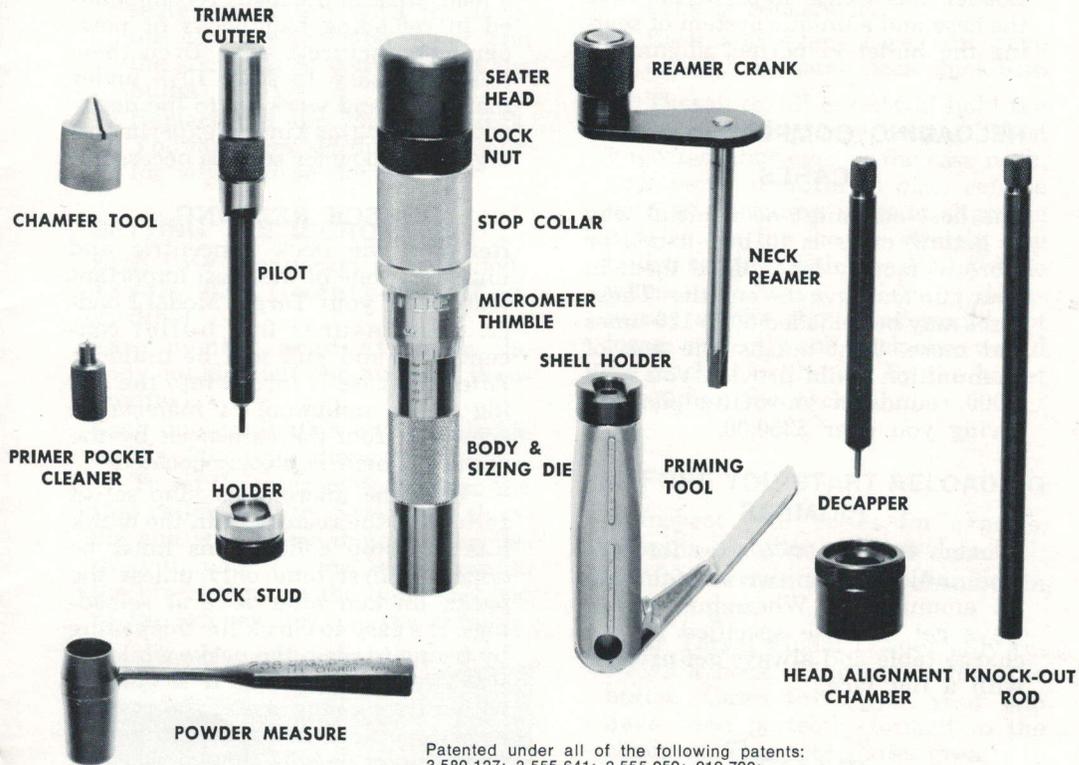


ZERO
ERROR

LEE TARGET MODEL LOADER

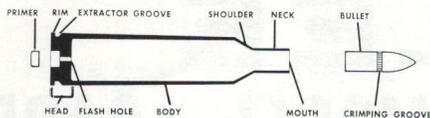
FOR RIFLE CARTRIDGES

COMPLETE INSTRUCTIONS



Patented under all of the following patents:
3,580,127; 3,555,641; 3,555,959; 219,700;
3,550,482

Because the components you use are the same as used by ammunition makers, you can expect to reload cartridges equal to or better than factory loaded ammunition. However, because we have no control over the method with which these tools will be used or over the manufacture and storage of powder and primers, we cannot accept responsibility for the use of these tools or charge tables.



MECHANICS OF RELOADING

1. Remove old primer.
2. Resize neck of case to firmly hold bullet.
3. Install a new primer.
4. Add the correct charge of powder.
5. Seat a bullet of the correct weight.

Besides doing the above, your Lee Loader has extra steps to improve the case and a unique system of seating the bullet in perfect alignment.

RELOADING COMPONENTS

CASES

The best and most economical way of getting cases is to buy a box or more of factory loads. Fire them in your gun and save the empties. These cases may be reloaded 50 to 100 times and more. That means one box of ammunition could provide you with 2,000 rounds of shooting pleasure saving you over \$350.00.

PRIMERS

Primers come in two sizes for rifle ammunition and in two sizes for pistol ammunition. When buying, always get the size specified on the charge table and **always get primers with a flat face.**

BULLETS

Select the bullet of your choice and match it to the powder you wish to use. Bullets can be had from your dealer in a large variety of styles and weights made by all the Arms Companies and several independent companies that specialize in bullet making.

This is probably the most important component for accuracy. Target quality bullets are best for utmost in accuracy. Even so results will differ from batch to batch.

POWDER

Loads have been recommended on the charge table supplied with your Target Model Loader. These are safe loads and because they are slightly under maximum, they generally are quite accurate. For the ultimate in accuracy, it will be necessary for you to continually experiment with different powders and charges in combination with the rest of the components.

Unless you are an experienced reloader who knows how to develop a load, stick to the loads recommended in reloading handbooks or powder manufacturers data. Even then, it is necessary to start 10% under maximum and work up to the desired load. For this kind of experimenting a good powder scale is necessary.

NECK REAMING

Reaming the neck concentric and uniform is one of the most important features of your Target Model Loader. This insures that bullet concentricity and pull will be uniform. After the case is forced into the sizing die, a minimum of material is removed from the case neck by the reamer which is closely located.

With the micrometer stop set at zero, turn the reamer until the crank hits the stop collar. This must be done the first time only unless the necks thicken after several reloadings. It's easy to check for thickening by trying to ream the necks while inside of the sizing die. If it goes in without removing metal there is no need for the reaming operation. If a drill press or hole shooter is available, the crank may be unthreaded and the reamer chucked by the shank. Remove the stop collar for chuck clearance.

CAUTION: Never turn the reamer backwards or force the reamer with excessive pressure as this will dull or chip the cutting edges.

MICROMETER BULLET DEPTH ADJUSTMENT

Your Lee Loader permits precise bullet depth adjustment with the mi-

rometer stop. Bullet depth can play an important part in obtaining best possible accuracy.

ZERO ADJUSTMENT FOR BULLET SEATER

- 1) Set the micrometer at zero.
- 2) Place a case that has been resized but not neck reamed in the head alignment chamber. Slip the body die assembly over the case and drop a bullet into the top.
- 3) Insert the bullet seater without the top knob. Screw the bullet seater in or out until the locknut touches the stop collar and the seater is in contact with the bullet.
- 4) Replace the top knob and lock. You may now set the micrometer for any desired depth.

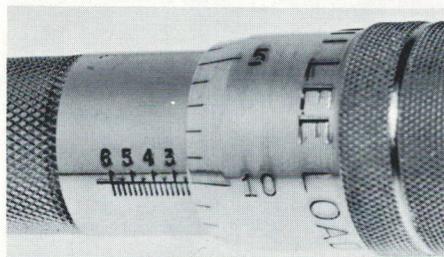
SETTING THE MICROMETER

Each line graduation on the body equals .025 (twenty-five thousandths).

Each number graduation on the body equals .100 (one hundred thousandths).

Each line graduation on the thimble equals .001 (one thousandth).

To set the micrometer, loosen the stop collar $\frac{1}{4}$ turn. Screw the thimble and stop collar down to the desired number on the body then to the proper line on the body and last to the proper line on the thimble.



Example:

Set .235 thousandths:

With the thimble, cover the #2 line plus one .025 line on the body. .200 plus .025 equals .225. Now continue turning .010 on the thimble (10 lines) or .225 plus .010 equal .235.

PRINCIPLE OF THIS NEW LOADING SYSTEM EXPLAINED

The case neck is resized in a slightly tapered bore. This holds the case securely for the neck reaming operation. The neck is reamed straight with a reamer held in close alignment by a closely fitted bore.

RESULTING IN:

- a) The neck is then properly prepared to receive the bullet with a light press fit.
- b) The inside and outside of the neck is concentric.
- c) Each and every case will have exactly the same neck thickness.

Therefore, all cases will hold the bullet with the same tension. Most important, however, is the case neck, now being uniform in size, can be used as a locating point to align the case within the die for straight line bullet seating. This cannot be done when necks have different thicknesses as the thin ones would not locate correctly and thick ones would be pinched in the die by the bullet expanding the neck.

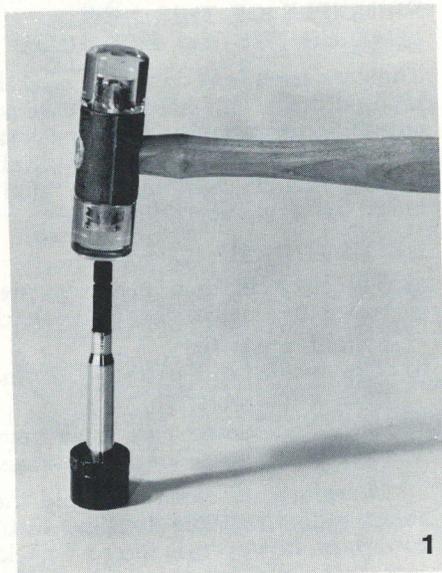
BEFORE YOU START RELOADING

1. Inspect your cases for cracks, splits or other obvious defects.
2. Make certain all cases chamber in your gun.

Your Target Model Loader only resizes the neck of the case to hold the bullet. Cases fired from your gun have been perfectly formed to the chamber. This contributes greatly to accuracy. Full length resizing destroys this perfect fit and should not be done.

Many of the precision parts of your Target Model Lee Loader are held to within .0002 (2/10,000, two ten thousandths of an inch). Use your tools carefully and keep them in the original container.

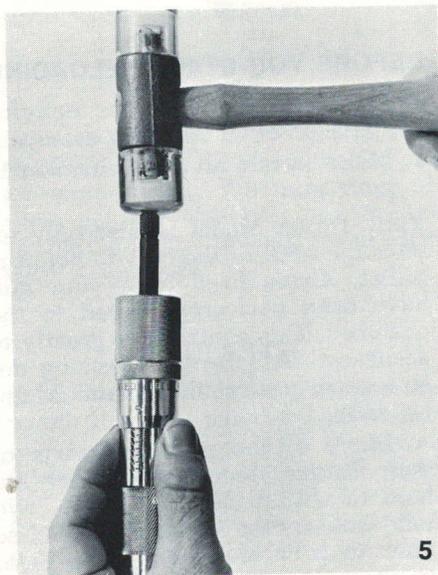
IMPORTANT: Even if you are an experienced reloader, follow the instructions step-by-step. This new system of reloading is different than what you may have been use to.



Start by depriming all of the cases.
**DO NOT DEPRIME BERDAN
PRIMERS, THEY HAVE 2 SMALL
FLASH HOLES INSTEAD OF ONE.**



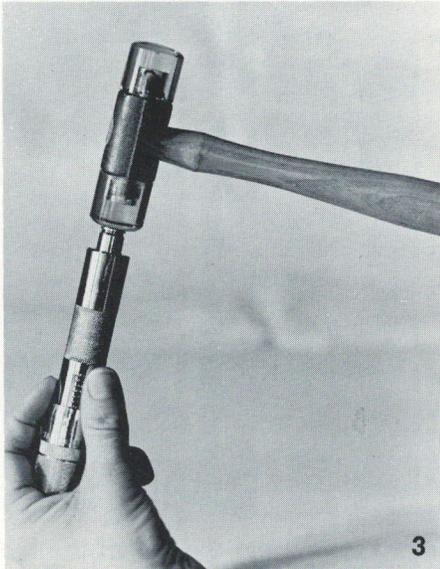
Clean residue from primer pocket
with a twist.



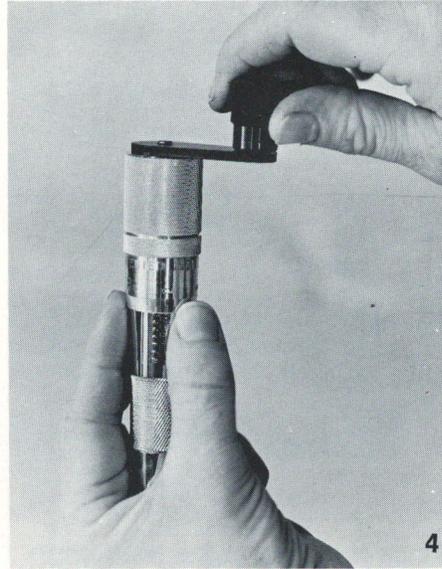
Knock the case out of the die with
the knock out rod.



With the case in the holder, trim
the case to length. This need not
be done each time. Experience
will dictate how often this must
be done.



Drive the case into the Loader until the head is flush. A plastic mallet works best but a piece of hardwood 10 or 12 inches long works well.



With the micrometer set at zero ream the neck of the case. **IMPORTANT:** See "NECK REAMING" in this instruction sheet. **CASES MUST BE FIRED FROM YOUR GUN. DO NOT REAM NEW UNFIRED CASES.**



Chamfer the inside and outside of the case. Use only one turn with light pressure. **DO THIS ONLY THE FIRST TIME OR AFTER CASE TRIMMING.**



Prime the case. Use primers with a flat face.



WARNING: With the Lee Powder Measure, use only charges listed on the Lee Charge Table. Make certain you are using the correct measure.

9

Place the case in the head alignment chamber and slip the body die assembly over the case. Add a charge of powder. Refer to the charge table for the proper load.



CASE MUST BE FREE OF DIE AND RESTING IN DEPRIMING CHAMBER.

10

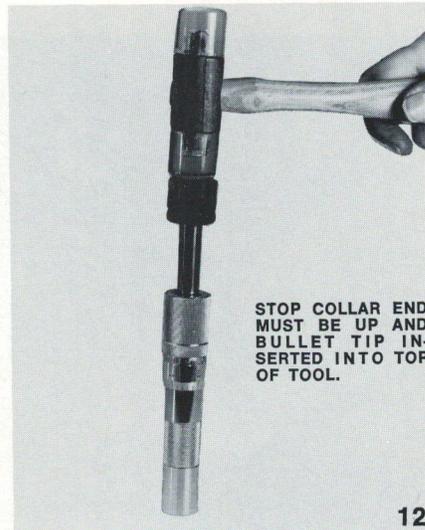
Drop a bullet into the top of the tool. The bullet depth adjustment should have been previously set. (SEE MICROMETER BULLET DEPTH ADJUSTMENT.) Set stop to any desired bullet depth. It is necessary to readjust to zero whenever bullet shape or weight is changed.



CASE MUST BE FREE OF DIE AND RESTING IN DEPRIMING CHAMBER.

11

Insert the bullet seater and push down until it stops against the stop collar. It may be desirable to use a light mallet for the first loading of once fired cases.



STOP COLLAR END MUST BE UP AND BULLET TIP INSERTED INTO TOP OF TOOL.

12

Crimp the bullet only on tubular magazine guns. Place the cartridge in the loading tool as pictured (Fig. 12) with bullet down and the depriming chamber on the head. Tap lightly until the desired crimp is formed. This can only be done with bullets having a crimping groove, or lead bullets.

AUTOMATIC ARMS

Ammunition for autoloading guns as a rule is somewhat more difficult to reload so as to function the action correctly. Best results can be had by full length resizing the cases and load to suggested velocities. This is not to say neck sized cases cannot be fired from an autoloading gun, but when used may have to be worked through the gun manually.

USING MILITARY CASES

Ammunition made for the Government has primers that are crimped in place. After depriming, the crimp must be removed so a new primer can be installed. The Lee Chamfer Tool will do the job very neatly and quickly. Remove enough metal to form a small radius so the new primer will enter easily.

ACCURACY

Many things contribute to accuracy. The Lee Target Model Loader was designed to eliminate some of the variables. It is easy to load ammunition that is more accurate than the "store bought" variety. But when we speak of accuracy here we're talking about the best possible accuracy. Theoretically, it should be possible to shoot 10 shots into the same hole. It has never been done.

While none of us may get that one hole group, it doesn't mean we shouldn't try for it. Accuracy shooting is one of those sports you can do by yourself. No other sport that permits solitary competition is so thoroughly enjoyable.

The Target Model Lee Loader is the most precision made production loading tool ever produced. You can shoot your ammunition with the confidence that it is the most accurate anyone will be able to produce with any given components.

To get the most out of your tools, use only cases that are in good condition and uniform in size, weight and dimensions. Target quality bul-

lets will give optimum results. You will have to experiment with different loads, powders and primers. It is best to weigh your charges; however, very good results can be had with the measure provided. Remember, the exact charge is not nearly as important as a uniform charge.

Precision shooting is an art. Pay attention to details. If one case consistently throws a wide shot, discard it or at least keep it separate from the rest. Develop a routine. Keep records of your loads, bullet depths, components used, weather conditions and results.

LEE CASE SPINNER Motorizes Your Case Conditioning!



Spinner — 69¢

To be used with the
Lee Trimmer Shell Holder

Speed up your case preparation with this handy tool. The 1/4" shank fits any hole shooter or drill press. All the operations can be done without removing the shell or stopping the motor.

Spin Cases for Trimming — Trims cases to the exact length, square and true, quick as a flash. Spins Cases for Chamfering — Just a light touch with a Lee Chamfering Tool chamfers and deburrs the inside and outside of the case mouth perfectly.

Spins Cases for Polishing — A quick pass with No. 0 steel wool removes all tarnish, grit and dirt for cases that look better than new. Makes it easy to inspect and satisfying to reload.

The company reserves the right under its product improvement policy to change construction or design details and furnish equipment when so altered without reference to illustrations or specifications used herein.

LEE LOADING EQUIPMENT



LEE LOADER FOR RIFLE AND PISTOL

Everything needed to completely reload your own rifle or pistol ammunition. Pays for itself in the first hour. Save 50 to 75% on your ammunition. Available for all popular and most military calibers.

\$10.98



LEE LOADER FOR SHOTGUN SHELLS

The patented Lee Loader makes it possible to manufacture a reloading tool at a low price without sacrificing quality. Reload anyplace. Load trap, field or magnum loads without buying extra measures. 10 ga., \$11.98.

12, 16, 20, 28 or .410 ga.

\$10.98



LEE POWDER MEASURE KIT

The newest addition to the Lee family of fine reloading equipment — 13 powder measures, slide chart in a neat box. 85 different powders listed. Over 1,100 loads. Measures alone worth \$6.50. A good quality buy at only . . .

\$3.98

PARTS LIST

| | |
|---------------------------------------------------------|--------|
| Body, sizing die & micrometer thimble assembly | \$7.00 |
| Trimmer pilot & holder | \$1.98 |
| Powder measure | \$.50 |
| Charge table | \$.25 |
| Shell holder for priming tool .. | \$1.80 |
| Head alignment chamber | \$1.50 |
| Bullet seater head | \$.90 |
| Bullet seater lock nut | \$.50 |
| Bullet seater "O" ring | \$.25 |
| Bullet seater rod | \$1.90 |
| Knock-out rod | \$1.80 |
| Decapper | \$1.90 |
| Trimmer cutter | \$1.25 |
| Trimmer lock stud | \$.40 |
| Primer pocket cleaner | \$.49 |
| Chamfer tool | \$1.48 |
| Neck reamer | \$4.50 |
| Reamer crank | \$2.00 |
| Priming tool less shell holder .. | \$2.98 |
| Stop collar | \$1.00 |

To convert to another size cartridge of the same caliber you will need the following:

| | |
|---------------------------------------------------------|--------|
| Body, sizing die & micrometer thimble assembly | \$7.00 |
| Trimmer pilot & holder | \$1.98 |
| Powder measure | \$.50 |
| Charge table | \$.25 |
| | <hr/> |
| | \$9.73 |

In addition, if the shell head is of a different size you will need the following:

| | |
|------------------------------------|--------|
| Shell holder for priming tool | \$1.80 |
| Head alignment chamber | \$1.50 |
| | <hr/> |
| | \$3.30 |

To convert to another size cartridge of a different caliber, you will need the following in addition to all of the above conversion items —

| | |
|-------------------------|---------|
| Neck reamer | \$4.50 |
| Decapper | \$1.90 |
| Knock-out rod | \$1.80 |
| Bullet seater rod | \$1.90 |
| | <hr/> |
| | \$10.10 |

See your dealer or order direct

LEE CUSTOM ENGINEERING, INC.
will pay the postage.

LEE CUSTOM ENGINEERING CO.

HARTFORD, WISCONSIN 53027

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