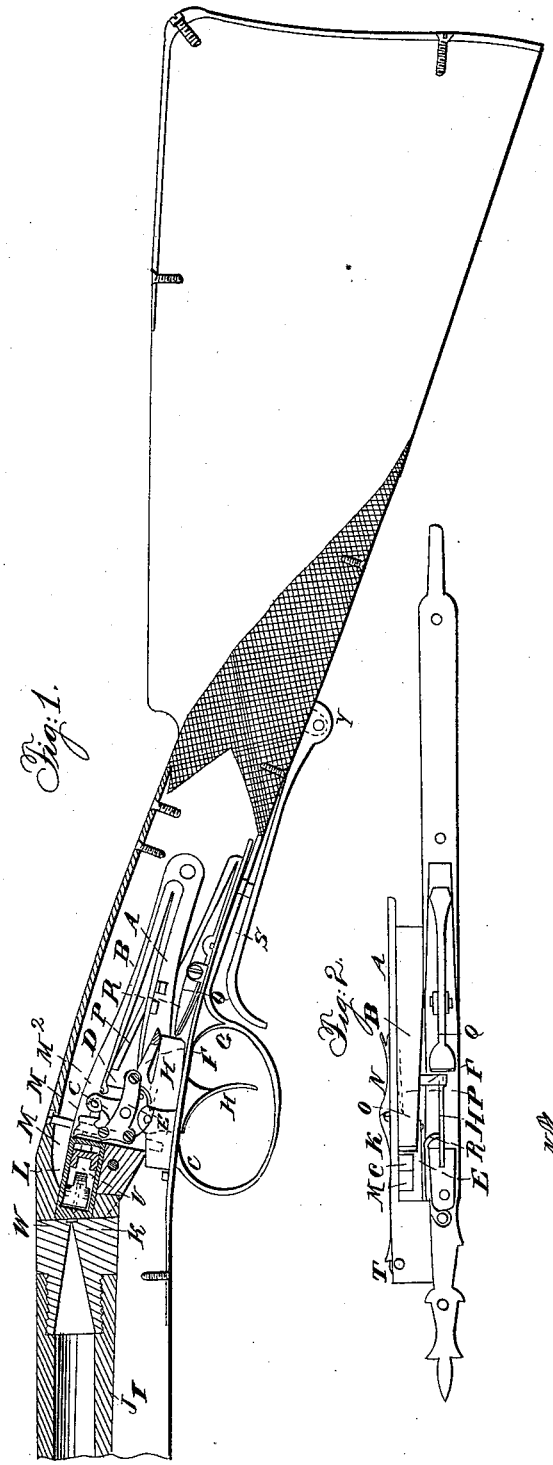
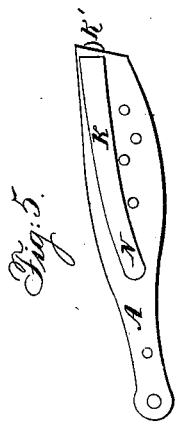
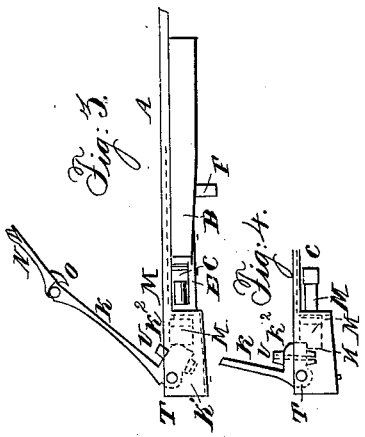
A WURFFLEIN.

Muzzle-Loading Fire-Arm.

No. 6,964 Patented Dec. 18, 1849.







UNITED STATES PATENT OFFICE.

ANDREW WURFFLEIN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVED CONCEALED-HAMMER AND TURNING-NIPPLE LOCK.

Specification forming part of Letters Patent No. 6,964, dated December 18, 1849.

To all whom it may concern:

Be it known that I, ANDREW WURFFLEIN, of the city and county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Fire-Arms, which are described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a vertical longitudinal section through the center of the breech of the stock, showing the internal arrangement of the lock, the cap-plate of the priming-chamber being removed in order to show the arrangement of the parts within the same. Fig. 2 is a top view of the lock detached from the stock, the swinging or cocking lever being closed into its seat or chamber. Fig. 3 is a top view of the lock, showing the cocking-lever partly opened to receive a percussion-cap. Fig. 4 is a horizontal section of a part of the lock, showing the swing or cocking lever entirely opened and in a position to turn and expose the nipple to receive the cap. Fig. 5 is a side view of the lock-plate, the swing or cocking lever being closed into the recess in the lock-plate, and the nipple with the cap being in the priming-chamber in a line with the hammer.

Similar letters in the several figures refer to corresponding parts.

The nature of my invention and improvement consists in so constructing the lock that the percussion-cap or other primer used to explode the charge is entirely protected from the weather, concealed from view, and when exploded does not cause a volume of smoke to rise above the lock, nor any particles of the primer to escape from the chamber at the moment of discharging the piece, accidental or premature discharges being prevented by securing the trigger by a spring-catch, the priming being effected by placing the cap upon the nipple with the thumb and finger when exposed, said nipple being screwed into a swing-lever affixed to the lock-plate by a fulcrum-pin and made to turn or swing horizontally in the arc of a circle to expose the nipple to receive the primer from the outside and conveying it inside of the cap or priming chamber, the hammer being cocked simultaneously with the operation of turning the nipple, the trigger being secured from turning until required to act on the sear by the said spring-catch, which is disengaged from the trigger in the act of grasping the piece to discharge the same, and the lock, being entirely concealed, is not liable to be broken or to be in the way when used by horsemen or otherwise, and the trigger, being locked, is not liable to discharge the lock by being struck by any article or by a sudden jar of the gun against anything.

The lock-plate A, mainspring B, tumbler C, swivel D, bridle E, sear F, guard G, trigger H, stock I, and band J are made and arranged in substantially the usual manner.

The improvement relates to a peculiar construction and arrangement of a novel swing-lever, K, for turning and exposing the nipple and cocking the hammer and tumbler C, priming-chamber L, sliding hammer M, for exploding the cap, jointed arm N of the swing-lever, and hook O, attached to the jointed arm of said swing-lever, and spring P, for holding the hook O in contact with the lock-plate, trigger-catch Q, and spring R, for locking the trigger, and lever S, for unlocking the same.

The operation of the above-named parts is as follows: When the lock is uncocked and unprimed and it is desired to cock and prime the same, the jointed arm N of the swing-lever K must be disengaged from the lock-plate A and the lever moved round on its fulcrum or joint-pin T in the arc of a circle. This movement will cause the shoulder K′ of the cocking-lever K to strike the shoulders of the sliding hammer M and move it horizontally toward the end of the chamber, and its stem or shank M′ being extended back through the chamber and connected to the tumbler C by a joint-pin, M^2, or disconnected and bearing against the tumbler, as represented in Fig. 4, causes the tumbler to turn on its axis E, and thus to contract the mainspring B, and the sear F falls into the notch of the tumbler, when the sliding hammer will be cocked, ready for exploding the cap, and during this operation the nipple V will be brought round and exposed outside the plate in a proper position to receive a cap, as represented in Fig. 4, and at the same time the spring-catch Q falls into the notch in the trigger H. The cap being put on the nipple with the thumb and finger, the lever is turned back to its former position and into its seat in the lock-plate, the jointed arm being at the same time pressed into its seat in the lock-

plate and secured therein by the hook O in the inner face thereof, hooking to the lock-plate, and being thus held by the spring P, fastened on the inner side of the lock-plate, when the several parts will have the positions represented in Figs. 1 and 2, ready for discharging the piece by simply grasping it by the right hand, with the forefinger on the trigger H and the second finger on the lever S, which is first actuated, in order to unlock the catch Q from the trigger H, which is then pulled in the usual manner to disengage the sear F from the tumbler C. The sear being disengaged from the tumbler, the mainspring B will turn the tumbler in the usual manner, and the sliding hammer M, being attached to the tumbler by the pin M′, as shown in Fig. 1, or brought against it, as shown in Fig. 4, will be driven horizontally forward against the percussion-cap or powder, when the explosion will take place within the priming-chamber L, and this being closed, (except where the touch-hole enters,) will prevent the escape of the smoke and broken particles of the percussion-cap. The explosion is prevented from escaping at the joint formed by the union of the priming with the breech-pin of the barrel by making a recess, W, in the end of the breech-pin, into which the end K′ of the lever is forced in the act of closing the swing-lever into its seat in the lock-plate.

The lever S, for lifting the tail end of the catch Q to unlock the trigger, is secured to the guard-plate G by a joint-pin, Y, and is made to act against the catch by a projection, X, rising from the lever and passing through the guard-plate G. The catch is attached to the guard-plate in a similar manner to that of the trigger, and has a spring, R, for throwing up its short end to engage the same with the trigger, which spring is fastened by one of its ends to the guard-plate.

The hammer M and percussion-cap being entirely concealed in this lock renders it very secure and not liable to be discharged by passing through brambles and brushwood and other places when combined and used with a fowling-piece, or by carrying the fire-arm in the pocket, or by swinging it on horsemen's backs when applied to carbines. Besides, it is rendered entirely secure when the trigger is locked by means of the catch Q, attached to the guard-plate, as above described.

I do not lay any especial claim to the peculiarity of construction of the individual parts of this lock, as they may be varied in many ways, nor do I claim a concealed lock for exploding the cap inside of the stock; but

What I do particularly claim as my invention, and desire to have secured to me by Letters Patent, is—

The combination of the lever K, with the nipple attached thereto, and sliding hammer M, arranged and operated substantially as set forth, by which the nipple is turned and exposed to receive the percussion-cap, and the hammer cocked simultaneously by the movement of the lever, the cap being exploded within a chamber inside the stock in a peculiar manner, as set forth in the foregoing specification, by which the inconvenience arising from flying fragments of the exploded cap and from smoke at the moment of discharge are avoided.

In testimony whereof I have hereunto signed my name before two subscribing witnesses.

ANDREW WURFFLEIN.

Witnesses:

NONNON ACKLEY,

J. J. NOTTE.