



SHOTSHELL
LOADING
with the

mec

500



*a progressive
reloader*

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*Here is reloading at its finest ...
this MEC 500 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

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LET'S START LOADING

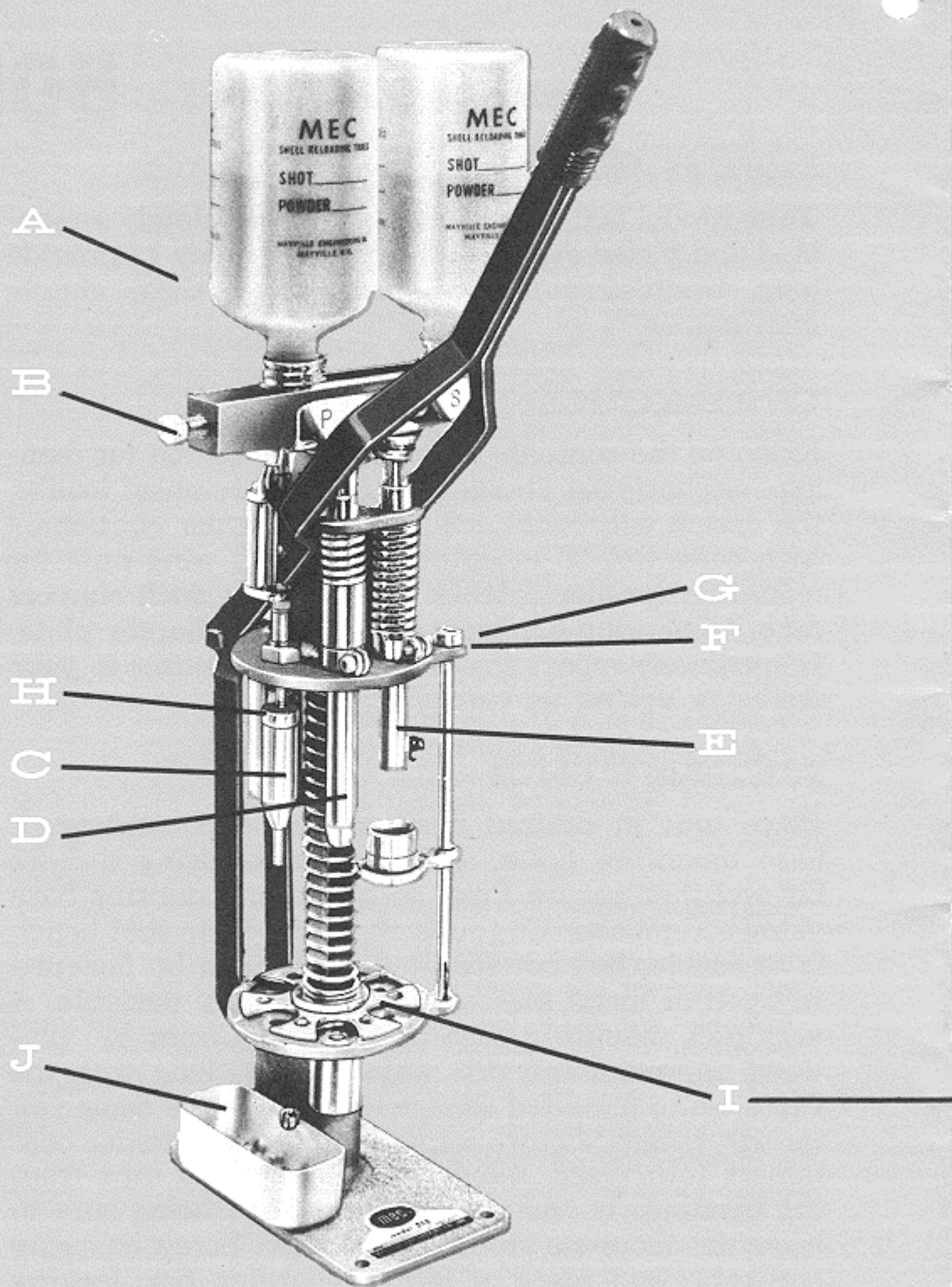
Your Model 500 Reloading Tool is completely assembled and tested at the factory, and is ready to provide long, troublefree service. Just follow these simple instructions.

UNPACKING

Examine the contents of the shipping carton for damages or shortages. In addition to the assembled loader, the carton will contain 2 shot and powder containers with caps, 3 $\frac{1}{4}$ -20 machine screws and wing nuts for mounting, primer catcher, resizing ring with support tube, 1 charging bar knob and resizing adaptor plate. 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 or mounting base using screws and wing nuts supplied. Note that bench is desirable, but not required. Press can be fastened to wood or metal base and be completely portable. A very nice mounting base can be made from $\frac{3}{4}$ " plywood approximately 12" wide and 18" long with the Press being mounted somewhat back of the center on the 18" length. Before screwing shot and powder containers into place, remove the cellophane tape from the openings in the measure assembly, being sure to leave the neoprene grommets in place. Screw charging bar knob into place at left of charging bar, locking it with the jam nut provided.

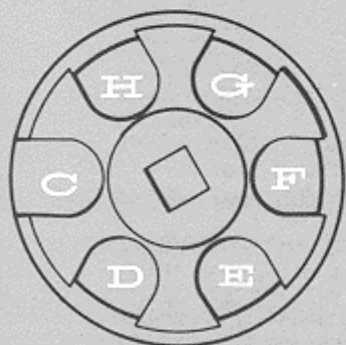


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LET'S TAKE A LOOK AT THE MEC 500

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

- A** Note that the **measuring assembly** pivots back for easy charging or changing of loads. This assembly is hinged by a machine screw, with wing nut, which should be tightened to a point where some drag or resistance is felt when the measure is pivoted.
- B** The **charging bar** is located just under the powder and shot containers. By moving this bar to right or left, powder and shot are measured and dropped into the shells. The bar is always operated with the left hand grasping the charging bar knob at the down-stroke of the Press handle.
- C** **Depriming Station** at which the shell opening is ironed and may be resized for diameter and head spacing if necessary.
- D** **Repriming Station** at which shell is also charged with powder.
- E** **Wad Ramming Station** at which shot is also charged through the wad ramming tube. Mechontrol Wad Guide positions itself on shell automatically allowing any practical wad column to be seated with one stroke.
- F** **Extra Station** for use with 6 or 8 point crimp starting heads (optional at extra cost.)
- G** **Crimp Starting Station** directly in rear (not shown).
- H** **Final Crimping Station**. Crimp die is completely adjustable for depth of crimp and radius.

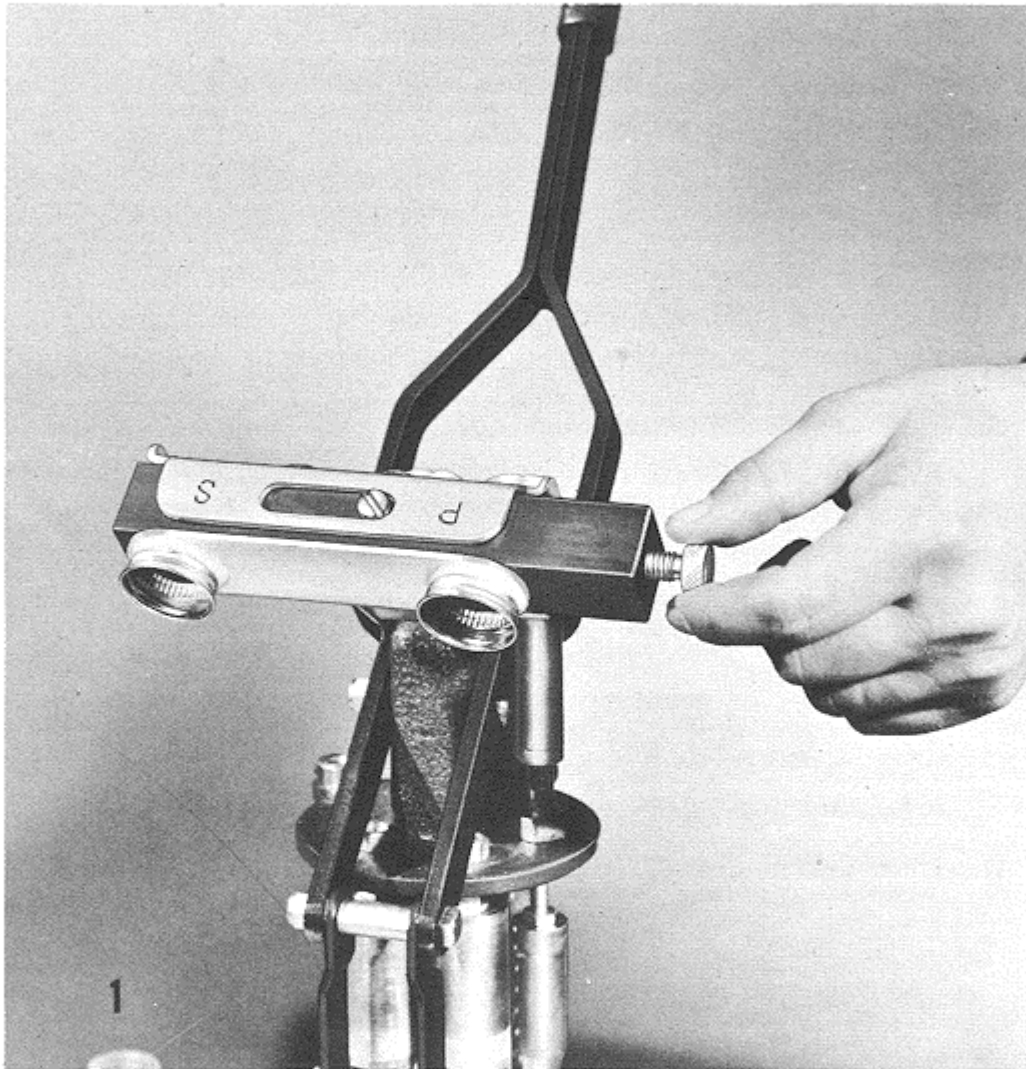


- I** **Shell Carrier** into which shells are placed and which automatically positions each shell at the proper station.

- J** **Primer Catcher**. This part is secured in its position by tilting so that notched edge slips under the screw provided in base.
If you haven't already talked to your dealer about the different kinds of powder, shot, primers and wads, please refer to the information on page 14 and also the charging bar chart packed with each loader which lists the various combinations of powder, shot and wad columns.

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500 CHARGING



Release charging assembly wing nut and flip or pivot containers down to charging position. Pull the charging bar to the left as far as it will go (Photo No. 1). Unscrew containers and fill with powder and shot. Replace containers, powder container first, making sure it is mounted in the proper position (position P for powder and S for shot). Next replace the shot container. (Note: Use only light or moderate pressure when tight-

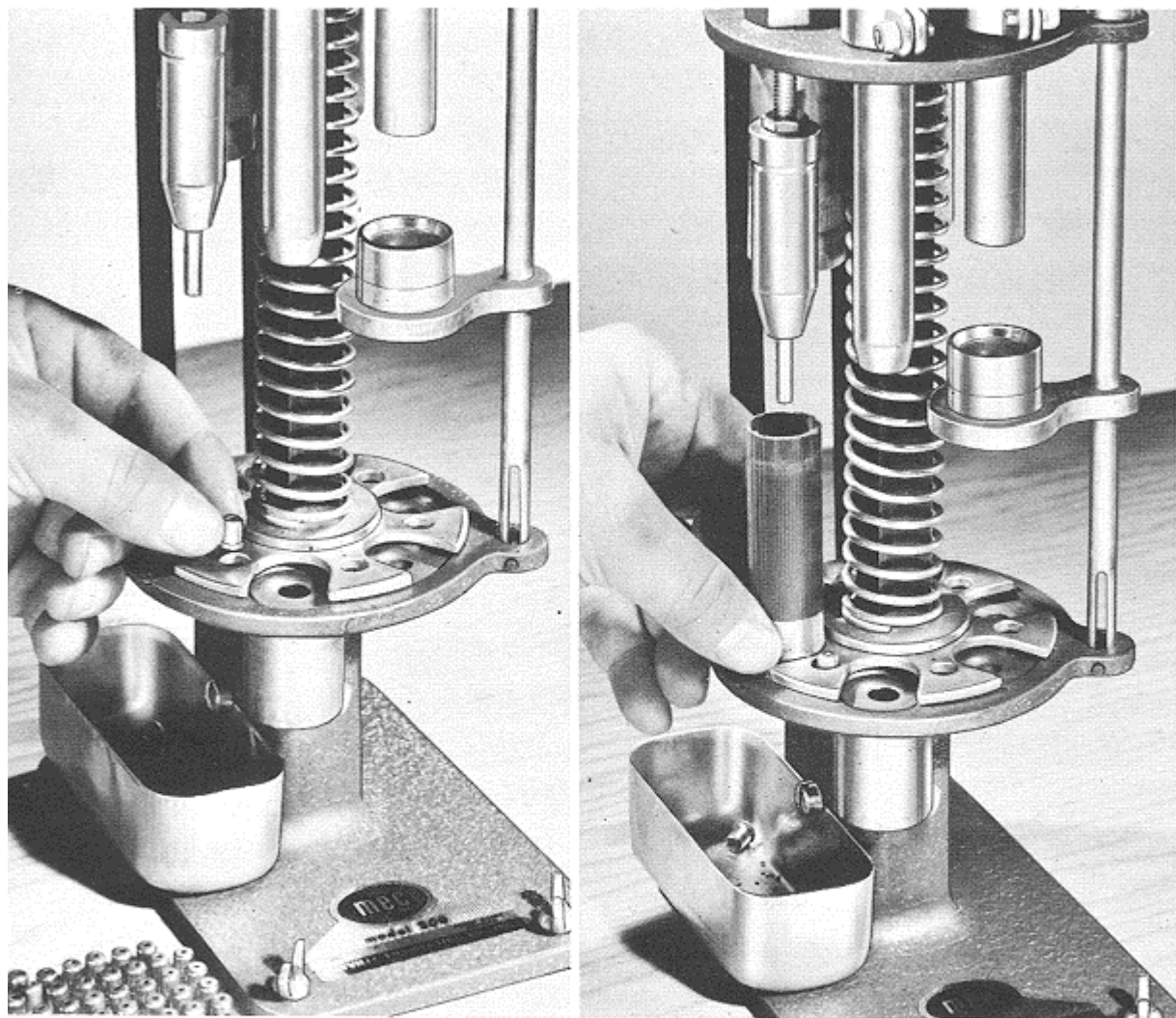
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ening containers.) Because of the weight factor, support the shot container with your hand while in the charging position so that there is no danger of its tearing loose under pressure (photo No. 2). While still supporting the shot container with your hand, flip the assembly to the upright or loading position. Now you are ready to load.

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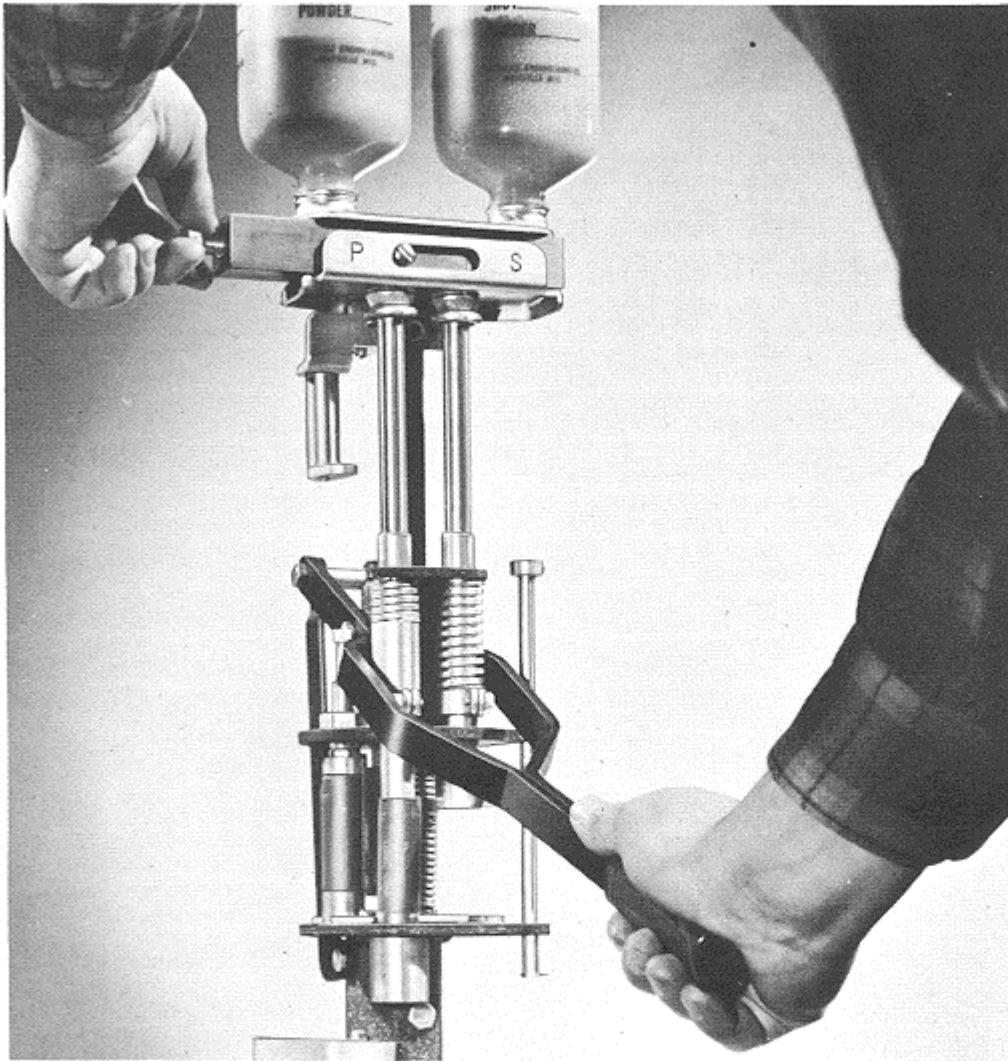
500 START LOADING



Step No. 1. Place primer into shell carrier just ahead of depriming station.

Step No. 2. Place shell into carrier at depriming station and depress the handle, thus depriming the shell. Now move carrier so that this first shell is under drop tube at repriming station.

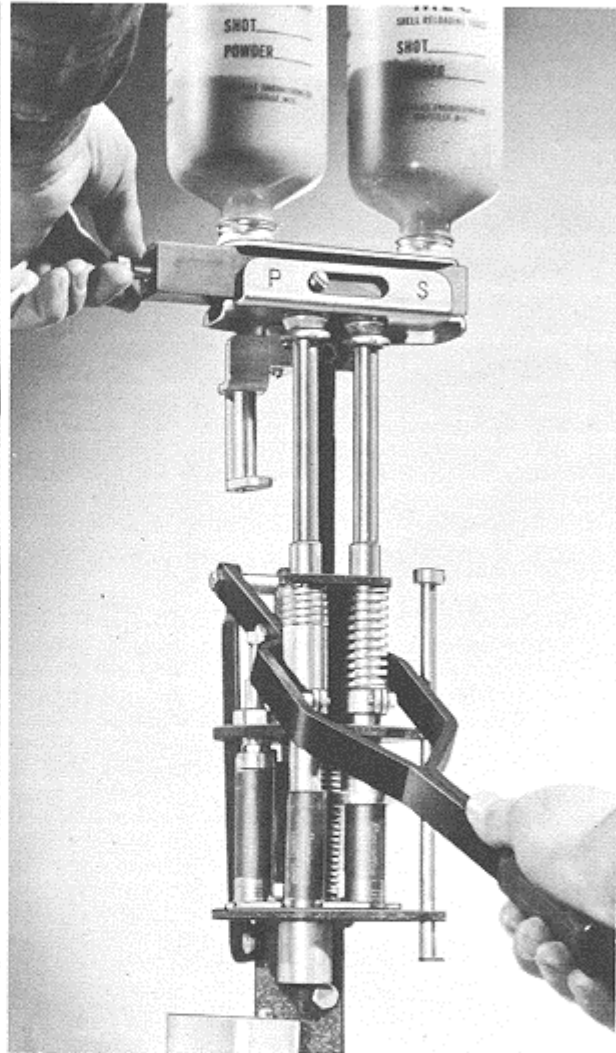
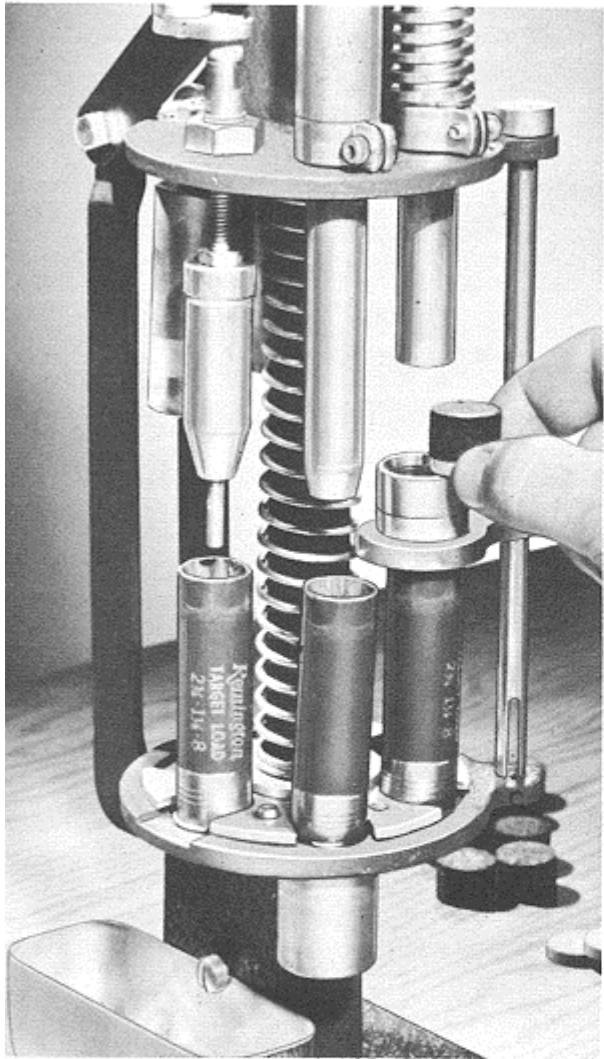
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Step No. 3. Again, place primer and empty shell into position, but this time push the charging bar to the right while the handle is in the down position. This operation now reprimed and charges powder as well as deprimed. Again move carrier counterclockwise to the next station.

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500 LOADING

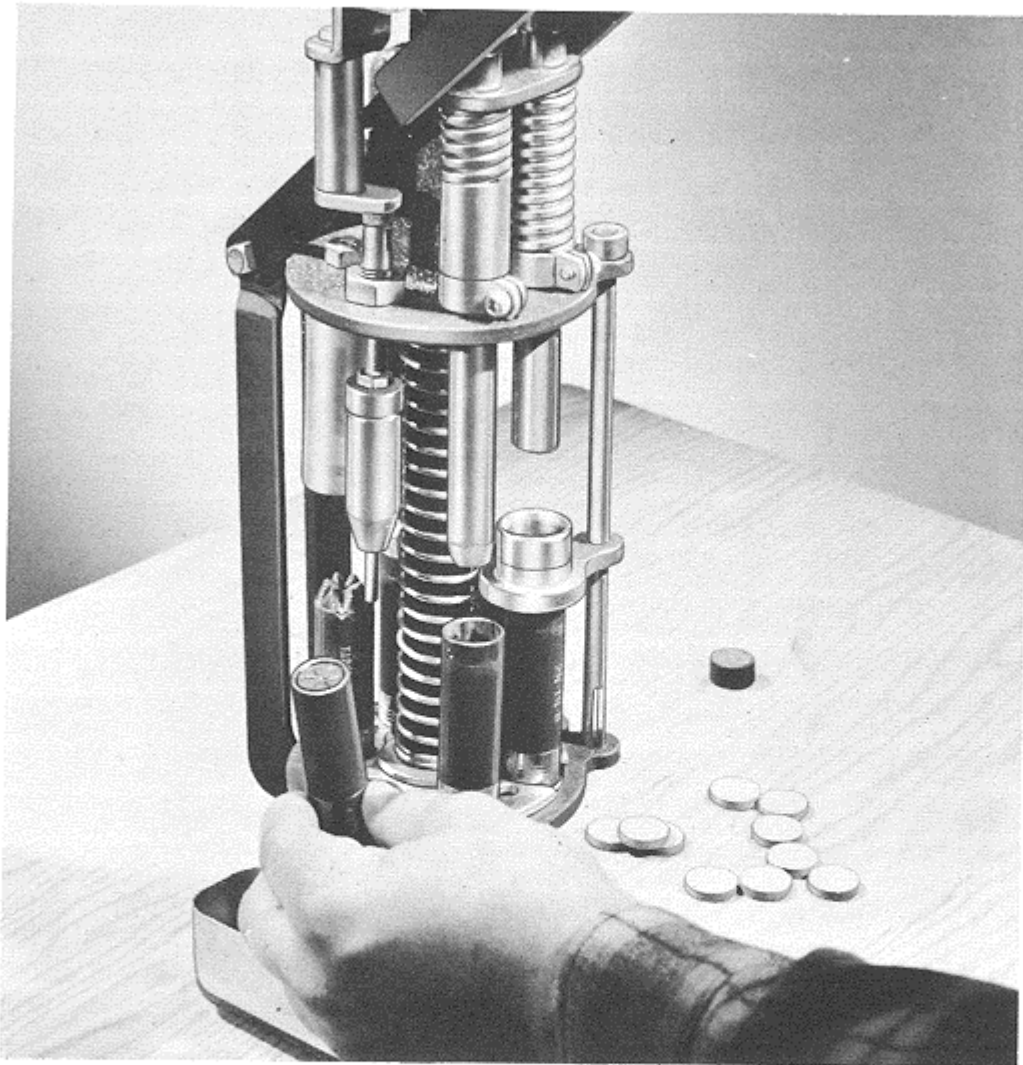


Step No. 4. First place proper wad column (See charging bar chart) in wad guide, then place primer and empty shell into carrier and again depress handle.

IMPORTANT
Do not push wads down into wad guide. This spreads fingers and prevents wad guide from dropping into position on shell.

Step No. 5. This time while the handle is in lowered position, pull the charging bar to the left to deposit shot and then move it back to the right to charge powder. Continue this same sequence of operation from this point on.

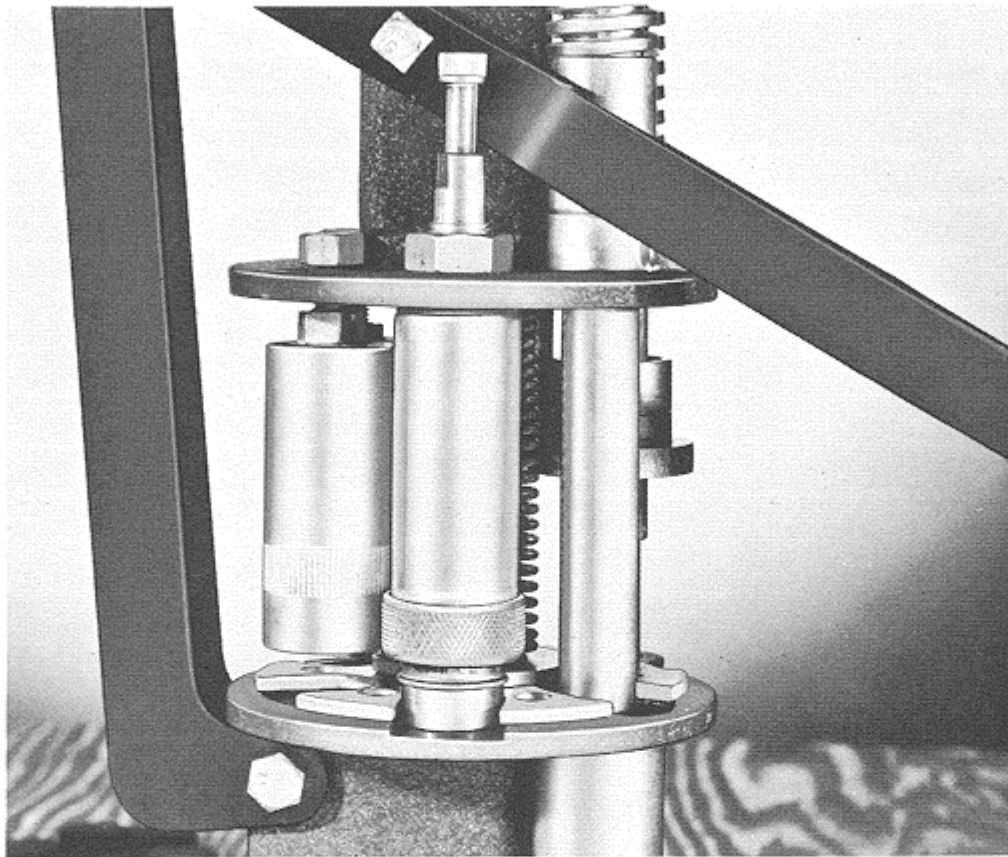
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When carrier becomes full it is indexed by grasping the loaded shell and pulling it forward to the exit and entrance aperture at the depriming station. Perform the operations slowly at first, making certain that all hand movements are done exactly as illustrated in the accompanying photos. Increase speed slowly, only after you have the technique firmly in your grasp.

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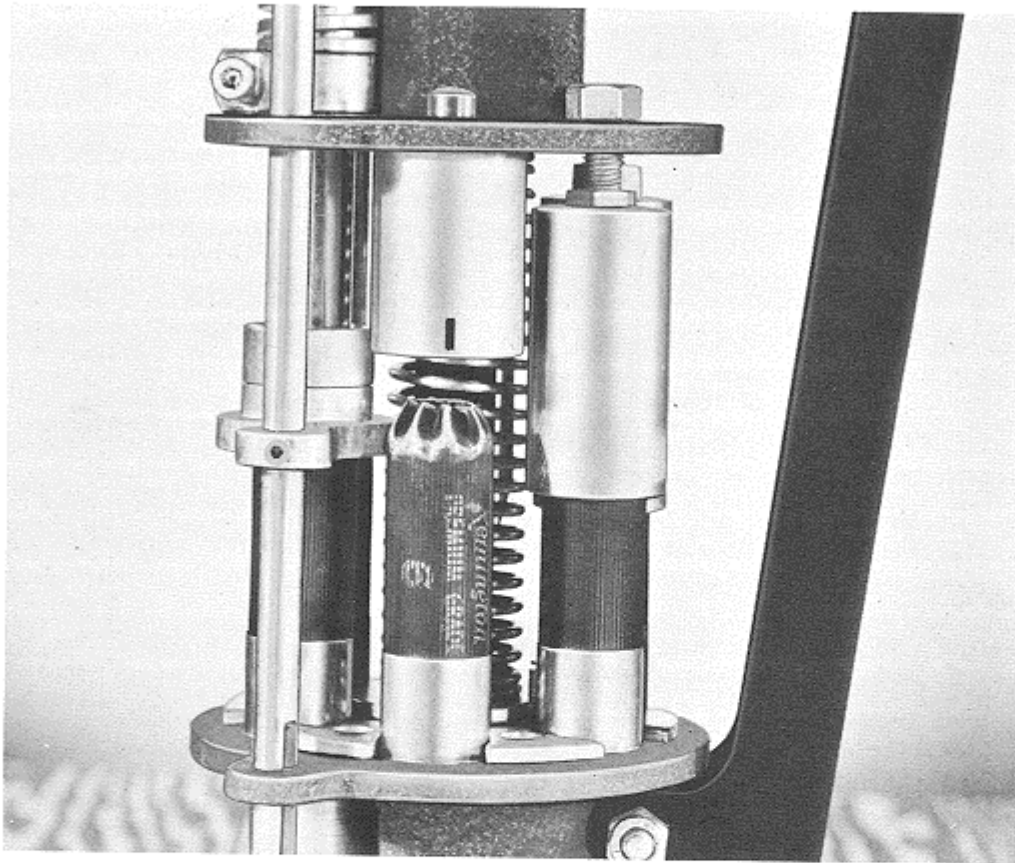
500 IF YOU HAVE TO RESIZE



Cases which do not slip readily into shell carrier should be rejected, to be resized to the proper diameter and head spacing after a considerable number have been accumulated. To do this, screw resizing ring and support tube into position over depriming punch. Now slip resizing adaptor into carrier below. Now slip the empty case into resizing ring and press handle. This will bring metal portion of shell to original dimension. Apply force to handle in upward direction to eject shell from ring. (Do not snap handle to release shell).

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TO LOAD NEW CASES



To load new cases, polyethylene (plastic) cases, and cases that were previously roll-crimped (old fashioned cases) the MEC 500 has an extra station for the attachment of an accessory, Part No. 534, or 534 SP*, Star Crimp Starting Head.

To install, place die in position shown, and fasten with screw provided. When used with new cases, no indexing is required. When used with plastic cases that have previously been star-crimped, it will be necessary to mark the die and index the shell so that the folds of the crimp are started in the same position as originally applied.

**534 SP — for new polyethylene (plastic) cases.*

CHARGING BARS AND WAD PRESSURES

Generally speaking, any combination of wads that includes one Over Powder Wad (Nitro Card) of any thickness and one Filler Wad (Fiber, Felt, or Cork) $\frac{1}{4}$ " thick and which brings the shot charge to within $\frac{9}{16}$ " of the shell opening will be satisfactory.* Bear in mind, however, that the best wad column for your particular needs will be determined by your own experience. A slight change in loading technique may require a suitable change in wad column. For your convenience we have provided with each loader a list of available charging bars with information concerning powder and shot charges and approximate wad column. Charging bars shown in heavy type are in stock and available for immediate shipment. Others will be made up to order at no extra cost, but will be subject to some delay in shipment.

The charges of powder and shot may vary slightly from the weights listed in the chart for many reasons. Density and moisture content of the powder, size of shot, undue agitation and inconsistent manipulation of the charge bar are the most frequent sources of trouble. All loads were developed by actual test and are based on the loading bar being moved from side to side at a uniform speed. Slowing the action will result in heavier loads, while speeding the action will result in slightly lighter charges. Because we have no control over the type, quality and quantity of components used in your loading operations, we cannot assume any responsibility in connection with your finished shells. ALWAYS make certain that you are using the powder for which the Charging Bar was designed. NEVER alter the Loading Bar or use powders not recommended in this chart.

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 in-

*NOTE: Wad Column must include at least one Nitro Card or plastic Over Powder Wad and one Filler Wad (Fiber, Felt, or Cork).

ward and has an opening in the center, the wad column is not high enough. In either case, correct your wad column so that the resultant crimp is tapered inward slightly. This will insure maximum locking in of the contents as the toggle action of the paper will cause the shell to 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 upward pressure is necessary to extract the shell from the crimping 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 excess extracting pressure. Remember, any shell that requires high extracting pressure will expand much more than one that extracts 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 because of the excessive pressure necessary to extract it from the crimping die. It is advisable to perform a preliminary operation on some domestic and foreign shells, using the special resizing apparatus that is shipped with each Press. The use of this equipment is fully explained on page 12.

...with crimping die sticking

Remember, the results that you get from your Loader will, to a great extent, depend upon the condition of the crimping die. The bore of the die 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 and 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 apparatus as explained on page 12 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.

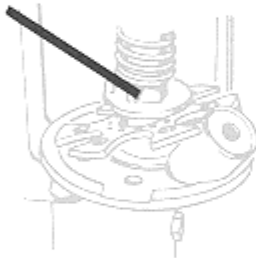
...with misfires or poor ignition

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. Always check the weight of your charges during actual machine operation since movement of the machine will greatly affect the weight of the powder charge especially if it is of the fluffy or less dense variety. Be sure to store your primers in cool dry surroundings.
2. Check the bases of your shells for "dishing". If you find this condition, exert more pressure during the Repriming 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 pow-

der 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 part and examine it. You may have accidentally 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. Charging the powder and shot while the handle is held at the lowered position will take care of this.

TO CLEAN UP



In cases of accidental spilling of powder or shot the MEC 500 can easily be cleaned by merely lifting the column spring approximately 1½" and inserting a nail or similar object in hole provided. Lift the shell carrier, remove Primer Seating Assembly and clean.

TO USE

RESIZING APPARATUS

(consists of Part No. 435, Resizing Ring and Support Tube and Part No. 568, Resizing Adaptor). (See illustration page 12)

No. 1, Screw Resizing Ring and Support Tube into place over deprime punch.

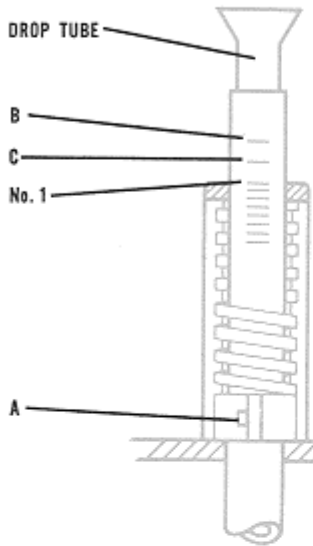
No. 2, Place Resizing Adaptor into shell carrier directly below deprime punch.

No. 3, Start shell into Resizing Ring and depress handle all the way. This will remove spent primer and resize the entire shell including base. Move handle to up position using the necessary force to eject shell from Resizing Ring. (Do not snap handle to accomplish this.)

Note: Process all of the accumulated shells in this manner and then remove resize apparatus and load using the technique described starting on Page 8.

IF YOU HAVE TO ADJUST

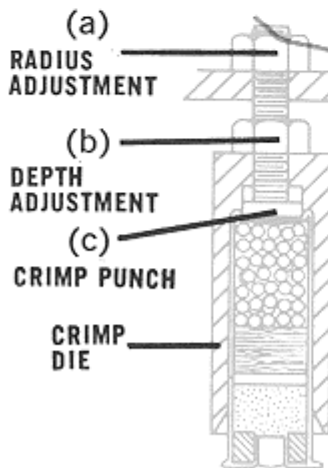
the rammer tube



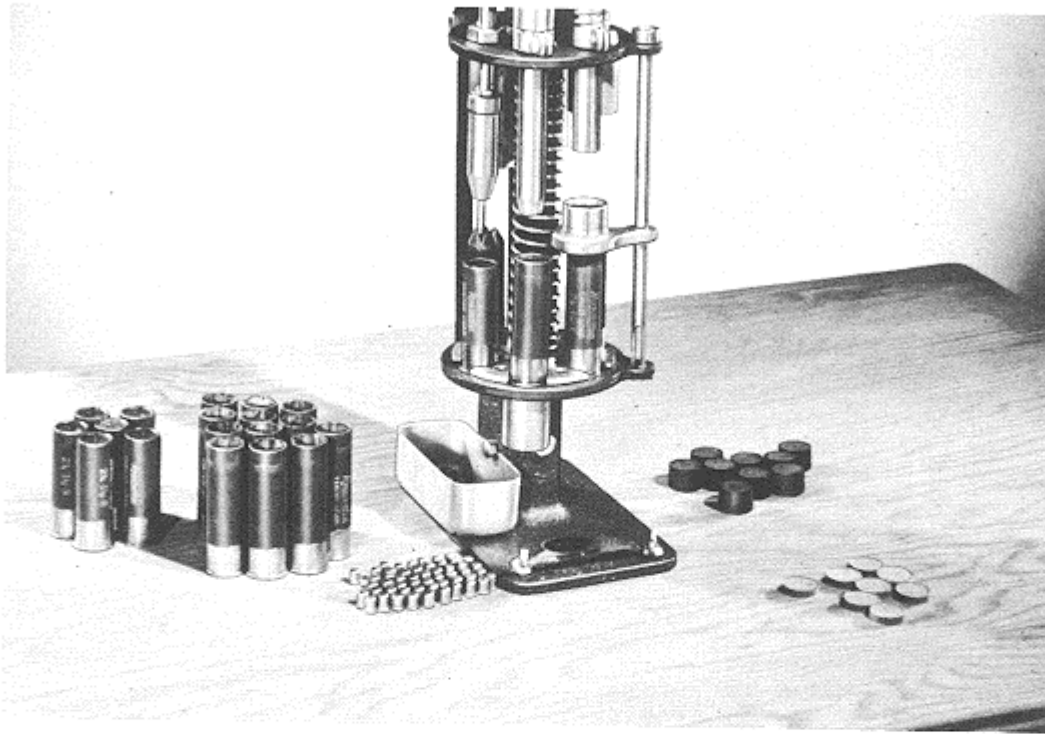
The MEC Rammer Tube is arranged to provide any wad pressure from 50 to 120 pounds. Proper setting for all 12 ga. $1\frac{1}{8}$ oz. loads in modern Star Crimp cases is with the No. 1 graduation just below the surface of the turret bracket. Since the spring is preloaded at 50 pounds, initial movement of the rammer tube will bring the first graduation into view indicating this 50 pounds. The tube is calibrated so that each additional graduation indicates an additional 10 pounds.

Loosening the screw in the set collar A will allow the drop tube to be moved to increase or decrease the pressure as required . . . the value of the first graduation changing by 10 pounds for each $\frac{1}{16}$ inch the tube is moved. For example, lowering the tube to reference mark C will cause the No. 1 graduation to indicate 70 pounds, with 10 pounds additional for each succeeding graduation. When lowered to reference mark B, graduation No. 1 will indicate 90 pounds.

final crimp die



Final Crimp Die is completely adjustable for both depth of crimp and radius. Loosening lock screw (a) and screwing the Crimping Sleeve down will increase the radius while moving it in the opposite direction will decrease it. To increase depth of crimp, both lock screws (b) and (a) should be loosened and the Crimping Punch (c) screwed downward while holding the Crimping Sleeve from turning. A little testing will give you the exact depth of crimp and radius that you desire. When making these adjustments or checking the finished shells, be sure to operate the Press handle to the positive stop at the bottom of its stroke.



SPEED

In order to obtain maximum production speed it will be necessary for you to arrange components properly. Primers and empty shells should be located to the left and should always be handled with the left hand, picking up the empty shell first and then the primer in one motion, placing them in the shell carrier in reverse order. Time will be saved if primers are placed base down. Do this by removing the sleeve with carton resting on surface in inverted position.

Wads should be positioned to the right of the Press with the filler wads to the rear so that both can be handled in one motion by first picking up the filler wad and then placing it upon an overpowder wad and then transferring both to the wad guide. Use hand movements exactly as depicted in the illustrations covering operation of the Press.

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Mayville, Wisconsin



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