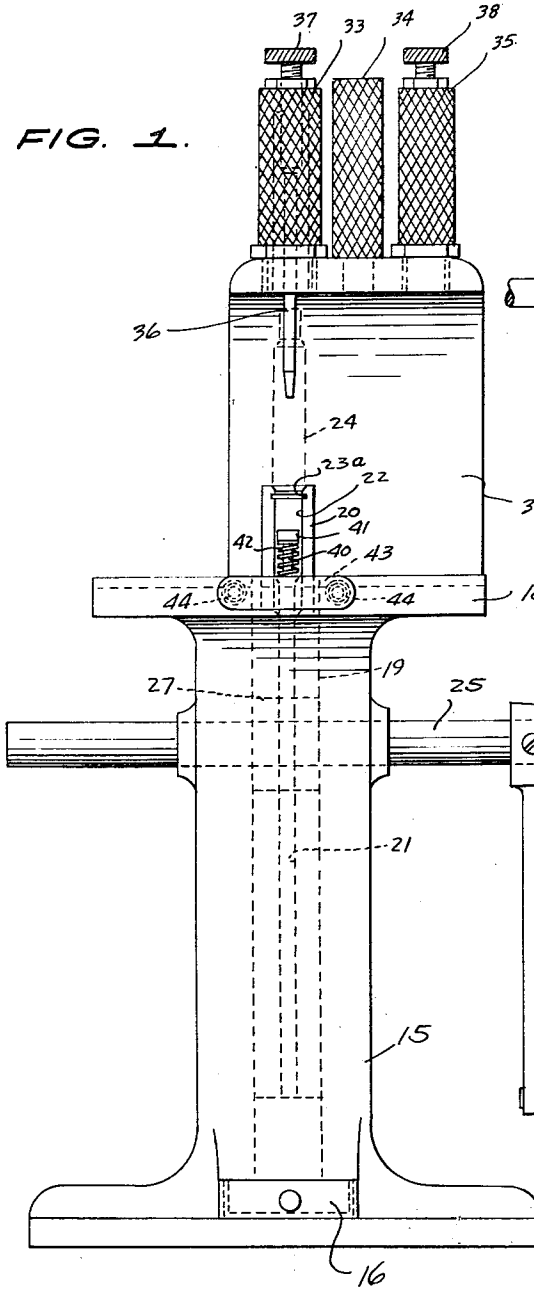
Dec. 25, 1956 M. L. HUNT, JR., ET AL 2,775,157

CARTRIDGE RELOADING DEVICE

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FIG. 1.



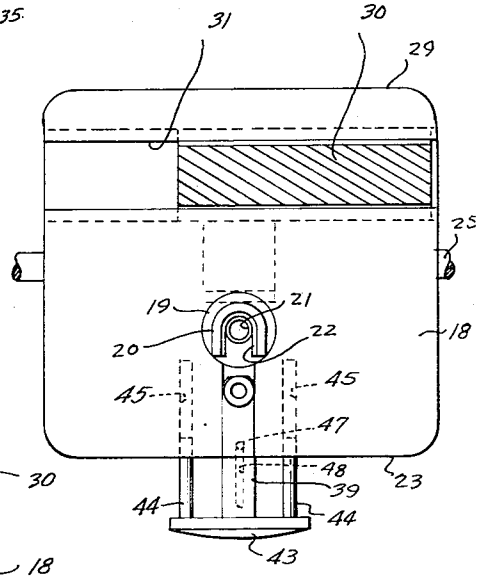


FIG. 3.

INVENTORS
MANLEY LEE HUNT, JR.
BILLIE CLEAVE SPARKMAN,
BY

McMorrow, Berman & Davidson
ATTORNEYS.

Dec. 25, 1956 M. L. HUNT, JR., ET AL 2,775,157

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FIG. 2.

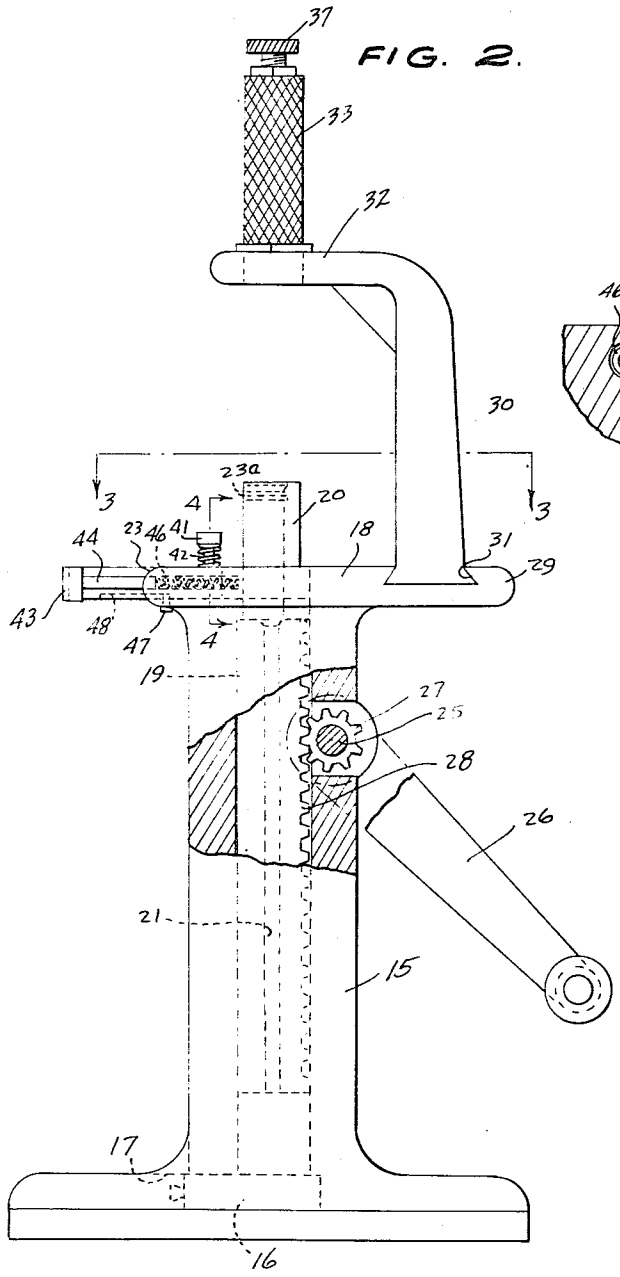
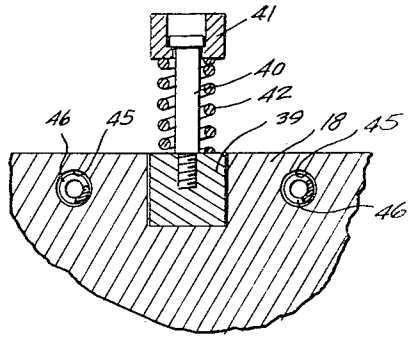


FIG. 4.



INVENTORS
MANLEY LEE HUNT, JR.
BILLIE CLEAVE SPARKMAN
BY

McMorrow, Berman & Davidson
ATTORNEYS.

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CARTRIDGE RELOADING DEVICE

Manley Lee Hunt, Jr. and Billie Cleave Sparkman, Hobbs, N. Mex.

Application June 18, 1954, Serial No. 437,722

4 Claims. (Cl. 86—23)

This invention relates to cartridge reloading devices.

An object of the invention is to provide a device in which a spent primer cap may be removed from a cartridge case, the neck of the case resized, a new primer cap inserted into the case, a powder charge deposited into the case, a bullet seated in the case, and the case crimped therearound, all with only one setting of the case in the device and without the changing of dies between operations.

Another object of the invention is to provide a device of the character referred to above in which spent priming caps removed from cartridge cases reloaded therein are retained within the device and conveyed to a reservoir therein, so as not to clog the operation of the device or clutter the floor therearound.

Other objects and advantages of the invention will appear from the following description considered in conjunction with the attached drawings, in which:

Figure 1 is an end elevational view of the device of the present invention.

Figure 2 is a side elevational view of the assembly of Figure 1.

Figure 3 is a view turned 90° and along the line 3—3 of Figure 2.

Figure 4 is a view taken along the line 4—4 of Figure 2.

Referring now to the drawings in more detail, the reference numeral 15 designates a pedestal provided with a reservoir 16 in the lower end thereof. The pedestal 15 has a flat lower end, adapted to rest upon a horizontal supporting surface and an upstanding portion rising from the lower end. The reservoir 16 consists of a drawer, as shown in Figures 1 and 2, slidably inserted in a recess 17 formed in the lower end of the pedestal 15, the drawer 16 being normally positioned directly beneath the upright portion of the pedestal 15. A platform 18 is formed on the top of the pedestal 15.

Extending through the platform 18, intermediate the ends of the latter, is an upstanding support 19 connected to the pedestal 15 for upward and downward movement. One end portion 20 of the support 19 projects upwardly of the platform 18 and the other end portion of the support 19 is adjacent the reservoir 16. The support 19 has a bore 21 extending longitudinally thereof from end to end and there is a transverse slot 22 in the end portion 20 of the support 19, communicating with the bore 21 and facing one end 23 of the platform 18. Seating means, consisting of a horizontally disposed groove 23*a* formed in the wall of the slot 22, adjacent the upper end thereof, is provided in the end portion 20 of the support 19 for holding the base of a cartridge case 24 containing a spent primer cap, the bore 21 of the support 19 being adapted to convey a spent primer cap, upon removal from the base of the cartridge case 24, to the reservoir 16. The groove 23*a* in the end portion 20 is adapted to slidably receive the flange at the base of the cartridge case 24 to hold the cartridge case 24 in an upright position with its base in the upper end of the portion 20. In this position a primer cap detached from the base of the case

24 will fall downwardly through the bore 21 and be deposited in the reservoir 16.

Operatively connected to the support 19, is means for causing the upward and downward movement of the support 19. The means consists of a shaft 25, rotatably mounted in the upright portion of the pedestal 15 intermediate its ends, a crank 26 on one end of the shaft 25 for turning the shaft 25, a pinion 27, mounted upon the shaft 25 intermediate its ends, for rotation therewith and a rack 28 formed on one side of the support 19 and in engagement with the pinion 27.

Positioned upon the platform 18, intermediate the projecting end portion 20 of the support 19 and the end 29 of the platform 18, is an upright 30, connected at its lower end to the platform 18 for transverse sliding movement. The lower end of the upright 30 is shaped to be slidably engaged in a dovetail groove 31 extending transversely of the upper surface of the platform 18. The upper end of the upright 30 carries a head 32 which projects over the intermediate portion of the platform 18. A plurality of spaced dies 33, 34 and 35 are carried by the projecting portion of the head 32, each of the said dies being selectively alignable with the cartridge case seating means or groove 23*a* upon sliding movement of the upright 30. The die 33 dependingly supports a primer pin 36 and has appropriate pin adjustment means 37 projecting from its upper end. The die 34 is adapted to hold a powder charge for deposit into the cartridge case 24 at the appropriate time. The die 35 contains means, not shown, for inserting a bullet into the neck of the cartridge case 24 and crimping the neck about the bullet. Adjusting means 38 projects upwardly from the top of the die 35.

Positioned transversely of the platform 18 adjacent the end 23, is a slide 39 having its inner end intermediate the portion 20 of the support 19 and the end 23 of the platform 18 and having its other end exteriorly of the end 23 of the platform 18, as shown in Figure 3. The slide 39 is connected to the platform 18 for movement from the latter position to a position in which the inner end of the slide 39 is within the slot 22. Carried on the inner end of the slide 39 is means for supporting a primer cap consisting of an upright bolt 40, an upright cup 41 slidable on the shank of the bolt 40 and a coiled spring 42 surrounding the shank of the bolt 40 and resiliently holding the cup 41 against the head of the bolt 40. To the outer end of the slide 39 is fastened a transversely extending handle 43. A guide bar 44, paralleling the slide 39 projects from the inner face of the handle 43, adjacent each end thereof, into a conformably shaped aperture 45 which extends into the platform 18 from the end 23. Within each aperture 45, interiorly of the adjacent end of the bar 44, is a coiled spring 46, bearing against the adjacent end of the complemental bar 44 and biasing the bar 44 outwardly of the aperture 45 and thus urging the slide 39 toward its movement position in which the inner end is exteriorly of the slot 22. A screw 47, inserted upwardly into the platform 18 from its lower surface, extends into a closed slot 48, cut in the lower face of the slide 39 and serves as a stop to limit the outward movement of the slide 39 when the slide 39 has reached the latter movement position.

To use the device of the present invention to reload the cartridge case, the case 24 is inserted into the case seating means 23*a* in the end portion 20 of the support 19 and the upright 30 is moved transversely on the platform 18 until the die 33 is aligned with the case 24. The crank 26 is then turned to cause the upward movement of the support 19, raising the case 24 up into the die 33 and causing the priming pin 36 to eject the spent primer cap from the base of the case 24. As the cap is ejected from the case 24 it falls down the bore 21 in the support 19 and is deposited in the reservoir 16 in the lower

end of the pedestal **15**. As the priming pin **36** reaches the primer cap to be ejected from the case **24**, the neck of the case **24** reaches other portions of the die **33** adapted to reshape and resize it, this operation being completed as the primer cap is ejected. As soon as the spent primer cap is ejected from the case **24**, the crank **26** is turned in the opposite direction to cause the downward movement of the support **19** to a position in which the lower end of the portion **20** of the support **19** is slightly below the lower face of the slide **39**. A new primer cap is then inserted in the cup **41** and manual pressure is exerted upon the handle **43** to move the slide **39** inwardly of the platform **18**, bringing its inner end and the cup **41** carried thereon into the slot **22** of the end portion **20**. The crank **26** is then turned further so as to move the support **19** further downwardly into contact with the primer cap held in the cup **41**. As this downward movement is continued, the cup **41** is forced downwardly along the shank of the bolt **40**, freeing the primer cap and the head of the bolt **40** acts as a plunger to insert the cap in the base of the case **24**. As soon as the cap is inserted, the support **19** is raised slightly to free the cup **41** from contact with the base of the case **24** and pressure is removed from the handle **43** to permit the springs **46** to return the slide **49** to its initial position in which the inner end is without the slot **22**.

The upright **30** is now moved longitudinally of the platform **18** to bring the die **34** into alignment with the case **24**, the case **24** remaining in its position upon the upper end of the support **19**. The crank **26** is then turned to raise the support **19** so as to bring the upper end of the case **24** into the die **34**, in which position a charge of powder is deposited into the case **24** from the die **34**. The case **24** is now lowered clear of the die **34** and the upright **30** is shifted to align the die **35** with the case **24** still held in the support **19**. A bullet is next inserted loosely into the neck of the case **24** and the support **19** is again moved upwardly to insert the bullet and the upper end of the case **24** into the die **35**. As the case **24** is moved to a predetermined distance in the die **35**, the bullet is properly seated in the neck of the case and the neck is crimped about the base of the bullet to secure the bullet therein. The crank **26** is now turned to withdraw the bullet from the die **35** and the bullet may now be removed from the seating means **23***a* and is ready for firing. Another case may now be inserted into the seating means **23***a* and the process repeated. The spent primer caps ejected from the cases reloaded in the device, accumulate in the reservoir **16** and may be removed therefrom for disposal at any time by drawing the reservoir **16** out of the recess **17** in the lower end of the pedestal **15** in which the reservoir **16** is slidable.

As the foregoing description has indicated, the case **24** need not be repeatedly seated in and removed from the support **19** during the operations of reloading but is seated only once for the whole series of operations. Also, obviously, there is no need to interrupt the operations for the changing of dies inasmuch as the plurality of dies available in the head **32** provide all of the necessary working elements in ready position. The inclusion in the device of the cap conveying bore **21** and the cap receiving reservoir **16** prevents the uncontrolled scattering of the detached caps about the device and the surrounding floor area where they may cause injury to the device or nearby apparatus or otherwise interfere with operations.

What is claimed is:

1. A device for reloading cartridges comprising a pedestal provided with a reservoir in the lower end thereof, a platform on the top of said pedestal, an upstanding support extending through said platform intermediate the ends of the latter and connected to said pedestal for upward and downward movement, one end portion of said support projecting upwardly of said platform and the other end portion being adjacent said reservoir, said support having a bore extending longitudinally thereof from end to end, seating means in said one end portion of said support for holding the base of a cartridge case containing a spent primer cap, the bore of said support being adapted to convey a spent primer cap upon removal from the cartridge case base to said reservoir, means operatively connected to said support for causing the upward and downward movement of the latter, an upright upon said platform intermediate said projecting end portion and the other end of said platform and connected at its lower end to said platform for transverse sliding movement, a head carried by the upper end of said upright and projecting over the intermediate portion of said platform, and a plurality of spaced dies carried by said head and each selectively alignable with said cartridge case seating means upon sliding movement of said upright.

2. A device for reloading cartridges comprising a pedestal provided with a reservoir in the lower end thereof, a platform on the top of said pedestal, an upstanding support extending through said platform intermediate the ends of the latter and connected to said pedestal for upward and downward movement, one end portion of said support projecting upwardly of said platform and the other end portion being adjacent said reservoir, said support having a bore extending longitudinally thereof from end to end, there being a transverse slot in said one end portion of said support and communicating with said bore and facing one end of said platform, seating means in said one end portion of said support for holding the base of a cartridge case containing a spent primer cap, the bore of said support being adapted to convey a spent primer cap upon removal from the cartridge case base to said reservoir, means operatively connected to said support for causing the upward and downward movement of the latter, an upright upon said platform intermediate said projecting end portion and the other end of said platform and connected at its lower end to said platform for transverse sliding movement, a head carried by the upper end of said upright and projecting over the intermediate portion of said platform, a plurality of spaced dies carried by said head and each selectively alignable with said cartridge case seating means upon sliding movement of said upright, and a holding element for a primer cap positioned on the side of said projecting end portion of said support remote from said upright and connected to said platform for movement into and out of the slot in said support.

3. A device for reloading cartridges comprising a pedestal provided with a reservoir in the lower end thereof, a platform on the top of said pedestal, an upstanding support extending through said platform intermediate the ends of the latter and connected to said pedestal for upward and downward movement, one end portion of said support projecting upwardly of said platform and the other end portion being adjacent said reservoir, said support having a bore extending longitudinally thereof from end to end, there being a transverse slot in said one end portion of said support and communicating with said bore and facing one end of said platform, seating means in said one end portion of said support for holding the base of a cartridge case containing a spent primer cap, the bore of said support being adapted to convey a spent primer cap upon removal from the cartridge case base to said reservoir, means operatively connected to said support for causing the upward and downward movement of the latter, an upright upon said platform intermediate said projecting end portion and the other end of said platform and connected at its lower end to said platform for transverse sliding movement, a head carried by the upper end of said upright and projecting over the intermediate portion of said platform, a plurality of spaced dies carried by said head and each selectively alignable with said cartridge case seating means upon sliding movement of said upright, a holding element for a primer cap positioned

on the side of said projecting end portion of said support remote from said upright and connected to said platform for movement into and out of the slot in said support, and spring means operatively connected to said holding element for urging said element toward its position of movement out of said slot.

4. A device for reloading cartridges comprising a pedestal provided with a reservoir in the lower end thereof, a platform on the top of said pedestal, an upstanding support extending through said platform intermediate the ends of the latter and connected to said pedestal for upward and downward movement, one end portion of said support projecting upwardly of said platform and the other end portion being adjacent said reservoir, said support having a bore extending longitudinally thereof from end to end, there being a transverse slot in said one end portion of said support and communicating with said bore and facing one end of said platform, seating means in said one end portion of said support for holding the base of a cartridge case containing a spent primer cap, the bore of said support being adapted to convey a spent primer cap upon removal from the cartridge case base to said reservoir, means operatively connected to said support for causing the upward and downward movement of the latter, an upright upon said platform intermediate said projecting end portion and the other end of said platform

and connected at its lower end to said platform for transverse sliding movement, a head carried by the upper end of said upright and projecting over the intermediate portion of said platform, a plurality of spaced dies carried by said head and each selectively alignable with said cartridge case seating means upon sliding movement of said upright, a slide positioned transversely of said platform adjacent said one end thereof, with the inner end of said slide intermediate said one end portion of said support and said one end of said platform, said slide being connected to said platform for movement from the latter position to a position having said inner end within said slot, a holding element for a primer cap positioned on the inner end of said slide, and hand actuable means on the other end of said slide for causing the movement of said slide from the position in which its inner end is intermediate said one end portion of said support and said one end of said platform to the position in which the inner end of said slide is within said slot.

References Cited in the file of this patent

UNITED STATES PATENTS

1,933,940	Sutton	Nov. 7, 1933
2,004,420	Siebert	June 11, 1935