

purpose of igniting it.—Although denominated a cylinder, the tube may be in any other form.

The advantages secured by this form of primer, are, that it can be acted upon and ignited by a lock far less expensive and less complicated than those in general use, which strike immediately over the vent of the gun. It renders the vent-field free from incumbrances, and the sighting of the gun clear of all obstructions.

I claim the conducting, or bent, cylinder primer, made and applied after the manner, and for the purposes, hereinbefore described, whether the same be formed of lead and tin, or of any other material.

JOSHUA SHAW.

Specification of a patent for a Compression Cannon Lock. Granted to JOSHUA SHAW, city of Philadelphia, December 3, 1832.

To all whom it may concern, be it known, that I, Joshua Shaw, of the city of Philadelphia, have invented an improved lock for the discharge of cannon, which I denominate the *compression cannon lock*, and that the following is a full and exact description of its construction and use.

Description of the Compression Cannon Lock.

The invention which I claim under this title may be described in general terms, as a lever attached to the gun near the vent, which lever is set in rapid motion by the application of muscular force, and then impinges upon a percussion primer, so as to compress it suddenly—the fire of the primer thus produced, passing along the vent-hole into the chamber of the gun, discharges the cartridge.

The modification which I most approve may be described as follows: it is adapted to the form of primer which is denominated the *bent cylinder*, invented by me.

A small groove, or channel, is cut from one side of the vent-field, to the vent, which may receive and retain one leg of the primer when the other is passed down the vent-hole. A plate, or platform, of metal, about three-quarters of an inch thick, is secured by screws to the side of the vent-field, a little lower than the groove above-mentioned. A shoulder rises on this plate to the level of the vent-hole; its face is towards the butt of the gun, and flush with the forward line of the groove, so that the primer passing along the groove and projecting beyond it, passes also along the face of the shoulder. The lever employed is of the first form; it is a solid square-edged bar of steel, two and a half, or three, inches long, about three-fourths of an inch wide, and one-half of an inch thick; the fulcrum is placed so as to give the limbs the relative length of about three and one. This fulcrum is a stout, well-tempered pin, which passes through the plate above described, and permits the lever to play horizontally on it. The ful-

crum passes into the plate, a little back of the line of the groove extended. When the lock is not in action, the lever lies parallel with the vent-field, its longer arm towards the muzzle of the gun, and it is retained in this position by the pressure of a feather spring; when the lever is brought round so as to be perpendicular with the side of the vent-field, the shorter arm passes, in its revolution, the line of the groove extended, and is arrested by the shoulder. The part of the lever which thus strikes against the shoulder, is fashioned so as to strike it with a vertical edge, or angle. A wire, cord, or other bridle, is fastened at one end to the longer arm of the lever, about three-fourths of an inch from its extremity. The lock, excepting the bridle, is enclosed in a neat brass casing, about four inches long by an inch wide and an inch deep, or thereabout; in which casing, however, is an opening adjoining the groove of the vent-field, to admit the end of the primer, and another opening at the side, to allow the lever to play.

The primer, having been adjusted in the groove prepared for it, and extending into the lock, the bridle, held by the gunner, is drawn smartly towards the butt of the piece; the lever flies round, its shorter arm compresses the primer against the shoulder of the lock, explodes it, and discharges the cannon.

The advantages attained by this lock, consist

1st. In its simplicity of structure, and consequent cheapness of manufacture, and security from accidental derangement.

2. In the small bulk it occupies, and its security against extrinsic injury.

3. In the circumstance that it does not, in any degree, interfere with the sighting of the gun, or with its discharge by any other means; differing in this particular from all other locks in general use.

What I claim as my invention, and for which I ask a patent, is a percussion cannon lock, the main acting part of which consists simply of a lever drawn forward by hand, a part of which lever, or a lip, or piece whereon, compresses, or strikes, upon a *percussion primer*, at a convenient distance from the vent. And this I claim whether the same be constructed in the precise form described, or in any other in which it acts upon the same principle and produces the same effect.

JOSHUA SHAW.

Specification of a patent for a Portable Cannon Lock. Granted to
JOSHUA SHAW, *city of Philadelphia, December 3, 1832.*

The portable cannon lock consists of 1. a *trigger*, placed near the handle, or butt, of the stock, acting by means of a connecting wire, or otherwise, on 2, a *gun, or pistol, lock*, on the percussion plan; the cock, or lever hammer, of which, when liberated, strikes on a percussion primer, placed at one end of 3, a *conductor*, or perforated tube of metal, which is arranged at one end to receive and retain the percus-