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SLIDING SLEEVE BULLET SEATING DIE

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1 Claim. (Cl. 86—39)

This invention relates to firearms and particularly shell loading devices, and in particular a sliding sleeve bullet seating die for forcing the rim or a shell into an annular groove of a bullet positioned in the end of the shell.

The purpose of this invention is to facilitate the manufacture of ammunition by providing an improved and rapid method of forcing material at the edge of a shell into a groove in the surface of a bullet positioned in the shell whereby the bullet is positively secured in the end of the shell with a comparatively simple operation.

In the conventional method of mounting bullets in the ends of shells the bullet is forced into the end of the shell with a light drive fit whereby it is secured by frictional engagement with the shell; and where edges of shells are crimped into grooves in bullets comparatively extensive machines are used. With this thought in mind this invention contemplates an assembly tool in which a bullet is forced into the end of a shell slidably mounted in a sleeve and an inner rim in the end of the sleeve forces the material at the end of the shell into a groove in the surface of the bullet.

The object of this invention is, therefore, to provide means for forming an assembly die for securing bullets in the ends of shells whereby the material forming the end of a shell is instantly forced into an annular groove in a bullet positioned in the end of the shell with a sliding action of a sleeve in which the shell is carried, in relation to means for adjustably mounting the bullet for insertion in the shell.

Another object of the invention is to provide an improved assembly die for securing bullets in shells that may be used in combination with conventional shell loading devices.

A further object of the invention is to provide a bullet assembly die for crimping or peening the end of a shell into an annular groove of a bullet which is of a simple and economical construction.

With these and other objects and advantages in view the invention embodies a sliding sleeve in which the end of a shell is carried, an outer tubular casing providing a shell holder adapted to be threaded into the table or bed of shell loading machines and having an opening therein through which the bullet is inserted, and adjusting screws and sleeves threaded in the upper end of the tubular casing for adjustably holding a bullet in operative position in relation to a shell.

Other features and advantages of the invention will appear from the following description taken in connection with the drawings wherein:

Figure 1 is a side elevational view of the improved sliding bullet peening die showing the mounting elements in dot and dash lines.

Figure 2 is a vertical section through the die shown in Fig. 1 being taken on line 2—2 thereof.

Figure 3 is a plan view of the die with the parts as shown in Fig. 2.

Figure 4 is a vertical section on an enlarged scale showing the inner shell holding sliding sleeve.

Referring now to the drawings wherein like reference characters denote corresponding parts the improved shell peening die of this invention includes a sliding sleeve 10 positioned in a tubular casing or shell holder 11, a bullet retaining plug 12, an adjusting sleeve 13, a lock nut 14, and a set collar 15.

The tubular casing 11, which is provided with a threaded section 16 on the lower end is threaded into a table or bed as indicated by the dot and dash line 17 and a

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shell 18 which is carried by a shell holder as indicated by the dot and dash lines 19 extends upwardly through a collar 20 in the lower end of the casing or holder 11 and the upper end of the shell extends into a bore 21, in the upper end of which an annular crimping or peening die or bead 22 is positioned. The lower part of the sleeve 10 is provided with an enlarged bore 23 which is connected to the bore 21 by a conical shaped section 24.

With the sleeve 10 and shell 18 positioned in the lower part of the die a bullet, as indicated by the numeral 25 is inserted through an opening 26 in the wall of the casing or holder 11 and the upper end of the bullet is positioned in a cavity 27 in the threaded plug 12. The lower end of the plug is provided with an outwardly flared section 28 to facilitate inserting the point of the bullet therein as shown in Fig. 2 and the lower end of the sleeve 13 is provided with a similar surface 29 that coacts with the surface 28 for the same purpose.

The upper end of the plug 12 is provided with splines 30 to facilitate setting the plugs and similar splines 31 are provided on the upper end of the sleeve 13.

A lock nut 32 is threaded on the upper end of the plug and positioned to engage the end of the sleeve and the lock nut 14, which is threaded on the sleeve 13 and also on the cylindrical casing or holder 11 is secured in position by a screw 33.

The set collar 15 is also provided with a set screw 34 for securing the collar in position with the die set in relation to the shell holder 19.

With the parts arranged in this manner the shell, inserted in the shell holder is moved upwardly by the holder with the upper end passing into a bore of the sleeve 10 and with the shell held in position, a bullet inserted through the opening 26 and positioned in the cavity 27, enters the upper end of the shell as the upward movement of the shell is continued and as the sleeve 10 engages the lower end of the sleeve 13, where upward movement of the sleeve 10 terminates, continued movement of the shell causes the rim 35, as illustrated in Fig. 4 to move inwardly into an annular groove 36 in the bullet, as shown in Fig. 4.

The shell, with the bullet therein is then dropped downwardly and discharged from the tool.

With this combination of adjustments to the plug 12, the sleeve 13, and casing or holder 11 the bullet and also the sleeve 10 may be accurately positioned in relation to the shell whereby the end of the shell may be peened or crimped as desired.

It will be understood that modifications may be made in the design and arrangement of the parts without departing from the spirit of the invention.

What is claimed is:

In a shell peening die, the combination which comprises an elongated cylindrical casing having an opening through the wall thereof and having threads on the outer surfaces of the ends, a sleeve having a shell receiving bore with an annular internally positioned bead in one end of the bore slidably mounted in the casing, a sleeve threaded in one end of the casing and positioned to engage the slidably mounted sleeve, a plug having a bullet receiving cavity in one end threaded in the sleeve threaded in the casing, and means securing the plug and sleeve in adjusted position in the casing whereby upon upward movement of the shell the rim of the end thereof is crimped inwardly.

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