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CHAPTER ONE

Basics of kitbashing plastic structures

By David Popp

Photos by the author

Kitbashing is a technique of modifying an existing kit or combining two or more kits to create a different structure. Hanson Piano is an N scale structure kitbashed from a pair of Design Preservation Models kits.

With the amazing number of structure kits available to model railroaders today, chances are good you can find the buildings you want for the factories, businesses, and homes on your layout. If you can't, it's fairly easy to modify existing kits (called *kitbashing*) to make the structures you need.

Recently I was looking for a wedge-shaped factory to fit an unusual space on my N scale layout. After searching for a while, it was obvious that I would need to kitbash a readily available plastic structure. After choosing one that had architectural features I was looking for, I set to work. You can use these simple kitbashing techniques to make your own unique structures.

Hanson Piano Co.

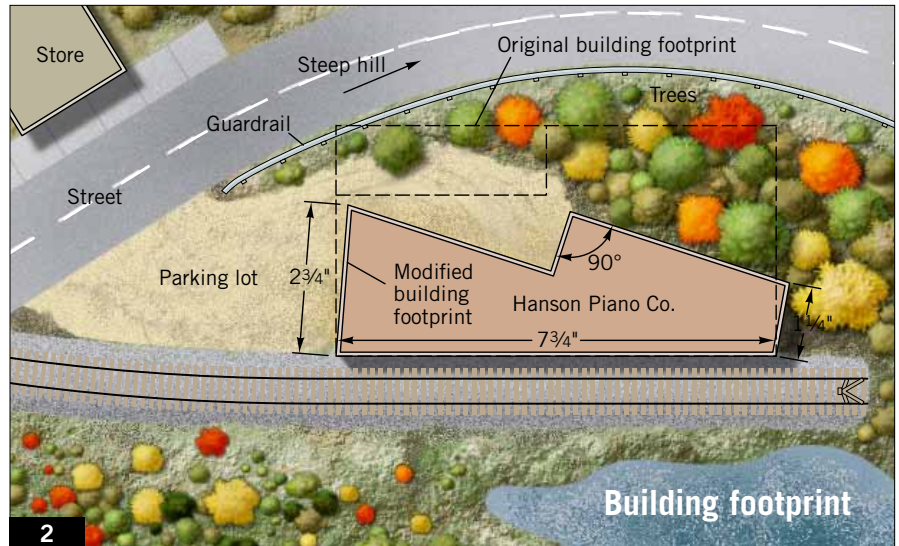
To build the Hanson Piano Co. plant, 1, you'll need to start with a Design Preservation Models (DPM) N scale Gripp's Luggage kit (no. 506). If you're working in HO scale, you could build a similar structure by combining parts from two DPM Laube's Linen Mill kits (no. 106). The DPM kit includes six plastic walls with all door and window details molded in place, a sheet of styrene for the roof, and two styrene tubes to make the twin smokestacks. The kit is ideal for customizing projects like this one because you can easily cut apart the walls with a razor saw and reassemble them in new ways.

The illustration, 2, shows where I wanted to place Hanson Piano Co. on my layout, and the dashed line indicates the space required by the DPM kit. It was obviously too big! By altering the finished shape of the kit and raising the ground on the street side so it would be level with the loading dock, I was able to make enough room for the structure without unrealistically crowding the corner.

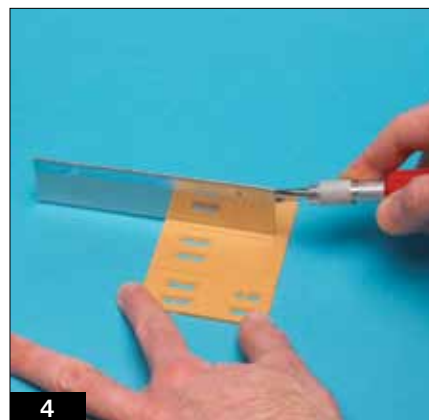
To get a feel for how the finished building will fit on the layout, tape the walls together. This way you can experiment with possible changes before cutting any parts.

The DPM kit pieces come with large tabs on them left over from the molding process. Use a sprue nipper, a special tool for cutting plastic, to carefully clip away the molding tabs (you could also use a sharp hobby knife). After cleaning up the walls, file or sand the edges smooth.

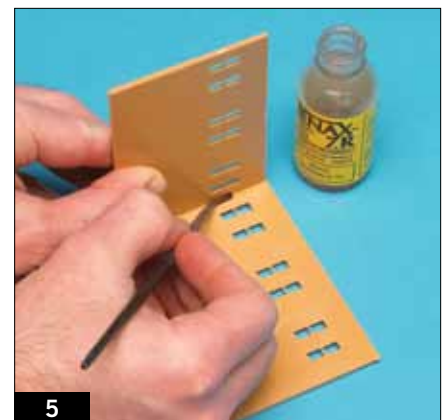
By cutting just one wall and changing the angles of several corners, you can make a wedge-shaped building from the original, 3. To cut the wall, place the razor saw blade along the



Tape marks the side of the pilaster that needs to be cut. The portion at right becomes the finished end wall (far right).



On this kit, the pilasters provide a built-in guide for a razor saw. Cut slowly and smoothly to ensure a square edge.



Touch a brush of liquid plastic cement to the joint and capillary action will draw it into the seam. Hold the joint securely for a few seconds until the bond begins to strengthen.

Lighting your structures

Illuminated houses make nighttime operations even more interesting. Here are some tips to help make your lighted structures look realistic.

On houses like the ones shown here, you must make sure that parts of the original kit don't show through windows you plan to light. On the Grimes house, I placed black paper inside the dormers to cover the kit's original roof so light wouldn't show through the windows. You could also put a piece of black paper inside each of the windows, add shades to the windows, or even cut out the original kit roof inside the dormer to light it from inside.

I cut the shades and curtains used in these structures from colored paper. However, I notice that in many houses today the windows are covered with plain white shades or venetian blinds. The fact that the shades are behind the windows in dark areas makes them appear gray.

Paint the inside of any house you plan to light a black or silver color. The light inside the house should show through only the windows, never the walls. If you prefer working with paper, you could trim black paper to line the walls and roof and glue it to the inside of the house.

I put a view block, a 3"-tall by 3½"-wide piece of cardboard, inside each of these houses so you can't see all the way through them when lit.—V.R.

living room, a den, or a guest room. In some neighborhoods, nearly every house has this type of extension.

To enclose the porch, I copied the form of the kit's front porch piece using Evergreen clapboard (nos. 4051 and 4061). I then cut a strip of Evergreen styrene to match the corner



The large dormers on the attic of the Grimes' house blend well with the kit.



The large dormers on the back side of the Grimes' house were added using the same method as the dormers on the front.

posts. I cut a shorter piece to copy the post at the left of the staircase, as this part doesn't need to go down to the floor of the model. After building the main part of the kit, I used the original living-room window for the office and cut an opening in the front clapboard panel so the window from the kit

would fit. I then drilled small holes in the square posts to accept the pins of the porch ceiling.

I assembled the office just as I would have built the original kit, except I used the newly cut styrene pieces and added posts to the front corners. I measured a new clapboard part and cut



1

CHAPTER SEVEN

Easy interior details

By David Popp

Photos by the author
and Jim Forbes

A few simple details is all it takes to provide the impression of a detailed structure interior, as with this N scale storefront building on David Popp's layout.

Structure windows can be frustrating for a modeler. Why are panes such a pain? Empty windows, especially the big ones found on storefronts, can break the illusion of a modeled world almost as fast as shiny plastic freight cars and locomotives.

In the real world, windows allow light into buildings, but they also allow passers-by a glimpse inside.

If you take a quick look around at houses, shops, factories, and offices, you'll find that many windows have curtains, shades, or blinds to keep people from looking inside. Though you can't see much beyond these view blocks, the curtains and blinds themselves are usually visible from the outside.



2 This building has both interior styrene walls and a construction-paper view block.

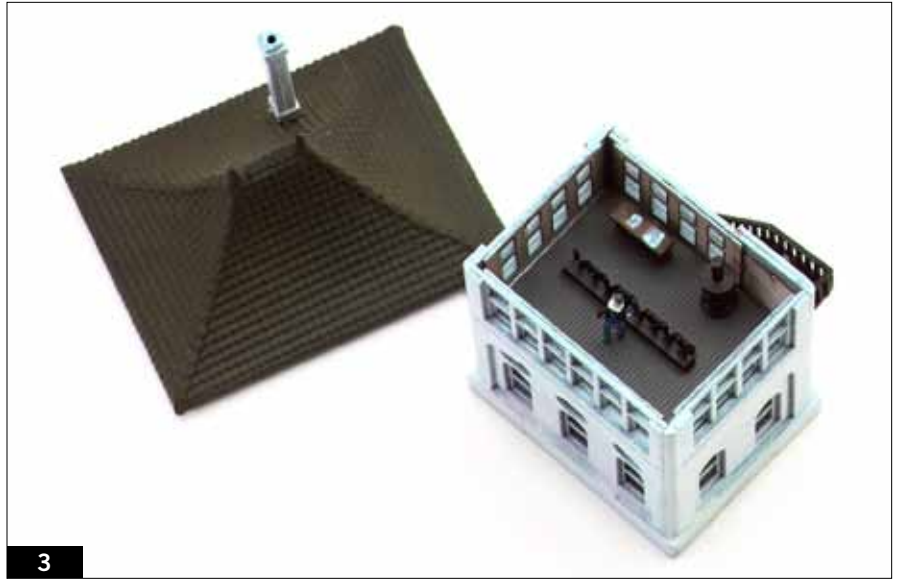
Where windows are left open to the viewer, at least some interior detail is visible. This is especially true with storefronts, where the front window is used as display and advertising space. And unless the windows are boarded up, empty buildings show some type of interior detail, even if it's bare walls, rubbish, and cardboard boxes.

With a little styrene, some paint, and a few signs and figures, making simple interior details for your model railroad structures is easy. And, they can be added to new kits and assembled buildings alike. These samples are N scale, but you can do the same in HO and other scales.

Basic walls

It adds to the realism of a model structure if viewers can't see all the way through the building. One method is to place a view block inside the finished model. I use black construction paper for this, **2**, placing it on an angle so you can't look in the upper windows and out the bottom windows. If you're working with a bigger structure, you might use cardstock or black styrene.

Though it's great for buildings with small windows, the black view-block trick doesn't work very well for large front windows, especially storefronts. In this case you're better off making simple walls from styrene. I use .030"



3 This interlocking tower features rudimentary details such as armstrong control levers, stove, desk, and figure on the top floor.

sheet styrene to divide the storefront from the back of the building and partition separate building entrances, such as stairwells. I also add a styrene ceiling to prevent the windows from upper floors from providing a view of the store below.

I typically add the walls and ceiling while the building is under construction and then paint them solid store-like colors. If you're adding walls to an existing building, you could make them as a freestanding unit that slips inside the building shell. The building in **2** shows the interior walls for my music store shown in **7**.

Simple interiors

Adding three-dimensional interiors to structures that viewers will see up close adds a lot of life to your model railroad. This is a fun project, and you don't have to go to dollhouse-level detailing to get good results. I built the interiors of the buildings in **3**, **4**, and **5** for structures on my layout using an assortment of styrene shapes to give the impression of everyday objects, such as chairs, sofas, and desks. I then painted them appropriate colors and added a few figures to bring the scenes to life. When seen from the edge of the layout, these details go a long way to convincing people that all the buildings have interiors.

I used styrene to make the interior for my N Scale Architect New Haven interlocking tower, **3**. I used grooved sheet to represent the wood floor. I added a Period Miniatures coal stove casting and then made a desk from several pieces of strip styrene. The interlocking mechanism is made from pieces of plastic Con-Cor fencing. Although the finished model looks only a little like a real interlocking plant close up, when viewed from outside the building, just the levers are clearly visible, completing the illusion that everything is correct.

For my drugstore (a Design Preservation Models kit), **4**, I filled the shop windows with signs and built a small apartment scene for the upper floor. Similar to the tower, I used styrene shapes here, this time to make a couch, chair, television, and table. After painting these details, I added some figures.

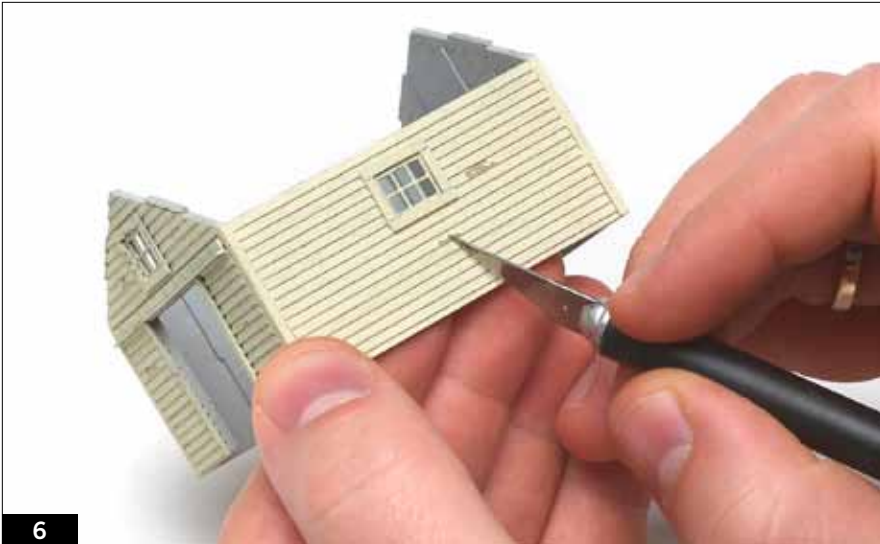
Mel's Café, **5**, is another DPM kit. I started by walling off the stairwell and adding a back wall to the diner portion of the building. Next, I made a floor for the diner and modeled two booths, one for each window, from strip styrene. I painted most of the interior a wood-work color and then added a few figures and an "OPEN" sign for the window.

This building also has a detailed upstairs and features a Preiser no. 79176 painting crew. The floor and



5

Apply masks of rubber cement with a fine-tip brush.



6

After applying the finish coat of paint, use a hobby knife to scrape away the rubber-cement patches, revealing the weathered wood underneath.



7

Micro-Mark's Distresser weathering brush can take the paint off of a model down to the weathered wood.

good idea to make a sketch of each wall and mark where you brushed on the cement. You can do just a few patches, or create a heavily weathered building with many areas of peeling paint.

Next, I airbrushed the garage with Polly Scale aged white. After the paint had dried, I used a fresh no. 11 blade to remove the rubber cement masks, 6. Do this carefully so you don't damage the wood (unless that's the finish you want).

You can also use a pencil eraser to remove the masks. However, I recommend testing pink erasers on an inconspicuous portion of the building, as some of these erasers will leave a pink residue on the paint. If you do get pink stains on your model, you can remove them by lightly scrubbing the building with a 3M wood finishing pad (found at most home improvement and hardware stores).

Distresser weathering

Not all prototype wood structures age in the same way. Some just have a few patches of paint peeling off, which I simulated on the garage. However, other buildings look downright dilapidated. The latter was the look I wanted on McCormac's Dry Goods.

As with the garage, I first stained the wood walls and let them dry. Then, after assembling the building, I airbrushed it with Polly Scale reefer white. After letting the paint dry for 24 hours, I used Micro-Mark's Distresser weathering brush to abrade the wood walls, 7.

This tool is versatile, as the length of the bristles can be adjusted depending on the degree of weathering you want: longer for a lighter touch, shorter for heavier. I set the bristles short since I wanted the building to be heavily weathered. Then I applied a second coat of my India ink wash. This served two purposes: it darkened the raw wood exposed by the Distresser's bristles, and it made the white paint less vibrant.

The doors, windows, and trim material is a peel-and-stick cardstock material. Because of this, I couldn't use the Distresser to abrade the painted surfaces like I did on the wood.

However, I didn't want these parts left unweathered, so I used an airbrush to dust them with thinned Polly Scale Union Pacific Dark Gray, Louisville & Nashville Gray, and steam power black (all mixed 1 part paint to 9 parts 70 percent isopropyl alcohol). Then I used the Distresser to stipple the doors, windows, and trim. This removed trace amounts of gray and black paint and exposed a bit of the white, helping the doors, windows, and trim blend in with the wood, 8.

Roof weathering

Most laser-cut wood kits have peel-and-stick roofing material. Moisture and enamel paints can affect the adhesive backing material, so I've found it best to weather the roofing with an airbrush or powdered pastels after it's been attached to the building.

On McCormac's Dry Goods, I painted the roofing material Louisville & Nashville Gray. I then used an airbrush to spray thinned Polly Scale Steam Power Black at the base of the smokejack, 9.

I then sprayed the roof with Model Master lusterless flat (Testor's Dull-cote will also work) in preparation for applying the powdered pastels. The dull surface is vital for pastel chalk weathering, providing some tooth for the chalk to cling to.

I used light rust from the Bar Mills Scale Model Works powdered pastels weathering set to add rust streaks at the base of the chimney, 10. Then I used the grimy black pastels to carry the soot streaks, which I first sprayed with an airbrush, to the edge of the roof. You could also use various shades of gray powdered pastels to make the roofing material look worn and faded.

You can even go beyond the techniques covered here. I've seen some wood structures where simulated nail holes have been added with pounce wheels and push pins. Some modelers will also use a hobby knife to peel back or remove individual boards, a technique that looks really neat.

Once you've studied a few prototype wood buildings, you'll see that the possibilities for weathering wood structures are seemingly endless.



8

After dusting the trim pieces with an airbrush, I used the Distresser tool to stipple the components.



9

An airbrush and thinned black paint created extra weathering at the base of the smokejack.



10

Chalk weathering completed the structure, including black, gray, and rust colors.

There's a quick and easy way to use a pencil's metal eraser holder to emboss stones and mortar lines into a sheet of balsa, a soft, lightweight wood that's easy to cut with a hobby knife and easy to emboss. This "tool" and process can be used to make unique stone foundations, retaining walls, or—as I did—entire buildings, 1.

Walls of balsa and basswood

After making a full-scale drawing of the structure you've decided to build, scribe the wall dimensions onto sheets of 1/16"-thick balsa and basswood using a needle in a pin vise. (Placing basswood behind the balsa will provide reinforcement to strengthen the walls.) When finished, use a metal rule and a sharp no. 11 hobby knife to cut out the pieces of the structure, working with one layer of wood at a time.

I used commercial door and window castings, and at this point it's helpful to use the castings to cut out and test-fit the openings. Make adjustments in the wood with a small file as needed.

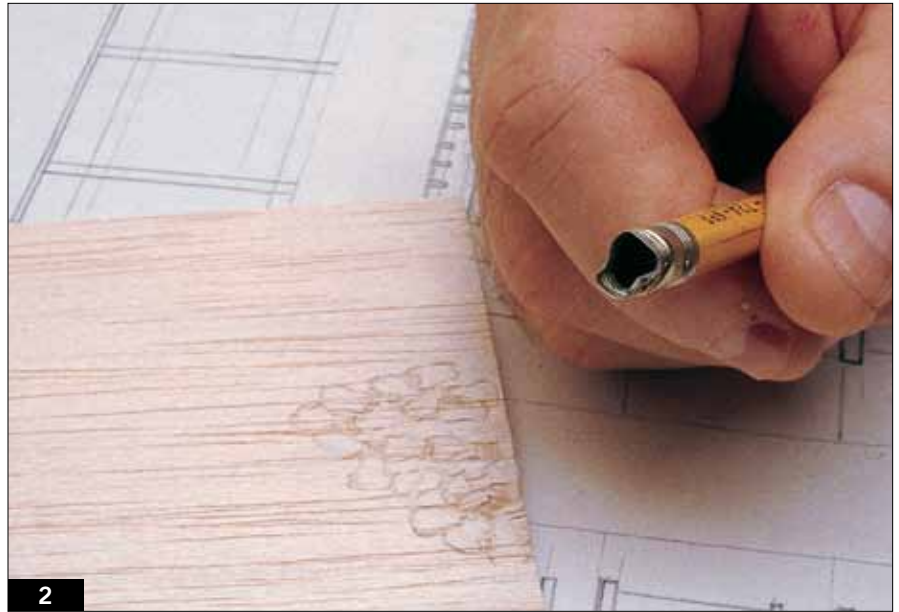
Once that's done, coat the back of the balsa wall and the front of the basswood wall with spray adhesive and press the two layers of wood together.

Pencil in the fieldstone walls

Now for the fun part—embossing the fieldstone surfaces. Remove the eraser from an old pencil and use a needle-nose pliers to gently bend the metal holder into an irregular shape, 2.

Starting in the lower corner of a wall, hold the pencil perpendicular to the balsa surface and press it into the wood. I found that turning the pencil between my fingers as I worked upward diagonally created a random and realistic appearance. Many times, I also overlapped a previous impression, 3. I occasionally had to straighten the edge of the metal eraser holder when it bent, so keep checking the metal to make sure it keeps the shape you want.

If the shapes appear too linear or uniform, emboss a few smaller shapes in different angles. Be careful not to overdo it, as having too many little stones in a large wall doesn't look right. Balsa varies in density, resulting in mortar lines of different widths and



2 Jay removed the eraser from a pencil and bent the metal holder into a more-natural shape. A standard pencil is just right for H0 or N scale, but a larger one is needed for S and O scales.



3 Push the pencil end squarely into the balsa, working diagonally from bottom to top in a checkerboard pattern. Turn the pencil as you work and overlap some previous impressions to vary the size and shape of the stones.

depths, further adding realism to the structure. Applying pressure with the metal eraser holder can also sometimes form depressions in the wood or cause the surface of some cuts to rise up or even chip off. But don't worry—I found that after adding a coat of paint, these imperfections make the walls look more realistic.

When you're done embossing the stonework, glue the walls together. Use modeling putty to fill any gaps at the

corners. When the putty dries, carve it to match the stonework.

Painting and finishing

My fieldstone has a basic grayish-white hue with streaks of color that reflect the mineral content and produce a realistic weathered effect, 4. You can tweak my painting techniques to produce an effect all your own.

I started with Floquil reefer white as my base coat. Then I held a spray