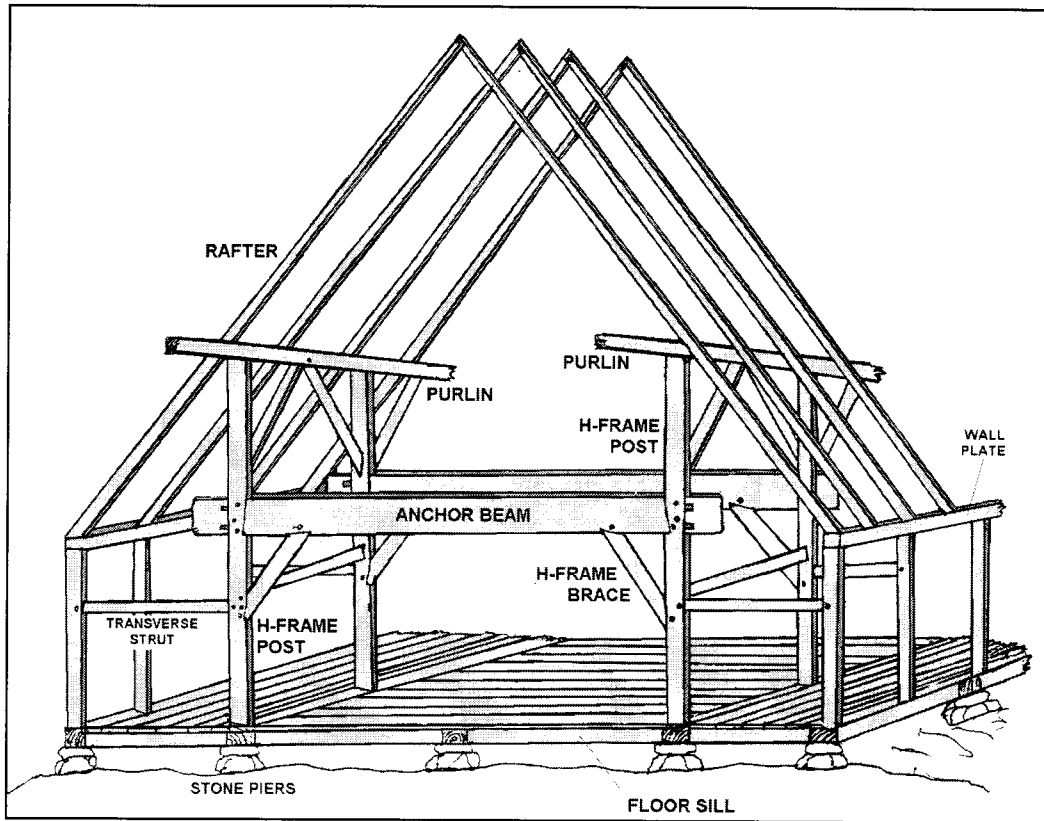


## How You Know when You're Looking at a DUTCH BARN

Dutch barns have been large and lovable parts of our landscape for over 300 years. They have a very recognizable shape — when they haven't been fooled with. What's even more recognizable is what's inside, which makes them one of the easiest types of architecture to identify.

*Inside* the give-away is the **H-frames**, which march down the center of the barn from one gable to the other. (A **gable** is the part where the roof makes an upside-down V — like in the picture above.) The H-frame is made of two large wooden posts, which are connected by a very large wooden beam or **anchor**. You can recognize a Dutch-style anchor beam because of its great size, and also because of the connection where the anchor goes into the post. This is called a **mortise-and-tenon joint** (see picture to the right). In a Dutch barn, the extension or **tenon** goes right through the post and comes out the other side. There

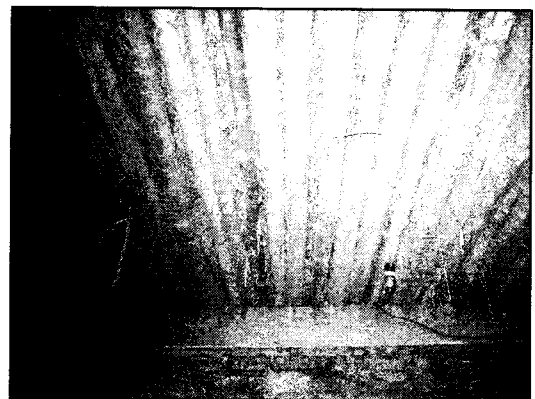




are usually braces between the posts and the anchor beam (see above). The anchor beam sits more than halfway up the posts, so the top of the H is stubbier than the bottom. This makes for a high, wide first story with a short second story above the anchor beams. The second story was used for storage for piles of grain plants (called **sheaves**) before the grain had been removed. Originally, **mow poles** (see lower right) were stretched across the beams to make a loose, airy floor for the unprocessed sheaves.

Wood beams called **purlins** connect the tops of the H-frames, and run lengthwise, gable to gable. The roof rafters sit on these. This means that Dutch barns are not held up by their walls but by the H-frames (and purlins), which hold the whole thing together the way our skeletons keep *us* from collapsing in a heap.

*Outside* the walls are pretty short on the sides — often just one story tall — while the tip of the gables can be 40 feet up. This is one way to identify the outside of Dutch barns: a short sides with a high-sloped roof.



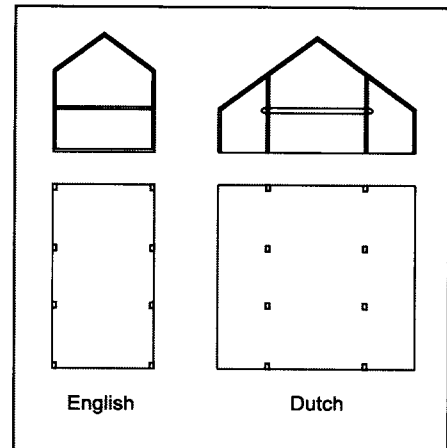


Also on the outside, the large doors in the gable ends are typical of Dutch barns, since other types of barns have doors in the side walls. In fact, the gable-end doors were often **Dutch doors**: one or both doors were cut into top and bottom parts (see photo to left). Other distinctions you can see from outside are the roughly square floor plan (most other barns are rectangular if you look at them from above), and the stone piles or **piers** that hold the floor beams and posts above the ground. The piers keep the floor above water and dirt — and rot.

Rot was important. Or, rather, *avoiding* rot was important, because nobody likes to eat rotten wheat. You kept the barn floor above the soggy ground, and you kept the sheaves above the anchor beams in an big airy space, because rot (and rats) could destroy the wheat before you had a chance to remove it from the stocks.

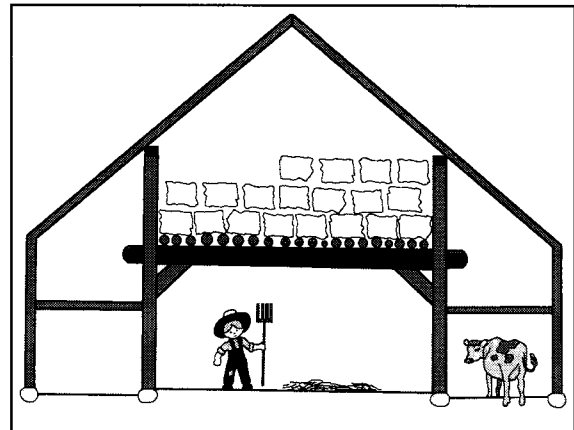
The Dutch designed their barns to take care of such things because the barns were originally wheat-producing factories. They needed to be, since the Dutch and other early settlers had to eat, and what most Europeans ate was bread — and dumplings, and cakes, and cookies. All of them are made of wheat. (So is pizza.)

This is why they wanted the wide floor space in the middle. This center space or **aisle** is called a **threshing floor** because it was used for threshing and winnowing, which were the two main parts of making harvested wheat into bushels of grain to be sent to the mill. (The mill turned the wheat grains into **flour**, which is the white powder that bread and cakes and cookies are made of.) The great space allowed farmers to spread out the sheaves. (Do you remember what sheaves are?) Then they slammed them with various types of pounding things — like the **flail** in the drawing to the left — in order to break apart the stocks, leaves, and grain. Next the stocks could be scooped up with a type of pitchfork, which wouldn't pick up the little grains. This got rid of most of the

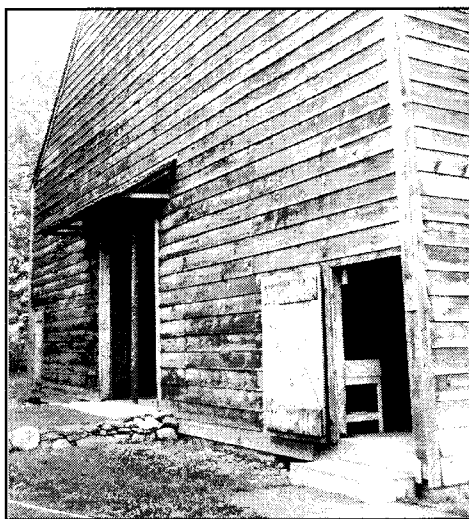


part of the wheat plant that we don't want to eat. What remained on the floor were the grain, grain husks or coating (called the **chaff**), and smaller bits of leaf and stock that couldn't be picked up with the pitchfork. This was the **threshing** part of the process.

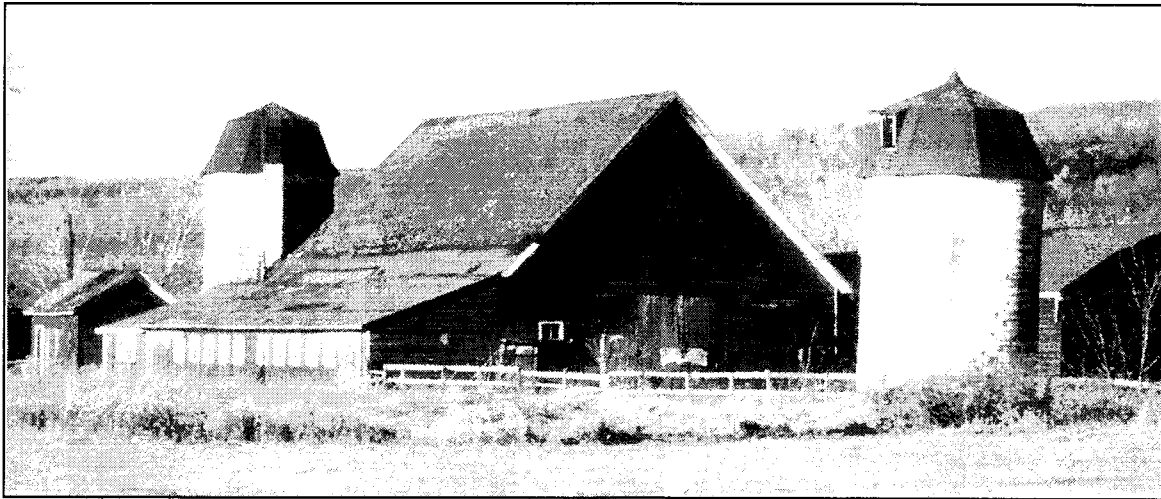
For **winnowing**, the Dutch made good use of their large Dutch doors to control the wind that ran through the barn. Wind came in at gable ends, and it blew across the threshing floor. By closing the lower half of the door, you could keep the wind high, where you wanted it. People tossed the remaining grain/chaff mix high in the air, and the wind blew away the light chaff and leaves, while the grain fell back to the floor. Pretty clever — and pretty easy, if you have the muscles to toss around baskets or shovels full of grain and chaff for 10 or more hours a day!



So, the center aisle was used for threshing and winnowing, as well as other activities like dancing (when people weren't threshing and winnowing). What about the side aisles? These had different uses. One was keeping animals. Boards could be put up to keep the animals out of the threshing area, but they would be conveniently nearby so you could feed them some of the leaf and stock leftovers. You could also use the side aisles for storage, or for little workshops. If things in the side aisles were dirty (like animals), barns had small doors toward the side walls, usually on the gable ends, so you wouldn't have to tramp all over the threshing floor.



So, we have 6 things to look for when we're trying to recognize an old Dutch barn. These have been underlined above. On the outside, we look for: (1) a high-sloped roof and short sides; (2) a square shape for the floor area; (3) large Dutch doors in the gable ends; (4) small side doors near the corners of the gable ends; and (5) stone piers keeping the floor off the ground. Inside we look for: (6) the H-frames. The outside features may have been monkeyed with, over the years. But, if you can get inside, you've set: If you see an H-frame ... it's a Dutch barn.



### **Some Things to Think About:**

1. If we knocked down the walls of a Dutch-style barn, would the rest of the barn fall down, too? Why or why not?
2. Why did the Dutch farmers want to keep floor beams and planks off the ground?
3. Why did the Dutch want a large space in the center of the barn?
4. What are Dutch doors, and why would you want to make them?
5. What's the difference between grain and chaff?
6. Why didn't the farmers just send the stocks of wheat to the mill?
7. What is threshing? Would you like to do it?
8. We still eat bread. Do you think we do threshing and winnowing now?
9. Can you think of ways that Dutch barns were inconvenient — ways they could have been more useful to the farmers?
10. If you needed to build a barn, would you build a Dutch-style barn? Why or why not?

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