CHAD VALLEY

PLANNING BOOK

BRIDGE and ROADWAYS Building Set

Build the way Bridges and Roadways are actually Built

Design and Build a VARIETY of REALISTIC STRUCTURES with GIRDERS, BRACES, FOOTINGS, ROADWAYS

These are just a few of the many types of realistic HIGHWAY BRIDGES, SUSPENSION BRIDGES, RAILRO

These impressive, realistic bridges are fun to build and to use with your toy cars, trucks and trains. They are not at all difficult to build. Once you have read the Instruction Sheet and built the simple bridge shown there in step-by-step illustrations, you just follow the same general steps to build any bridge you want.

LONG SPAN HIGHWAY BRIDGE

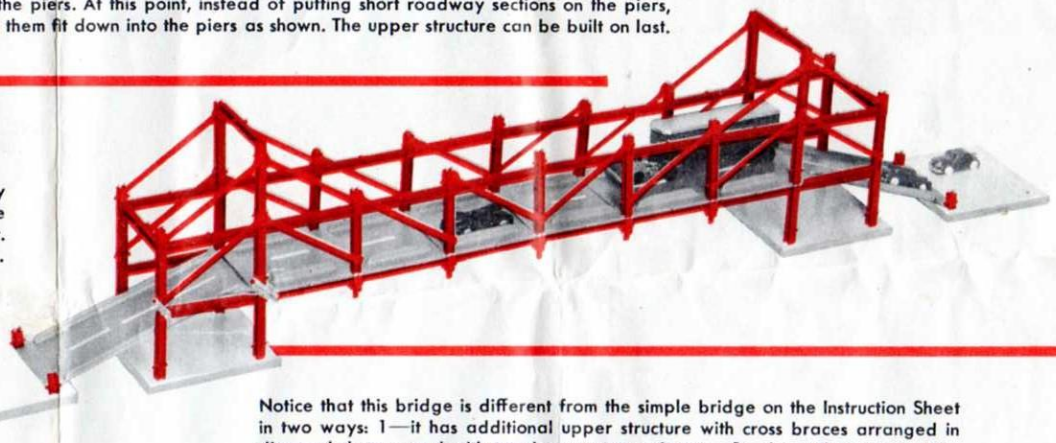
This bridge is built just like the simple bridge on the Instruction Sheet except for: 1—the longer span; 2—the additional upper structure with a beam across the top for extra rigidity; 3—"built-in" ramps at the ends of the roadway.

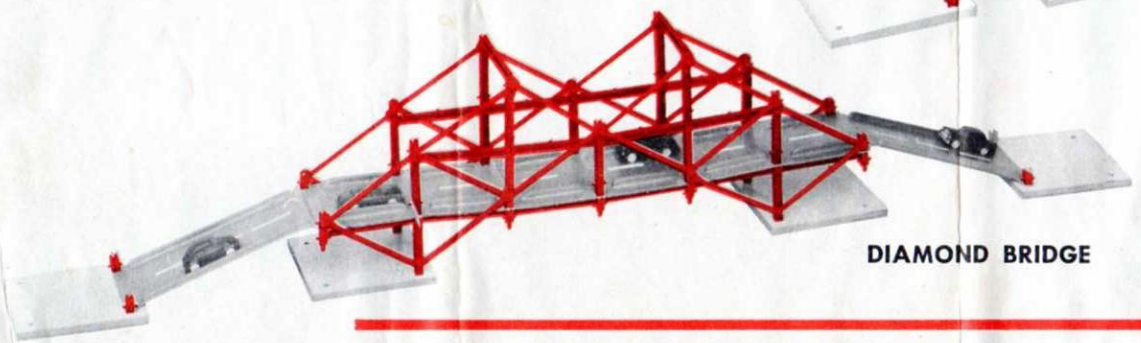
To build this bridge, first build the piers but *leave off* the beams across the *outer ends* to allow the ramps to fit down in between.

Assemble the centre span on the floor the same way you did the span of the simple bridge, then lift it up and attach it to the piers. At this point, instead of putting short roadway sections on the piers, you will use ramps, letting them fit down into the piers as shown. The upper structure can be built on last.

RIVER BRIDGE

This sturdy bridge is built in exactly the same manner as the Long Span Highway Bridge above but it has stronger column and beam construction on the piers. The cross braces from the tops of the pier columns give the span additional support. This is a "semi-suspension" bridge because the span is partly supported by these braces.





DIAMOND BRIDGE

Notice that this bridge is different from the simple bridge on the Instruction Sheet in two ways: 1—it has additional upper structure with cross braces arranged in diamond shapes, and with two beams across the top; 2—the end sections of the roadway are "cantilevered"—that is, they do not rest on piers but are held up by cross braces attached from the stubs at the ends of the roadway to the tops and bottoms of the pier columns. The piers have only two "legs" instead of the usual four columns.

To build this bridge, first make the two-legged piers. Assemble the span (without the upper structure) on the floor as described in the Instruction Sheet and place it on the piers.

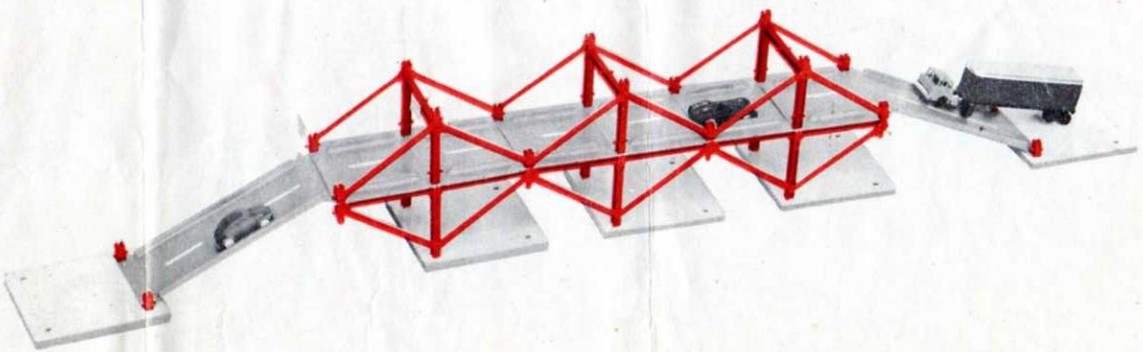
Next, put the end sections together, putting on the ramps at the same time you put in the stubs. Place these sections on the piers and put on the cross braces to hold them up. Then finish the upper structure.

CAUSEWAY BRIDGE

This type of bridge is used to cross low places or shallow water, where there is no traffic beneath the bridge with which the footings would interfere. While this bridge is entirely different from the simple bridge on the Instruction Sheet it is very easy to build and it will give you some experience in different types of bridge construction.

Start by building the three piers—you can see that these piers have only two "legs" each. Next, assemble the roadway in the usual manner on the floor. Make two separate 2-section parts and place these on the piers, putting the upper girders and cross braces on the *centre pier only*.

The next step is to assemble the two end sections of roadway. You will put on the ramps at the same time you put in the stubs. Place these end sections on the end piers, complete the upper structure and put on the rest of the cross braces.

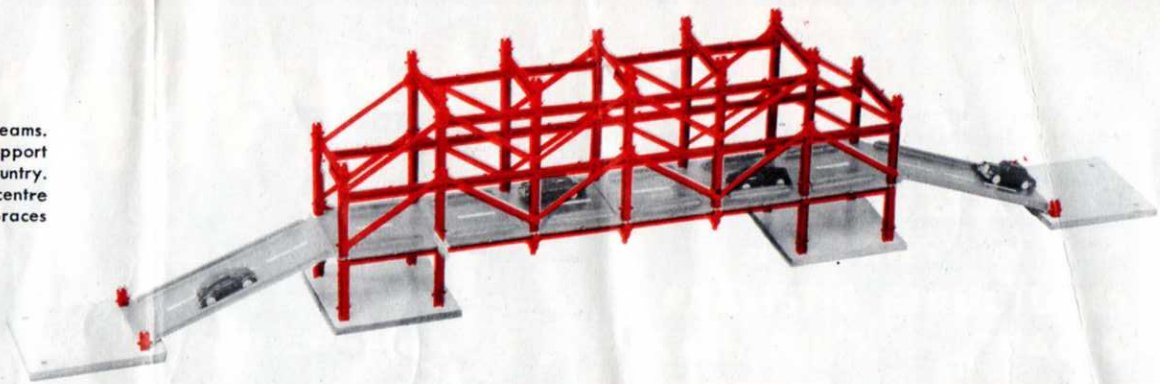


AD BRIDGES and TRESTLES you can build with your No. 4 BRIDGE and ROADWAYS BUILDING SETS

HEAVY DUTY TRAFFIC BRIDGE

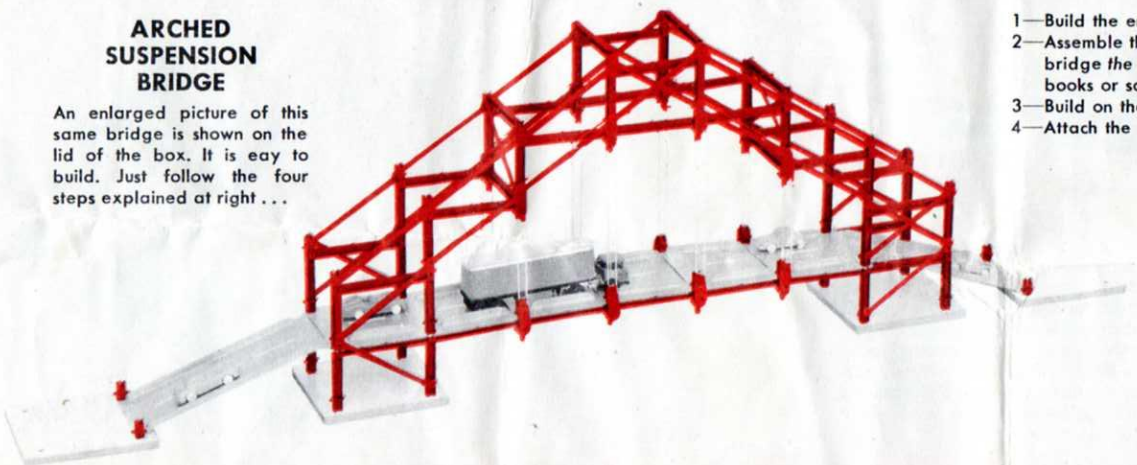
This is the familiar type of bridge you see where highways cross small rivers and streams. For comparatively short spans "truss bridges" like this are easy to build and will support the heaviest traffic. This is the reason there are so many of them throughout the country.

You build this bridge exactly as described in the Instruction Sheet. Make the centre span one column high—you will add on the upper columns, beams and cross braces *after* the span has been attached to the piers.



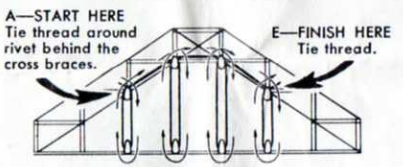
ARCHED SUSPENSION BRIDGE

An enlarged picture of this same bridge is shown on the lid of the box. It is eay to build. Just follow the four steps explained at right . . .



1—Build the end piers and approaches complete.
2—Assemble the roadway on the floor in the usual manner and attach it to the piers. Because this is a suspension bridge *the roadway is not self-supporting*. To support it temporarily while you build the upper arch, slide some books or some other object underneath to hold the roadway level.
3—Build on the upper arch, working in from both ends to meet at the centre.
4—Attach the suspension cables (nylon thread) on both sides of the bridge as shown in the diagram below.

TO ATTACH THE CABLES

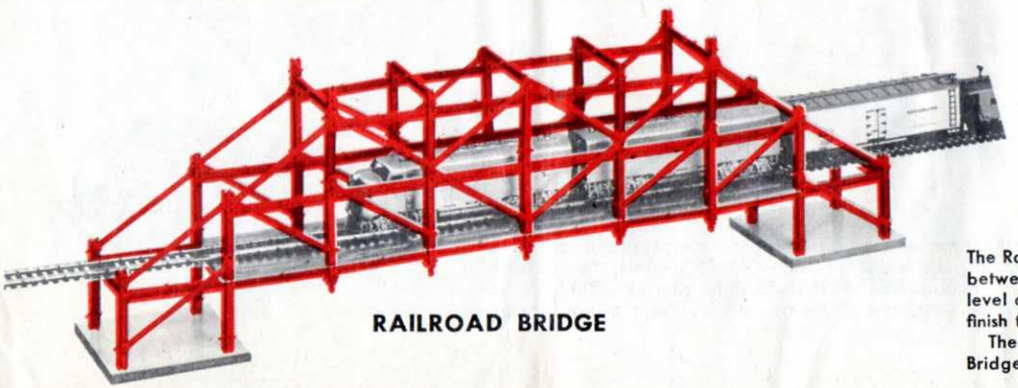


B—Bring thread down and between the stub and the tie brace.
C—Take thread up and around behind the cross braces.
D—Follow direction of arrows, pulling thread just tight enough to keep roadway level.

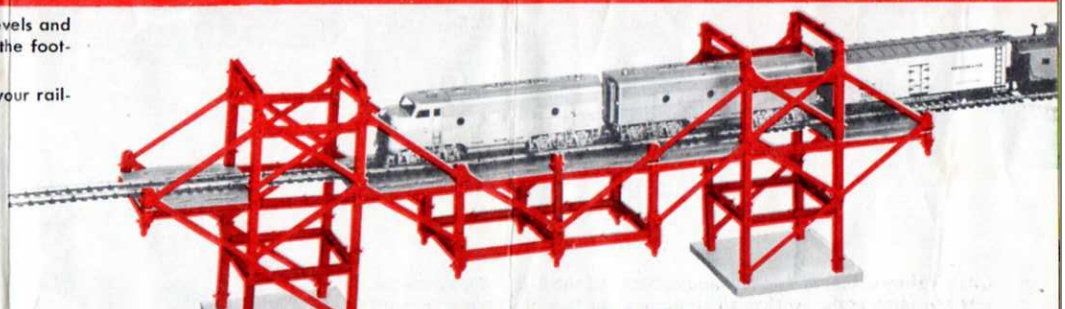
Build strong, realistic BRIDGES and TRESTLES

RAILROAD BRIDGES • Thrilling to build and use with your toy trains. You can arrange your tracks on various levels and cross one track over another by adding a stub girder at the bottom of each pier column where it is attached to the footing. These extra stubs give the bridge enough height above the ground for a train to run underneath.

If model trains are your hobby you can build bridges and trestles that will become a permanent part of your railroad layout, spanning valleys with bridges of any height, length and type desired.



RAILROAD BRIDGE



RAILROAD TRESTLE

The Railroad Trestle above is an "inverted truss" suspended between two tower piers. Build the piers first, just up to the level of the roadway. Assemble and attach the span, then finish the towers and cross bracing.

The Railroad Bridge at the left is similar to the Traffic Bridge at the top of this page except that the cross braces are arranged differently and the piers are extended outward to make the bridge longer.

In building railroad bridges and trestles you can leave off the flat roadway sections, giving them a real railroad-like appearance.

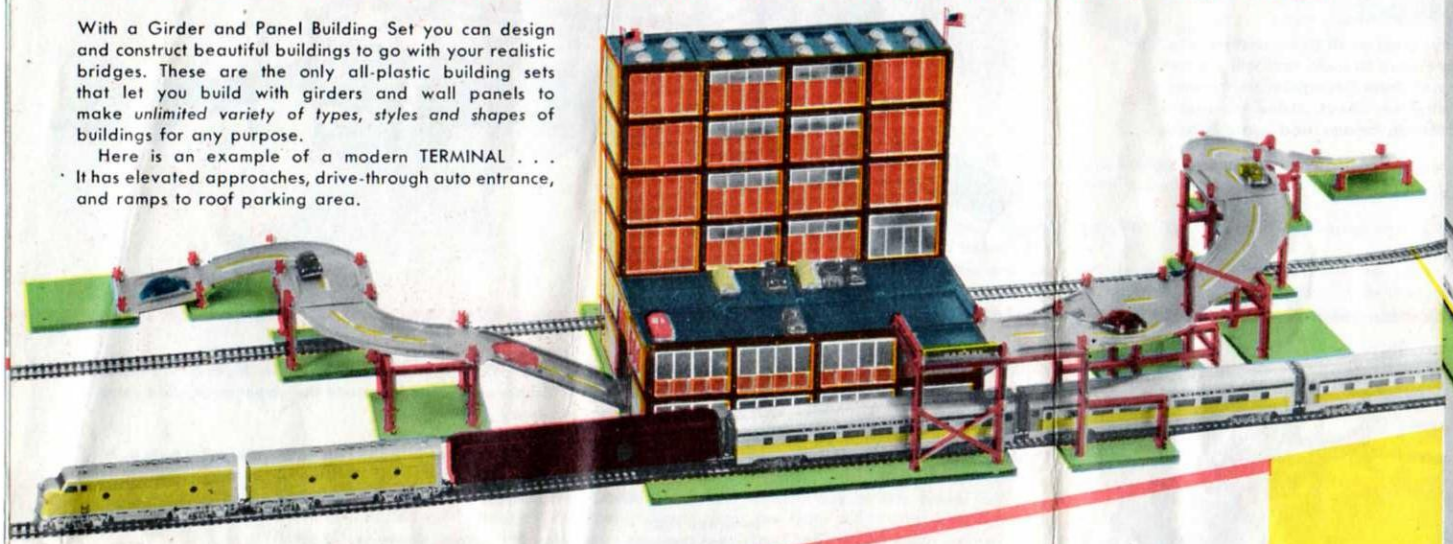
You can combine your Bridge and Roadways Set with Chad Valley's GIRDER and PANEL BUILDING SETS

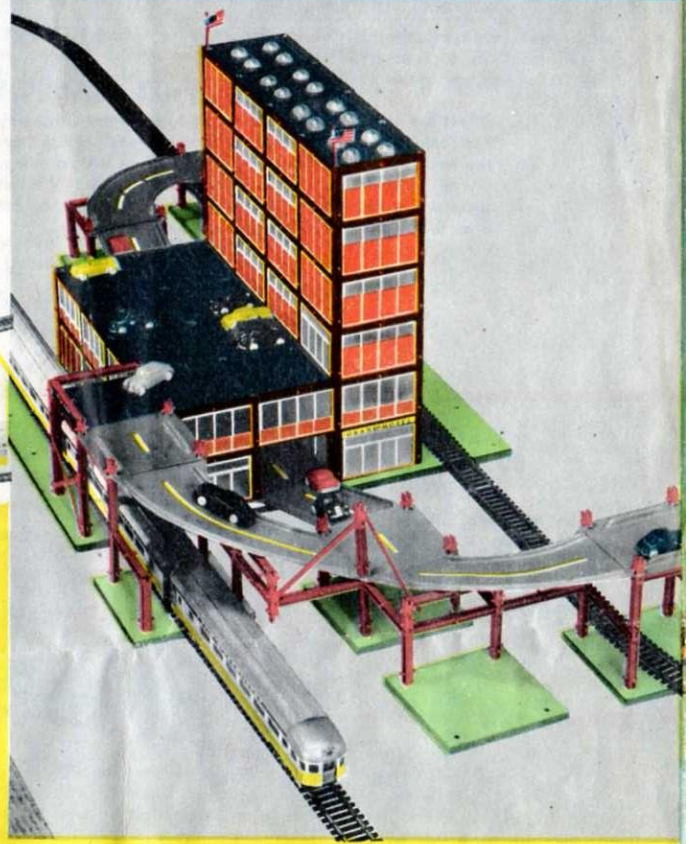
BUILD MODERN BUILDINGS THE WAY *REAL BUILDINGS* ARE BUILT . . .

construct framework of GIRDERS on the Masonite foundation, build on walls with prefab PANELS

With a Girder and Panel Building Set you can design and construct beautiful buildings to go with your realistic bridges. These are the only all-plastic building sets that let you build with girders and wall panels to make *unlimited variety of types, styles and shapes* of buildings for any purpose.

Here is an example of a modern TERMINAL . . . It has elevated approaches, drive-through auto entrance, and ramps to roof parking area.

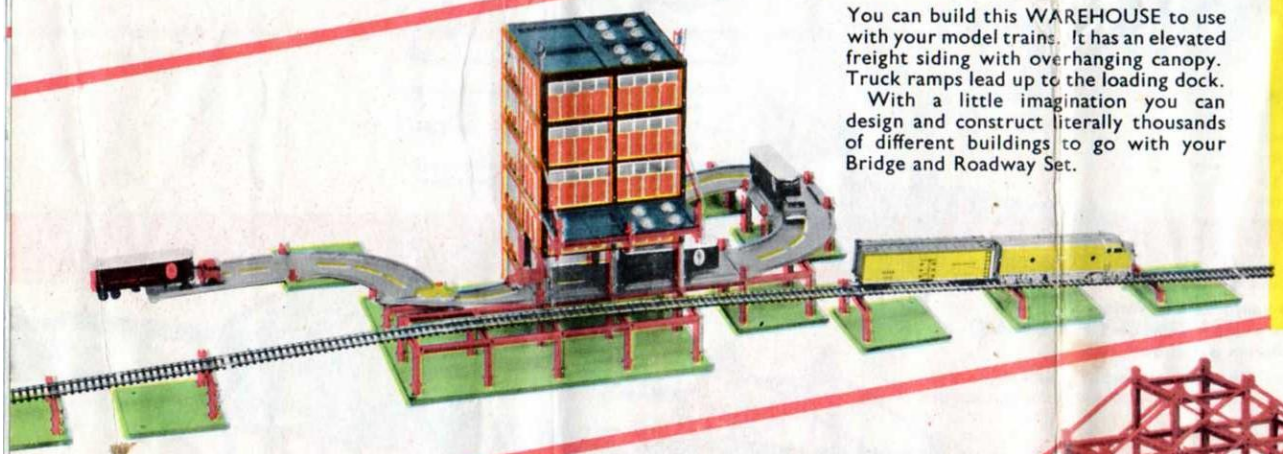




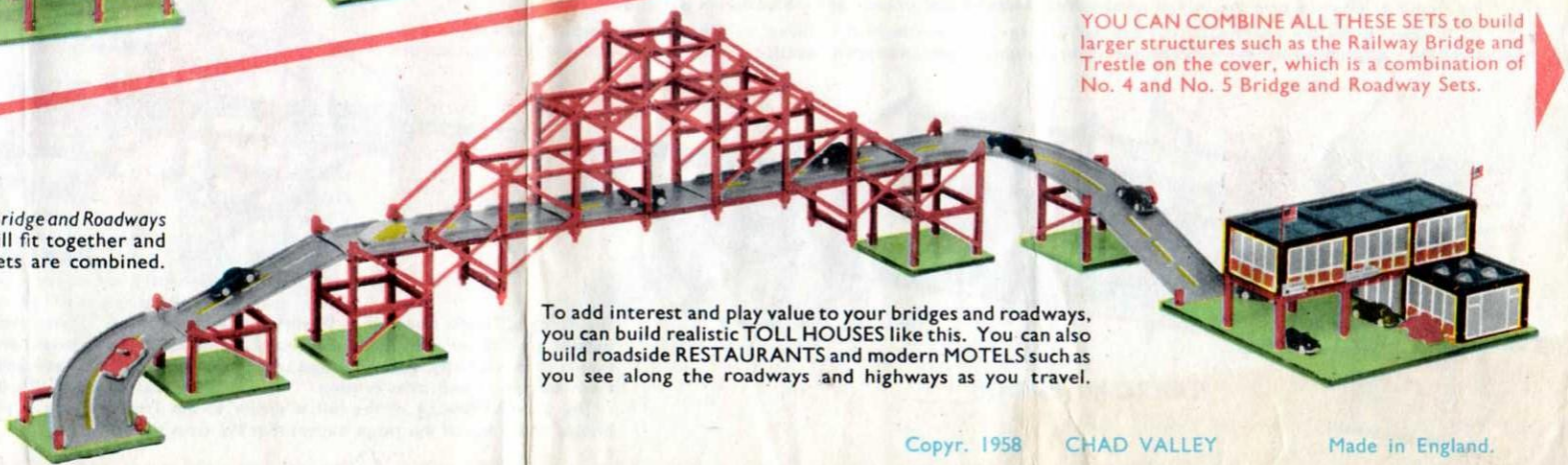
This *side view* of the TERMINAL shows how cars and taxicabs can overpass the railroad tracks to drive into the ground floor of the building. A ramp leads up to the roof where cars are parked. You can build many variations, such as running the trains into the depot.

You can build this WAREHOUSE to use with your model trains. It has an elevated freight siding with overhanging canopy. Truck ramps lead up to the loading dock.

With a little imagination you can design and construct literally thousands of different buildings to go with your Bridge and Roadway Set.



YOU CAN COMBINE ALL THESE SETS to build larger structures such as the Railway Bridge and Trestle on the cover, which is a combination of No. 4 and No. 5 Bridge and Roadway Sets.



To add interest and play value to your bridges and roadways, you can build realistic TOLL HOUSES like this. You can also build roadside RESTAURANTS and modern MOTELS such as you see along the roadways and highways as you travel.

Chad Valley *Girder and Panel Building Sets* and the *Bridge and Roadways Sets* are same scale, so that all structural parts will fit together and can be used interchangeably when any of the sets are combined.

There are *three sizes* of Girder and Panel sets. The Terminal building at the top of this page was built with Set No. 3; the Warehouse was built with Set No. 2; the Toll House was built with Set No. 1. Any of these sets can be combined with either the No. 4 or No. 5 Bridge and Roadway set, or with each other.