next month."

"But, my dear," said grandma earnestly, "you are very young. Do you feel that you are fitted for married life?"

"I am being fitted now, grandma," explained the prospective bride sweetly. "Seven gowns!"—Kansas City Journal.

More Than the Average.

Mrs. Wayup—How much sleep do I need, doctor? Doctor—Well, the average person needs about seven hours. Mrs. Wayup—Then I shall take about fourteen. I consider I am much above the average.—Judge.

Spiritual Victory.

If after victory on the field of battle we fail to win spiritual victory and to place ideals where they truly should be the heroism of our soldiers will have done no more than postpone our own catastrophe for a few years.—M. Paul Sabatier.

Duty makes us do things well, but love makes us do them beautifully.—Phillips Brooks.