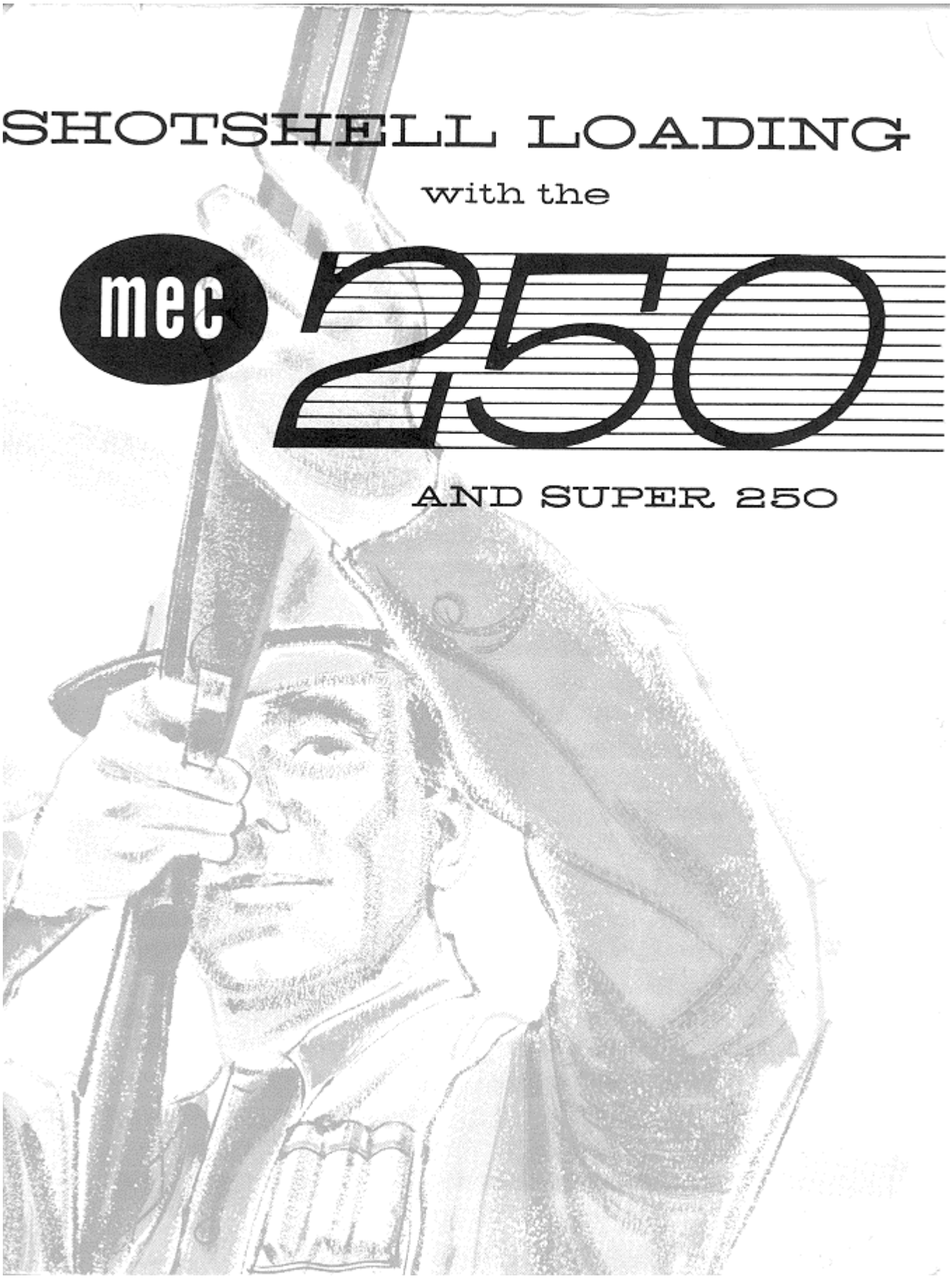
SHOTSHELL LOADING

with the

mec 250

AND SUPER 250



Here is reloading at its finest . . .
this MEC 250 will give you perfect reloads
. . . every time

IT'S EASY-TO-USE • IT'S FAST • IT'S ACCURATE
IT'S VERSATILE • IT'S FOOLPROOF • IT'S SAFE

INDEX

MAYVILLE ENGINEERING CO., INC.

LET'S START LOADING

Your Model 250 reloading tool is completely assembled and tested at the factory, and is ready to provide long, trouble-free service. Just follow these simple instructions.

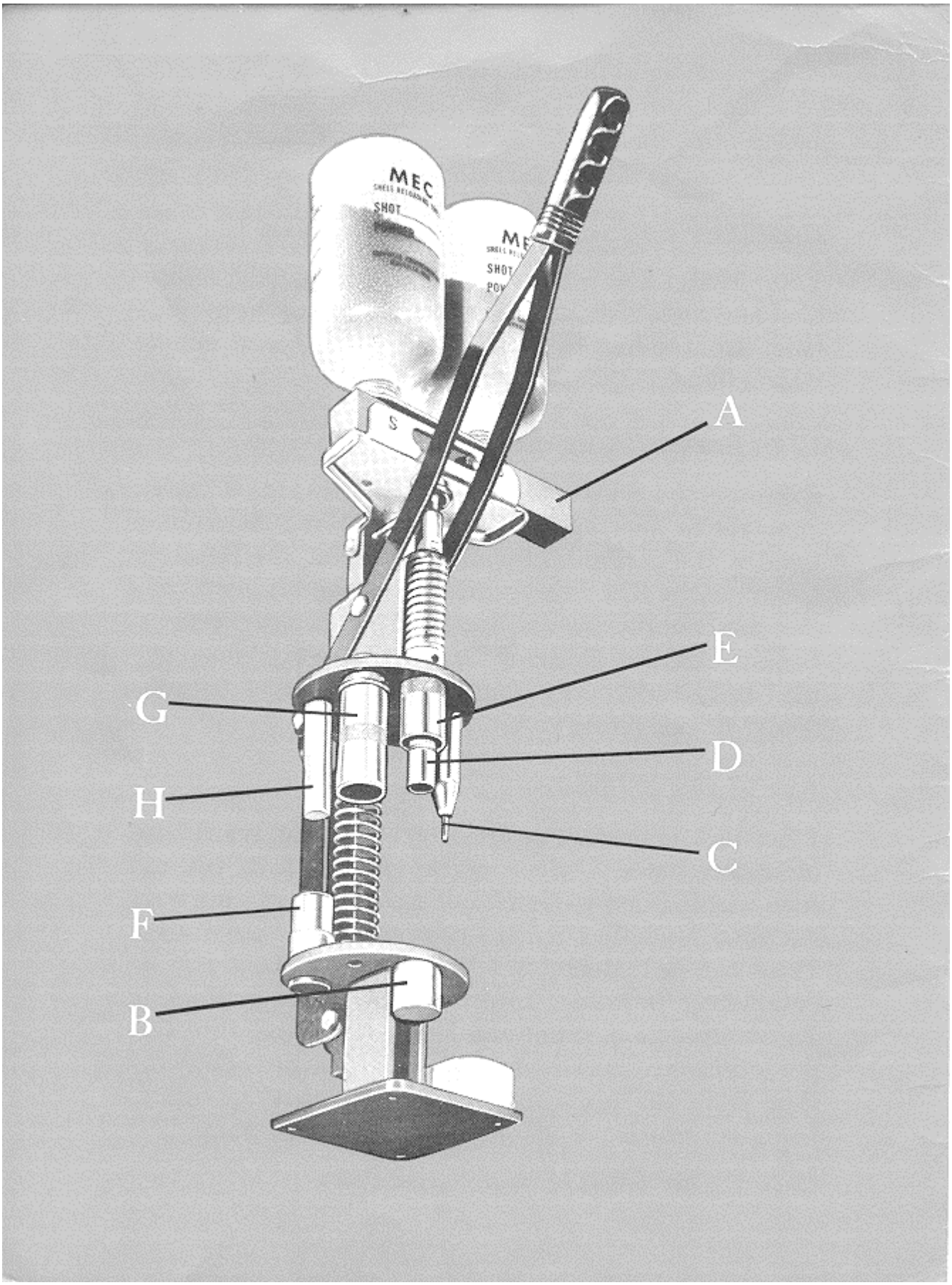
UNPACKING

Examine the contents of the shipping carton for damages or shortages. In addition to the Assembled Loader, the carton will contain one No. 224 Resizing Die, one No. 325 Primer Seating Assembly, two caps (for the containers), and three ¼-20 machine screws, Primer Catcher, Resizing Ring* and Wing Nuts. Immediately report any shortages or damages to your dealer or delivering carrier.

MOUNTING

Place unit in desired position on bench and mark base mounting holes. Drill at marks using a 9/32 bit and then secure press to bench using screws and wing nuts supplied. Note that bench is desirable, but not required. Press can be fastened to a wood or metal base and be completely portable. Insert No. 325 Primer Seating Assembly into position on Press Base and slip wad guide in place on Rammer Tube. Remove cellophane tape from the openings in the measure assembly, being sure to leave neoprene grommets in place.

*Super 250 Resize Ring fastened to support tube


MEC
SHOT
A
E
G
D
H
C
F
B

mec 250

RELOADING IS SIMPLE

Before you actually try loading though, it might be well to look the tool over, comparing it with the photograph at the left which identifies all the parts and dies which you will be using*.

Note that the charging and measuring assembly slips, or pivots, back for easy charging or changing of loads. This assembly is hinged by a machine screw, with wing nut, which should be tightened during actual loading.

A The charging bar is located at the bottom of the MEASURING ASSEMBLY. By moving this bar to the right or left, powder and shot are measured and dropped into the shell.

B The No. 325 Primer Seating Assembly fits into position as shown. This assembly consists of cup, spring, and spring pad No. 331. Then, going from right to left, the dies and their functions are as follows:

C Depriming Punch

D Rammer Tube, thru which powder and shot are dropped into the shell. This tube is also used to seat wads.

E Wad Guide inserts and seats over-powder and filler wads, separately or together.

F Resizing Die

G Crimping Die performs complete crimping operation in one stroke.

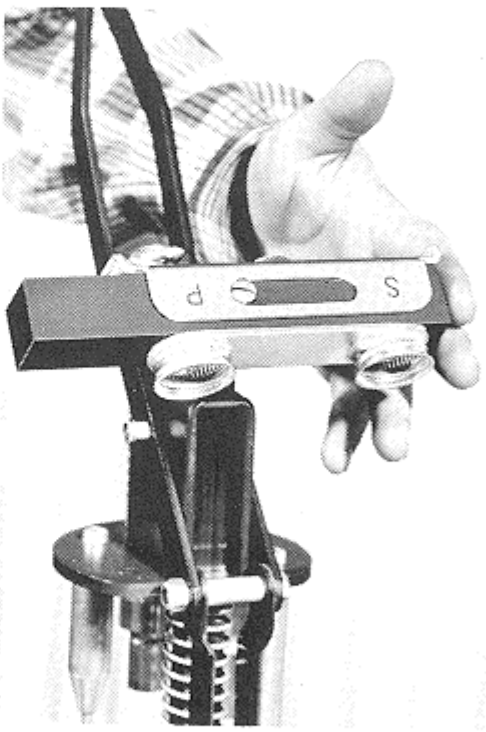
H Eject Punch used only when shell does not slip out of Resizing Die.

If you haven't already talked to your dealer about the different kinds of powder, shot, caps and wads, you'll probably want to refer to the Charging Bar Chart packed with each loader. It lists wad column heights and pressures.

*Description is for MEC 250. See page 13 for description of Super 250

CHARGING

Release charging assembly wing nut and flip or pivot back to charging position. Push the charging bar to the right as far as it will go. *(Photo, left)*. Unscrew containers and fill with powder and shot. Replace containers, powder container first, making sure it is mounted into the proper position (position "P" for powder, and "S" for shot). Next replace the shot container. *(Note:* Use only light or moderate pressure when tightening containers). Because of the weight factor, support the shot

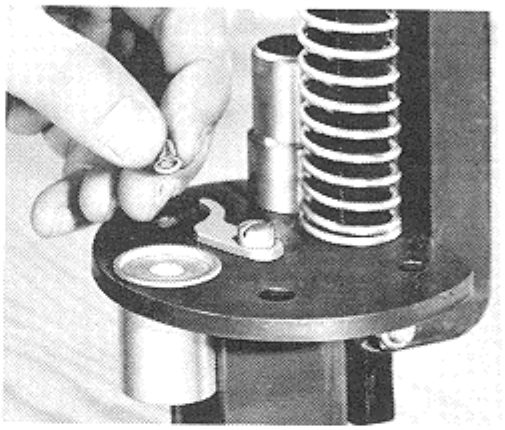


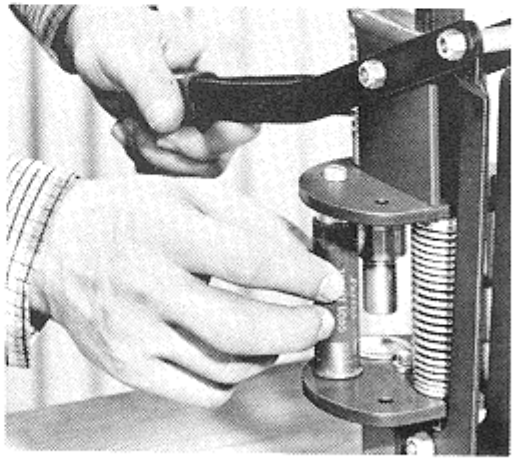
container with your hand while in the charging position so that there is no danger of its tearing loose under pressure. *(Photo, right).* While still supporting the shot container with your hand, flip the assembly to the upright or loading position. Now you're ready to load.

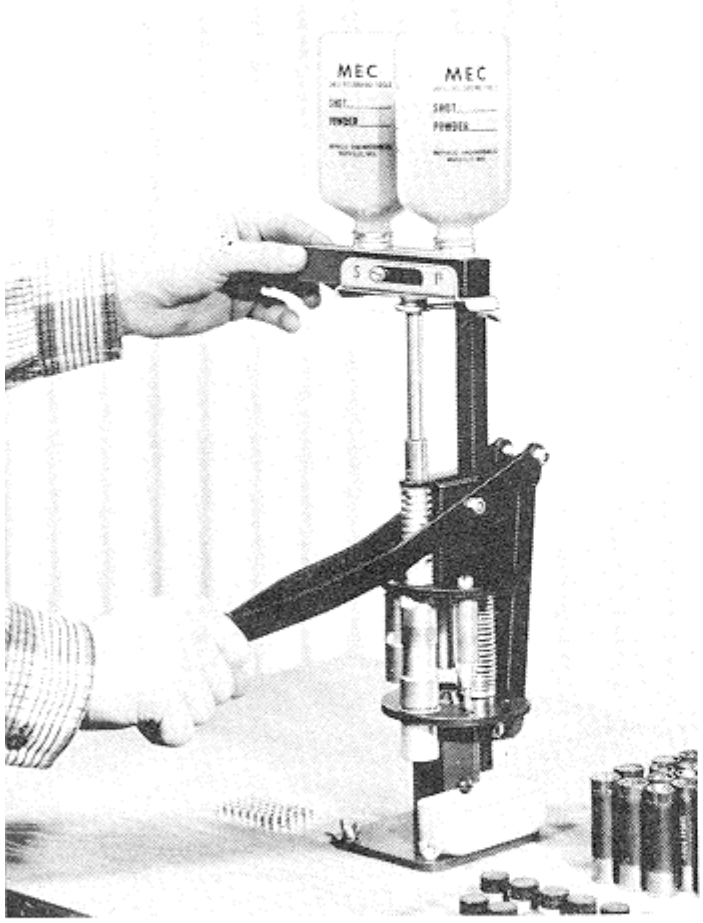
DEPRIMING

Place Primer in Primer Seating Assembly, base down, *(Photo, upper left)*. Start shell on the Deprime Punch and depress handle *(Photo, lower left)*. This removes spent primer which drops into Primer Catcher below*.

*If Super 250 Model, see page 13



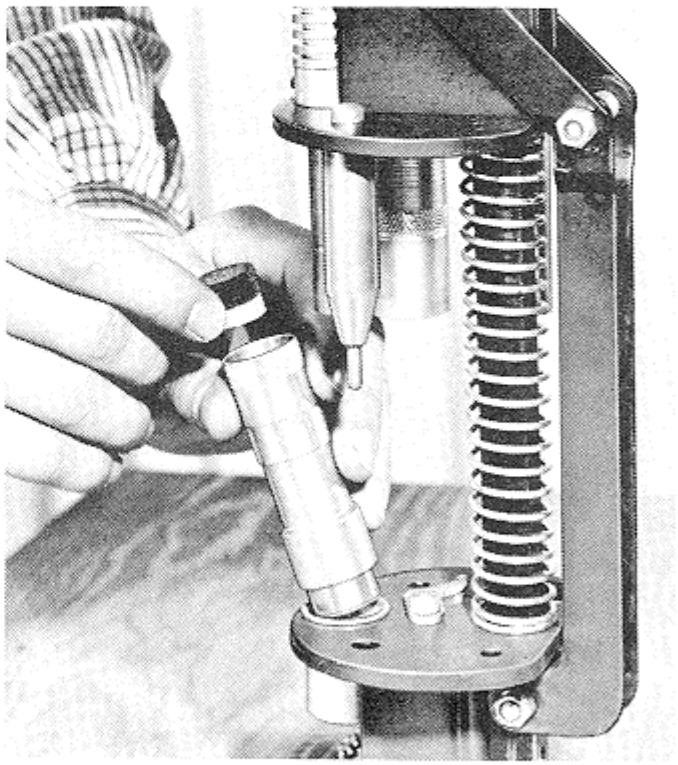


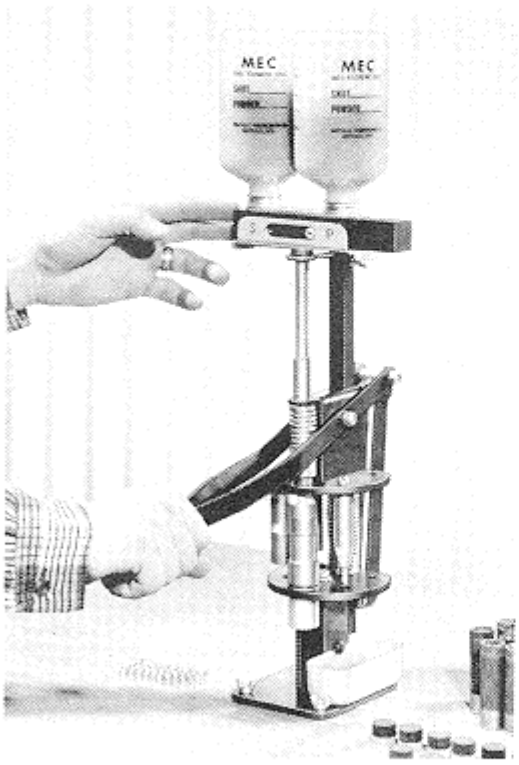


Slip shell into Resizing Die and place under Rammer Tube. Depress handle, starting Rammer Tube into shell. This operation reprimes and resizes the shell, as well as positions the "floating" wad guide. Next charge powder by pulling the charge bar to the left. *(Photo, right).*

WADDING

Insert wad column, *(Photo, left)*. Then place under Rammer Tube and depress handle to positive stop.





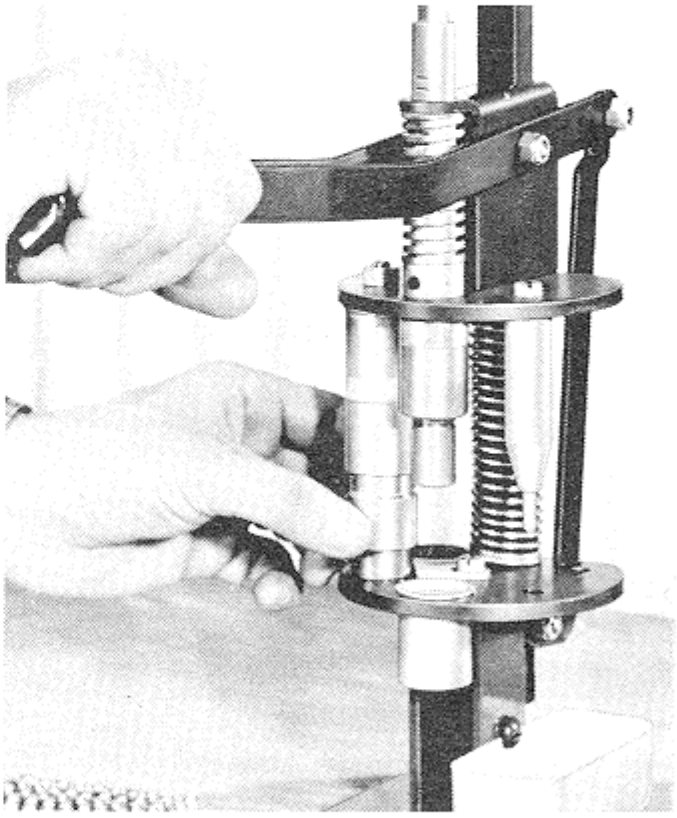
Charge shot *(Photo, right)* and, holding Resizing Die down, raise handle. This will allow wad guide, with Rammer Tube, to move up out of the way.

Note: Factory setting will result in correct pressure for most 1⅛ ounce loads when modern cases are used with proper wad column.

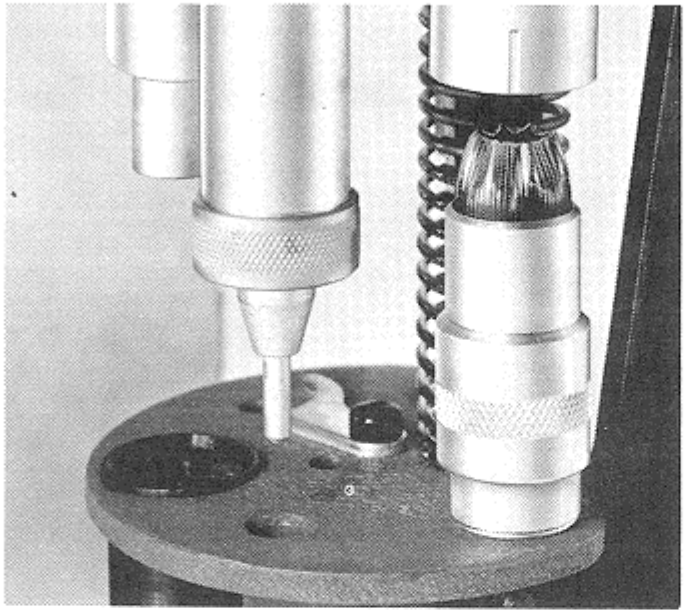
CRIMPING

Move die and shell to position under Crimping Die and depress handle. This performs complete crimping operation in one stroke of press handle *(Photo left)*. If shell lodges in the Resizing Die, place into opening beneath ejecting punch and depress handle. This will eject finished shell*.

Note: Crimping operation is completely adjustable. For further information, see Page 18.



*To load the plastic shells, see Super 250 Model on page 13



THE SUPER 250

Your MEC Super 250 is equipped with a special resize-deprime apparatus. This die completely resizes the shell, including the metal for diameter and head space while hull is being deprimed. Shell is ejected from the die by upward pressure on the handle at the top of the stroke. (Note: DO NOT SNAP HANDLE UP).

To Load New Cases or The Plastics

There is a star crimp head located at the extreme right side of your tool. A six-segment and eight-segment star crimp (for the popular gauges) is included with the reloader. Both paper and plastic cases can be processed with the star crimp head.

IF YOU HAVE TROUBLE

...with oversize shells

1. You may be using too many wads. If the crimp bulges when the shell is finished, or if bulging or crushing of the paper adjacent to the brass base is evident, your wad column is too high. If the crimp tapers inward and has an opening in the center, the wad column is not high enough. Slight inward taper is preferred as this locks contents with toggle action of paper, and shell will withstand considerably more abuse without spilling shot.
2. The shells you are using may be moist. This is certain to cause trouble, and especially so, when oversize wads, or too much pressure, or a combination of both enter into your loading operations. All makes of shells DO ABSORB MOISTURE, and their size is directly related to the moisture content of the paper. Hot weather, when high-humidity conditions are unnoticed, will give you your greatest trouble with oversize shells. Your cases may be as much as .015" larger than when working during the winter or during the season when your storage and working area is heated. Dehydrating your cases in the oven of your kitchen range at a temperature of approximately 200° will give surprisingly good results.
3. Check the wads you are using to be sure they are of the correct diameter. Oversize wads will exert too much side pressure on the wall of the shell, causing it to expand when ejected from the resizing die. The same condition results from too much pressure on the wad column. Whenever pressure is necessary to eject the shell from the Resizing Die, it may give trouble if your gun has an exceptionally small chamber. Soft cases will tend to swell slightly during storage, and this, too, could cause trouble. Immediately inspect any shell that requires high ejecting pressures. Remember, any shell that ejects from the Resizing Die under great pressure will expand much more than one that ejects easily.
4. The brass base of the shell may be oversize. This portion of the fired shell varies widely, and is sometimes so large that it is impossible to resize by conventional methods without distorting the shell with the excessive pressure necessary to eject it from the Resizing Die. The result of high ejecting pressures is oversize shells

with poor firing characteristics. It may therefore be necessary to perform a preliminary operation on some shells using Part No. 235, Resizing Ring. Excessive ejecting pressures will be eliminated and reloads of uniform high quality will result. Internal pressures are such that expansion in storage may be entirely eliminated. Use of the Resizing Ring is fully explained on page 19.

...with crimping sleeve sticking

Remember, the results you get from your loader will, to a great extent, depend on the condition of the Crimping Sleeve. The bore of the sleeve is made to exacting tolerances and should be protected between periods of operation. A light coating of oil is suggested as a rust and corrosion preventative. Be sure to remove all oil and check for possible rust or pitting before actual use.

1. Check your shells for moisture. If necessary, dry them, as explained in part 2, above.
2. Check your shells for dirt or other foreign materials.
3. Check for oversize wads. To get good results you must use **quality** components.
4. Check for oversize brass. Use resizing ring, as explained on page 19, if necessary.
5. Do not lubricate your shells. This softens the paper and makes them difficult to resize. In addition, the finished shells will expand in storage.

...with misfires or poor ignition

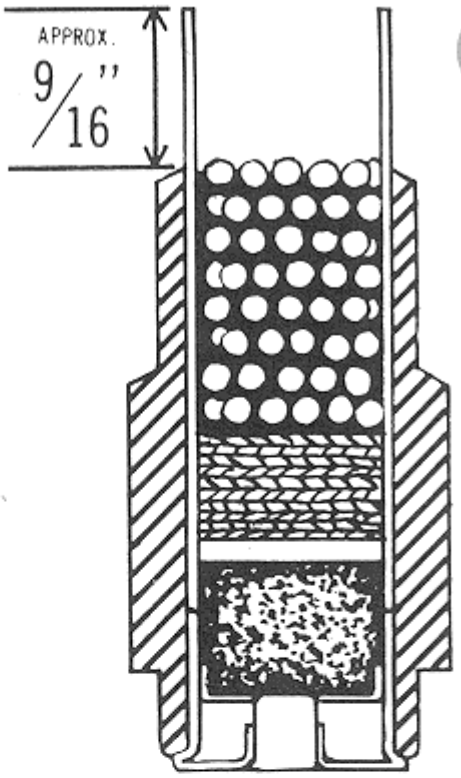
1. Check your powder and primers for moisture or dampness. Never expose the powder to air for any extended period. Most powders will absorb moisture from the air, especially under humid conditions. This will affect the burning characteristics as well as the weight. Whenever checking the weight of your charges, always use fresh powder from a sealed can and agitate to a certain extent to assure uniformity of mixture. Primers should always be stored in cool, dry surroundings.

2. Check the bases of your shells for "dishing". If you find this condition, exert more pressure during the Depriming operation. This will flatten them. Poor detonation or misfire is often caused by the firing pin not striking the Primer with the proper impact due to this "dishing".
3. Be careful not to run out of powder or shot. Many cases of poor detonation or misfire are caused by the loading of several shells before noting that the powder container is empty. A light shot charge often produces muzzle flash or blast.
4. When you have misfire with the Primer showing evidence of good contact with the firing pin, always take the shell apart and examine it. You may have accidently used a spent primer.
5. Inaccurate wad seating causes inconsistent ignition. Simply pushing the Wad Column into the shell and releasing it is not enough. Pausing at the proper pressure is necessary to allow the air to exhaust and the powder to be compacted properly.

SPEED

In order to obtain maximum production speed it will be necessary for you to arrange components properly. Primers should be located to the left with base down. This can be accomplished by placing the carton of primers on bench surface upside down and then removing the cover. When the insert is lifted all primers will be set base down which will eliminate "fumbling" when placing them in the Primer Seating Assembly.

Wads and empty cases should be positioned to the right of the press. Stacking the wads . . . that is, placing filler wads upon the overpowder wads which have been spread on your bench . . . will also help to obtain increased speed of operation. Use hand movements exactly as depicted in illustrations.



WADDING

While wadding is primarily concerned with the sealing and cushioning of the rapidly expanding gasses given off by the explosion of powder, an important secondary function is performed. It is in connection with the volumetric capacity of the empty shell itself and the amount of powder and shot used.

Very simply, the quality of the crimp on the finished shell is very much affected by the space taken up by the components used and it is adjustment of the wad column that determines the finished height of the complete components column. A rule of thumb relating to this calls for a difference between the level of the shot charge and the mouth of the open shell with this dimension being approximately 9/16 inches for 12 gauge. *Remember* that this is an approximate dimension which may have to be adjusted slightly to suit the method of crimping used on your particular press or the wad pressure used in your operations. With the MEC 250 and Super 250 presses, the level of the shot charge before crimping should be approximately flush or in line with the top opening of the resizing die. This is for full 2¾ inch long shells utilizing the modern star or pie crimp.

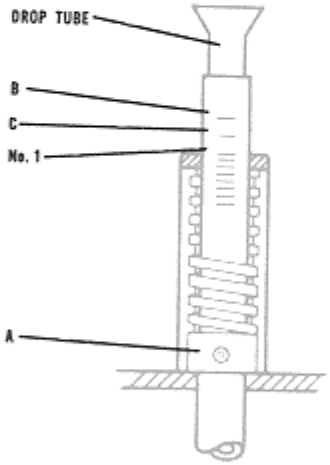
TO USE

. . . resizing ring, part no. 235 (Applies to MEC 250 only)

1. Slip the Resizing Ring on the shell, large opening first.
2. Place shell into Ejecting Hole in Loader Base and press shell into ring with Ejecting Punch (h, page 4). Note: Use only enough pressure to seat the Base Flange of the shell against the ring. Too much pressure will cause the Shell Base to "dish" or become concave. In extreme cases, where the brass is expanded to such an extent that the base is distorted when resizing, it may be well to use the No. 331 Spring Pad (See photo, Page 4) over the base to prevent "dishing".
3. Proceed to reload the shell in accordance with the instructions starting on page 8, leaving the Ring in place. The Ring will come loose during the depriming operation.

IF YOU HAVE TO ADJUST

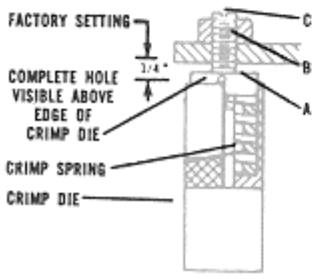
the rammer tube



The M E C Rammer Tube is arranged to provide any Wad Pressure from 50 to 120 lbs. Proper setting for all 12 gauge, 1⅛ oz. loads in modern Star Crimp Cases is with the No. 1 graduation just below the surface of the turret bracket. Since the spring is preloaded at 50 lbs. initial movement of the Rammer Tube, will bring the first graduation into view indicating 50 lbs. The tube is calibrated so that each additional graduation indicates 10 lbs.

Using the Set Screw "A", the Drop Tube may be moved to increase or decrease pressure as required . . . the value of the first graduation changing by 10 lbs. for each 1/16" the tube is moved. For example: Lowering the tube to Reference Mark "C" will cause the No. 1 graduation to indicate 70 lbs. with 10 lbs. additional for each succeeding graduation. When lowered to Reference Mark "B", Reference Mark "C" will indicate 70 lbs. . . . graduation No. 1, 90 lbs. When applying pressure to the overpowder wad only, Reference Mark "B" may be used to advantage. For Ballistite or other similar powders, the pressure may be gauged by the spring in the Primer Seating Assembly which indicates 25 lbs. at the bottom of its stroke.

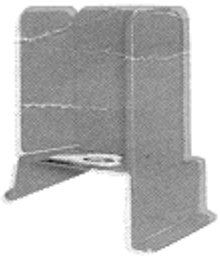
pressure crimp assembly



For best results on soft, moist or well worn cases it may be necessary to release pressure on Crimping Spring. Do this using the adjusting Nut "A". Be sure to set to original position when processing cases that have good stiff paper at the crimp end.

To adjust for depth of crimp release Lock Nut "B" and, using "C", turn Assembly down for increased depth — up for less. Moving press handle slowly during actual crimping operation will usually improve the quality of the crimp.

ACCESSORY EQUIPMENT



MEC E-Z PAK — Here's how to pack shotshell reloads the easy way. As each shell is reloaded, they're placed in E-Z PAK, exactly as if they were being placed in the box. After each 25 shells, original box is slipped over E-Z PAK, which is then turned upside down, and removed. Nothing easier — nothing neater. Available in all gauges.

MEC E-Z Wad Dispenser — Makes Wad handling as easy as 1-2-3. The MEC Wad Dispenser is "reloader-high", making your wadding operation faster . . . more convenient.

Electric Shell Former F33B — Tests cases for blow-out at the brass, and reshapes and reconditions the shell for easy insertion of wads. Makes it possible to re-use shells that might otherwise be discarded. Includes bracket for mounting to bench.

MEC Charging Bars — A complete assortment of "quick-change" charging bars is available for any load or gauge. See list packed with your tool or check with your dealer.

Star Crimp Starting Head
(6 and 8 segment)

Die Sets — Primer Type 241 and S 241* (12, 16, 20, 28, 410)
Complete die sets for converting from one gauge to another. Changeover takes only a few minutes. (Charging Bars Extra)

IMPORTANT! When ordering parts or accessory equipment, be sure to state serial and model number of reloader on which they will be used, along with part numbers listed above.

*For Super Model

mec

250

AND SUPER 250

MAYVILLE
ENGINEERING COMPANY, INC.
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