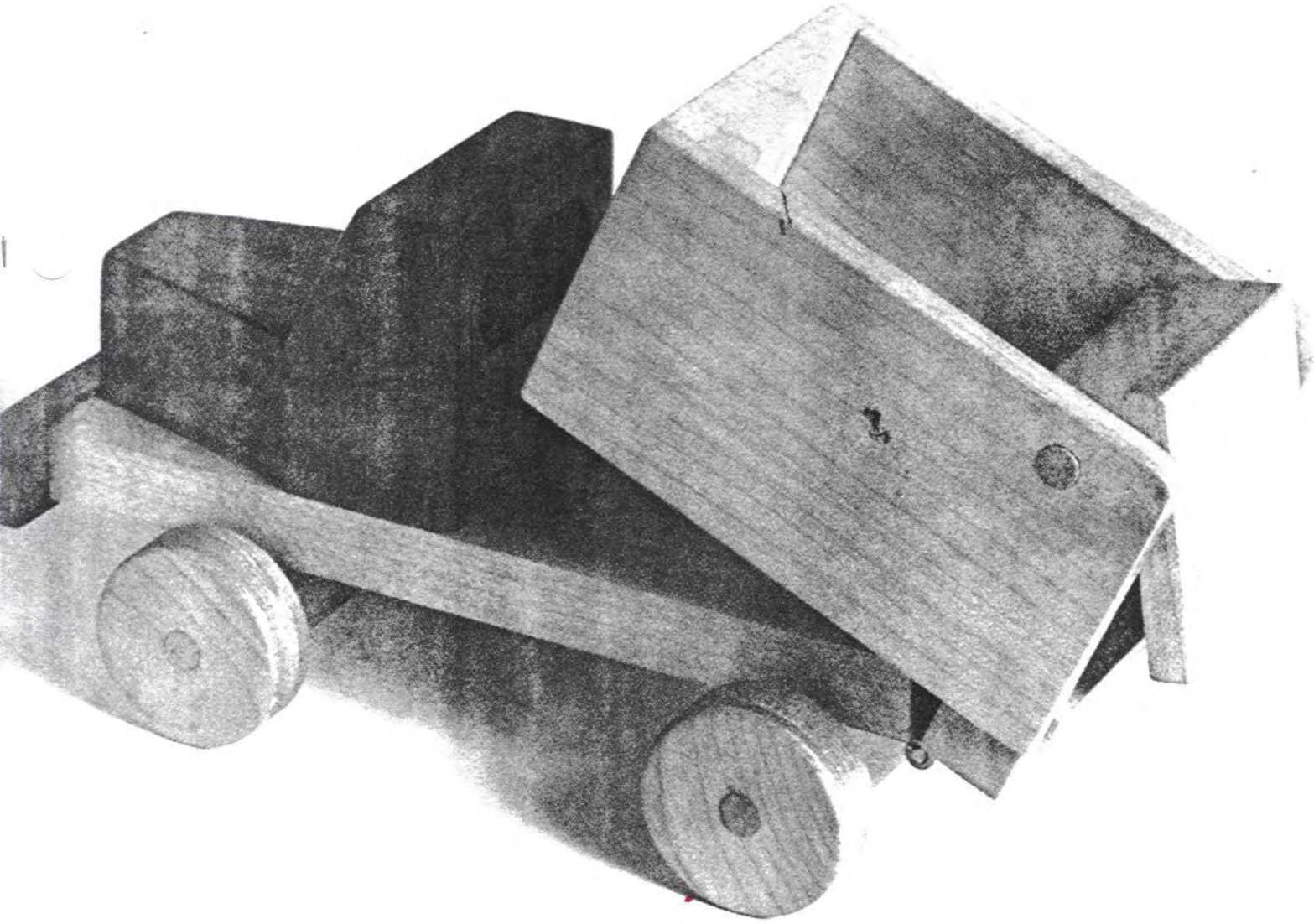


# Dump Truck

The key feature of this rugged, ready-for-action dump truck is the tilting bed, which is hinged to the chassis with a brass hinge. The truck is made with contrasting woods to highlight certain features. It shares many similar components with the crane truck in Project 4—bumper, headlights, hood, cab, axle blocks and wheels. With all these similar parts, it would be easy to knock out a whole fleet of construction vehicles.



## Parts Preparation

### TRUCK CHASSIS

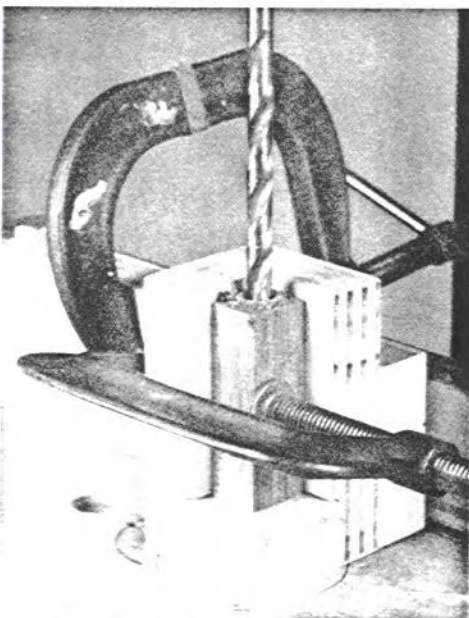
1. Cut the chassis block to size, and then score the bottom of the block to prevent finish from flowing into the area where the axle block will be glued (see p. 18).
2. Cut the axle blocks a little long, and then trim to the correct length during final assembly. Drill the axle blocks for the axles, as discussed on p. 12 and shown in the photo at left below.
3. Drill holes for headlights into the front bumper.
4. Make the headlights, as explained on p. 14.
5. Cut the wheels using a hole saw, as discussed on p. 13.

### CAB ASSEMBLY

1. Cut the sides of the hood at 17°, as shown in the middle photo below. Refer to p. 9 for the angle-cutting jig used in this operation.
2. Lay out the window while the cab is still in block form, and then drill the holes for the window (see the drawing on the facing page).
3. Using a tenoning jig, cut the front of the cab at 30° to end at the hood (see the photo at right below and the drawing on p. 30).

### DUMP ASSEMBLY

1. Cut the bed, side walls and end wall to size. The side walls are mirror images of each other; taping the blanks together with double-sided tape will ensure identical parts.



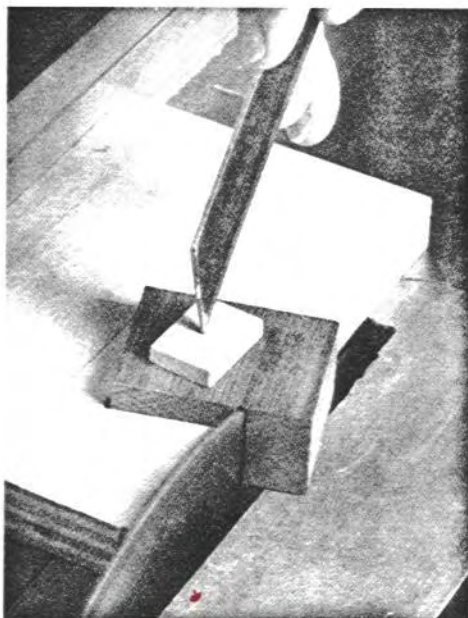
Use a jig to hold the axle block on end while drilling the hole for the axle.

## Parts List

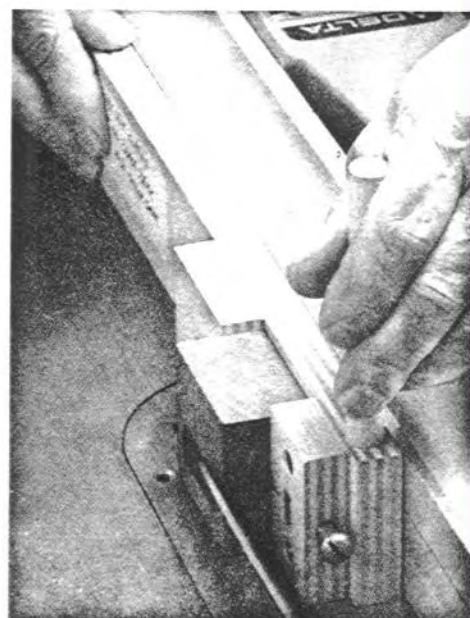
Quantity	Description	Finished Dimensions	Material
1	Chassis	2 1/8 x 1/2 x 6 1/8	Maple
1	Front bumper	1 1/16 x 5/16 x 2 7/8	Walnut
2	Headlights	3/16-in.-dia. dowel by 3/4 in. long	Birch
2	Axle blocks	3/8 x 3/4 x 2 1/8	Maple
2	Axles	1/4-in.-dia. dowel by 3 3/8 in. long	Birch
4	Wheels	1 5/16 in. dia. by 1/2 in. thick	Maple
4	Spacer washers	1/4 in.	Steel
1	Hood	1 7/8 x 1 x 1 3/4	Walnut
1	Cab	2 7/8 x 1 1/4 x 2	Walnut
1	Dump bed	1/4 x 2 3/8 x 3 3/8	Maple
1	End wall	1/4 x 2 1/8 x 2 3/8	Maple
2	Side walls	1/4 x 2 1/8 x 3 3/4	Maple
1	Tailgate	1/4 x 2 1/8 x 1 13/16	Maple
1	Tailgate hinge block	1/2 x 3/4 x 2 1/8	Maple
1	Tailgate pivot pin	1/4-in.-dia. dowel by 2 3/4 in. long	Birch
1	Dump hinge block	1/2 x 9/16 x 2 1/8	Maple
1	Butt hinge	1 in. by 2 in.	Brass

2. Cut 1/8-in. by 1/4-in. rabbets for the dump bed along the bottom inside edge of both side walls and the end wall and also along the front inside edges of the side walls.
3. Drill a 1/4-in.-dia. hole in the side walls for the tailgate pivot pin. Separate the side walls.

4. Cut the tailgate and tailgate hinge block to size.
5. Drill the tailgate hinge block to receive the pivot pin, using the same technique as for the axle blocks.



Use an angle jig to cut the sides of the hood at 17°. The small pine scrap (secured to the workpiece with double-sided tape) prevents damage from the push stick.



Use a tenoning jig to cut the angled front of the cab.

# Assembly

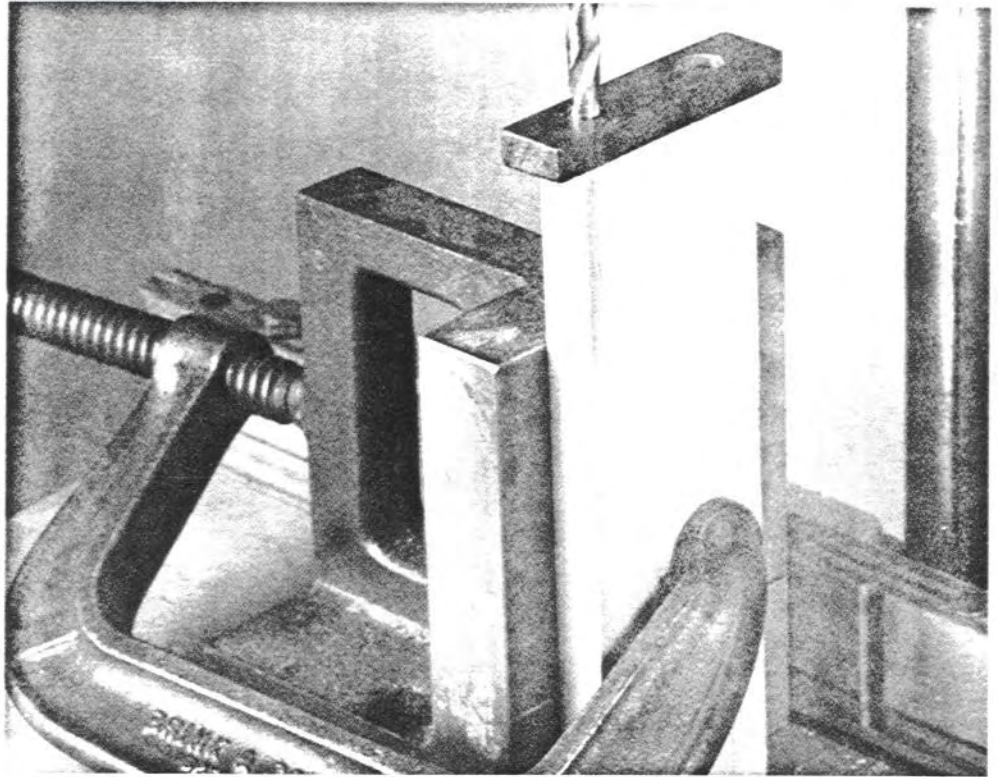
Finish all parts as described on pp. 16-18. Refer to the drawings on p. 30 for correct orientation of the parts during assembly.

## TRUCK CHASSIS AND CAB ASSEMBLY

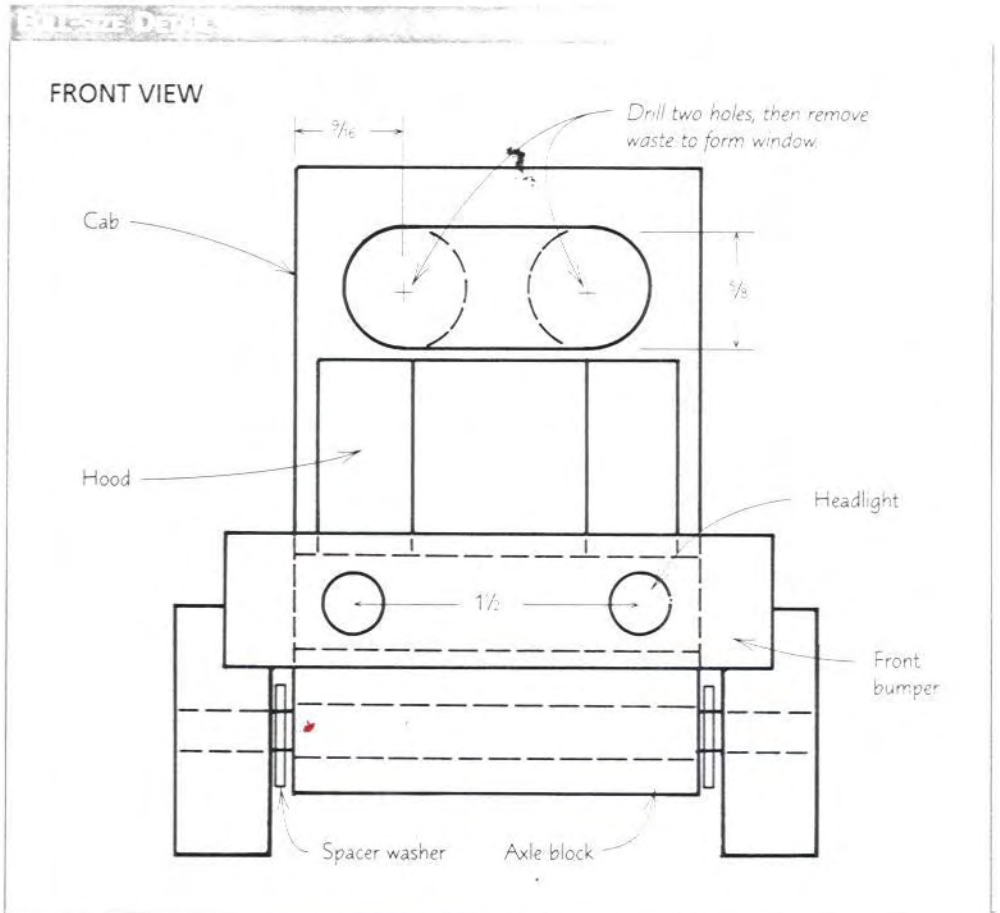
1. Glue the front bumper, centered in all directions, on the front end of the chassis.
2. To install the headlights, secure the chassis to a right-angle steel block on the drill press, as shown in the photo at right, and drill into the chassis through the holes in the bumper. The holes should be deep enough that the headlight dowels protrude approximately  $\frac{1}{8}$  in.
3. Glue the cab assembly and axle blocks (but not the wheels) to the chassis.

## DUMP ASSEMBLY

1. Assemble the tailgate and tailgate hinge block.
2. Assemble the end wall and side walls to the dump bed.
3. Align the tailgate hinge block between the side walls, and glue in the tailgate pivot pin. Make sure not to get glue between the tailgate hinge block and the pivot pin.
4. Fasten the dump assembly to the dump hinge block with double-sided tape to check for proper movement. If everything checks out, glue the dump assembly to the dump hinge block, and then connect the dump assembly to the chassis with a 1-in. by 2-in. brass butt hinge.
5. Assemble the wheels and axles, using  $\frac{1}{4}$ -in. spacer washers between the wheels and axle blocks.



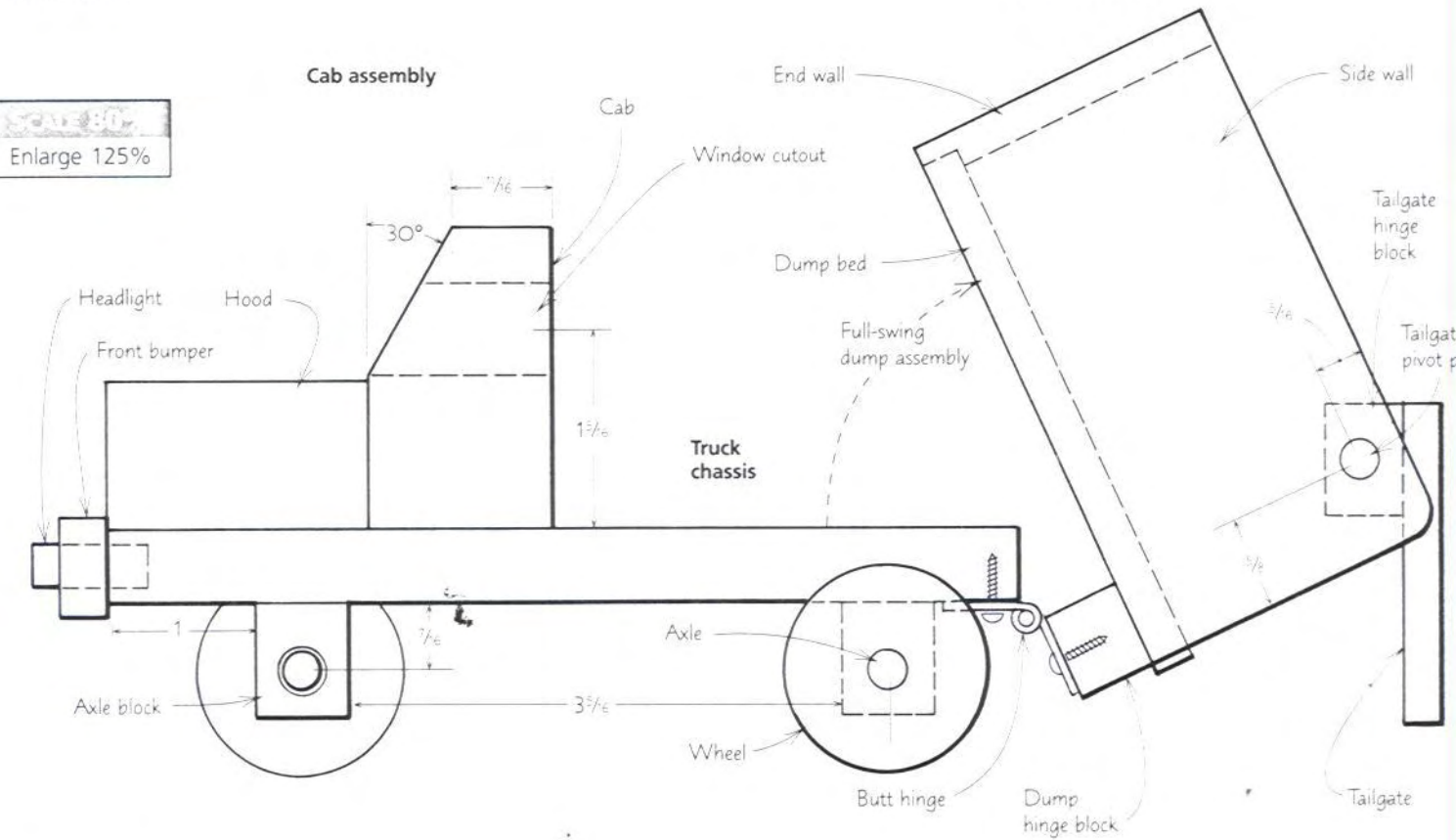
With the chassis clamped to a right-angle block for vertical support, drill holes for the headlights through the holes in the bumper into the chassis.



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# Dump Truck p. A

SIDE VIEW



TOP VIEW

