(No Model.)

H. S. BURNS.

APPARATUS FOR GREASING BULLETS.

No. 264,237. Patented Sept. 12, 1882.

fig. 1

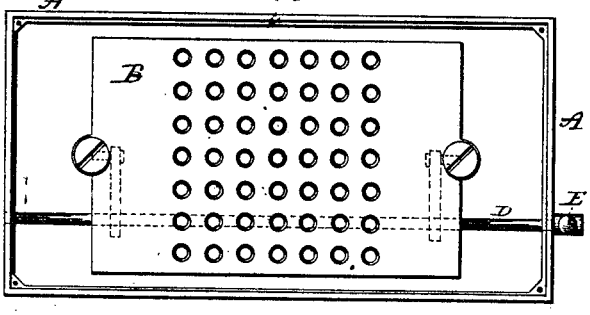

fig. 2

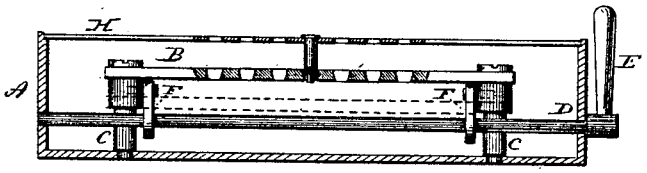

fig 3

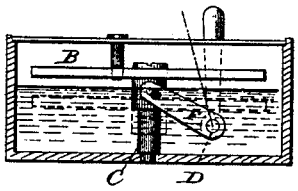

fig. 4

Witnesses.
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UNITED STATES PATENT OFFICE.

HENRY S. BURNS, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE WINCHESTER REPEATING ARMS COMPANY, OF SAME PLACE.

APPARATUS FOR GREASING BULLETS.

SPECIFICATION forming part of Letters Patent No. 264,237, dated September 12, 1882.

Application filed June 5, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY S. BURNS, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Bullet-Greasing Machines; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a top or plan view; Fig. 2, a longitudinal section; Fig. 3, a transverse section; Fig. 4, a cartridge showing the surface of the bullet lubricated.

This invention relates to an improvement in applying the lubricating material to cartridges for fire-arms, and particularly to that class in which the lubricating material is applied upon that portion of the surface of the bullet which projects from the shell. A small amount only of lubricating material is necessary; but it is essential that this shall be evenly applied to the bullet. To do this by mechanical appliances, and thereby avoid the handling of the cartridges, individually, is the object of my invention; and it consists in the arrangement of a plate over or in a bath of lubricating material, with mechanism to immerse the plate in the lubricating material and raise it therefrom, the said plate constructed with perforations corresponding substantially to the size and shape of the protruding end of the bullet, but slightly larger, combined with a perforated plate arranged over said movable perforated plate, the perforations in one corresponding in position to the other, and so that the cartridges may be inserted through the perforations in said upper plate, and there hang by their heads with the bullet downward and directly over the corresponding perforations in the movable plate below, whereby the said movable plate may be raised from the bath of lubricating material, taking upon the surface of the perforations a coating of lubricating material, whereby, when the plate is raised so that the perforations pass onto the suspended bullets, the lubricating material in the perforations will come into contact with the surface of the bullet and deposit a sufficient quantity of lubricating material thereon, and as more fully hereinafter described.

A represents the pan, in size corresponding to the work to be done, and in which a quantity of lubricating material is held in a liquid condition by heat or otherwise, as indicated in Fig. 3. Within this pan a plate, B, is arranged in a horizontal plane, and so as to move freely up and down on vertical guides C. The mechanism for thus moving the plate here shown consists of a rock-shaft, D, arranged longitudinally through the pan, with a hand-lever, E, upon the outside, and provided with arms F, which extend into connection with the said plate, as seen in Figs. 2 and 3, whereby a rocking movement imparted to the shaft D will correspondingly raise the plate from or lower it into the pan, as indicated in Fig. 3. The plate B is perforated, as seen in Figs. 1 and 2, the shape of the perforations corresponding to the protruding end of the bullets to be lubricated.

H is a thin metal plate, perforated so as to correspond to the perforations in the plate B, and arranged to be set upon the pan, as shown, and so that the perforations in the plate H will register or stand concentric with those in the plate below. The perforations of the plate H are filled with cartridges in the usual manner of filling such plates for various purposes—that is to say, by placing the cartridges in mass thereon and shaking the plate until the perforations are filled by cartridges, which fall through by their own gravity and hang suspended through the plate, as seen in Fig. 2. The plate thus filled is placed upon the pan over the plate B, as seen in Fig. 2, the plate B being at the time immersed in the lubricating material below, as seen in broken lines. Then the plate B is raised, as seen in Fig. 2, so that the perforations pass onto the bullets, bringing the surface of the perforations of the lubricating material thereon into contact with the surface of the bullets, depositing the lubricating material, or a sufficient portion thereof, upon the surface of the bullets. Then the plate B is dropped and the plate H, with its bullets, removed for the lubricating material to cool,

another plate charged with cartridges in like manner placed over the pan, and the bullets lubricated, and so continuing.

By this device a very large number of cartridges are lubricated at a single operation, and all with the same and just the required amount of lubrication, and that amount applied upon that surface only where it is required.

While I prefer the mechanism shown as the means for immersing the lubricating-plate and raising it from the bath, other mechanism equivalent therefor may be employed; or the plate arranged upon its guides may be moved up and down by handles applied to the plate, thereby dispensing with any mechanical appliances for moving the plate.

I have represented the movable plate as of considerable thickness and having the surface of the perforations contracted from the upper side downward, corresponding to the shape of the bullet; but in some cases, particularly in the smaller cartridges, a thinner plate may be used, and the perforations may be of equal diameter throughout. A sufficient quantity of lubricating material will adhere around the perforations to be applied to the surface of the bullet. I therefore do not limit my invention to any relative thickness of the movable plate or the shape of the perforations through it, it only being essential that the perforations in the plate shall correspond in diameter substantially to the portion of the bullet or part of the cartridge to be lubricated, or so that the lubricating material which adheres to that surface will come into contact with the surface of the bullet.

I claim—

1. The combination of a pan constructed to contain the lubricating material in a liquid state, a plate arranged in said pan in a horizontal plane upon guides and so as to be immersed in or raised from the lubricating material, the said plate perforated, the perforations corresponding to the portion of the cartridge to be lubricated, and a plate arranged over said movable plate, correspondingly perforated, through the perforations of which the cartridges to be lubricated may be suspended above the lubricating material, substantially as described.

2. The combination of a pan constructed to contain the lubricating material in a liquid state, a plate arranged in said pan in a horizontal plane upon guides and so as to be immersed in or raised from the lubricating material, the said plate perforated corresponding to the portion of the cartridge to be lubricated, and a plate arranged over said movable plate, correspondingly perforated, through the perforations of which the cartridges to be lubricated may be suspended, a rock-shaft provided with arms in connection with said plate, by means of which the up-and-down movement may be imparted to the lubricating-plate, substantially as described.

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Witnesses:

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