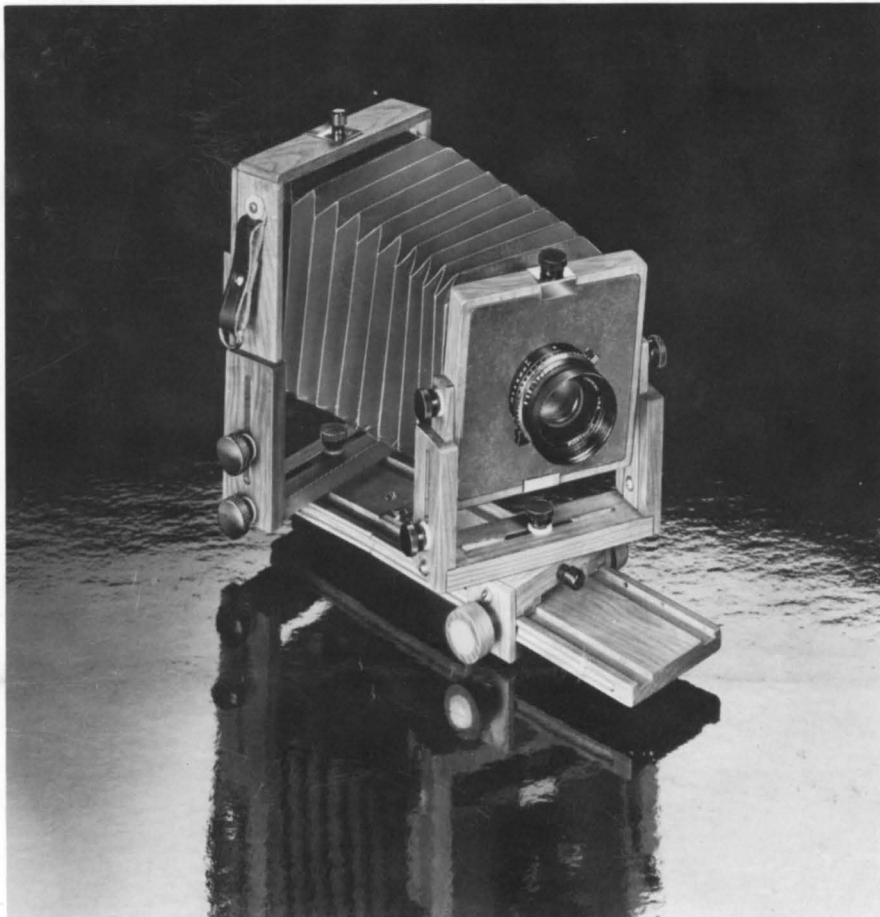


Porta Vu 45 Camera Kit Assembly Instructions



Weighing only 2¾ lbs., the Porta Vu 45 goes everywhere.



The easy to assemble Porta Vu 45 Kit.

Welcome to large format photography.

The Porta-Vu 45 is a full movement, at front and back, folding view camera. We think you will find your Porta-Vu 45 Camera Kit a most interesting and worthwhile photographic experience.

If you have not been involved in large format photography, the Porta Vu 45 kit will introduce you to a most exciting new world. The world of ultimate photographic quality and creative photographic control which can never be equalled by miniature cameras.

Assembling and finishing your Porta Vu kit properly according to the instructions is extremely important. This will provide you with an accurate, reliable camera. More importantly, building your own Porta Vu 45 will involve you in the elements of large format camera design, and increase your understanding of view camera movements and the creative versatility that large format offers.

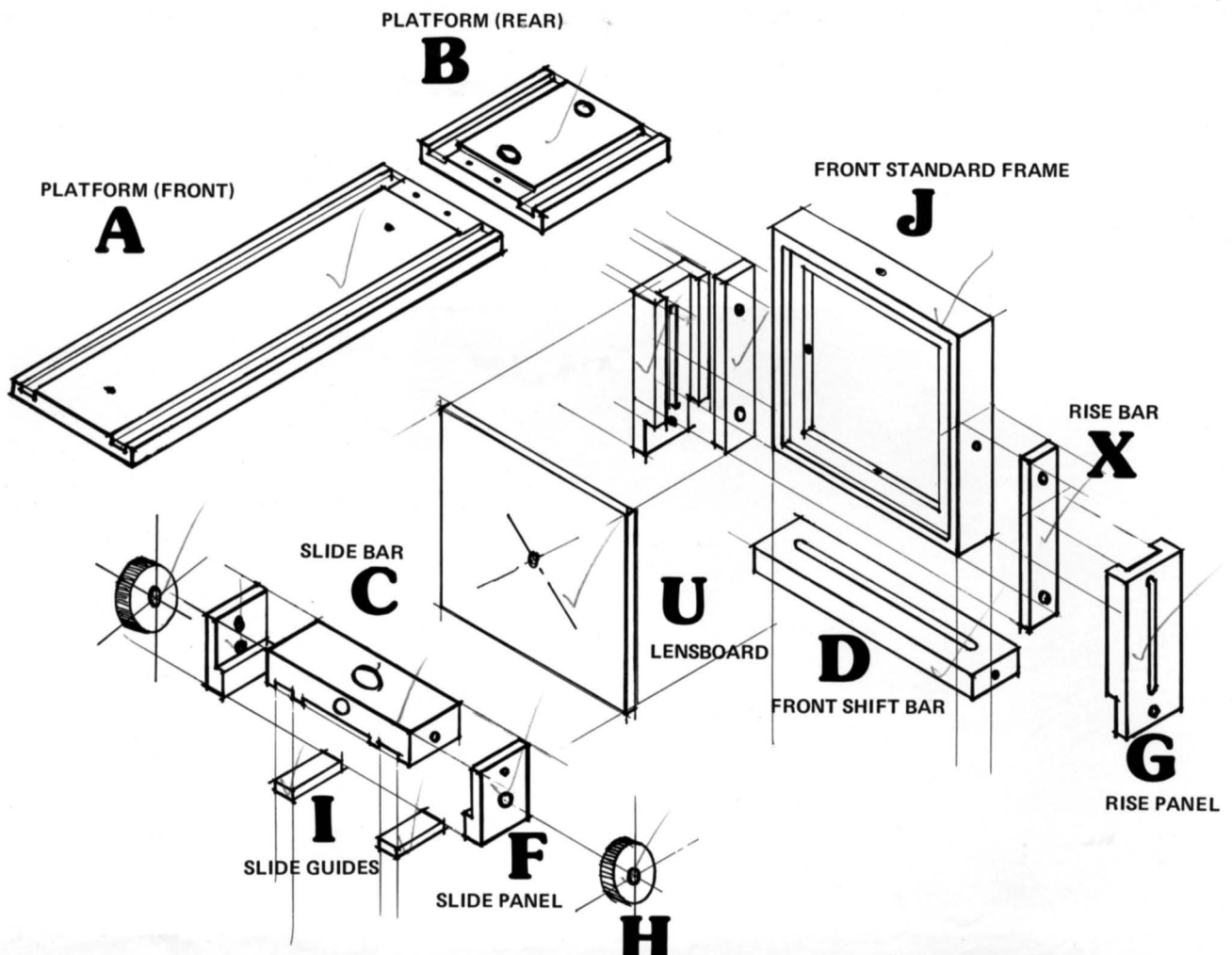
STOP! Don't do anything else until you read this.

Right now you are looking at many bits, pieces, knobs, screws and several pages of directions. Don't be anxious, and above all don't rush. Everything will go together easily, because there is minimal gluing; all the wood parts have predrilled holes for accurate alignment; no special tools are required.

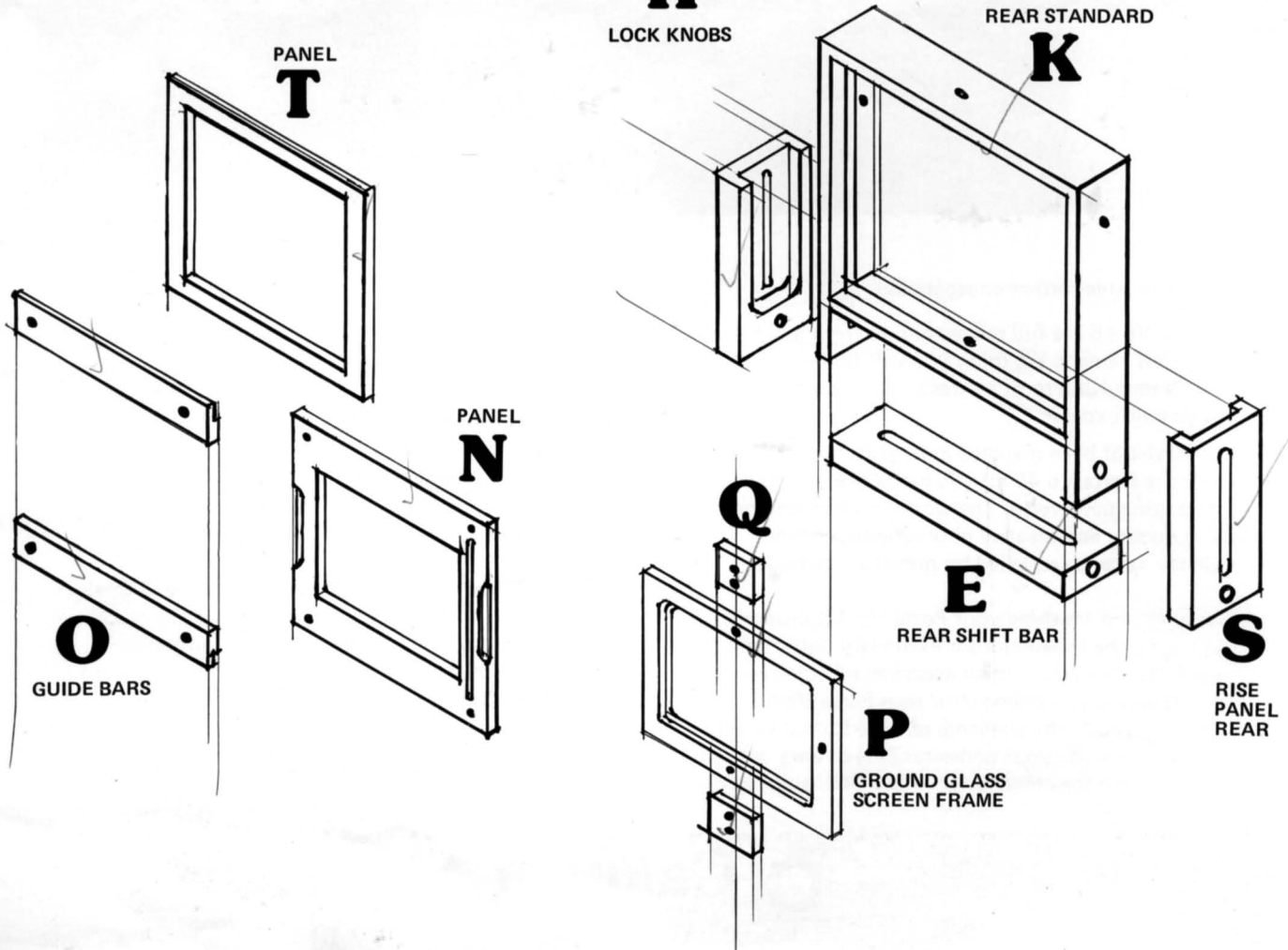
For best results, please use the following procedure:

1. **Read the instructions and become familiar with all the parts.** The exploded drawing will identify the parts for you, and show the relationship of all the components. The hardware identification section will indicate all the screws, bolts, knobs etc. necessary to complete the kit.

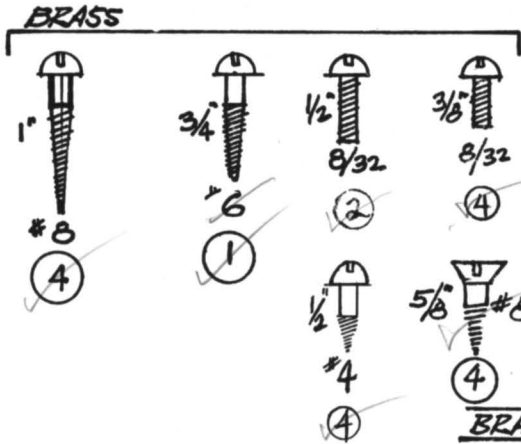
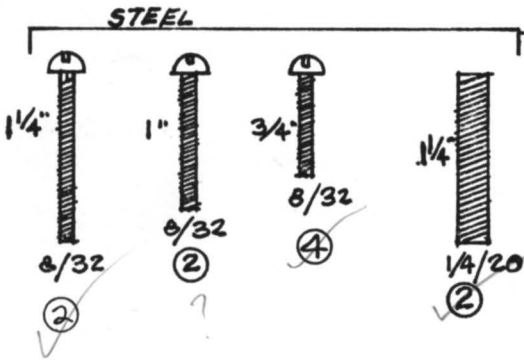
Note: Most parts may be prefinished before assembly - Do not apply finishing material where parts receive glue.



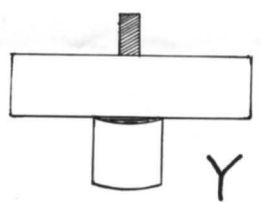
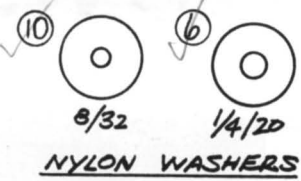
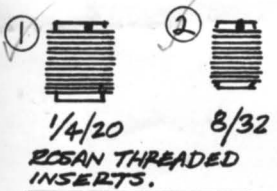
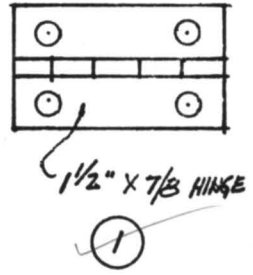
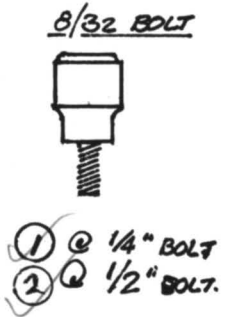
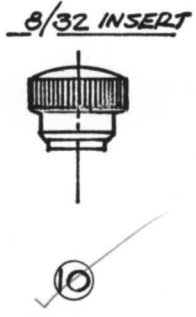
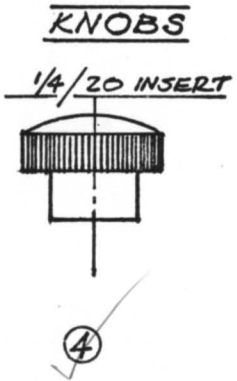
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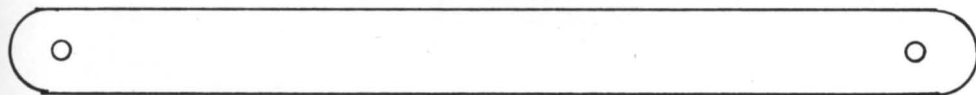
SCREWS & BOLTS + KNOBS



BRASS HINGE



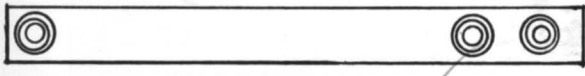
3



LEATHER HANDLE ①

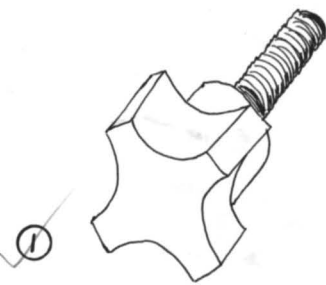
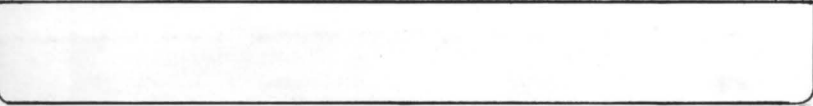


ELASTIC FOR SCREEN ②

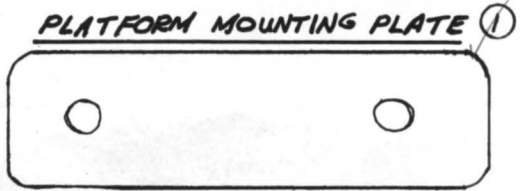
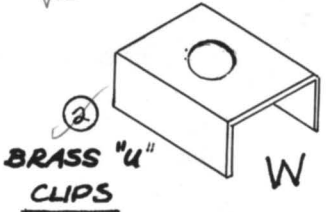
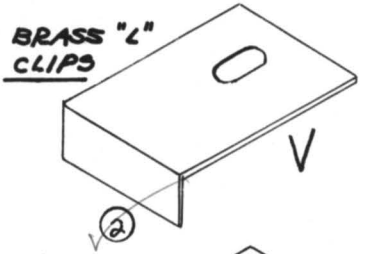


ELASTIC FOR PLATFORM ①

REAR STANDARD PLATE ①



INSERTING TOOL



Porta Vu 45 Porta Vu 45 Porta Vu 45

2. **Set out the materials and tools**
 - A. Materials
 1. "Elmers" glue, or other white wood glue or Weld-wood contact cement.
 2. Five minute epoxy or cyanoacrylate
 3. Masking tape
 4. Fine sandpaper
 5. Small applicator sticks for gluing
 6. Clean cloth rags for wiping excess glue and applying finish
 7. "Min Wax Antique Oil Finish"
This is an easy to apply durable finish, however, any commonly accepted wood finish can be used.
 - B. Tools
 1. 3-screwdrivers: 1-medium slotted, 1-small slotted, 1-phillips
 2. Pliers
 3. Tripod
 4. Optional, but helpful; 2-C clamps, screw starter, 4 x 5 film holder.
3. **Lay out parts and hardware** in groups, as shown in Photo A, B.

Assembly

If you have familiarized yourself with the instructions and components of the Porta Vu 45 kit, assembly should take about 3-4 hours excluding finishing time.

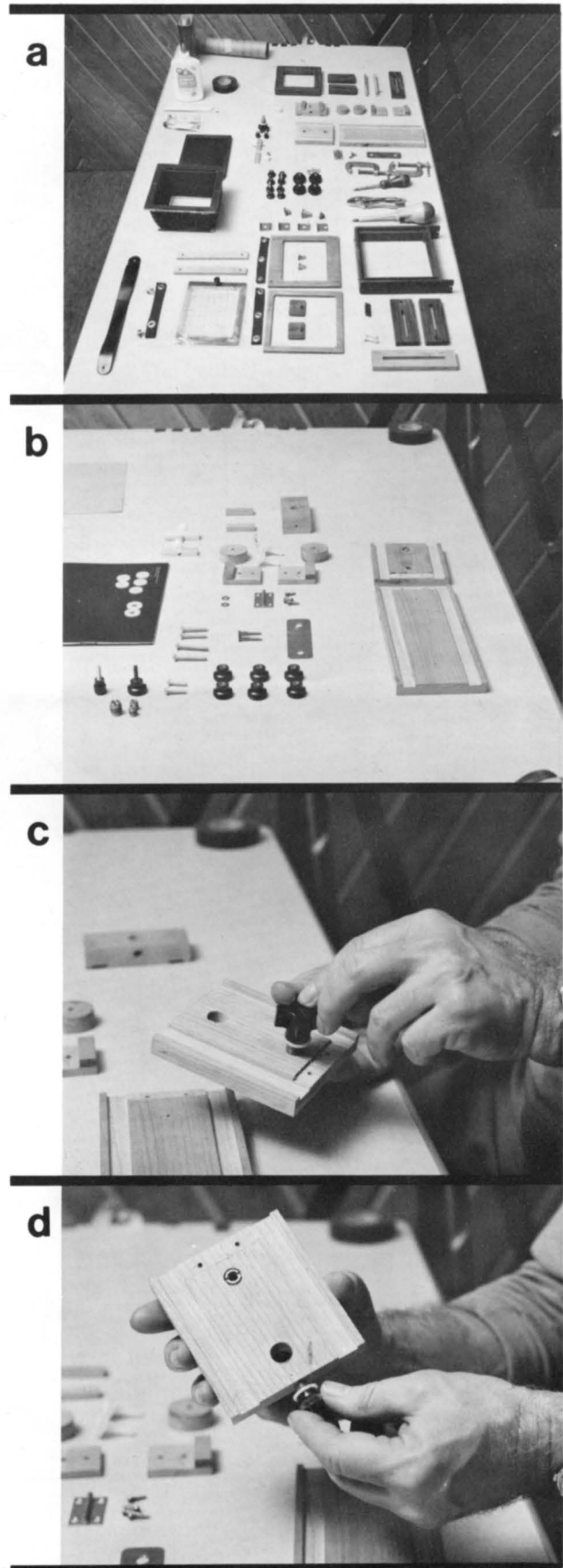
4

1. **Install Rosan threaded inserts**

Requires: (1) ¼-20 Rosan threaded insert, (2) 8-32 Rosan threaded inserts, 1-inserting tool, (1) 8-32 knob with stud.

 - A. The inserts must be installed straight.
 - B. Place a nylon washer over the stud of the inserting tool.
 - C. Screw the ¼-20 insert onto the inserting tool stud with the slotted end toward the knob.
 - D. Screw the insert into the hole (Photo C) nearest the hinge position in platform B.
 - E. Remove the inserting tool, and tighten the insert with a screwdriver. The bottom of the insert must be flush with bottom of platform B. **Do not over tighten.**
 - F. Remove the insert with a screwdriver, paint the hole with five minute epoxy, and replace the insert. (**Do not get excess glue inside the insert.**)
 - G. Place a nylon washer over the stud of the 8-32 knob with the long bolt.
 - H. Screw one 8-32 insert on the stud with the slot toward the knob.
 - I. Install the 8-32 insert onto the rear end of platform B as above (Photo D).
 - J. Use the same procedure to install one 8-32 insert into the hole in the front face of focus slide C.

Note: Internal threads of all inserts can be cleared up of excess glue with a ¼-20 or 8-32 tap.



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2. Install Hinge

Requires hinge and 4-#4 round head screws

- A. Place platform parts A & B end to end, grooved side up.
- B. Align the four hinge holes and grooves of A & B and tape the platform parts tightly together top and bottom. (Photo E)
- C. Place the hinge in position over the four pilot holes.
- D. Place a small amount of white glue into each pilot hole.
- E. Secure the hinge to the platform using the #4- $\frac{1}{2}$ " round head brass screws. Remove tape.

3. Attach Platform Mounting Plate

Requires: Brass mounting plate, and (1) 8-32 x $\frac{1}{2}$ " knob with stud.

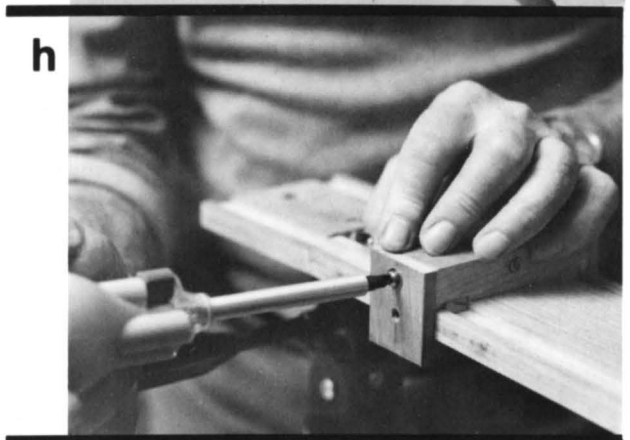
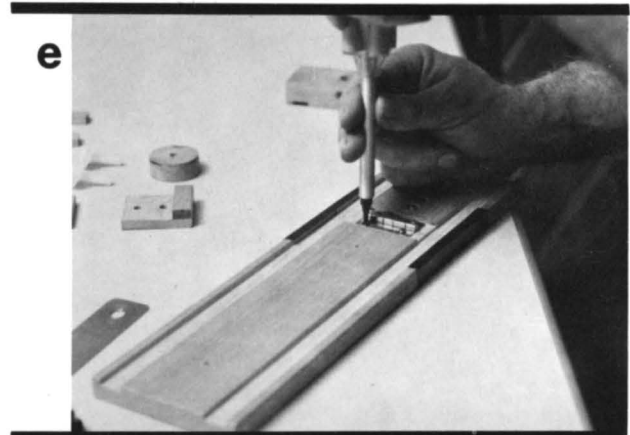
- A. Turn the platform upside down.
- B. Position the brass mounting plate over the hole with insert and the small tapped hole.
- C. Secure the plate with a 8-32 mounting knob with stud. (Photo F)
- D. Mount the platform onto a tripod for further assembly. The tripod bolt should go through the mounting plate and screw into the $\frac{1}{4}$ "-20 insert.

4. Slide Focus Assembly

Requires: Parts C, I, H, F, and 2-nylon $\frac{1}{2}$ "-20 bolts, 2-#8 x 1" brass wood screws with brass washers.

- A. Lightly sand all four edges of slide guides (I) to prevent binding. Check for fit in "C".
- B. Glue slide guides (I) into the slots in part C (Photo G). Remove excess glue.
- C. Place the slide assembly in the grooves of the platform (after glue has set.) Check for ease of Slide C movement the length of the platform.
- D. Screw the side panels (F) onto the slide assembly using the #8 brass screws and brass washers. (Photo H) (Do not glue F to C.)
- E. Adjust slide action so that the slide focus assembly moves smoothly on the platform. If it binds, loosen the screws slightly. If it is too loose, tighten the screws. Light sanding of the platform grooves, platform side edges, or slide guides may be necessary for optimum smoothness in sliding. It is most important that this assembly slide easily down the full platform. It is better to be a little to loose than too tight in slide fit.
- F. Assemble the wooden focus lock knobs (H). Screw the bolts into the wood knobs very tightly.
- G. Screw the completed focus lock knobs into the $\frac{1}{4}$ "-20 holes in side panels (F).

Note: It is most important that this assembly slide easily down the full platform. It is better to be a little loose than too tight in slide fit.



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5. Assembly Swing Shift Hardware (2 sets)

Requires: Molded swing shift hardware Y, (1) 8-32 knob with $\frac{1}{2}$ " stud, and (1) 8-32 knob with $\frac{3}{4}$ " stud.

A. Place one set of swing-shift hardware Y, into the hole on top of Part C. Place the second set into the rear hole of Part B. **Note:** Do not enlarge holes. The fit should be tight. Light cylinder sanding will adjust rotation.

B. Screw the front 8-32 knob with $\frac{1}{2}$ " stud into the front insert Part C. Screw the 8-32 knob with $\frac{3}{4}$ " stud into the insert in the end of the platform, Part B. (Photo J)

6. Front Standard Frame

Requires: Front standard Frame J, (2) 8-32 x $1\frac{1}{4}$ " round head bolts, (2) 8-32 x 1" round head bolts.

A. Install (2) 8-32 x $1\frac{1}{4}$ " round head bolts opposite each other in the front standard frame (Part J).

B. Install (2) 8-32 x 1" round head bolts opposite each other in the front standard frame. Screw all four bolts through the frame from the inside. (Photo K) A small amount of white glue on the last part of the threads will help to keep bolt tight.

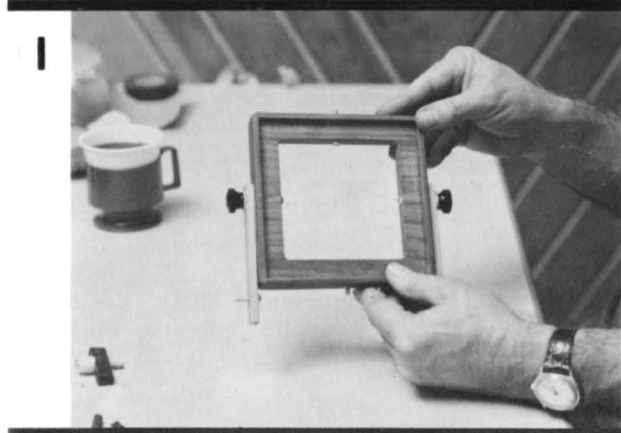
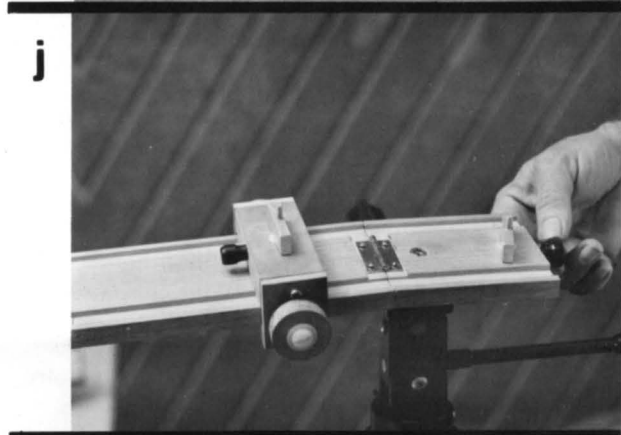
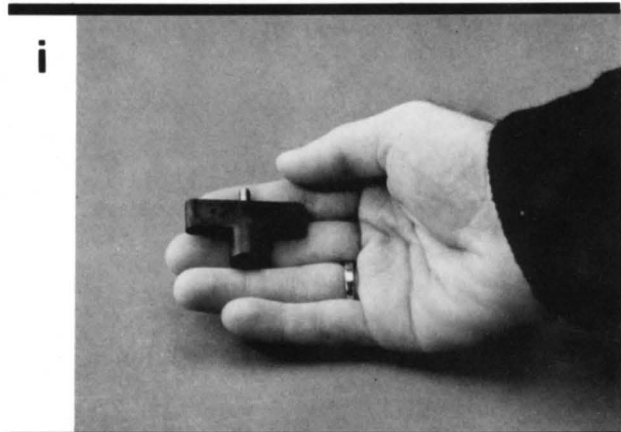
7. Front Raise Bars

Requires: Parts X, (2) 8-32 x $\frac{3}{4}$ " round head steel bolts, 2-small hole nylon washers, (2) 8-32 female knobs.

A. Screw an 8-32 x $\frac{3}{4}$ " bolt into the tapped hole of each rise bar.

B. Place the drilled holes in the rise bars over the $1\frac{1}{4}$ " bolts protruding through the standard frame.

C. Place a nylon washer over each of the $1\frac{1}{4}$ " bolts protruding through the rise bar. Screw the 8-32 knobs onto the bolts (Photo L) and set this assembly aside.



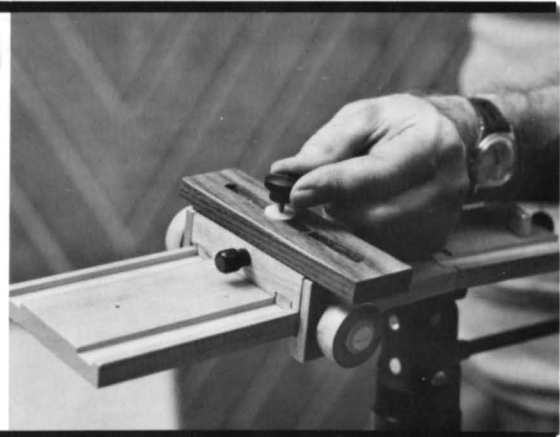
Porta Vu 45 Porta Vu 45 Porta Vu 45

8. Shift Bar (Front)

Requires: Shift bar, Part D. Note: Part D has a small pilot hole in each end. Shift bar, Part E has a $\frac{1}{4}$ "-20 tapped hole in each end, and will be used on the back standard. Also requires 1-small hole nylon washer, cork washer, and (1) 8-32 female knob.

- A. Place shift bar D over front swing hardware.
- B. Place the nylon washers over the protruding bolt and secure with the 8-32 knob. (Photo M)

m



9. Rise Panels (Front)

Requires: 2-rise panels (G) and 2-#8 x 1" brass screws, 2-nylon washers (small hole), (2) 8-32 female knobs.

- A. Screw one rise panel (G) to the end of the front shift bar (D). (Photo N)
- B. Take the front standard frame with rise bars attached, and place one of the rise bars into the groove of the rise panel. The bolt in the rise bar should go through the slot in the rise panel.
- C. Place a nylon washer (small hole) over the bolt protruding through the rise panel, and screw an 8-32 female knob onto the bolt, do not tighten.
- D. Take the second rise panel, place it over the rise bar, and screw it to the shift bar. Attach washer and knob as above. (Photo N)

n



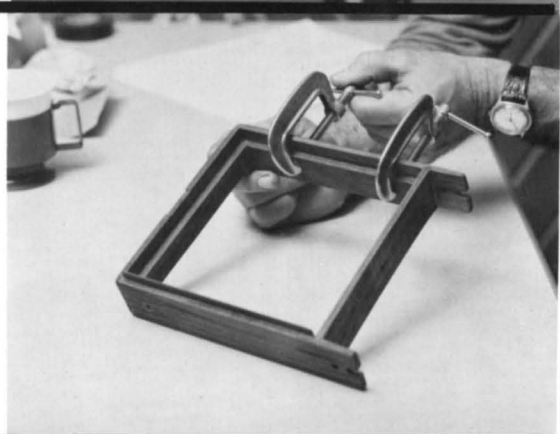
Note: The rise panels may be glued in place before screwing them to the shift bar.

10. Rear Standard

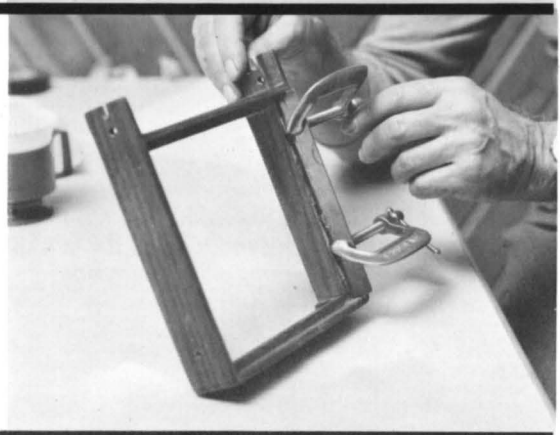
Requires: Rear Standard K, 2-wood panels $5\frac{1}{2}$ " long x $\frac{3}{4}$ " wide x $\frac{1}{4}$ " thick, 1-brass plate 6" L x $\frac{3}{4}$ " W, 2-nylon bolts, (2) 8-32 x $\frac{3}{4}$ " round head bolts.

- A. Install the 2 wood panels on the interior sides of the rear standard box frame. Glue the panels in place and in alignment with the top and bottom panels. C clamps are helpful, and will hold the panels until the glue sets. (Photo O)
- B. Install the brass plate on the left side of the rear standard frame. This plate must be glued with epoxy. C clamps are helpful. (Photo P)
Clean up excess epoxy from brass and wood.

o



p



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- C. Screw the two remaining nylon bolts into the side bottom holes of the rear standard. (Photo Q) Screw from the inside.
- D. Screw the (2) 8-32 bolts into holes in the top and bottom of the frame. Screw from the inside. (Photo Q)

11. Rear Shift Bar (E)

Requires: Part E, (2) $\frac{1}{4}$ -20 x $1\frac{1}{2}$ " black studs, 1-nylon washer (small hole), (1) 8-32 female knob.

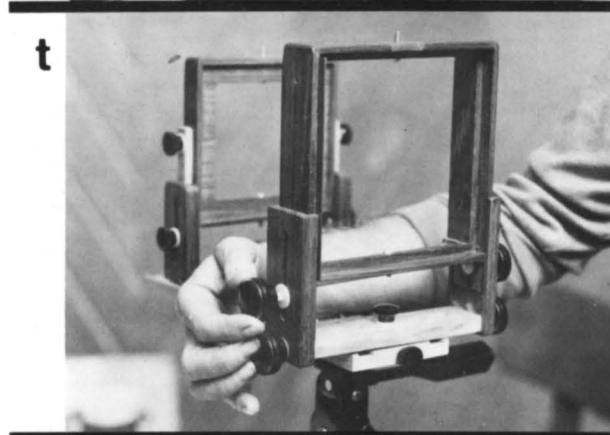
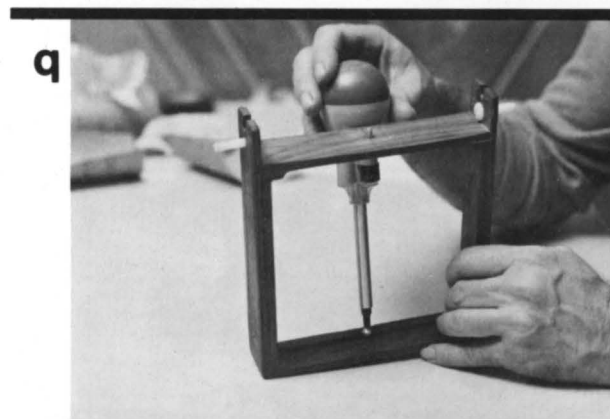
- A. Screw the $\frac{1}{4}$ -20 black studs into the tapped holes at the end of Part E. Use pliers (be careful not to mash the threads), or an allen (hex) wrench. (Photo R) Use 5 minute epoxy in each hole before screwing bolt into hole.

- B. Place the rear shift bar over the rear swing hardware.
- C. Place the nylon washer over the swing hardware stud, and screw on the female knob. (Photo S)

12. Rear Rise Panels (Part S)

Requires: (4) $\frac{1}{4}$ -20 female knobs (large), 4-nylon washers (large hole).

- A. Place the left rise panel over the left black stud in the rear shift bar.
- B. Set the rear standard in position with the nylon bolt protruding through the rise panel.
- C. Place washers over the nylon bolt and black studs, and secure by screwing on the large knobs.
- D. Repeat this procedure on the right side. (Photo T)



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13. Assembling the Ground Glass Back

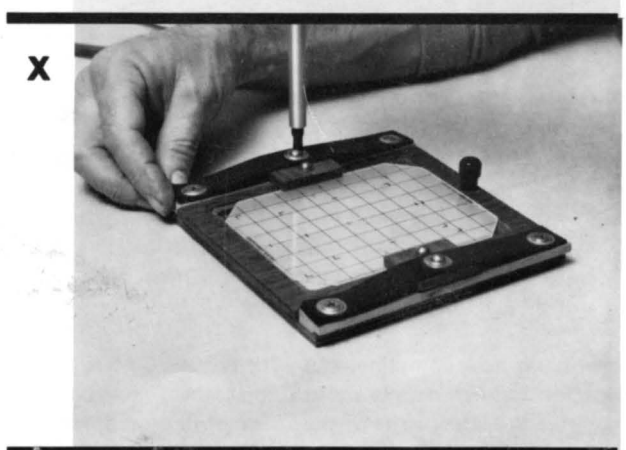
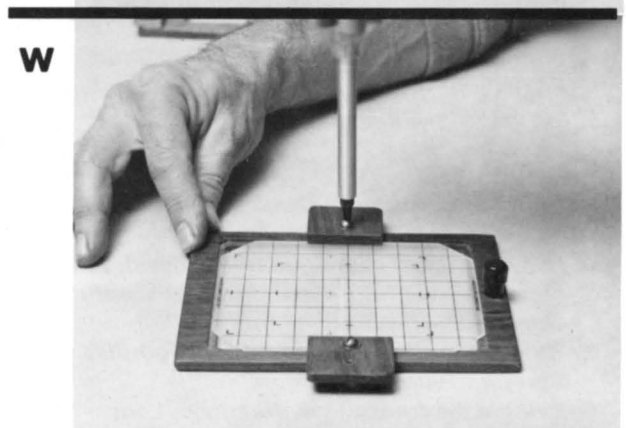
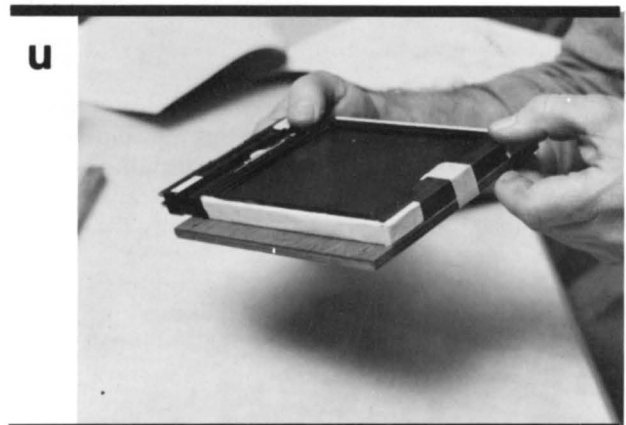
Requires: Parts N, T, O (2), P, Q (2) ground glass, 2 elastic bands with three holes, (2) 8-32 x 1/2" brass bolts and (2) 8-32 x 3/8" brass bolts and washers, (1) 8-32 knob 1/2" with bolt, 4-5/8" flat head brass screws.

- A. Glue Panel N (with groove up) to Part T. Align all edges.
- B. Place a 4" x 5" film holder on panel N so that the ridge of the holder fits into the groove of Part N. The long edges of the film holder should be taped with a double thickness of masking tape. Center the holder on Part N and tape in place. (Photo U)
- C. Glue guide bars Part O to Part N. The rabbeted edge of the guide bar should face down and to the outside. Check to be sure the film holder is centered on the hole and that the guide bars are straight. Use Elmers white glue.
- D. After the glue has set, place the elastic bands over the guide bars, and screw the ends of the elastic bands in place with the 5/8" screws. (Photo V)
- E. Set this assembly aside.
- F. The view screen frame has been pre-assembled, Parts P, Q and the ground glass. Remove the film holder from Panel N.
- G. Place the view screen frame P on Panel N. Light edge sanding may be needed for easy fit.
- H. Place the elastic bands over the tapped holes in Parts Q, and screw in place with the 8-32 brass bolts x 3/8" long. (Photo X)

Note: If you wish to apply a finish, it is recommended that you disassemble the camera at this point. If no finish is desired, continue assembly. See front note about prefinishing before assembly.

14. Attaching the Bellows

- A. Push the small end of the bellows through the rear standard.
- B. Press fit the small end of the bellows into the back of the front standard. (Photo Y) Use contact cement to permanently assemble.
- C. Press fit the large end of the bellows into the back standard. If this fit is tight and flat - no glue is required.



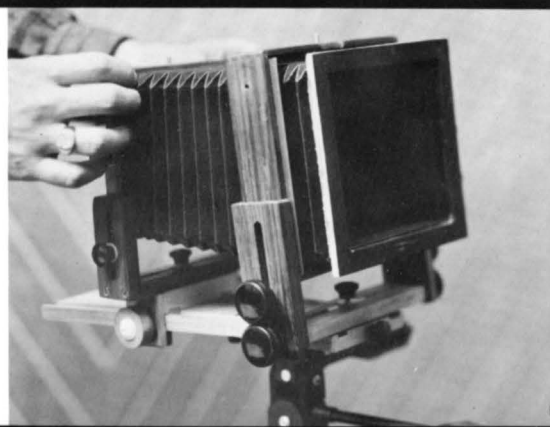
Porta Vu 45 Porta Vu 45 Porta Vu 45

15. Attach the Ground Glass Back

Requires: 2-brass "L" clips (V), (2) 8-32 female knobs.

- Attach one "L" clip loosely over the stud in the bottom of the rear standard (black knob up for vertical: knob to the right for horizontal).
- Position the ground glass back on the rear standard (black knob up for vertical; knob to the right for horizontal).
- Fit the clip to the groove of the ground glass back. Hold firmly, and screw on female knob.
- Continue to hold the back firmly, and install the top clip and knob. (Photo Z)

y

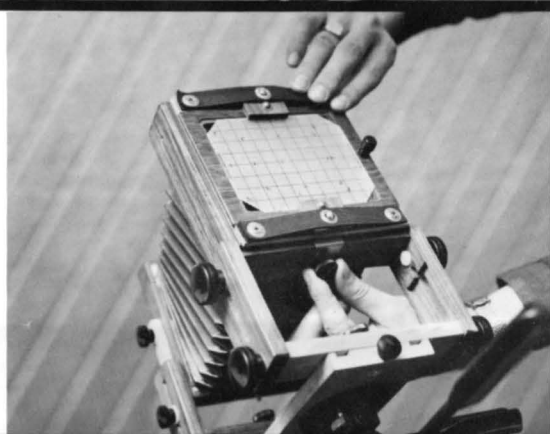


16. Attach the Lensboard (U)

Requires: 2-brass "U" clips (W), (2) 8-32 female knobs.

- Tilt the camera and front standard backward, and place the lensboard on the front standard. Lightly sand edges for fit. Hold or tape lensboard in position.
- Position the "U" clip over the bottom stud, and tightly fasten the knob. (Photo AA)
- Continue to hold the lensboard in place, and install the top clip and knob. Slight clip bending may be required.

z



10

17. Attach Carry Strap

Requires: strap, 2-nylon washers (small hole), (2) 8-32 x 3/8" brass round head bolts.

- Position strap holes and washers over the holes on the sides of the rear standard. Screw the bolts securely in place. (Photo BB)

aa

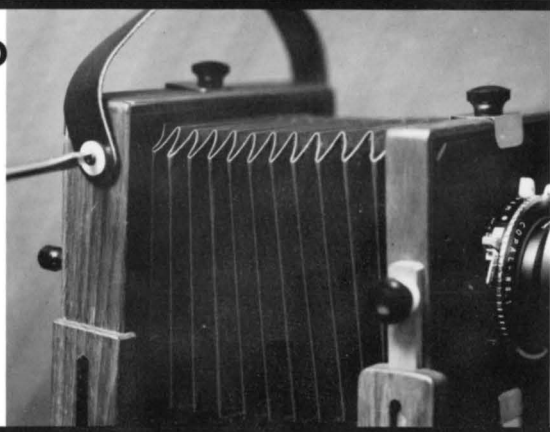


18. Folding the Camera

Requires: Elastic band (2 holes) 1-#6 x 3/4" brass screw.

- Remove the top knob from rear standard, and place one end of the elastic band over the stud. Screw knob on stud.
- Slide the front standard as closely as possible to the rear standard.
- Remove the camera from the tripod. Loosen the knob on the bottom of the platform brass plate, and swing the brass mounting plate upward.
- Fold the platform against the camera body and lens.
- Install the #6 x 3/4" screw in the hole at the top of the camera platform.
- Pull the elastic band forward, and slip the gromet over the head of the screw. (Photo CC)
- Make final front slide action adjustment and practice mounting and folding.

bb



Assembly is now complete, and your Porta Vu 45 is ready for use. For details about using camera movements please see the latest issue of the Calumet Photographers Catalog.

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Finishing Suggestions

A finish will help preserve the wood, and depending on the amount of time you wish to spend, the camera's cherrywood can take on the beauty of hand rubbed furniture.

Cherry is an interesting wood, because its color will tend to darken with age. However, it can be stained to attain the darker finish more quickly.

An easy to apply finish that is durable and long lasting is "MinWax Antique Oil Finish". It is available from your local paint store.

Your Porta Vu 45 has been presanded and the oil finish can be applied directly. For a furniture smooth finish, the wood may be further sanded with very fine sandpaper or steel wool.

If you are not familiar with advanced wood finishing, we suggest you contact your local home improvement center, hardware dealer or the many fine books available on the subject.

Brass Polishing

The brass pieces on your camera may be shined with any of the available brass polishes. We like "Brasso" and "Wenol". If you have access to a buffing wheel and compounds, this will speed up the polishing procedure. After the brass is polished, it can be coated with a clear varnish of urethane finish to preserve the shine. A satin finish can be achieved with fine steelwool.

Lens Mounting

While you can mount your lens on the Porta Vu 45 lensboard, we recommend that for best results, you have the lens mounted by a qualified camera service center, Calumet also offers this service at a nominal cost.

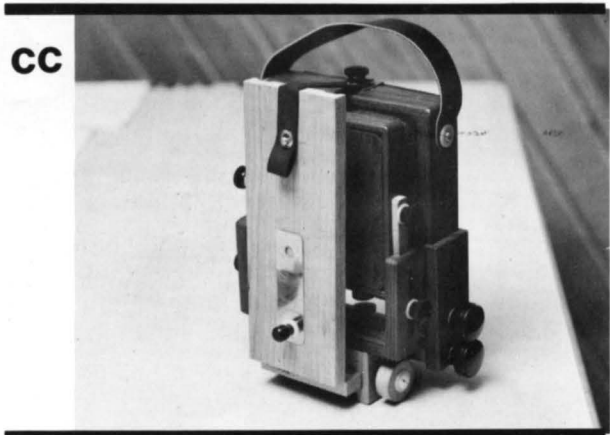
If you purchase a lens and camera or a lens and lensboard at the same time from Calumet, we will mount the lens at no charge.

Accessories

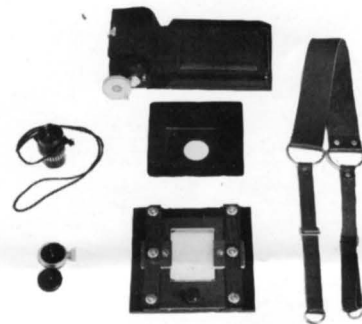
The Porta Vu 45 is a complete system with many excellent accessories, some of which are shown in Photo DD. Other accessories are being developed and will be offered in the future. Please refer to your current Photographic Catalog or contact your Calumet Sales Representative for an up-to-date listing and price information.

Exclusive Design

The Porta Vu 45 kit is the result of years of research and development by architect, photographer and veteran camera designer, Lester Fader.



dd



Accessories:

- a. C-2 Roll Holder
- b. Wista Lupe
- c. Recessed Lensboard
- d. Quick Release Tripod Mount
- e. Levels
- f. Studio-Vu Platform
- g. Focusing Cloth
- h. Sheet Film Holders
- i. Polaroid 545 Land Film Holder
- j. Lenses



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ADDITIONAL NOTES ON THE KIT AND ASSEMBLY

1. The two 8/32 by 1/2" long brass bolts and one small knob have been preinstalled in the view screen assembly. (They will not be in the parts bag.)

2. FOCUS SLIDE ADJUSTMENT:

If the slide binds at the side, sand the platform edges lightly to relieve the friction.

If the slide has a wobble action, loosen the brass screw at the side guide panel, part "F", and press the panel lightly upward until it just touches the bottom of the platform. Slowly tighten the screws while checking easy slide action. If the panel does not move up enough-- enlarge the mounting hole. A little lubricant can help smooth out the slide action.

3. BELLOWS MOUNTING:

When you push the small end of the bellows thru the rear of the back standard you will have to pull the pleats thru the hole. Gently tug at the pleats until all of them are through and the rear bellows board seats against the rabbet in the back of the frame.

The front of the bellows should be thumb pressed into the back of the front standard, then removed to apply CONTACT CEMENT to the frame and the bellows. (it is not advised to use white glue or epoxy for this job.) It will take a little ' thumb action' to press the bellows into the rabbeted area.