

TIMBER FRAMING

JOURNAL OF THE TIMBER FRAMERS GUILD

Number 55, March 2000

Index to Issues 1-54

Historic American Timber Joinery: The Dropped Tie Beam

Jack Sobon

CONTENTS

TOPICS	2
Nancy Janssen Currier	
HISTORIC AMERICAN TIMBER JOINERY: A GRAPHIC GUIDE	
I. TIE BELOW PLATE	4
Jack A. Sobon	
INDEX TO TIMBER FRAMING ISSUES 1-54, 1985-1999 BY SUBJECT AND AUTHOR	10
BOOKS: <i>A Guide to Medieval English Tithe Barns</i>	
Bill Keir	24

On the cover, late barn (after 1860) in North Adams, Massachusetts, built with dropped tie beams. Photo by Jack Sobon.

Published Quarterly
Copyright © 2000
Timber Framers Guild
PO Box 60

Becket, MA 01223

www.tfguild.org

joel@tfguild.org will@tfguild.org

888-453-0879

Editorial Correspondence

PO Box 275, Newbury, VT 05051
802-866-5684 rowerk@together.net

Editor: Kenneth Rower

Contributing Editors

History: Jack Sobon

Timber Frame Design: Ed Levin

Correspondents

England: Paul Price

Subscription \$25.00 Annually
Or by Membership in the Guild

ISSN 1061-9860



1 9 8 5

TOPICS

The Best We Can Do

IN America, does our economic and political system reflect the restless and chaotic opposing forces of the natural world? Or, will Nature come to mean *human nature*? Not long ago on a Boston highway, I passed an old-fashioned VW beetle with a bumper sticker that advised, "Save the planet, kill yourself!"

The situation is not without hope, but the contests are often fierce, involving real questions of survival. The jobs-versus-owls issue, an example of the competing interests that seem to haunt every environmental problem, was clearly and sympathetically presented by Bob Sproul at the Guild's October conference in Fairlee, Vermont. Bob owns a sawmill in Myrtle Point, Oregon, with modern equipment and efficient organization. He's been in the timber business a long time, and he's never lost his appreciation for the benefits of forest beauty. Part of his enterprise is salvaging fallen trees. This work has brought him into close association with timber framers, who are often looking for the large, premium timbers that result.

Myrtle Point, in the southwestern quarter of Oregon, lies about equidistant from Coos Bay to the north and Siskiyou National Forest to the south. Both the spotted owl and the marbled murrelet inhabit certain locations in this area. These two threatened species sit at the eye of the hurricane raging over how to use our National Forests. Their natural habitat is old-growth forest stands.

In April 1993, President Clinton hosted the Northwest Forest Summit. The result of the gathering was a loosely formulated goal called the President's Plan. The intention was to resolve deadlock between environmental groups and the timber industry over the fate of remaining old-growth forests, defined for this purpose as groves of trees not pruned or managed for at least 200 years. The plan was proposed on the heels of the frenzied buying, selling and building of the 1980s. Both forest advocates and the timber industry had hopes that a compromise would be reached.

TIMBER FRAMING, Journal of the Timber Framers Guild, reports on the work of the Guild and its members, and appears quarterly, in March, June, September and December. TIMBER FRAMING is written by its readers and welcomes interesting articles by experienced and novice writers alike. Contributions are paid for upon publication at the rate of \$125 per published page.

Twenty years earlier in 1973, the National Environmental Policy Act had been passed. This act required the U.S. Forest Service and the Bureau of Land Management (BLM) to analyze how they were managing National Forests and other public lands throughout the country.

In 1976, the National Forest Management Act was passed, and specific plans were created for each National Forest. Most of these forests are west of the Mississippi River. According to Tom Hussey, the Forest Service's staff member for regional planning in the Pacific Northwest, the initial plans were a type of zoning that divided the forests into areas for recreation, commercial activity (chiefly logging) and wildlife habitat. There were some rules and regulations. Awareness of the speed of environmental change was just beginning.

The President's Plan of 1993 was not a detailed blueprint, but rather the first step in creating new management directives based on scientific information. With funding from the Department of Agriculture and the Department of the Interior, parent departments respectively of the Forest Service and the BLM, a nongovernmental group was formed to gather the information. This 100-person group, the Forest Ecosystem Management Assessment Team (FEMAT), comprised "wildlife biologists, ecologists, foresters, hydrologists, analysts and technicians of all sorts, under the direction of Jack Ward Thomas . . . with the mandate to come up with a workable strategy for the forests in the Pacific Northwest," as described by The Forest Partnership, a group of timber industry and environmental organizations which co-founded the movement for certified wood products and forests, and which publishes the periodical *Initiatives For a Sustainable Forest Industry*.

The focus on the Pacific Northwest reveals a major commercial difference between western and eastern forests. Sales of timber from National Forests provide a large part of the raw material for the western timber industry, whereas the majority of timber milled in the East is cut from private lands.

FEMAT came up with 10 options, of which the one selected (the ninth) called for a "structure-based" management plan. (Over the years, the names have varied for well-designed forest plans—sustainable forestry, biodiverse forestry, ecosystem management.) Structure-based management includes inventory, selective harvests, identification of tree stands and regulations for clearcuts and fire protection, and, under Option 9, has as a primary aim greater protection for fish and wildlife.

Option 9 brought general dissatisfaction to both industry and environmental groups. The first group felt the rules were too re-

strictive, the second not strict enough. In its publication *Initiatives* (Vol I, No. 3), The Forest Partnership observed, "Under Option 9, most species were given a 40 percent to 60 percent chance of surviving and being well-distributed throughout the ecosystem. It must be kept in mind that these percentages measure likelihood of viability for habitat—how this will translate into species viability is unclear."

The National Forest Plan of 1994 (based on Option 9) created 19 forest plans for individual forests. The territory west of the Cascade mountain range in the states of Washington and Oregon and in northern California is identified as the region in which the greatest number of old-growth stands remain. (Myrtle Point lies squarely in this region.) According to the Forest Service's Tom Hussey, old-growth forests comprise 4 percent of all U.S. forests, but four-fifths of these forests are inside National Forests. Elsewhere, one reads or hears that 90 percent of U.S. old-growth has been cut. Together with the shifting definition of old-growth, the numbers don't really describe the matter. (Some years ago, the Guild, in correspondence with the Forest Service, used a standard of 160 years or older to define old-growth trees. In another context, according to Bob Sproul and others, it takes 80 years for a Douglas fir to produce a timber of interest to a demanding modern timber framer.) Some stands are second-growth with very old trees. And in any stand there can be single old-growth trees called "residuals." The territories are often so remote that we may not have found all of the old-growth.

The implementation of Option 9, meanwhile, expanded the number of regulations governing logging. Greater care was expected in treatment of waterways, both fish bearing and intermittent. Time-of-day restrictions were placed on logging activities. Some limitations related to fire hazards; others were to facilitate nesting habits of the marbled murrelet. Field inspections increased. Site visits included marking of trees and post-logging impact inspections.

National Forest timber sales have always been conducted at public auction, with sizable tracts going to the highest bidders, usually large companies. All parties must pay up in advance of the removal of timber. Charges now include new impact fees.

The final burden that has brought Bob Sproul to his knees was a court injunction that virtually stopped all logging, regardless of type, in certain areas. This injunction, placed in August 1999 on two dozen timber sales in the northwest and southwest regions of Oregon, was the result of litigation (Oregon Natural Resources Council et al v. U.S. Forest Service et al) brought against the Forest Service by 13 environmental organizations led by the ONRC and includ-

ing the Northwest Ecosystem Alliance and chapters of The National Audubon Society.

Carey Stillwell, a staff lawyer with the Western Environmental Law Center in Eugene, Oregon, told me that a stage has been reached called "stipulation to dismiss," which means that the injunction will be lifted when the settlement agreement is fulfilled. The agreement requires the Forest Service to perform accurate surveys that it was originally required to do under the terms of Option 9.

IN northern California, an independent case known in short form as "Headwaters" (it has its own Website) also illustrates the contentious and time-consuming nature of contemporary forest issues.

In settlement of the issue, which has been fought out over roughly the same time period as the Option 9 saga (since 1993), some 8,200 acres of old-growth redwood forest are to be bought by the government from the Pacific Lumber Company for the sum of \$380 million. Until the 1980s, Pacific Lumber had been logging for over 100 years and had established a reputation as a model employer and forest manager. But in the era of the savings and loan debacles, they sold to Maxxam, headed by one Charles Hurwitz. The sale dramatically altered Pacific Lumber's financial stability and leadership, and exposed the redwoods to imminent danger.

In the coming transaction, the state of California will pay \$130 million and the United States government \$250 million. Pacific Lumber for its part has agreed to create a Habitat Conservation Plan and a Sustained Yield Plan to govern forestry practices on its remaining 200,000 acres. According to the information posted on the Headwaters Website, an approved habitat conservation plan is a long-term conservation plan established under the U.S. Endangered Species Act that "allows a private landowner to incidentally take listed species, provided adequate conservation measures are enacted that allow for the long-term survival and recovery of the species."

Since 1994, many Habitat Conservation Plans (HCPs) have been approved and enacted. The President's Plan included a concept of "no surprises" intended to relieve developers, landowners and timber industry members of unexpected, punitive regulations. HCPs were supposed to assess potential impact on wildlife, minimize takings and provide plans for species recovery. To this end, federal and state support in various forms would be made available in the management of private lands. So far, the results of HCPs are mixed and sometimes downright negative. HCPs constitute a new issue between commercial and environmental interests. They also illustrate the

different time lines which govern the market and scientific research.

A sustained yield plan, meanwhile, is specified as "a state plan which provides for maximum sustained production of high-quality timber products over a 100-year planning period . . . requires protection of watersheds, wildlife, and fisheries, and must abide by applicable state and federal laws such as the endangered species acts. . . . an SYP is in force for 10 years."

The details of public hearings and reviews are lengthy and symptomatic of our system that turns on a recognition of opposing forces. We are a people who have learned to bring our passionately held beliefs and opinions to a bargaining table where stylized and legal debate replace aggression.

We are also a people who have developed the capacity to see ourselves in the suffering of the weak—perhaps even the weak of other species. Human nature may be the cause of most of our environmental problems, but only humans (we suppose) agonize over the losses incurred and attempt to rectify them. At the same time, we sometimes recognize in ourselves the self-centeredness of the strong. For many of us in timber framing, economics is not a theoretical subject. It is very much about survival. We, ourselves, may be among the endangered species.

Bob Sproul described finding a ring of scientists on their knees in a remote part of the forest. They were inspecting lichen and fungi. It was a moment that highlighted for him the unreasonableness of the situation, with its focus on tiny details. On the other hand, we do now understand that botanicals growing only in the cool dampness of old-growth forests may have curative potential for some of our ills. We don't know what's out there.

It is a fact, however, that the ring of forces surrounding National Forest issues is large. It includes private and governmental scientists, industries, agencies, elected officials, environmental groups and private citizens. The process of debate is cumbersome and clumsy, and we live with it as the best we can do.

—NANCY JANSSEN CURRIER
Nancy Currier lives in Bedford, N.H., and takes a steady interest in local and national forest issues. The Headwaters Website is <ceres.ca.gov/cral/headwaters>.

Historic American Timber Joinery, A Graphic Guide

THIS article is first in a series of six to discuss and illustrate the joints in American traditional timber-framed buildings of the past, showing common examples with variations as well as a few interesting regional deviations. The series will not describe the cutting process (that is best left to the “how to” books), but it will occasionally mention whether a joint is simple to fashion or labor intensive. Structural merits will be discussed only in general terms. Most of the research underlying the articles has been done in the heavily timber-framed northeastern United States, but the findings are applicable over a much wider area. This series was developed under a grant from the National Park Service and the National Center for Preservation Technology and Training. Its contents are solely the responsibility of the author and do not represent the official position of the NPS or the NCPTT. The six articles, to appear in successive issues of *TIMBER FRAMING*, will be entitled, respectively :

- I. Tying Joints (Tie below Plate)
- II. Tying Joints (Tie at Plate)
- III. Sill and Floor Joints
- IV. Wall Framing
- V. Roof Joinery
- VI. Scarf Joints

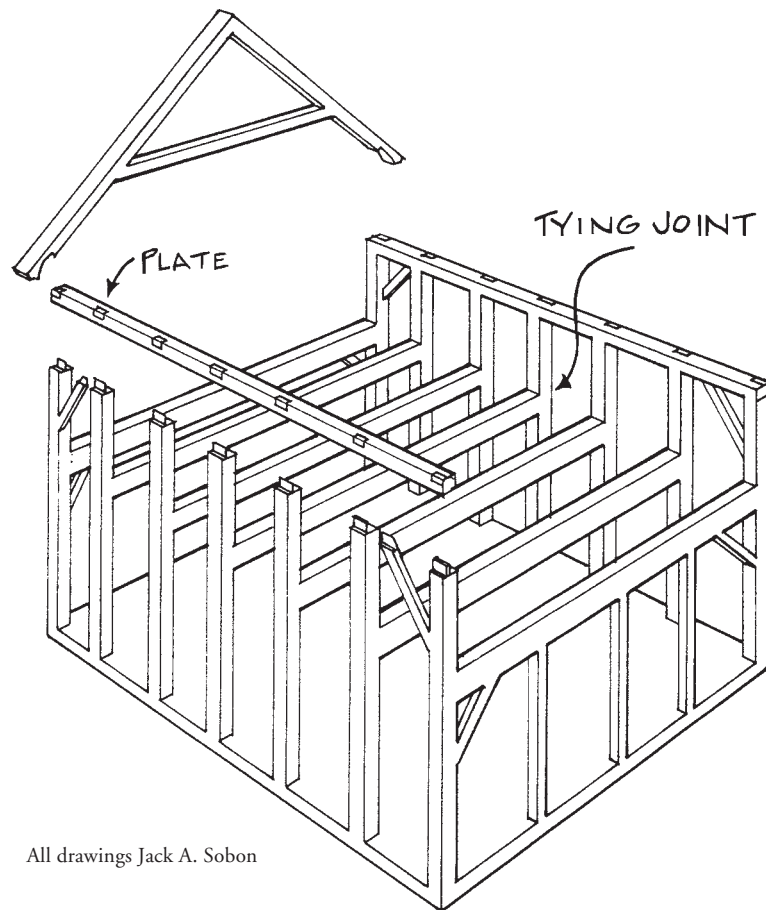
I. Tying Joints (Tie below Plate)

OF all the joints that make up a traditional timbered frame, the most important are the tying joints. Tie beams, also referred to as crossbeams, anchorbeams, ties and lower chords (in trusses), are transverse horizontal members that span from wall to wall or eave to eave, resisting the outward thrust of the roof planes. Where the tie beam joins the wall framing, we have the *tying joint*. Tying joints are usually the only connections in a frame that must resist tension. When a tie beam joins the feet of principal rafters, the result is a triangle, a rigid structural shape. In wide structures, rafters are often supported by purlin plates somewhere in mid-span, and their effective span is thus shortened (see Fig. 2). Support by purlin plates normally reduces outward thrust of the rafter at the plate and consequently the load on the tying joint. But wind loads can cause bracing to exert tension loads on the tying joint. (See, for example, Ed Levin, “Frame Engineering,” TF 30.) In aisled structures, the tie beams may not be continuous across the entire width, but may span from post to post of the aisles. Of all the joints in a frame, the tying joints especially must be of good structural design and each one well crafted (there is no redundancy).

Because of their complexity and variety, tying joints may conveniently be divided into two groups: tie below plate and tie at plate. This article will focus on the former group.

The tie below plate, or *dropped tie* as it is often called, joins the wall posts below the plate. Its connections are generally simpler than those of the tie into plate and probably its configuration is the more widespread. Since it lies below the plate, occasionally several feet, and the rafters join to the plate, it doesn't create the nice triangle with the rafters that engineers like to see. The rafters carry roof thrust to the plate. The plate transfers the load to the post. The posts are joined by the tie beams. Each joint must be sufficient to carry the load, and the post must not break.

If the load path is convoluted, why did the arrangement arise? In traditional timber framing it is often simpler and stronger to stagger joints. When a joint is cut in a timber, wood is removed



All drawings Jack A. Sobon

Fig. 1. In the typical New York State timber-framed Dutch house, the plate is 3 to 4 ft. above the second floor. The closely spaced H-bents, typically 3 to 5 ft. on center, illustrate the tie-below-plate condition.

and the timber's strength is diminished. Joining multiple members at the same location often creates complex joinery and can weaken members excessively. Raising the plate a foot or two above the tie avoids this problem, and raising the plate several feet above the tie also makes the space under the roof more usable.

The Through Mortise and Tenon (Figs. 3-5). Probably the most prevalent tying joint in America, the through mortise and tenon was the standard joint in the carpenter's repertory where a joint was subject to tension loads. The mortise is cut completely through the post to maximize the tenon length. Because the connection relies entirely on the pins to resist withdrawal, pin size and location are critical. Failure of this joint can occur in five ways:

1. The pin can shear off (pin too small or decayed), and the joint withdraws.
2. The wood in the tenon between the pin hole and the end of the tenon, called the *relish*, can split out (tenon too short or pin hole too close to end of tenon), and the joint withdraws.
3. The mortise face can split out (pins too close to face), and the joint withdraws.
4. The post can split in a line from the pin hole up to the post's top tenon (joint too near the post top), and the top portion of the post breaks away.
5. The post can break off at the tying joint (too much cut out of the post).

Generally, through tenons are used to maximize the relish in the

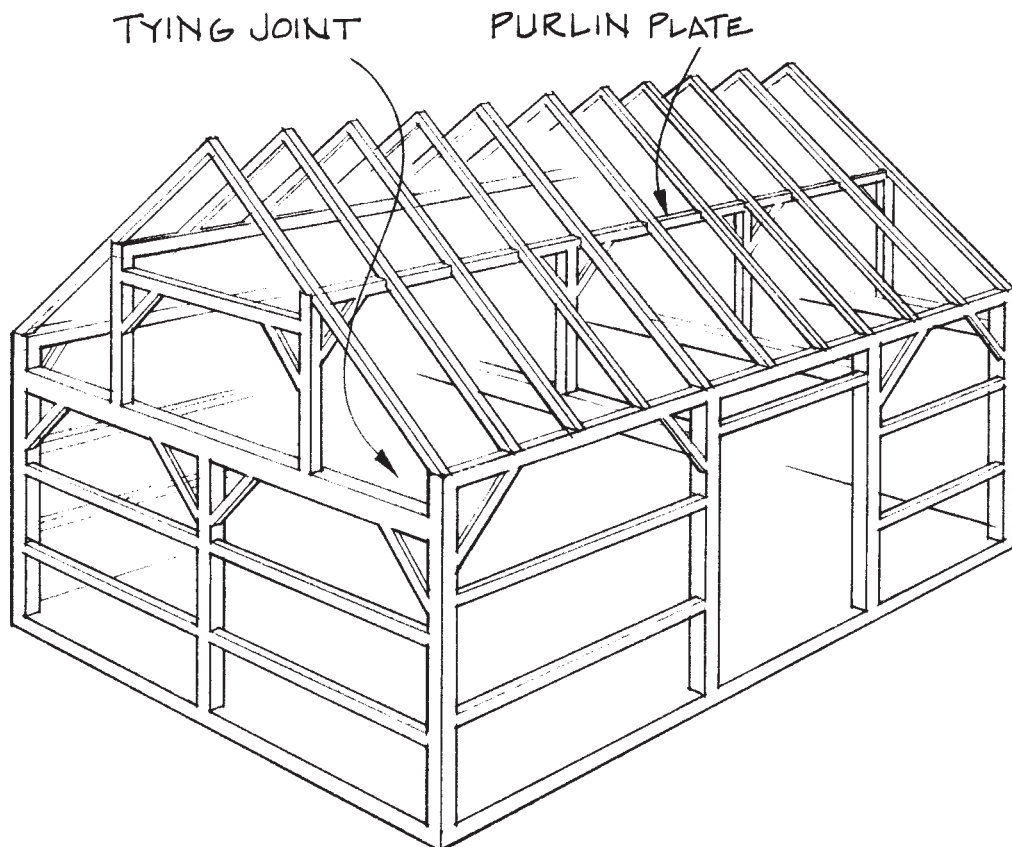
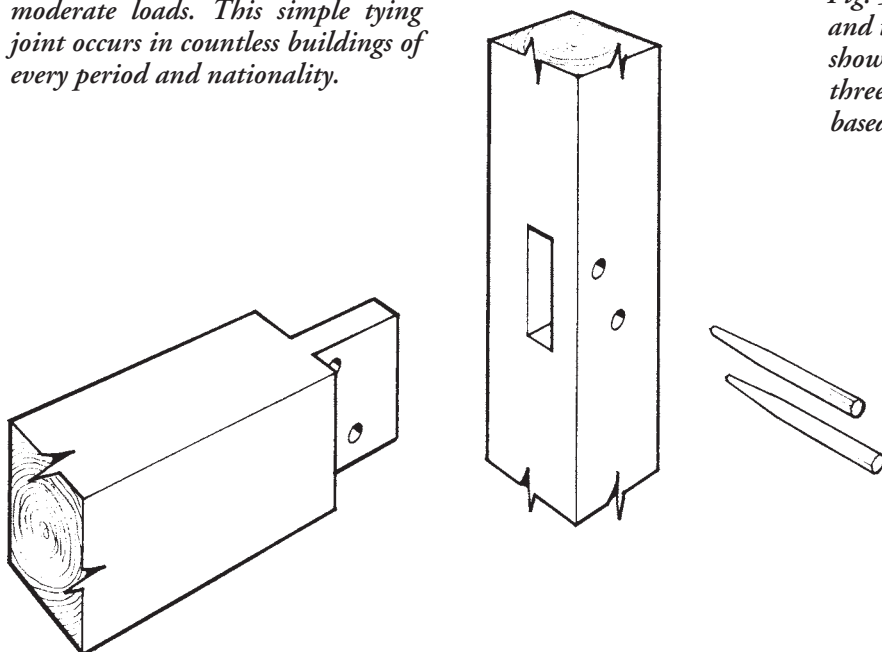


Fig. 2. The three-bay, side entrance barn, common throughout western New England and New York after about 1800, made use of the tie-below-plate tying joint. The rafters were additionally supported by continuous purlin plates at their midspan.

tenon beyond the pin hole, but a few blind (not through) tenons have been found. The use of two or more pins is common, often not in line to avoid mortise face split out. Some typical pin placements are illustrated in Fig. 5.

In most buildings, this joint is housed because the tie beam often carries floor loads. Instead of the tenon alone, the full width of the beam bears on the post; a substantial increase in bearing as well as shear strength is accomplished. A diminished housing is typical in scribe rule frames, a parallel housing in square rule frames. (Square rule frames are marked and cut according to a

Fig. 3. The through mortise and tenon. In its most basic form, it handles moderate loads. This simple tying joint occurs in countless buildings of every period and nationality.



system in which a smaller, straight and square timber is envisioned within each real, irregular timber; all joints are cut to the surfaces of the imagined inner timber, such that standardization is possible for similar pieces, and assembly is necessary only once, at the raising. Scribe rule frames, on the other hand, are built according to an older system that custom-fits each timber to an adjoining one, a process that requires arranging the individual pieces on a framing floor and assembling and disassembling large parts of the frame before raising the whole.) Because the diminished housing retains more wood on the post and allows more relish in the tenon behind the upper pin hole, it makes a marginally stronger connection. The depth of housing in a scribe rule joint is typically consistent within a frame and is commonly 1 in. In square rule framing, many joints appear to be housed to some depth simply as a consequence of the system, but load-bearing tying joints will have noticeably deeper housings.

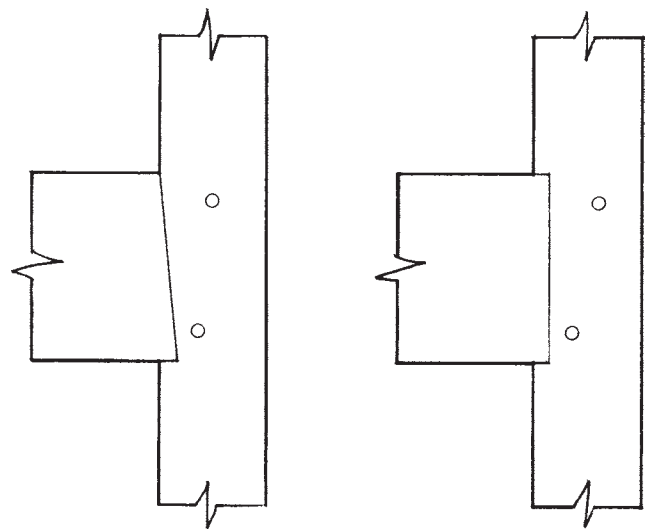
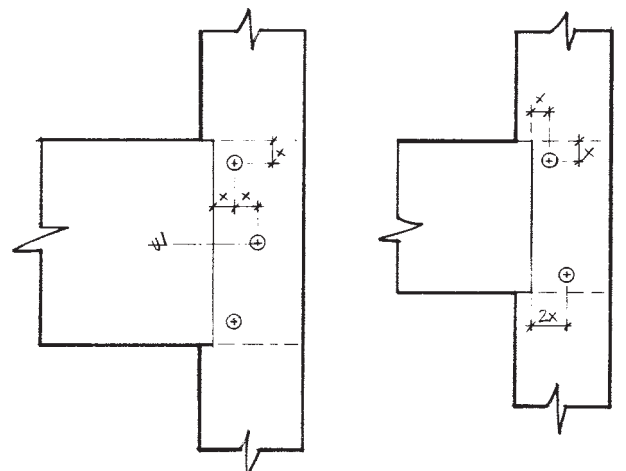


Fig. 4. The two basic types of housed through mortise and tenon joints. The diminished housing (on the left) was primarily used in scribe rule frames. The parallel housing (on the right) is found in both scribe rule and square rule frames.

Fig. 5. Pin number and placement varied with the size of the member and the preferences of the builder. Members 6 in. deep or smaller (not shown) usually have one pin; 7 to 10 in., two pins; and above 10 in., three pins. The distance shown as "x" is often either 1½ in. or 2 in., based on the tongue or blade of the framing square used by the builder.



Blind-Housed Through Mortise and Tenon (Figs. 6 and 7). When the post face is wider than the tie beam, the tie beam is often housed into the post. It may be set flush with the layout face of the post (for example, the outside face of an outside post) or centered. A wide post can minimize breakage at the joint. Occasionally a tie beam is reduced in width at its end to allow for a blind housing. This extra wood retained on the post adds considerable strength compared with a post whose face has been cut right across to form an open housing.

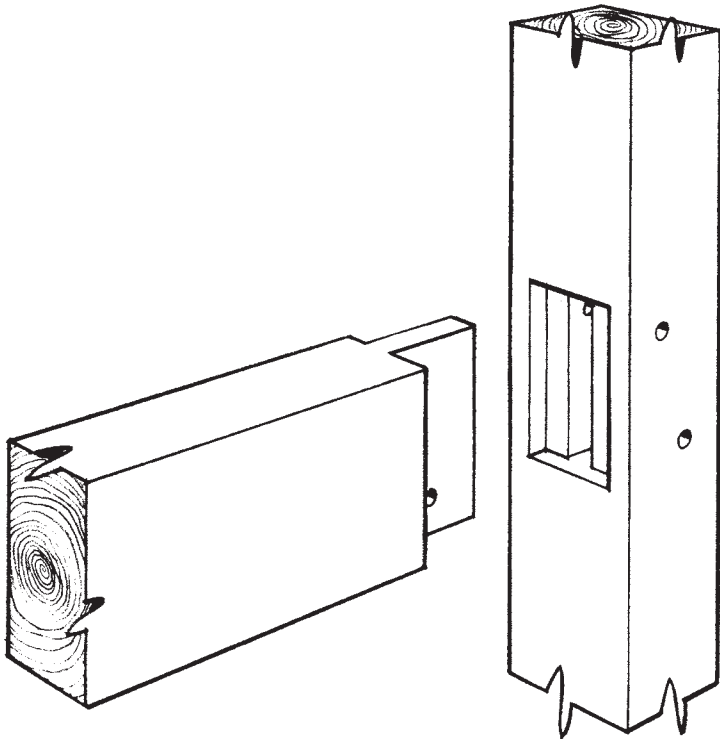
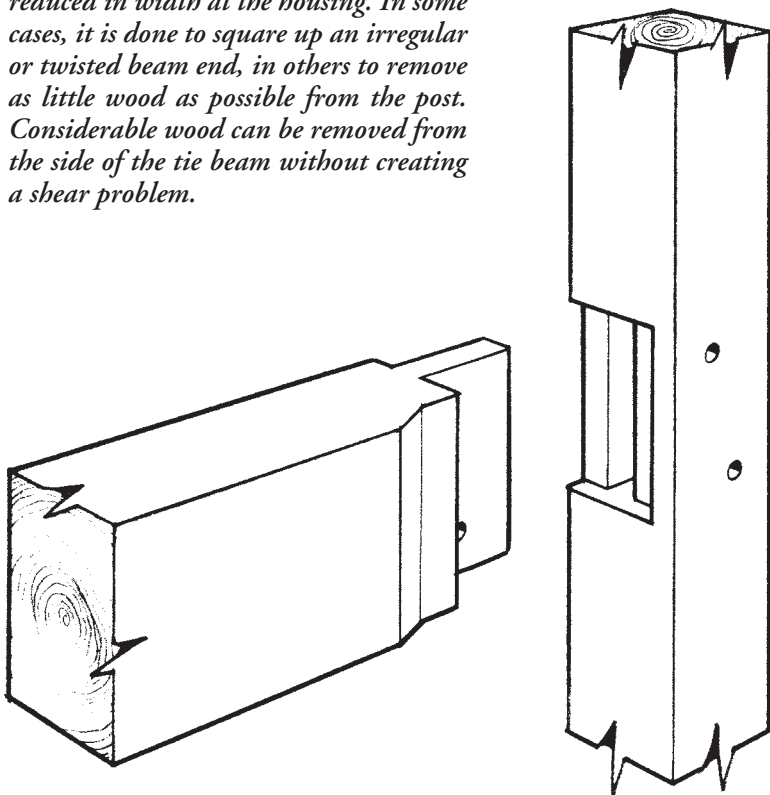


Fig. 6. In a blind-housed through mortise and tenon, the tie beam may be flush with one side or centered as shown. The uninterrupted long grain flanking the joint on the post resists breaking at the joint and mortise face splitout.

Fig. 7. Occasionally, the tie beam end is reduced in width at the housing. In some cases, it is done to square up an irregular or twisted beam end, in others to remove as little wood as possible from the post. Considerable wood can be removed from the side of the tie beam without creating a shear problem.



Paired Through Mortise and Tenon (Fig. 8). In frames with larger members, paired or twin tenons were occasionally used. Such a configuration will likely outperform a simple mortise and tenon, with reduced tendency for pin shear and mortise-face splitout. However, the advantage must be judged against the substantial additional work in the cutting of the joint. Paired tenons are sometimes found in mill structures, barns and large wooden machines like cider presses.

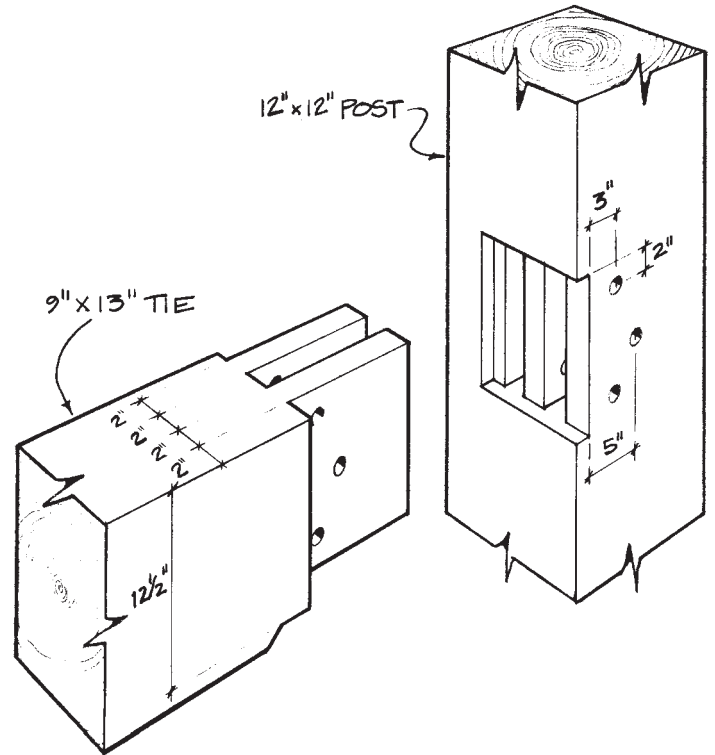


Fig. 8. Paired or twinned through mortise and tenon as found in a ca. 1840 barn in Middleburg, New York. The joint is housed flush with one side. As is typical of square rule structures, the tie beams are reduced to a consistent depth (here 12½ in.) at the joint. This rugged connection has well resisted the forces in the 50-ft.-wide barn.

The Wedged Dovetail Through Mortise and Tenon (Figs. 9 and 10). This joint is arguably the strongest to use in this particular application. It does not rely upon pins to resist tension. Instead, the bottom of the tenon is angled to form a half-dovetail as shown in the photo (from a late-18th-century barn, Great Barrington, Mass.). The mortise is extended above and also angled to permit a wedge to be inserted from the outside of the post. Though pins are used to bring the joint tight, the wedge-and-dovetail configuration does the work. If worked in green timber, shrinkage will allow some withdrawal. However, in many old frames with this joint, the connection is still snug. This is probably due to the speed at which timber ends dry. Much of the tenon's shrinkage has already occurred prior to assembly even though the interior of the timber a few feet away may still be saturated with water. Ordinarily it is difficult or impossible to drive the wedge further after the exterior skin is applied. Though this joint involves more work than the basic one, it is certainly worth the effort. It has been found in buildings of all nationalities and types and from every period.



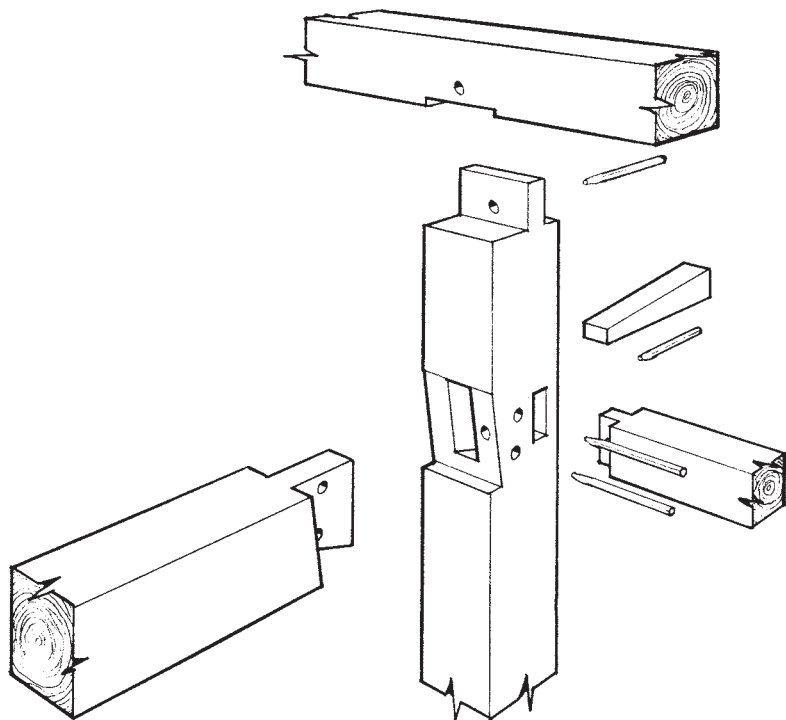
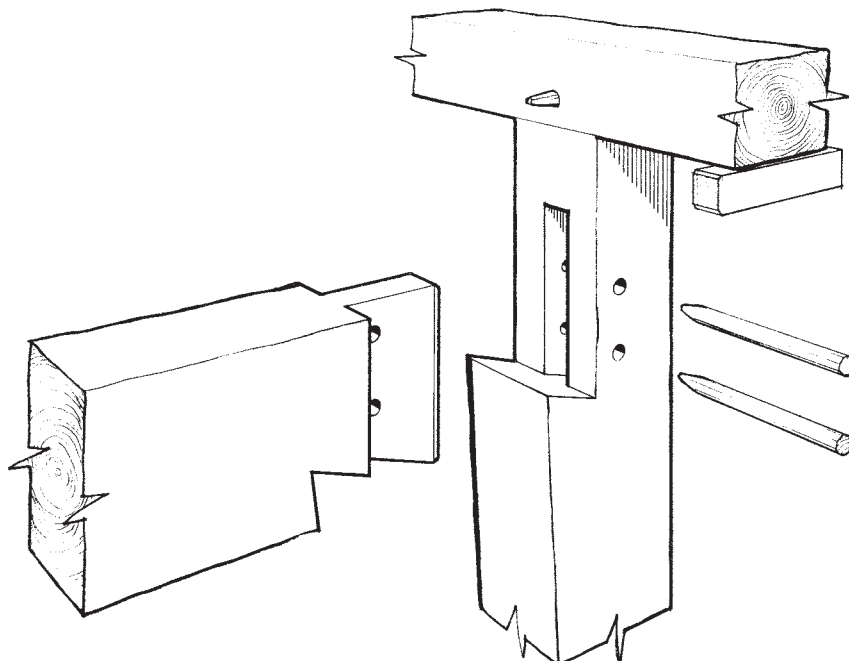
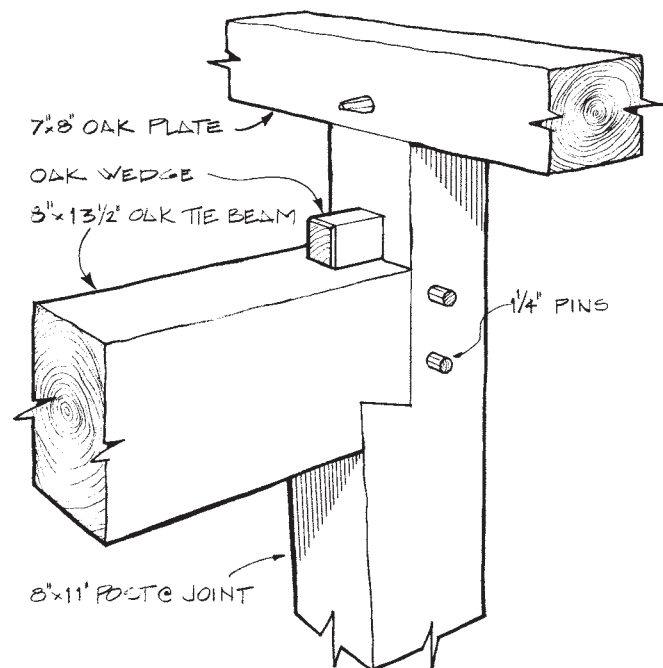
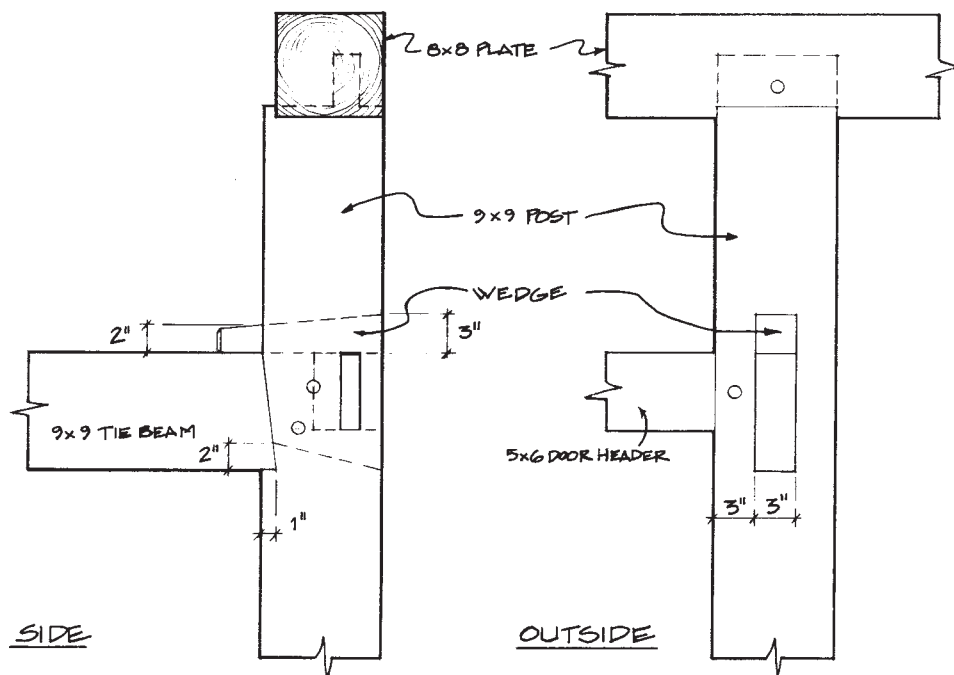


Fig. 9. Above, exploded view of the wedged dovetail through mortise and tenon in a late-1700s three-bay, 30x40-ft. English barn in Adams, Massachusetts, framed almost entirely of beech.

Fig. 10. At right, side and end views of the same joint with dimensions. A door header joins the post at the same height as the tie beam.

Figs. 11 and 12. Below and below right, assembled and exploded views of a wedged dovetail through mortise and tenon with dovetailed housing, as found in a 28x34-ft., three-bay side entrance barn in East Chatham, New York, probably dating from the second half of the 18th century. This unique joint has exceptional tensile strength.



The Through Mortise and Tenon with Dovetailed Shoulder (Figs. 11 and 12). A local (Columbia County, New York) variation of the wedged dovetail joint has the dovetail on the tenon continue into the housing which, because of the flare of the post, is about 3 in. deep. Only two buildings have been found with this joint. Judging by their location and similarities, they are likely the work of the same builder. The drawback to this joint would be the potential for the tie beam to fail in shear where it is notched to fit the housing. Apparently the load on the joint in this 28-ft.-wide barn is matched by the heavy oak tie beam, for nothing has failed in over 200 years.

The Kerf-Wedged Dovetail Through Mortise and Tenon (Fig. 13). A variation allows a basic tenon to become a full dovetail. Kerfs are sawn near the edges of the tenon and wedges are driven in to expand the tenon to fit a dovetail-shaped mortise. The kerfs are not parallel to the tenon edges, but angled away from the edge to avoid creating a splitting plane in the tie beam tenon when the edges of the tenon are bent away to follow the splay of the mortise ends. The advantage of this type over the wedged half-dovetail is that the tenon is not reduced in cross-section to create the dovetail. The disadvantage is that the angle of the dovetail must be shallow, and thus it will be affected relatively more by shrinkage of the tenon. In the illustrated example, the tenon flares only $\frac{1}{4}$ in. on the top and bottom. After seasoning and shrinking of the members, the two pins may be carrying the entire load. It would seem that seasoned timber is necessary to use with such a subtle dovetail flare. I have found only one timber example, though the joint is common in furniture.

the Dutch, primarily New York and New Jersey. However, it was not the only tying joint used in Dutch barns, nor was it used only in Dutch framing.

Necked Tying Joint (Fig. 17). Referred to in The Netherlands as a *Kopbalkgebint*, this joint also extends beyond the post for great strength. It may be used in non-aisled structures and still be protected from the weather as it can be tucked under an overhanging roof. The tie beam end resembles a head and neck. The tenon or neck fits in a slot cut in the top of the post to make a form of bridle joint. The post has paired tenons into the plate. This ingenious joint could hardly be improved upon. Its only disadvantage is that its location is fixed at just below the plate. It also requires posts wider than normal to accommodate the extra joinery. Only three American examples have been documented, two in Dutch barns in Blenheim and Schoharie, New York, the third in a three-bay "English" barn in Warren, Vermont (See TF 30).

—JACK A. SOBON

This unusual tenon profile appears on three Dutch barns in Coeymans, New York, and is likely the signature of a particular builder.



Photos Jack A. Sobon

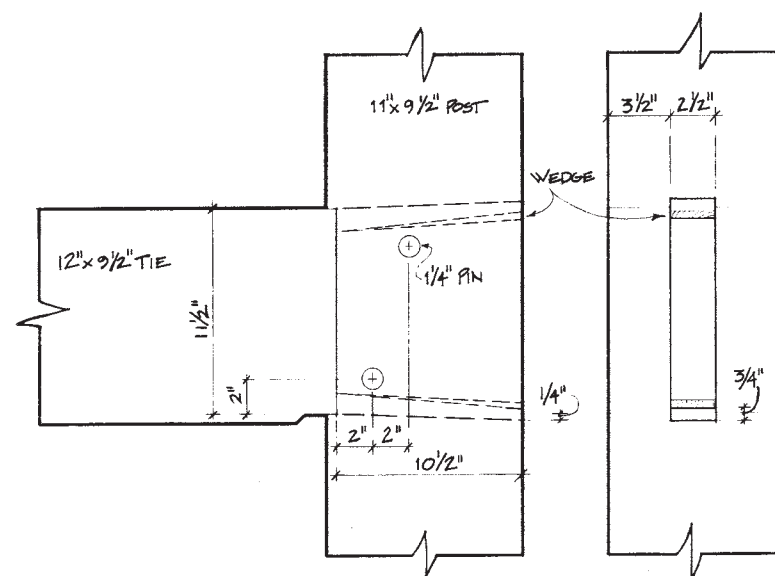
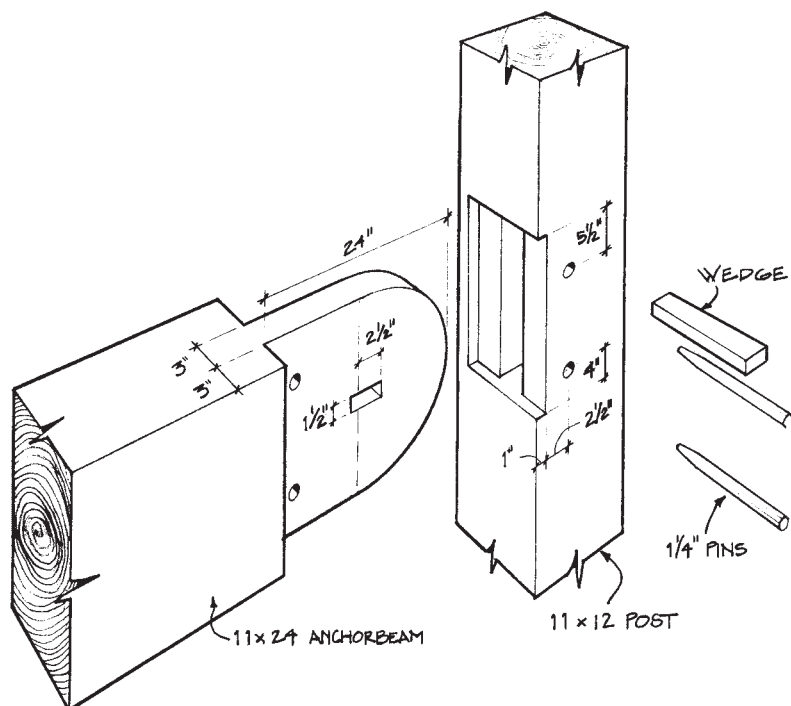


Fig. 13. This kerf-wedged dovetail through mortise and tenon joint is found in the upper floors (after 1810) of the Machine Shop at Hancock Shaker Village, Hancock, Massachusetts. It was used for both the tying joints and the queenpost trusses. This joint is much more common in furniture than in framing. Because of shrinkage in the height of the tenon, the wedges are loose, indicating that the pins are carrying the load.

Fig. 14. Below, a through mortise and extended tenon as found in an 18th-century 47x45-ft. Dutch barn in Root, New York. Two pins and a single wedge secure this housed version. Note that the pins are not equidistant from the top and bottom of the tenon. Perhaps this was done to reduce the tendency of the 24-in.-deep white pine anchor beam to lift off the shoulder as it shrank.

Through Mortise and Extended Tenon (Figs. 14-16). When the building is aisled as in Dutch barns, the primary tying joints typically occur at the posts that flank the central aisle. These posts are joined by an *anchorbeam*, creating an H-shaped bent. The side aisles are treated as lean-tos and gain their strength from the H-bent. Since the tying joint is now interior, the tenon can be extended for additional strength without being exposed to the weather. (In Europe, such tenons are often exposed on the exterior of buildings.) Adding a foot or so of tenon prevents relish failure. By adding wedges through this tenon, all five potential modes of failure mentioned earlier are effectively eliminated save one: where the post breaks at the tying joint. The wedges can be driven additionally after the building is finished and the wood seasoned. The only disadvantage is that an additional 2 ft. or more of length are required on the anchorbeams, typically the largest timbers in a building. (Sections 12 by 24 in. are not uncommon.) The profile of the tenon varied with the builder.

This joint is synonymous with Dutch barn framing and can be found in hundreds of buildings throughout the area first settled by



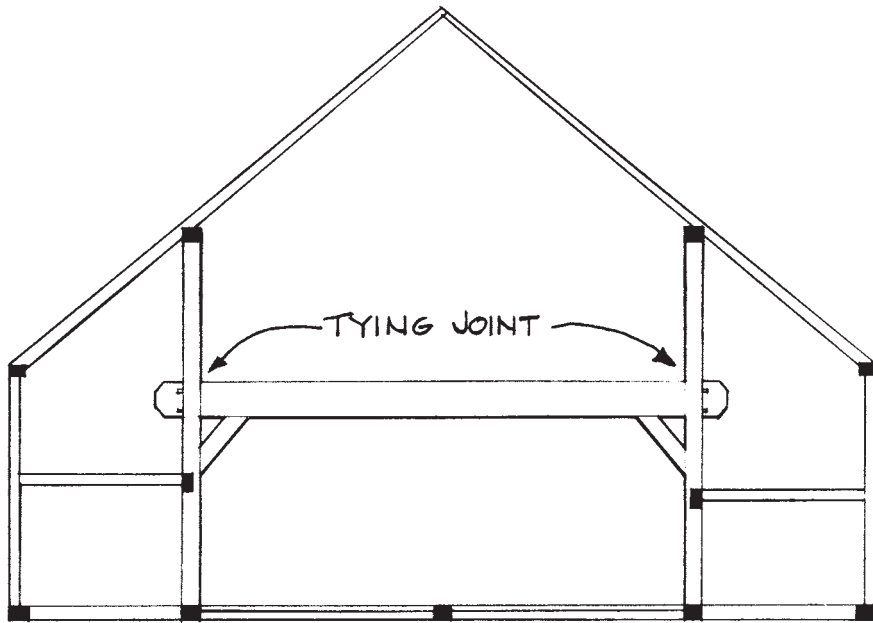


Fig. 15. The New World Dutch barn is an aisled building. The structural core is the H-shaped bent, each composed of aisle posts and an anchorbeam with heavy braces. Because the tying joint is interior, the tenon can be extended without being exposed to the weather.



Anchorbeam tenon ends from a pre-1820 Dutch barn taken down in Altamont, New York.

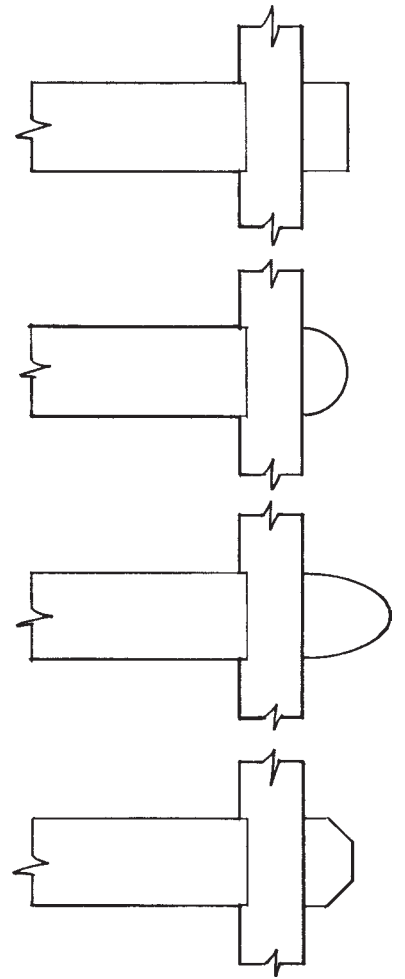
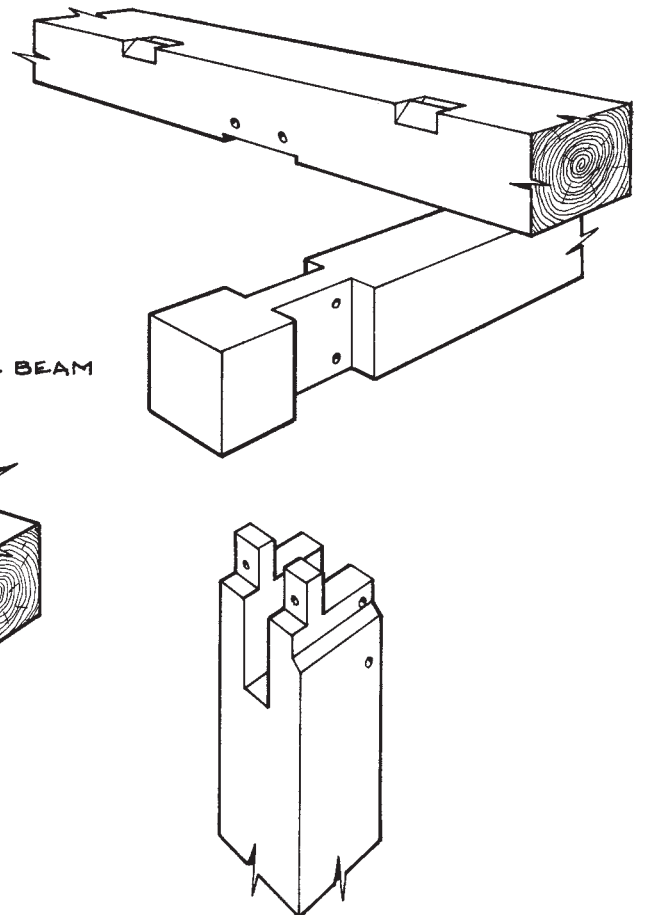
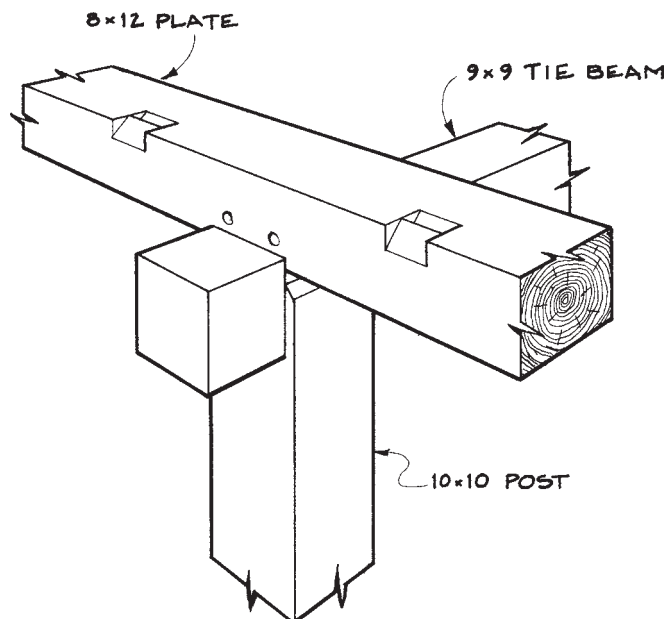


Fig. 16. Common variations on the shape of the protruding tenon. All versions have been found with two wedges, one wedge or no wedges.

Fig. 17. Assembled and exploded views of a necked tying joint in a ca. 1840, 30x40-ft. English barn in Warren, Vermont. The 9x9 tie beam has a 3-in.-thick neck secured as a normal through tenon with two 1-in. pins. The head protrudes 8 in. past the post. Two, 2-in.-thick tenons secure the post to the plate. This building was cut using the square rule system, and consequently the joint is housed into the plate. Roof thrust is additionally resisted by the plate bearing directly against the head of the tie beam.



Index to TIMBER FRAMING 1-54

October 1985-December 1999

Subjects

Apprenticeship
 Architectural Design
 Architectural Design Contests and Expositions
 Automation
 Barns
 Biographies and Profiles
 Book Reviews
 Bridges
 Business Council
 Business Management
 China
 Churches
 Compound and Roof Joinery
 Culture and Cross-Culture
 Design (See Architectural Design)
 Dismantling
 D-I-Y
 Durability (Earth, Wind, Fire, Water)
 Egypt
 Enclosure Systems
 Engineering (See Timber Design & Engineering)
 England
 Finland
 Forest Resource
 Framing Techniques
 France
 Germany
 Guild Affairs (Miscellaneous)
 Guild Board Meetings
 Guild Conferences
 Guild Workshops
 Heating, Ventilating and Air Conditioning
 Historic Framing
 Holland and Dutch America
 Humor
 Indexes
 Japan
 Layout Techniques
 Log Building
 Norway
 Pegs and Pegging
 Preservation and Reconstruction
 Profiles (See Biographies)
 Raising and Rigging
 Recycling
 Romania
 Russia
 Scotland
 Sharpening
 Southeast Asia
 Timber Frame Design and Engineering
 Tools
 Trébuchets
 Windmills
 Wood Science

Issue Number by Date

1: Oct 85	19: Mar 91	37: Sep 95
2: Jul 86	20: Jun 91	38: Dec 95
3: Mar 87	21: Sep 91	39: Mar 96
4: May 87	22: Dec 91	40: Jun 96
5: Aug 87	23: Mar 92	41: Sep 96
6: Nov 87	24: Jun 92	42: Dec 96
7: Feb 88	25: Sep 92	43: Mar 97
8: May 88	26: Dec 92	44: Jun 97
9: Aug 88	27: Mar 93	45: Sep 97
10: Nov 88	28: Jun 93	46: Dec 97
11: Feb 89	29: Sep 93	47: Mar 98
12: May 89	30: Dec 93	48: Jun 98
13: Aug 89	31: Mar 94	49: Sep 98
14: Nov 89	32: Jun 94	50: Dec 98
15: Feb 90	33: Sep 94	51: Mar 99
16: May 90	34: Dec 94	52: Jun 99
17: Sep 90	35: Mar 95	53: Sep 99
18: Dec 90	36: Jun 95	54: Dec 99

Index by Subject (Index by Author, page 17)

Apprenticeship

Apprentice Program Underway, 17:10
 Apprenticeship, 24:8
 Len Brackett on a Japanese Apprenticeship, 5:6

Architectural Design

Are Timber Frames Well Designed? 9:7
 Baker House, Michigan, 37:8
 Booneville, California, House, 37:8
 Campbell Residence, 51:5
 Caverly House, Petersburg, New York, 21:6
 Collaborative Workshop Planned, 11:10
 Derrick House, New York State, 32:9
 Design, Framework for Craft, 17:4
 Design Workshop Reviewed, 11:8
 Dining Rotunda in Syracuse, 38:4
 Dog House, Pennsylvania, 42:15
Dwelling, Seeing and Designing, by David Seamon, 29:2
Earth to Spirit, by David Pearson, 39:2
 Edmund Burroughs House, 37:6
 Ervey House, Massachusetts, 32:10
 Ethical Design and Construction, 33:11
 Fukagawa School, Nagano, Japan, 32:11
 Gazebo in Philadelphia, 36:10
 Geometer's Delight, 11:5
 Habitat Designs Revised, 11:3
 Hahn House, Ontario, 32:8aada
 Hayter House, Ontario, 18:12
 House and Studio, Minnesota, 26:8
 How to Plot a Site Plan, 23:3
 Hubbards, N.S., Waterfront Studio, 51:5
 Hulalai Bridge and Walkway, 51:5
 Illinois House, 42:15
 Is Place a Journey? 24:4
 Japanese Tea House in Maryland, 51:4
 Katherine Cartrette Discusses Methods, 13:13
 Lake House, Gloucestershire, 21:7
 Lancy House, Bainbridge Island, Washington, 21:8
 Lawyer-Wellner House, New York State, 26:8
 Learning from Sea Ranch, 43:12
 Letters: Design, 21:2

(Light)-Framing American Culture, 31:3
 Lost Nation Cabin, Lancaster, N.H., 42:15
 Mackel House, Indiana, 18:12
 Martha's Vineyard Horse Barn, 54:24
 Modern House for Maryland Shore, 10:8
 Nash House, Port Townsend, Washington, 17:10
 1989 W. Conference, Design: Practice, 15:4
 1989 W. Conference, Design: Theory, 15:4
Old Way of Seeing, by Jonathan Hale, 41:2
 One Man's Castle, Bell-Tower, N.H., 26:9
 Phelps House, New York State, 32:10
 Pitch, Measure, Proportion, 9:3
 Primer for Healthy House Construction, 20:4
 Proportioning Systems and the Timber Framer, 18:8
 Recent Work in Slide Show III, 5:5
 Return to Order, 13:12
 Rico House, Ontario, 18:12
 Round Post, Square Beam Joinery, 41:6
 Site Planning and Site Inventory, 26:5
 Slide Show Second Opinion, 2:3
 Susameisha, Kyoto, Japan, 42:14
 Suzuki House2aa, Osaka, Japan, 29:4
 Timber Frame Foundations, 17:11
 Town House, Saltsburg, Pennsylvania, 37:8
 Untimber Framing, Variations on the Heavy Frame, 12:4
 Wake House, Blanchard, Washington, 37:7
 Westchester House, New York, 21:6
 Western Conference Surveys Design, Joinery, Business
 (Timberline '88), 11:4
 What is Fine Home Building? 40:18
 Whole House, 1:2
 Wildcat Cliffs Fitness Centre, 21:7

Architectural Design Contests and Expositions

1990: Timbercraft Homes (Judith Landau), Riverbend (Martin Riley and Pascal Viel), Thistlewood (Chris Pickard), Northern Timberhouse (Alfredo Rico and Darryl Lane), 17:10
 1991: Star Ridge Design (Michael and Joan Buzarak), Northern Timber Framing (Jeremy Lang), Creative Homes and Millworks (James Howard Fox), Carpenter Oak and Woodland (Roderick James), Timbercraft Homes (Judith Landau), 21:6
 1992: The Timber-Frame Workshop (Dan Bartlett, Chris Madigan), New Energy Works (Jack Brower), Timberpeg (Janet Null, AIA), 26:8
 1993: Michael Anderson, 29:4
 1994: Thistlewood (Steve Buckle), Stephen Amstutz Woodworking (David Bryant), New Energy Works (Peter Reynolds), Ian Ellison, Yoshimoto Ringyo (Kimihoro Miyasaka), Dennis Orre, 32:10
 1995: New Jersey Barn Co., The Cascade Joinery (Jill Sousa), Gregory Smith, Riverbend (Rodney Pfothenauer), J-Squared (Chris Luthi), 37:6
 1996: Michael Anderson, Garland Mill (Tom Southworth), Timberecture (Dennis Buttner), Creswell and Powell (Jim Collins AIA), 42:14
 1997: *Eastern*: Whitefield Wetlands Study Gazebo consortium, Acorn Timber Fames, Blue Ridge Timberwrights (J. Edward Feher), 45:8.
Western: Timberworks (John Sullivan, Hill-Glazier), 51:5.
 1998: *Eastern*: Daiku Woodworking (Peter Wechsler), Acorn Timber Frames (David Garrett), 51:4
 1999: Cranston Timber Framing (Phil Regan), 54:24

Automationaa

Letters: Hands and Machines, 51:3
 Timber Frame Nerds? 45:12
 Topics: Eyes Wide Shut, Spar Wars, 53:2
 Topics: Handwork, 47:3
 Topics: King Ludd, or the Road Ahead? 49:2

Topics: More on Handwork, 52:2
Topics: Pythagorean 345, 48:20

Barns

Ancient Barn Surveyed (Harmondsworth), 7:6
Barn Dismantling, 31:8
Barn Symposium, 9:5
Barns of Roots America, by Richard Babcock, 33:3
Barns of the Genesee Country, by Daniel Fink, 8:6
Cantilevered Dutch-American Barns, 43:8
Charlton Court Barn, a Medieval Frame, 34:4
Composite Massachusetts Barn, 36:4
Double-Cutting and Historic Scribe Framing, 40:16
Dutch Barn Wood Species, 46:8
18th-Century Ulster Co. Lap Dovetail Dutch Barns, 41:9
English Barns with Nailed Wind Braces, 47:14
Forebay Barn Origins Explored, 13:14
Forebay Floor Framing, 28:13
Framer’s Journal: Hudson Valley Barns, 41:20
Genesee Barns, 9:5
Johannes Lawyer Barn, 12:6
Mammoth in Monmouth County, 24:13
Massachusetts Barns, 28:14
New World Dutch Barns, 28:12
Pennsylvania Barn in New Jersey, 48:5
Richard Babcock Discusses Early Barns, 2:3
Ross County Barns, 40:10
Silent Spaces: The Last of the Great Aisled Barns,
by Malcolm Kirk, 35:2
Taking Down Timber Barns, 32:4
Topics: A Mammoth Lesson, 52:3
Traditional Farm Types of the Netherlands, 27:6
Two Ulster County Barns, 36:4
Variant Log Sweitzer Barns in Pennsylvania, 48:5
Wemple Barn, 24:8
Wilson Barn, 24:9

Biographies and Profiles

Board Candidate Biographies, 12:8-10
Cecil Hewett (brief obituary), 50:3
Culture (Len Brackett), 7:2
Holding the Timber Frame Industry Together
(Scott Northcott), 53:13
Len Brackett on a Japanese Apprenticeship, 5:6
Silhouettes:
Arch-Druid (Brendan Costello), 24:12
Hewer of Wood (Tim Berube),26: 4
Hugh Lofting, 22:5
Mystery Man (Paul Martin), 18:4
Swords into Ploughshares (Tom Harris), 46:12
Visit with Jim Kricker, 54:10

Book Reviews

Architectural Technology up to the Scientific Revolution,
edited by Robert Mark, 38:3
Barns of Roots America, by Richard Babcock, 33:3
Barns of the Genesee Country, by Daniel Fink, 8:6
Brief Reviews: Bell, Kelley, Haupt, 32:3
Build a Classic Timber-Framed House, by Jack A. Sobon, 32:2
Colossus of 1812, by Lee H. Nelson, 42:2
Consumer Guide to Home Energy Savings, by Alex Wilson, 20:2
Dwelling, Seeing and Designing, by David Seamon, 29:2
Earth to Spirit, by David Pearson, 39:2
English Historic Carpentry, by Cecil Hewett (brief notice of
American reprint, with new drawing), 46:20
Historische houtconstructies in Nederland, by G. Berends, 43:2
Mechanical Marvels in the Age of Leonardo,
by Paolo Galluzzi, 47:2
Norwegian Wood: A Tradition in Building, by Jerri Holan, 40:3
Old Way of Seeing, by Jonathan Hale, 41:2
Pictorial History of Chinese Architecture,
by Liang Su-Ch’eng, 11:3
Secrets of the Old Growth Forests, by David Kelly, 13:10
*Seeking Structure from Nature: The Organic Architecture
of Hungary*, by Jeffrey Cook, 48:2
Silent Spaces: The Last of the Great Aisled Barns,
by Malcolm Kirk, 35:2
Timber Construction for Architects and Builders,
by Eliot Goldstein with Stephen Smulski, 52:20
Timber Solutions Manual, by David W. Duquette, 45:2
Way of the Carpenter, by William H. Coaldrake, 23:2

Bridges

Bridge Design Competition Announced, 11:1
Bridge for Guelph, Ontario, 21:5
Bridge Triumph in Canada (Guelph ’92), 25:1
Canadian Work Party (photos), 25:10-11
Colossus of 1812, by Lee H. Nelson, 42:2
Dropping 115,000 Pounds, 25:16
Engineering the Speed River Bridge, 25:12
Extinct Framing: Railroad Bridge Trusses, 44:4
Giddings Road Bridge, 40:10
Guelph Bridge Designed, 23:1
Guelph Bridge (panoramic photo), 25:8
Guelph ’92, the Story of a Bridge, 25:4
Long Two-Span Wooden Bridge Under Repair, 11:10
Organic Circles, 25:8
Problem of Long Timbers, 16:3
Romance and Symbolism of Covered Bridges, 40:8
Windsor-Cornish Repairs Proceed, 12:10

Business Council

Guild Notes & Comment: Timber Frame Business Council,
40:21
Letters: For Guild and Council, 46:2
Reflections on the Business Council, 45:11
Topics: Council Update, 51:2
Topics: Ontogeny or Phylogeny? 38:2

Business Management

Business Home Truths, 15:3
Contracts and Estimating, 9:6
Crafting the Future of Our Craft: Paradigms and Principles,
26:13
From the Troops, 27:2
Hints on How to Run the Railroad, 11:7
Insurance, 22:9
Letters:
Class Envy, 28:2
Tedd Benson, 28:2
Tedd Benson Replies, 27:3
Marketing, 9:5
1990 W. Conference: Business Start-Up, 15:5
Plain Language Contracts, 40:4
Pricing the Work, 17:12
Pricing the Work II, 17:12
Pricing the Work III, 19:3
Promotion, 6:6
SBA National Resource Development Plan, 21:14
Specifications, 20:5
System for Emergencies, 22:9
Timber Framing Business, 1:2
Topics: Council Update, 51:2
Topics: Eyes Wide Shut, Spar Wars, 53:2
Western Conference Surveys Design, Joinery, Business
(**Timberline ’88**), 11:4

China

Chinese Traditional Framing, 16:8
Chinese Traditional Framing II, 17:8
Chinese Traditional Framing III, 20:8
Guild Notes & Comment: My Eastern Conference, 54:2
Pictorial History of Chinese Architecture,
by Liang Su-Ch’eng, 11:3

Churches

Central Moravian Church, 31:11
Ellesddie Chapel, 48:7
Erection of Church Steeples, 36:6
Guild Notes & Comment: My Eastern Conference, 54:2
Newbury Methodist Church, 31:10
St. Peter’s Church, 40:9
South Berwick, Maine, Churches, 44:4
Tallest Timber Frame, 9:12
Vermont Church Roof Frame Reproduced, 3:3

Compound and Roof Joinery (*See also* Layout)

Cabildo Roof Goes Up One, Two, Three (photos), 24:10
Framing Systems, 1:1
German Roof Layout I, 33:14
German Roof Layout II, 34:10
Hip and Valley Framing, 17:6

Hip and Valley Framing II, 19:5
Hip and Valley Framing III, 21:15
Trig Guide for the Perplexed, 14:4

Culture and Cross-Culture

American in Russia, 30:12
Apprenticeship, 24:8
Bonnie Trip to the Land of Chips, 50:4
Can a Building Heal a Community? 33:8
Craft as Myth in Modern Communities, 28:7
Crafting the Future of Our Craft: Paradigms and Principles,
26:13
Culture (Len Brackett), 7:2
D-I-Y II, 17:2
Early Woodworkers in Massachusetts Bay, 54:16
1868-1873 Framer’s Journal, 31:11
Framer’s Notebook: Amulets, 33:13
Guild Notes & Comment: Economics, 31:15
Is Place a Journey, 24:4
Kitchen Notes from Dolly Copp, 42:8
Learning from Sea Ranch, 43:12
Letters:
From the Troops, 27:2
Hands and Machines, 51:3
Merit Badge, 16:2
Tedd Benson Replies, 27:3
(Light)-Framing American Culture, 31:3
Oatman’s Last Voyage: Ludlow to London via Dublin, 53:16
Proportioning Systems and the Timber Framer, 18:8
Pythagorean 345, 48:20
Russian Reflections (Petersburg ’92), 26:1
Shtandart Shop, St. Petersburg, 28:9
Six Paradoxes, 32:3
Spiraling Dragons: The First One, 39:14
Spiraling Dragons: The Other One, 40:11
Suspenders, 13:6
Tale of Two Saunas, 47:9
Timber Frame House: Its Place in America, 13:13
Timber Frame Sculpture, U.S. Society, 10:5
Timber Framer’s Journal, 20:6
Topics: Handwork, 47:3
Topics: King Ludd, or the Road Ahead? 49:2
Topics: More on Handwork, 52:2
Topics: Pythagorean 345, 48:20
Topics: Spar Wars, 53:3
Topping Out, 24:8
Vermont Framer’s 1799 Diary, 10:4
Viewpoint for Wooden Architecture, 35:3
Visit to Germany, 27:4
Voyages of Brungraber: Summer, 42:10
Voyages of Brungraber: Winter, 41:12
Voyages of Oatman: Cambridge and Warwickshire, 52:12
Voyages of Oatman: Chartres, 47:17w
Voyages of Oatman: Hessen, 48:8
Voyages of Oatman: Suffolk and Essex, 51:6

Dismantling

Barn Dismantling, 31:8
Taking Down Timber Barns, 32:4

D-I-Y

D-I-Y in Alberta, 53:8
Topics: D-I-Y, 14:2
Topics: D-I-Y II, 17:2

Durability (Earth, Wind, Fire, Water)

Earthquakes and Timber Frames, 16:4
Fire, 19:12
Hanshin Earthquake, 36:8
Letters:
Engineering, 16:2
Hugo, 14:2
Injustice, 15:2
Longevity, 36:2
Of Sapwood and Water, 43:10
On Longevity, 34:2
Tale of a Twister: Frame Put to Test, 4:4

Egypt

Raising an Obelisk, 54:4

Enclosure Systems

Cellulose Alternative, 29:6
D-I-Y in Alberta, 53:8
Foam Wars, 4:3
Infill System for the Lancy House, 21:9
Letters: Straw-Clay, 36:2
Natural Straw-Clay Wall Systems, 35:6
Panel Installation, 7:6
Panel Panel Delivers Report, 2:4
Panel Tests Questioned Sharply, 3:3
Reflections on Foam Panels and a Site-Built System, 23:4
Testing Committee Meeting Minutes: Panel Survey, 2:6

England

Ancient Barn Surveyed (Harmondsworth), 7:6
Ancient English Frame, 19:2
And a New One (Chrishall, Essex), 19:3
Baythorne Hall (A Revision), 46:20
Capitals, Scarfs and the Interdict, 33:4
Charlton Court Barn, a Medieval Frame, 34:4
Double-Cutting and Historic Scribe Framing, 40:16
English Barns with Nailed Wind Braces, 47:14
Globe Theatre, 31:10
Letters: Sussex Report, 28:3
New Globe for London, 36:5
Oatman’s Last Voyage: Ludlow to London via Dublin, 53:16
Old English Joint, 34:16
Reconstruction of London’s Globe, 37:2
Reproducing Shakespeare’s Globe, 23:6
Richard Harris Describes “Language of Carpentry,” 9:3
Solving a Structural Enigma: Westminster Hall’s Hammer Beam Roof, 30:4
Timber-Framed Dovecote in Suffolk, 52:4
Timber Framing and the Landscape, 1:2
Timber Framing Revival in England? 7:4
Traditional Frame in West Sussex, 29:8
Variation on the English Tying Joint, 14:6
Voyages of Oatman: Cambridge and Warwickshire, 52:12
Voyages of Oatman: Suffolk and Essex, 51:6
Winchester Cathedral’s South Transept Roof, 46:4

Finland

Highland Reminiscence, 52:16
Tale of Two Saunas, 47:9

Forest Resource

Appeal to Plant More Trees, 21:14
Commentary (forestry), 9:8
Field Report, 27:16
Forest Bathing, 29:3
Forest Experts Confirm the Worst, 9:8
Forest Management Plan Agreement Signed by Guild, 18:10
Forest Service Answers Guild on Old-Growth, 11:2
Forest Service Replies Again on Old-Growth, 13:2
Forester Sets Out Rational Long-Term Management Plan, 15:6
Guild Achieves First Public Planting, 21:4
Guild Answers Forest Service on Old-Growth, 12:2
Guild Notes & Comment (forests), 42:18
’Inimim News, 40:24
’Inimim Progress Report, 27:15
Letter from the Board of Directors of the TFGNA to Those Reponsible for the National Forests and Bureau of Land Management Timberlands of the United States, 9:9
Letters:
 Eastern Old-Growth, 30:3
 Timber Tax, 24:2
New Perspectives Commentary, 21:14
New Perspectives on National Forests, 21:12
Notes from the Cruck Farm, 9:11, 10:4
Oak and the Pine Tree Mentality, 24:16
Old-Growth Policy Announced, 15:1
Old-Growth Symposium Yields Basic Agreements, 19:10
Pioneer Forest Plan Progresses in California, 22:8
Resource Committee Acts, 8:5
Saving Ontario’s Old-Growth, 22:8
Secrets of the Old Growth Forests, by David Kelly, 13:10
Sustainable Forestry, 27:15
Timber Framing and the Landscape, 1:2
Topics: Forest Update ’97, 44:2
Wood for the Future, 10:3

Framing Techniques

Back to the Fundamentals, 13:5
Build a Classic Timber-Framed House, by Jack A. Sobon, 32:2
Department of Clarification, 42:20
Elements of the Dream Shop, 13:7
French Snap, 36:4
Japanese Lintel Setting Techniques, 24:6
Peter McCurdy Surveys Repair Methods, 2:2
Round Post, Square Beam Joinery, 41:6
Scribe Rule, Square Rule, 31:9
Traditional Techniques and Shortcuts, 39:4
Tricks of the Trade, 9:10
Uneven Bunk Displacement and the Timber Framer, 14:5

France

French Compagnonnage Briefly Explored, 13:14
French Miscellany, 24:8
French Scribe Layout, Introduction to, 34:8
French Scribe II, 35:10
French Scribe III, 36:18
French Scribe Rule, 8:5
Voyages of Oatman: Chartres, 47:17

Germany

Correction, 51:3
Early Wisconsin Framing, 12:3
German Frame Typology, 49:4
German Frame Typology II, 51:16
German Frame Typology III (Roofs), 52:7
German Roof Layout I, 33:14
German Roof Layout II, 34:10
German Timber Framing, 48:6
Henry Antes House, 40:9
Letters: German Conference, 16:2
Load Behavior of Connections with Oak Pegs, 38:6
Load Behavior of Connections with Pegs II, 39:8
Timber Framing in Germany, 9:4
Visit to Germany, 27:4
Voyages of Brungraber: Winter, 41:12
Voyages of Oatman: Hessen, 48:8

Guild Affairs: Miscellaneous

Apprentice Program Underway, 17:10
Breaking New Ground, 22:3
Business Meeting Adopts Bylaws, 2:2
Committees: Bennett Heads Testing, Gardner Carries On, Lukian Takes Chair, 5:2-3
Conference Committee Meeting Minutes, 2:5
Directions:
 Introductory, 20:3
 News and Progress, 21:3
 West, South and North, 22:3
Education Committee Minutes, 2:5
Education Committee Reports, 9:11
Election Procedure Explained, 8:4
Elections, 20:2
Forest Management Plan Agreement Signed by Guild, 18:10
Guild Answers Forest Service on Old-Growth, 12:2
Guild E-Mail, 20:2
Guild Notes & Comment:
 Forests, 42:18
 Grants, 41:16
 Historic Review, 31:14
 Miscellany, 27:19
 My Eastern Conference, 54:2
 New Executive Directorate, 50:2
 Sunny Days Ahead, 27:19
 Timber Frame Business Council, 40:21
“House Makers” Reviewed, 15:2
’Inimim News, 40:24
’Inimim Progress Report, 27:15
Letters:
 Advertising, Maybe, 22:2
 Advertising, No, 22:2
 Apprenticeship, 15:2
 Apprenticeship, 24:2
 Cautions, 18:2
 Dedication, 10:2
 Education, 11:2
 Exchange Program, 13:3
 Generosity, 21:2

Guelph Bridge Advice, 23:2
Hands and Machines, 51:3
Kudos, 6:6
Medications, 8:2
Misprinting, 51:3
Suggestions, 31:2
Thanks, 13:2
Who’s Who, 9:2
Marlboro 1986 (**Marlboro ’86**): A Considered Appraisal, 2:8
Members Raise Issues at Annual Meeting, 5:8
Message from the President, 1:4
Midwest Considers Chapters, 8:1
Midwest Region Meets, 11:7
New Election Procedure, 6:5
Ontogeny or Phylogeny? (Business Council), 38:2
Oregon Conference Issues (**Timberline ’90**), 18:1
Organic Circles, 25:8
Pioneer Forest Plan Progresses in California, 22:8
Professional Directory to Appear, 8:1
Slide Show, 1:3
Slide Show Raises Questions, 2:2
Standards, 16:10
Traditionalists Establish Group (TTRAG), 18:2

Guild Board Meetings

Board Holds Annual Meeting (**Fort Worden ’89**), 15:1
Board Sets Major Goals for 1989 (**Chebeague ’88**), 10:1
Directors Annual Meeting Minutes, 2:3
Directors Chart Course for 1988 (**Portsmouth ’87**), 6:1
Directors Meet, Elect Officers, Review Events, 5:3
Directors Meetings, 1:1
Guild Directors Meet (**Troy ’90**), 17:3
Guild Notes and Comments:
 Bucksteep ’93, 30:15
 Fishkill ’93, 28:18

Guild Conferences

All-Day Workshops Introduced, 21:3
Amherst Conference (**Amherst ’97**), 45:6
Annual Meeting ’95 (**Williamsburg ’95**), 37:16
Barn Symposium, 9:5
Bethlehem Conference (**Bethlehem ’96**), 42:13
Bethlehem Conference Commentary, 42:13
Bridge Triumph in Canada (**Guelph ’92**), 25:1
Building Expert Challenges Timber Framers, 13:3
Call for Abstracts, 11:2
Canada ’91, 18:3
Canadian Group Takes Shape (**Alliston ’90**), 16:1
Canadian Work Party (photos), 25:10-11
Conference Preparations Complete, 12:1
Conference Returns to Rensselaer (**Troy ’91**), 19:1
Conference success at Troy (**Troy ’90**), 17:1
’89 Conference Broadens Range, 11:1
Elizabethtown Conference Arranged, 8:1
500 Attend 1987 Conference (**Poultney ’87**), 5:1
Guelph Bridge (panoramic photo), 25:8
Guelph ’92, the Story of a Bridge, 25:4
Guild Conference Draws 200 (**Hancock ’85**):
 Conference Report; Framing Systems;
 Guild Officers; Directors Meetings;
 Business Meeting; Timber Framing and the Landscape; The Whole House;
 The Timber Framing Business;
 Mortise and Tenon Test Suggests Joint Revision; Slide Show; Committees, 1:1-3
Guild Notes & Comment:
 Fairlee ’99, 54:2
 Nacogdoches ’94, 32:14
 Rindge ’93, 29:15
 Skamania ’95, 35:14
Habitat Frames, panoramic photo: 13:4
Habitat Jubilation at ’89 Conference (**Habitat ’89**), 13:1
Habitat (photos), 13:6-10
Hints on How to Run the Railroad, 11:7
Log Building, 7:6
Marketing, 9:5
Marlboro 1986 (**Marlboro ’86**): A Considered Appraisal, 2:8
National Conference Reaches Out (**Elizabethtown ’88**), 9:1
National Conference Set for June, 15:1
New Venue for Western Conference (Big Sky, 1991), 22:1
1989 Conference Scheduled, 10:1
1989 W. Conference:

Business Start-Up, 15:5
Design: Practice, 15:4
Design: Theory, 15:4
The Future, 15:4
Raising, 15:5
1987 Conference Set for Vermont, 3:1
'91 Elections and Meeting Ring Changes (**Troy '91**), 21:1
Oregon Conference Issues (**Timberline '90**), 18:1
Regional Conferences Announced, 9:1
Second Canadian Conference (**Orilla '91**), 20:1
Second Western Conference Draws 140 to Timberline (**Timberline '88**), 7:1
Selected Short Subjects, 13:15
325 Attend 1986 Conference (**Marlboro '86**), 2:1
Three Who Beat the Buster, 17:3
Timber Frame House: Its Place in America, 13:13
Trade Fair Enlivens Conference, 2:3
Tricks of the Trade, 9:10
Western Conference (**Fort Worden '89**), 13:1
Western Conference Surveys Design, Joinery, Business (**Timberline '88**), 11:4
Western Meeting Brings 100 Framers to Oregon Mountain (**Timberline '87**), 3:1
Wide Ranging Workshops Enrich Weekend (**Poultney '87**), 5:4
Williamsburg '95, An English View, 37:14

Guild Workshops

Collaborative Workshop Planned, 11:10
Concord Workshop Success (**Concord '89**), 14:1
Guelph Bridge (panoramic photo), 25:8
Guelph '92, the Story of a Bridge, 25:4
Guild Notes & Comment:
 Lone Mountain Ranch '95, 37:12, 38:14
 Nacogdoches '94, 32:12
 Penetang '94, 34:13
 Rindge '93, 29:13
Guild Rendezvous 1996 (**Dolly Copp '96**), 42:4
Habitat Designs Revised, 11:3
Habitat Frame Underway, 11:1
Habitat Frames Readied for Raising, 12:1
Habitat Frames (panoramic photos), 13:4-5
Habitat (photos), 13:6-10
"House Makers" Reviewed, 15:2
Kitchen Notes from Dolly Copp, 42:8
Maine Rendezvous (**Green Island '95**), 38:15
Malabar Memories (**Malabar '95**), 36:14
Shtandart Shop, St. Petersburg, 28:9
Timber Frame for Humanity, 13:1
Views of Concord Workshop (photos), 14:3

Heating, Ventilation and Air Conditioning

Consumer Guide to Home Energy Savings, by Alex Wilson, 20:2
Moisture Control, 9:4
Primer for Healthy House Construction, 20:4
Timber Frame Heating and Ventilation, 18:6
Ventilation, 6:6

Historic Framing

Adzed Beams? 28:13
American Timber Frame, 37:10
Ancient English Frame, 19:2
Architectural Technology up to the Scientific Revolution, edited by Robert Mark, 38:3
Baythorne Hall (A Revision), 46:20
Capitals, Scarfs and the Interdict, 33:4
Central Moravian Church, 31:11
Composite Massachusetts Barn, 36:4
Corncribs in the Delaware Valley, 48:4
Cruck Apexes, 24:9
Double-Cutting and Historic Scribe Framing, 40:16
Early Wisconsin Framing, 12:3
Early Woodworkers in Massachusetts Bay, 54:16
1868-1873 Framer's Journal, 31:11
Ellessdie Chapel, 48:7
English Barns with Nailed Wind Braces, 47:14
Ernhaus, 48:4
Forebay Barn Origins Explored, 13:14
Forebay Floor Framing, 28:13
French Snap, 36:4
Genesee Barns, 9:5
Hammer-Beam Roofs I, 48:12
Hammer-Beam Roofs II, 49:2

Hay Barracks, 36:5
Henry Antes House, 40:9
High Horse Wheel, 31:10
Long Island, N. Y., Where Dutch and English Meet, 31:8
Long Island Roof Framing, 28:12
Marriage of Timber and Stone, 28:13
Mortise Clues, 36:5
New Jersey House Reconstruction, 36:4, 37:6 (photos)
New Roof at Scotland's Stirling Castle, 47:4
Old English Joint, 34:16
Pennsylvania Barn in New Jersey, 48:5
Peter McCurdy Surveys Repair Methods, 2:2
Preservation vs. Restoration, 31:9
Raising Holes and Wing Pegs, 40:8
Restoration Objectives, 24:9
Richard Babcock Discusses Early Barns, 2:3
Ross County Barns, 40:10
Ship's Knees, 24:9
Simple 18th-Century Quaker House, 31:6
Solving a Structural Enigma: Westminster Hall's Hammer Beam Roof, 30:4
Square Rule Methods, 45:4
Tidewater Virginia, 9:7
Traditional Techniques and Shortcuts, 39:4
Traditional Timber Framing Research and Advisory Group (TTRAG) Proceedings:
1992: Madigan, Brilliant, Lawson, Huber, Lewandoski, Nash, Gee, Yonne, 24:8
1993: Sinclair, Haarmann, Christian, Brandt, Sobon, Proulx, 28:12
1994: Haarmann, Lehmer, Nash, Sobon, Rower, Levin, Kricker and Young, Murray, Brandt, 31:8
1995: Sobon, Carr, Huber, Greenwood, Lanoue, Christian, McCurdy, Sinclair, 36:4
1996: Simmons, Sinclair and Hedges, Brandt, Dauerty, Smolen, Troth, 40:8
1997: Grassi, Sturgis, Lewandoski, Christian, Stevens, 44:3
1998: Ernhaus, Greenwood, Huber, Ensminger, Wingender, Kovacic, 48:4
Tying Joint Evolution, 36:12
Tying Joint, Variation on the English, 14:6
Tying Joint Variation II, 21:16
Tying Joint Variation III, 23:12
Tying Joint Variation IV, 26:16
Tying Joint Variation V, 27:18
Tying Joint Variation VI, 28:20
Tying Joint Variation VII, 30:16
Tying Joint Variation VIII, 33:16
Tying Joint Variation IX, 35:13
Tying Joint Variation X, 38:20
Variant Log Sweitzer Barns in Pennsylvania, 48:5
Vermont Framer's 1799 Diary, 10:4
Voyages of Oatman: Cambridge and Warwickshire, 52:12
Voyages of Oatman: Chartres, 47:17
Voyages of Oatman: Hessen, 48:8
Voyages of Oatman: Suffolk and Essex, 51:6
What Can an Off-Cut Tell Us? 37:9
Wilson Barn, 24:9
Winchester Cathedral's South Transept Roof, 46:4

Holland and Dutch America

Canlevered Dutch-American Barns, 43:8
Dutch-American Timber Framing, 44:6
Dutch Barn Wood Species, 46:8
18th-Century Ulster Co. Lap Dovetail Dutch Barns, 41:9
Hay Barracks, 36:5
Historische houtconstructies in Nederland, by G. Berends, 43:2
Long Island, N. Y., Where Dutch and English Meet, 31:8
Mammoth in Monmouth County, 24:13
New World Dutch Barns, 28:12
Raising Holes and Wing Pegs, 40:8
Topics: A Mammoth Lesson, 52:3
Traditional Dutch Frame in New York, 19:8
Traditional Farm Types of the Netherlands, 27:6
Two Ulster County Barns, 36:4
Voyages of Oatman: The Netherlands, 49:6
Wemple Barn, 24:8

Humor

Chisel Sharpness Assessment, 20:5
D-I-Y, 14:2

Guild Notes & Comment, 49:12
Notes from the Cruck Farm, 9:11, 10:4
Uneven Bunk Displacement and the Timber Framer, 14:5

Indexes

Index to TIMBER FRAMING 1-42, 45:13
Nos. 1-17, TIMBER FRAMERS NEWS, 10/85-9/90, 18:5
Nos.18-26, 12/90-12/92, 27:20
Nos. 27-30, 1993, 31:16
Nos. 31-34, 1994, 35:16
Nos. 35-38, 1995, 39:3
Nos. 39-42, 1996, 43:20

Japan

Double Raising at Brattleboro Museum, 6:4
Fukagawa School, Nagano, Japan, 32:11
Gazebo in Philadelphia, 36:10
Hanshin Earthquake, 36:8
Japanese Lintel Setting Techniques, 24:6
Len Brackett on a Japanese Apprenticeship, 5:6
Spiraling Dragons: The First One, 39:14
Spiraling Dragons: The Other One, 40:11
Sumitsuke, Heart of the Japanese Frame, 26:10
Sumitsuke 2: Koya Gumi Marking, 28:10
Sumitsuke 3: Koya Gumi Marking, 29:10
Susameisha, Kyoto, Japan, 42:14
Suzuki House, Osaka, Japan, 29:4
Tale of Two Saunas, 47:9
Vermont Museum Sets Raisings, 5:1
Viewpoint for Wooden Architecture, 35:3
Voyages of Brungraber: Summer, 42:10
Way of the Carpenter, by William H. Coaldrake, 23:2
West Coast Frame Raised in Japan, 3:4

Layout Techniques (*See also* Compound and Roof Joinery)

Before the Chips Fly, 7:3, 8:3, 12:7
Cabildo Roof Goes Up One, Two, Three (photos), 24:10
Double-Cutting and Historic Scribe Framing, 40:16
French Scribe Rule, 8:5
German Roof Layout I, 33:14
German Roof Layout II, 34:10
Guild Notes & Comment:
 Lone Mountain Ranch '95, 37:12
 Lone Mountain '95 (cont'd), 38:14
 Penetang '94, 34:13
Guild Rendezvous 1996 (**Dolly Copp '96**), 42:4
Industrial, Pre-Industrial Framing, 20:6
Letters: Reconsiderations, 30:2
Old Ways of Measuring, 44:5
Products: Layout Template, 12:3
Round Post, Square Beam Joinery, 41:6
Square Rule Methods, 45:4
Sumitsuke, Heart of the Japanese Frame, 26:10
Sumitsuke 2: Koya Gumi Marking, 28:10
Sumitsuke 3: Koya Gumi Marking, 29:10

Log Building

Guild Rendezvous 1996 (**Dolly Copp '96**), 42:4
Letters: A Log Builder Speaks Out, 4:2
Log Building, 7:6
Maine Rendezvous (**Green Island '95**), 38:15
Ross County Barns, 40:10
Visit with the Canadian Log Builders, 7:5

Norway

Norwegian Wood: A Tradition in Building, by Jerri Holan, 40:3

Pegs and Pegging

Direction for Joint Design, 15:7
Holding the Timber Frame Industry Together, 53:13
Joint-Busting at Amherst, 45:3
Load Behavior of Connections with Oak Pegs, 38:6
Load Behavior of Connections with Pegs II, 39:8
Mortise and Tenon Test Suggests Joint Revision, 1:3
Pegging Design, 28:15
Topics: Pegs, 10:5

Preservation and Reconstruction

Ancient Barn Surveyed (Harmondsworth), 7:6

Barns of Roots America, by Richard Babcock, 33:3
Cabildo Roof Frame to be Built in New Hampshire, 21:1
Cabildo Roof Goes Up One, Two, Three (photos), 24:10
Edmund Burroughs House, 37:6
Framing the Cabildo Roof, 23:8
Globe Theatre, 31:10
Harmondsworth Copy, 24:8
Industrial, Pre-Industrial Framing, 20:6
Long Two-Span Wooden Bridge Under Repair, 11:10
Malabar Memories (Malabar '95), 36:14
New Fort for 17th Century Village, 3:2
New Gates for Lock No. 36, 24:14
New Globe for London, 36:5
New Jersey House Reconstruction, 36:4, 37:6 (photos)
New Roof at Scotland's Stirling Castle, 47:4
19th-Century Pavilion Reproduced (photos), 22:10
Pegging the Big Easy, 20:3
Pilgrim Dugout, 4:3
Preservation vs. Restoration, 31:9
Reconstruction of London's Globe, 37:2
Reproducing Shakespeare's Globe, 23:6
Restoration Objectives, 24:9
Restoration Strategies, 31:12
Richard Babcock Discusses Early Barns, 2:3
Vermont Church Roof Frame Reproduced, 3:3
Winchester Cathedral's South Transept Roof, 46:4
Windsor-Cornish Repairs Proceed, 12:10

Raising and Rigging

Cautionary Tale, 10:7
Double Raising at Brattleboro Museum, 6:4
Erection of Church Steeples, 36:6
Letters:
 Reality, 13:2
 Thanks, 13:2
 Trussed, 20:2
Lifting 40,000 Pounds Twice, 25:16
1989 W. Conference, Raising, 15:5
Recent Raisings Ancient and Modern Style, 4:1
Raising Holes and Wing Pegs, 40:8
Raising an Obelisk, 54:4
A Surprising Inversion, 10:7
Tips on Getting Them up without Breaking Anything, 5:5
Vermont Museum Sets Raisings, 5:1

Recycling

Logging the Industrial Forest, 22:6

Romania

Wooden Vernacular Architecture in Romania, 21:10

Russia

American in Russia, 30:12
Russian Reflections (Petersburg '92), 26:1
Shtandart Shop, St. Petersburg, 28:9

Scotland

Aftermath, 50:20
Bonnie Trip to the Land of Chips, 50:4
Highland Fling, 50:14
Highland Reminiscence, 52:16
Goldberg's Highland Journal, 51:9
Less Cackling, More Eggs, 50:8
New Roof at Scotland's Stirling Castle, 47:4
Serious Challenge, 50:12

Sharpening

Before the Chips Fly (sharpening), 10:6
Chisel Sharpness Assessment, 20:5
Confessions of a Tool Merchant, 9:6
Lee's Chiselology, 9:6
Sharp Look at Stones, 9:10
Sharpening Chains, 11:8
Toishi (stones), 8:6

Southeast Asia

House Building in Donggo, 16:6

Timber Design and Engineering

Advanced Joinery Questions, 13:15

Allowable Stresses Proposed for Oak Timbers, 6:5
Behavior of Connections Commentary, 39:11
Brief Reviews: Bell, Kelley, Haupt, 32:3
Cruck Apexes, 24:9
Direction for Joint Design, 15:7
Dropping 115,000 Pounds, 25:16
Engineered Tension Joinery, 23:10
Engineering, Brutally Basic and Applied, 13:16
Engineering the Speed River Bridge, 25:12
Engineers, Bolts and Glulam, 15:7
Frame Engineering, 30:7
Guild Notes & Comment:
 Nacogdoches '94, 32:12
 Rindge '93, 29:13
Hammer-Beam Roofs I, 48:12
Hammer-Beam Roofs II, 49:2
Joint-Busting at Amherst, 45:3
Joinery Decisions, 27:10
Joint Engineering, 38:10
Joint Engineering II, 39:12
Letters:
 Charles Landau Replies, 28:5
 Ed Levin Replies, 28:6
 Joinery, 28:3
 Rolling Plates? 40:2
Load Behavior of Connections with Oak Pegs, 38:6
Load Behavior of Connections with Pegs II, 39:8
Mortise and Tenon Test Suggests Joint Revision, 1:3
Notched vs. Mortised Joinery, 43:4
Pegging Design, 28:15
Pegs, 10:5
Problem of Long Timbers, 16:3
Professor Brungaber Lectures, 2:5
Round Post, Square Beam Joinery, 41:6
Solving a Structural Enigma: Westminster Hall's
 Hammer Beam Roof, 30:4
Some [Engineering] Applications, 13:16
Standards, 16:10
Super Joint, 2:1
Three Who Beat the Buster, 17:3
Timber Construction for Architects and Builders,
 by Eliot Goldstein with Stephen Smulski, 52:20
Timber Solutions Manual, by David W. Duquette, 45:2
Timber Frame Foundations, 17:11
Tying Joint Evolution, 36:12
Tying Joint, Variation on the English, 14:6
Tying Joint Variation II, 21:16
Tying Joint Variation III, 23:12
Tying Joint Variation IV, 26:16
Tying Joint Variation V, 27:18
Tying Joint Variation VI, 28:20
Tying Joint Variation VII, 30:16
Tying Joint Variation VIII, 33:16
Tying Joint Variation IX, 35:13
Tying Joint Variation X, 38:20
Western Conference Surveys Design, Joinery, Business
(**Timberline '88**), 11:4

Tools

Adzed Beams, 28:13
Early Mortising Technology, 22:12
Junior Crane, 23:5
Layout Template, 12:3
Leaf Springs, 24:9
Letters:
 Hands and Machines, 51:3
 Mortiser, 7:2
New Tools and Materials at Show, 5:7
Rope Comealongs, 9:11
Timber Frame Nerds? 45:12
Tool Show and Tell, 13:15
Topics: Eyes Wide Shut, Spar Wars, 53:2
Topics: Handwork, 47:3
Topics: King Ludd, or the Road Ahead? 49:2
Topics: More on Handwork, 52:2
Topics: Pythagorean 345, 48:20
Way of the Carpenter, by William H. Coaldrake, 23:2

Trébuchets

Aftermath, 50:20
Bonnie Trip to the Land of Chips, 50:4
Building the Lexington Bellfortis, 44:10

Design Considerations for a large Trébuchet, 44:12
Highland Fling, 50:14
Highland Reminiscence, 52:16
How I Spent My Spring Vacation, 44:15
Goldberg's Highland Journal, 51:9
Less Cackling, More Eggs, 50:8
Serious Challenge, 50:12
Trébuchet for Virginia Military Institute, 44:8

Windmills

Mill Timber Framing, 44:3
Visit with Jim Kricker, 54:10

Wood Science

Allowable Stresses Proposed for Oak Timbers, 6:5
End Sealers, 4:2
Glulams Looking Smoother, 24:16
Grading Workshop Success, 11:9
Letters:
 Dendrochronology, 33:2
 Long Timber, 16:2
 Maple, 7:2
 PEG 1000: Degrade Prevention, 14:5
Of Sapwood and Water, 43:10
Stress Values to be Established for Oak Timbers, 3:2
Testing Committee Report, 11:8
Timber Construction for Architects and Builders,
 by Eliot Goldstein with Stephen Smulski, 52:20
Visual Stress Grading Revisited, 14:6

Index by Author

Acorn Timber Frames

Waterfront Studio, 51:5
St. George's Anglican church, 45:9

Adams, Merle

Letters: Timber Tax, 24:2
Reflections on Foam Panels and a Site-Built system, 23:4
Logging the Industrial Forest, 22:6
All-Day Workshops Introduced, 21:3
Fire, 19:12
1990 W. Conference, Raising, 15:5

Anderson, Al

Board Candidate biography, 12:8

Anderson, Chas

Letters: Injustice, 15:2

Anderson, Michael

Learning from Sea Ranch, 43:12
Susameisha, Kyoto, Japan, 42:14
Spiraling Dragons: The Other One, 40:11
Spiraling Dragons: The First One, 39:14
Hanshin Earthquake, 36:8
Sumitsuke 3: Koya Gumi Marking, 29:10
Suzuki House, Osaka, Japan, 29:4
Sumitsuke 2: Koya Gumi Marking, 28:10
Sumitsuke, Heart of the Japanese Frame, 26:10
Japanese Lintel Setting Techniques, 24:6
Books: *Tools and Form*, by William H. Coaldrake, 23:2

Alston, Leigh and John McCann

Timber-Framed Dovecote in Suffolk, 52:4

Arvin, Jeff

Reflections on the Business Council, 45:11
Round Post, Square Beam Joinery, 41:6
Board Holds Annual Meeting (**Fort Worden '89**), 15:1
Timber Frame for Humanity, 13:1
Engineering, Brutally Basic and Applied, 13:16
Books: *Secrets of the Old Growth Forests*, by David Kelly, 13:10
Untimber Framing, Variations on the Heavy Frame, 12:4
Board Candidate biography, 12:8
Collaborative Workshop Planned, 11:10
Midwest Considers Chapters, 8:1
Topics: Culture (Len Brackett), 7:2
Panel Installation, 7:6
Topics: Ventilation, 6:6
Panel Tests Questioned Sharply, 3:3

Baker, Frank

Board Candidate biography, 12:8

- Barlow, Bob and Faye**
Tricks of the Trade, 9:10
- Bartlett, Dan**
One Man's Castle, Bell-Tower, N.H., 26:9
- Batton, Bart**
Marketing, 9:5
- Beemer, Will**
Guild Rendezvous 1996 (**Dolly Copp '96**), 42:4
Guild Notes & Comment (Grants), 41:16
Guild Notes & Comment (**Lone Mountain '95**), 38:14
Guild Notes & Comment (**Lone Mountain '95**) 37:12
Guild Notes & Comment (**Penetang '94**), 34:13
Books: *Build a Classic Timber-Framed House*, by Jack A. Sobon, 32:2
Guild Notes & Comment (**Nacogdoches '94**), 32:12
Guild Notes & Comment (**Rindge '93**), 29:13
- Beffeyte, Renaud**
A Serious Challenge, 50:12
- Beggs, Colin**
Topics: More on Handwork, 52:2
- Bennett, Peter T. and W. Bradshaw Swanson**
Letters: Reality, 13:2
- Bennett, Sandy**
Shandart Shop, **St. Petersburg**, 28:9
A Trig Guide for the Perplexed, 14:4
- Benson, Tedd**
Letters: Tedd Benson replies, 27:3
Crafting the Future of Our Craft: Paradigms and Principles, 26:13
Board Candidate biography, 12:9
Confessions of a Tool Merchant, 9:6
Forest Experts Confirm the Worst, 9:8
Books: *Barns of the Genesee Country*, by Daniel Fink, 8:6
A Timber Framing Revival in England? 7:4
- Bjork, Phil**
1990 W. Conference, The Future, 15:4
- Board of Directors**
Letter from the Board of Directors of the
TFGNA to Those Responsible for the National
Forests and Bureau of Land Management
Timberlands of the United States, 9:9
- Bobb, Steve**
Slide Show Second Opinion, 2:3
- Bosies, Sharon**
1989 W. Conference, Design: Practice, 15:4
Topics: End Sealers, 4:2
- Bower, John**
A Primer for Healthy House Construction, 20:4
- Brackett, Len**
'Inimim News, 40:24
'Inimim Progress Report, 27:15
Pioneer Forest Plan Progresses in California, 22:8
Forest Management Plan Agreement Signed by Guild, 18:10
Guild Answers Forest Service on Old- Growth, 12:2
Board Candidate biography, 12:9
- Brandt, Marcus**
Central Moravian Church, 31:11
Henry Antes House, 40:9
Marriage of Timber and Stone, 28:13
- Brill, David**
A Canadian Work Party (photos), 25:11
Cabildo Roof Goes Up One, Two, Three (photos), 24:10
Habitat Photos, 13:6-10
- Brilliant, Frederic**
French Miscellany, 24:8
- Brock, Peter S.**
Design, Framework for Craft, 17:4
- Brooks, Dennis**
Letters: Misprinting, 51:3
- Brower, Jack**
Lawyer-Wellner House, New York State, 26:8
- Brown, Rick**
Raising an Obelisk, 54:4
- Brown, Wyly**
Highland Reminiscence, 52:16
- Brunel, Sam**
And Some [Engineering] Applications, 13:16
- Brungraber, Ben**
Topics: King Ludd, or the Road Ahead? 49:2
Voyages of Brungraber: Summer, 42:10; Winter, 41:12
- Pegging Design, 28:15
Visit to Germany, 27:4
On Dropping 115,000 Pounds, 25:16
Engineered Tension Joinery, 23:10
Pegging the Big Easy, 20:3
Chisel Sharpness Assessment, 20:5
Board Candidate biography, 12:9
Hints on How to Run the Railroad, 11:7
Tallest Timber Frame, 9:12
Log Building, 7:6
Allowable Stresses Proposed for Oak Timbers, 6:5
- Bryant, David**
Derrick House, New York State, 32:9
- Buck, Jim**
Contracts and Estimating, 9:6
Recent Raisings Ancient and Modern Style, 4:1
- Buck, Timothy Jr.**
And a Cautionary Tale, 10:7
- Buckle, Steve**
Hahn House, Ontario, 32:8
- Buckner, Edward**
Oak and the Pine Tree Mentality, 24:16
- Burch, Elliot**
Uneven Bunk Displacement and the Timber Framer, 14:5
- Buttner, Dennis**
House, Illinois, 42:15
- Buzerak, Michael and Joan**
Caverly House, Petersburg, N.Y., 21:6
- Carew, D.L.R.**
Conference Returns to Rensselaer (**Troy '91**), 19:1
Conference success at Troy (**Troy '90**), 17:1
Products: Layout Template, 12:3
- Carr, Mike**
Framer's Journal: Hudson Valley Barns, 41:20
- Cartrette, Katherine**
Habitat Designs Revised, 11:3
- Chambers, Robert W.**
Business Home Truths, 15:3
Letters: A Log Builder Speaks Out, 4:2
- Chappell, Steve**
Second Western Conference Draws 140 to Timberline (**Timberline '88**), 7:1
Trade Fair Enlivens Conference, 2:3
- Chauvin, Tim**
Letters: Advertising, Maybe, 22:2
"House Makers" Reviewed, 15:2
- Chauvin, Tim and Wynter**
System for Emergencies, 22:9
- Christian, Rudy**
Old Ways of Measuring, 44:5
Mortise Clues, 36:5
Malabar Memories (**Malabar '95**), 36:14
Letters: Reconsiderations, 30:2
Forebay Floor Framing, 28:13
Three Who Beat the Buster, 17:3
Tool Show and Tell, 13:15
Advanced Joinery Questions, 13:15
Before the Chips Fly (layout), 12:7
Board Candidate biography, 12:9
Letters: Education, 11:2
Before the Chips Fly (sharpening), 10:6
Before the Chips Fly (layout), 8:3
Before the Chips Fly (layout), 7:3
Super Joint, 2:1
- Churchill, Randy**
Letters: For Guild and Council, 46:2
- Clark, Terry**
An American in Russia, 30:12
- Collins, Jim**
Dog House, Pennsylvania, 42:15
- Collins, William**
Guelph '92, the Story of a Bridge, 25:4
- Courbet, Gus**
Notes from the Cruck Farm, 10:4
Notes from the Cruck Farm, 9:11
- Crabtree, Mark**
Guelph Bridge (panoramic photo), 25:8
Habitat frames (panoramic photo): 13:4
- Cranston Timber Frames**
Martha's Vineyard Horse Barn, 54:24
- Crocco, David G.**
Plain Language Contracts, 40:4
- Currier, Nancy J.**
Topics: Forest Update '97, 44:2
Guild Notes & Comment (Forests), 42:18
Topics: Forest Bathing, 29:3
Topics: Organic Circles, 25:8
- Daley, Dan**
Selected Short Subjects, 13:15
Design Workshop Reviewed, 11:8
- Darm, Sean**
Books: *A Pictorial History of Chinese Architecture*, by Liang Su-Ch'eng, 11:3
- Dauerty, David J.**
Square Rule Methods, 45:4
St. Peter's Church, 40:9
- Daviss, Bennett**
Can a Building Heal a Community? 33:8
- Deplume, Norman**
New Venue for Western Conference (**Big Sky, 1991**), 22:1
Cabildo Roof Frame to be Built in New Hampshire, 21:1
National Conference Set for June, 15:1
Building Expert challenges Timber Framers, 13:3
Katherine Cartrette Discusses Methods and Considerations, 13:13
Conference Preparations Complete, 12:1
1989 Conference Scheduled, 10:1
National Conference Reaches Out (**Elizabethtown, '88**), 9:1
Elizabethtown Conference Arranged, 8:1
- Design Contests and Expositions**
1999, 54:24: Cranston Timber Framing (Phil Regan)
1998, 51:4: Daiku Woodworking (Peter Wechsler), Acorn Timber Frames (David Garrett)
1997, 51:5: Timberworks (John Sullivan, Hill-Glazier)
1996, 42:14: Michael Anderson, Garland Mill (Tom Southworth), Timberecture (Dennis Buttner), Creswell and Powell (Jim Collins AIA)
1995, 37:6: New Jersey Barn Co., The Cascade Joinery (Jill Sousa), Gregory Smith, Riverbend (Rodney Pfotenhauer), J-Squared (Chris Luthi)
1994, 32:10: Thistlewood (Steve Buckle), Stephen Amstutz Woodworking (David Bryant), New Energy Works (Peter Reynolds), Ian Ellison, Yoshimoto Ringyo (Kimihiro Miyasaka), Dennis Orre
1993, 29:4: Michael Anderson
1992, 26:8: The Timber-Frame Workshop (Dan Bartlett, Chris Madigan), New Energy Works (Jack Brower), Timberpeg (Janet Null, AIA)
1991, 21:6: Star Ridge Design (Michael and Joan Buzerak), Northern Timber Framing (Jeremy Lang), Creative Homes and Millworks (James Howard Fox), Carpenter Oak and Woodland (Roderick James), Timbercraft Homes (Judith Landau)
1990, 17:10: Timbercraft Homes (Judith Landau), Riverbend (Martin Riley, Pascal Viel), Thistlewood (Chris Pickard), Northern Timberhouse (Alfredo Rico, Darryl Lane)
- Doering, Carol**
D-I-Y in Alberta, 53:8
- Donahoe, Toni and Bob**
Tale of a Twister: Frame Put to Test, 4:4
- Duke, Violet L.**
Letters: Engineering, 16:2
A Geometer's Delight, 11:5
Timber Framing in Germany, 9:4
- Dunbar, Dick**
Letters: Design, 21:2
Letters: Maple, 7:2
- Dunn, Gary**
Topics: Standards, 16:10
- Ellison, Ian**
Ervey House, Massachusetts, 32:10
- Ensminger, Bob**
Variant Log Sweitzer Barns in Pennsylvania, 48:5
- Ezzell, Li**
Field Report, 27:16
- Fletcher, Rachel**
Proportioning Systems and the Timber Framer, 18:8
- Forsaith, Richard**
... And a New One (Chrishall, Essex), 19:3

Fox, James Howard
Wildcat Cliffs Fitness Centre, 21:7

Freeman, Paul and Randall Walter
Timber Frame Nerds? 45:12

Gardner, Bruce L.
Pricing the Work, 17:12
Topics: Promotion, 6:6
Education Committee Minutes, 2:5

Garlow, John
PEG 1000: Degrade Prevention, 14:5

Gee, Newman
Ship's Knees, 24:9

Goldberg, Mike
Goldberg's Highland Journal, 51:9

Grassi, Robert
Mill Timber Framing, 44:3

Green, Thomas O.
Letters: Merit Badge, 16:2

Greenwood, Alex
Corncribs in the Delaware Valley, 48:4
New Jersey House Reconstruction, 36:4

Greif, Andy
Call for Abstracts, 11:2
Sharp Look at Stones, 9:10

Grier, Ross
Department of Clarification, 42:20

Guilhemjouan, Marc
French Scribe III, 36:18
French Scribe II, 35:10
Introduction to French Scribe Layout, 34:8

Haarmann, Peter F.
Long Island, N.Y., Where Dutch and English Meet, 31:8
Long Island Roof Framing, 28:12

Hamilton, L.
Letters: Who's Who, 9:2

Hamilton, Scott G.
Letters: Dedication, 10:2

Hand, Jay and Jay Welborn
19th-Century Pavilion Reproduced (photos), 22:10

Harvard, Peter M.
Site Planning and Site Inventory, 26:5

Hewett, Cecil A.
English Barns with Nailed Wind Braces, 47:14
Baythorne Hall (A Revision), 46:20
An Old English Joint, 34:16
Capitals, Scarfs and the Interdict, 33:4

Hochstetler, Levi
Letters: Medications, 8:2

Home, Jim
Glulams Looking Smoother, 24:16

Howard, Richard
Views of Concord Workshop (photos), 14:3

Howell, Charles
Letters: From the Troops, 27:2

Huber, Greg
Mammoth Lesson, 52:3
Pennsylvania Barn in New Jersey, 48:5
Dutch Barn Wood Species, 46:8
Cantilevered Dutch-American Barns, 43:8
18th-Century Ulster Co. Lap Dovetail Dutch Barns, 41:9
Two Ulster County Barns, 36:4
Mammoth in Monmouth County, 24:13
Wemple Barn, 24:8

Index to Articles
Numbers 39-42, 1996, 43:20
Numbers 35-38, 1995, 39:3
Numbers 31-34, 1994, 35:16
Numbers 27-30, 1993, 31:16
Numbers 18-26, 12/90-12/92, 27:20
Numbers 1-17, TIMBER FRAMERS NEWS,
October 1985-September 1990, 18:5

Ireton, Kevin
What is Fine Home Building? 40:18
Tidewater Virginia, 9:7

James, Roderick
Lake House, Gloucestershire, 21:7

Jin, Yuxiang
Chinese Traditional Framing III, 20:8
Chinese Traditional Framing II, 17:8
Chinese Traditional Framing, 16:8

Just, Peter
House Building in Donggo, 16:6

Keir, Bill
Topics: Spar Wars, 53:3
Letters: Trussed, 20:2

Keroux, Buck
Moisture Control, 9:4

Kessel, Martin H. and Ralf Augustin
Load Behavior of Connections with Pegs II, 39:8
Load Behavior of Connections with Oak Pegs, 38:6

Kirby, Sam
Maine Rendezvous (**Green Island '95**), 38:15
Natural Straw-Clay Wall Systems, 35:6

Kohler, Joe
Books: *Consumer Guide to Home Energy Savings*,
by Alex Wilson, 20:2

Kohler, Joe and Dan Lewis
Timber Frame Heating and Ventilation, 18:6

Kovacik, John
Ellessdie Chapel, 48:7

Kricker, James and Stephen G. Young
High Horse Wheel, 31:10

Landau, Charles
Letters: Charles Landau replies, 28:5
Joinery Decisions, 27:10
Infill System for the Lancy House, 21:9
West Coast Frame Raised in Japan, 3:4

Landau, Judith
Lancy House, Bainbridge Island, Washington, 21:8
Nash House, Port Townsend, Washington, 17:10
1990 W. Conference, Design: Theory, 15:4
Letters: Thanks, 13:2

Lang, Jeremy
Westchester House, N.Y., 21:6

Lange, Norman
Topics: Insurance, 22:9

Lanoue, David E.
Composite Massachusetts Barn, 36:4

LaPorte, Robert
Letters: Straw-Clay, 36:2
Panel Panel Delivers Report, 2:4

Latané, Tom
Hands and Machines, 51:3

Lawrence, Steve, Paul Price and Ken Rower
A New Roof at Scotland's Stirling Castle, 47:4

Lawson, Richard
Cabildo Goes Up One, Two, Three (photos), 24:10
Harmondsworth Copy, 24:8

Lee, Lance
Craft as Myth in Modern Communities, 28:7

Lee, Leonard
Lee's Chiselology (sharpening), 9:6

Lehmer, Dale
Barn Dismantling, 31:8
Taking Down Timber Barns, 32:4

Leonard, George M.
Forest Service Replies Again on
Old-Growth, 13:2
Forest Service Answers Guild on Old-Growth, 11:2

Levin, Ed
Highland Fling, 50:14
Hammer-Beam Roofs II, 49:1
Hammer-Beam Roofs I, 48:12
Building the Lexington Bellfortis, 44:10
Joint Engineering II, 39:12
Joint Engineering, 38:10
Globe Theatre, 31:10
Frame Engineering, 30:7
Apprenticeship, 24:8
Framing the Cabildo Roof, 23:8
Breaking New Ground, 22:3
Hip and Valley Framing III, 21:15
Hip and Valley Framing II, 19:5
Guild Directors Meet (**Troy '90**), 17:3
Hip and Valley Framing, 17:6
Forester Sets Out Rational
Long-Term Management Plan, 15:6
Board Candidate biography, 12:10
'89 Conference Broadens Range, 11:1
Wood for the Future, 10:3
Commentary (forestry), 9:8
French Scribe Rule, 8:5
Double Raising at Brattleboro Museum, 6:4
Marlboro 1986: A Considered Appraisal, 2:8

Lewandoski, Jan
Extinct Framing: Railroad Bridge Trusses, 44:4
Books: *The Colossus of 1812*, by Lee H. Nelson, 42:2
Erection of Church Steeples, 36:6
Brief Reviews: Bell, Kelley, Haupt, 32:3
Restoration Strategies, 31:12
Tying Joint Variation VII, 30:16
Wilson Barn, 24:9
Industrial, Pre-Industrial Framing, 20:6
Letters: Long Timber, 16:2
Problem of Long Timbers, 16:3
Windsor-Cornish Repairs Proceed, 12:10
Board Candidate biography, 12:10
Long Two-Span Wooden Bridge Under Repair, 11:10
Vermont Framer's 1799 Diary, 10:4
Vermont Church Roof Frame Reproduced, 3:3

Ley, Russell
Canadian Work Party (photos), 25:11

Lidholm, Lyle E.
Early Wisconsin Framing, 12:3
Letters: Mortiser, 7:2

Lindsey, Gail
Ethical Design and Construction, 33:11

Little, George
Early Mortising Technology, 22:12

Lukian, Doug
Saving Ontario's Old-Growth, 22:8

Luthi, Chris
Booneville, California, House, 37:8

Madigan, Chris
One Man's Castle, Bell-Tower, N.H., 26:9
Topping Out, 24:8
Peter McCurdy Surveys Repair Methods, 2:2
Message from the President, 1:4

Magee, Mack
Earthquakes and Timber Frames, 16:4
Engineers, Bolts and Glulam, 15:7
Direction for Joint Design, 15:7
Visual Stress Grading Revisited, 14:6
Elements of the Dream Shop, 13:7
Testing Committee Report, 11:8
Grading Workshop Success, 11:9

Marcom, Dennis
Professor Brungraber Lectures, 2:5

Mark, Robert
Solving a Structural Enigma: Westminster Hall's
Hammer Beam Roof, 30:4

Martin, Paul
Recent Raisings Ancient and Modern Style, 4:1

McCann, John and Leigh Alston
Timber-Framed Dovecote in Suffolk, 52:4

McCarty, Joel C.
Guild Notes & Comment (TFBC), 40:21
Topics: Ontogeny or Phylogeny? 38:2
Guelph Bridge Designed, 23:1
Letters: Guelph Bridge Advice, 23:2
Guild E-Mail, 20:2
Topics: Specifications, 20:5
Slide Show Raises Questions, 2:2

McCurdy, Peter
Reconstruction of London's Globe, 37:2
New Globe for London, 36:5

McEnnerney, Matthew
Reproducing Shakespeare's Globe, 23:6

Meysner, Jürgen
German Roof Layout II, 34:10
German Roof Layout I, 33:14
Pricing the Work III, 19:3
Letters: German Conference, 16:2

Miller, Randy
A Gazebo in Philadelphia, 36:10

Milton, Curtis
Guild Notes & Comment:
A New Executive Directorate, 50:2

Miyasaka, Kimihiro
A Viewpoint for Wooden Architecture, 35:3
Hanshin Earthquake, 36:8
Fukagawa School, Nagano, Japan, 32:11

Mori, Shigehiro
Topics: Toishi (stones), 8:6

Mullen, Grigg II
Trébuchet for VMI, 44:8

Mumaw, John W.	New Election Procedure, 6:5	Business Meeting Adopts Bylaws, 2:2
Techniques: Sharpening Chains, 11:8	Stress Values to be Established for Oak Timbers, 3:2	Directors Annual Meeting Minutes, 2:3
Murphy, Brian	Testing Committee Meeting Minutes, 2:6	Conference Committee Meeting Minutes, 2:5
Topics: Handwork, 47:3	Revel, Ryan	Guild Conference Draws 200 (Hancock '85):
Murray, Scott	Modern House for Maryland Shore, 10:8	Officers; Directors Meetings; Business
1868-1873 Framer's Journal, 31:11	Reynolds, Peter	Meeting; Timber Framing and the Landscape;
Guild Notes & Comment (Fishkill '93), 28:18	Phelps House, New York State, 32:10	The Whole House; The Timber Framing
Bridge for Guelph, Ontario, 21:5	Rich, Mark B.	Business; Mortise and Tenon Test Suggests
Second Canadian Conference (Orilla '91), 20:1	Pythagorean 345, 48:20	Joint Revision; Slide Show; Committees, 1:1-3
Traditionalists Establish Group, 18:2	Letters: Advertising, No, 22:2	Russell, Paul
Canada '91, 18:3	Rico, Alfredo and Darryl Lane	Traditional Frame in West Sussex, 29:8
Musco, T.G.	Rico House, Ontario, 18:1	Letters: Sussex Report, 28:3
Topics: Suspenders, 13:6	Riley, Martin and Pascal Viel	Saeger, Laura
Nagelbach, Fred	Mackel House, Indiana, 18:12	Framer's Notebook: Amulets, 33:13
Timber Frame Sculpture, U.S. Society, 10:5	Robinson, Kendall W.	New Gates for Lock No. 36, 24:14
Nash, L. Andrew	Silhouettes: Hugh Lofting, 22:5	Timber Frame House: Its Place in America, 13:13
American Timber Frame, 37:10	Topics: D-I-Y II, 17:2	Sample, Randy
Preservation vs. Restoration, 31:9	Roehm, George H.	Guild Achieves First Public Planting, 21:4
Restoration Objectives, 24:9	Letters: Suggestions, 31:2	Regional Conferences Announced, 9:1
Forebay Barn Origins Explored, 13:14	Rothert, Paul	Genesee Barns, 9:5
Neel, W. Wayne	Surprising Inversion, 10:7	Sampson, R. Neil
Design Considerations for a Large Trébuchet, 44:12	Rower, Ken	Appeal to Plant More Trees, 21:14
New Jersey Barn Co.	Guild Notes & Comment (Fairlee '99), 54:3	Sasala, Rick
Edmund Burroughs House, 37:6	Visit with Jim Kricker, 54:10	Notched vs. Mortised Joinery, 43:4
Norlander, Susan	Books: <i>Timber Construction for Builders and Architects</i> ,	Schmidt, Dick
Kitchen Notes from Dolly Copp, 42:8	by Eliot Goldstein with Robert Smulski, 52:20	Joint-Busting at Amherst, 45:3
Null, Janet	New Roof at Scotland's Stirling Castle, 47:4	Books: <i>Timber Solutions Manual</i> ,
House and Studio, Minnesota, 26:8	(with Steve Lawrence and Paul Price)	by David W. Duquette, 45:2
Oatman, Paul	Books: <i>English Historic Carpentry</i> , by Cecil Hewett	Behavior of Connections Commentary, 39:11
Oatman's Last Voyage: Ludlow to London via Dublin, 53:16	(first American edition), 46:20	Seki, Yuko
Voyages of Oatman: Cambridge and Warwickshire, 52:12;	Amherst Conference (Amherst '97), 45:6	Tale of Two Saunas, 47:9
Suffolk and Essex, 51:6; The Netherlands, 49:6;	Bethlehem Conference (Bethlehem '96), 42:13	Sexton, James
Hessen, 48:8; Chartres: 47:17	Books: <i>Architectural Technology up to the Scientific</i>	Tying Joint Evolution, 36:12
Orpin, Jonathan	<i>Revolution</i> , edited by Robert Mark, 38:3	Silverstein, Murray
Topics: Council Update, 51:2	Annual Meeting '95 (Williamsburg), 37:16	Is Place a Journey? 24:4
Books: <i>Seeking Structure from Nature: The Organic</i>	Books: <i>Silent Spaces: The Last of the Great Aisled Barns</i> ,	Sinclair, Peter
<i>Architecture of Hungary</i> , by Jeffrey Cook, 48:2	by Malcolm Kirk, 35:2	Hay Barracks, 36:5
Dining Rotunda in Syracuse, 38:4	Guild Notes & Comment (Skamania '95), 35:14	New World Dutch Barns, 28:12
Letters: On Longevity, 36:2	Guild Notes & Comment (Nacogdoches '94), 32:14	Sinclair, Peter and Bob Hedges
Topics: On Longevity, 34:2	Newbury Methodist Church, 31:10	Raising Holes and Wing Pegs, 40:8
Letters: Eastern Old-Growth, 30:3	Books: <i>Dwelling, Seeing and Designing</i> ,	Simmons, David A.
Cellulose Alternative, 29:6	by David Seamon, 29:2	Romance and Symbolism of Covered Bridges, 40:8
Letters: Tedd Benson, 28:2	Bridge Triumph in Canada (Guelph '92), 25:1	Smith, Andy
Letters: Apprenticeship, 24:2	Canadian Work Party (photos), 25:10	Aftermath, 50:20
Letters: Generosity, 21:2	'91 Elections and Meeting Ring Changes (Troy '91), 21:1	Smith, Gregory
Letters: Cautions, 18:2	SBA National Resource Development Plan, 21:14	Town House, Saltsburg, Pa., 37:8
Letters: Apprenticeship, 15:2	Elections, 20:2	Smolen, John
1990 W. Conference: Business Start-Up, 15:5	Oregon Conference Issues (Timberline '90), 18:1	Giddings Road Bridge, 40:10
Oswald, Anthony	Canadian Group Takes Shape (Alliston '90), 16:1	Sobon, Jack A.
Barn Symposium, 9:5	Old-Growth Policy Announced, 15:1	Of Sapwood and Water, 43:10
Overbay, Jim	Concord Workshop Success (Concord '89), 14:1	Books: <i>Historische houtconstructies in Nederland</i> ,
New Perspectives on National Forests, 21:12	Views of Concord Workshop (photos), 14:3	by G. Berends, 43:2
Palmer, John	Habitat Jubilation at '89 Conference (Habitat '89), 13:1	Letters: Rolling Plates? 40:2
Letters: Exchange Program, 13:3	Western Conference (Fort Worden '89), 13:1	Traditional Techniques and Shortcuts, 39:4
Pankratz, Bruce	Habitat Frames Readied for Raising, 12:1	Tying Joint Variation X, 38:20
Topics: Six Paradoxes, 32:3	Habitat Frame Underway, 11:1	What Can an Off-Cut Tell Us? 37:9
Letters: Class Envy? 28:2	Bridge Design Competition Announced, 11:1	French Snap, 36:4
Peters, Tom F.	Western Conference Surveys Design, Joinery, Business	Tying Joint Variation IX, 35:13
(Light)-Framing American Culture, 31:3	(Timberline '88), 11:4	Tying Joint Variation VIII, 33:16
Petrescu, Paul	Board Sets Major Goals for 1989 (Chebeague '88), 10:1	A Simple 18th-Century Quaker House, 31:6
Wooden Vernacular Architecture in Romania, 21:10	Richard Harris Describes "Language of Carpentry," 9:3	Scribe Rule, Square Rule, 31:9
Pfotenhauer, Rodney	Professional Directory to Appear, 8:1	[For TJV VII, see Lewandoski, 30:16]
Baker House, Michigan, 37:8.	Election Procedure Explained, 8:4	Adzed Beams? 28:13
Pickard, Chris	Resource Committee Acts, 8:5	Letters: Joinery, 28:3
Hayter House, Ontario, 18:12	Directors Chart Course for 1988 (Portsmouth '87), 6:1	Tying Joint Variation VI, 28:20
Pinneo, Tom	500 Attend 1987 Conference (Poultney '87), 5:1	Tying Joint Variation V, 27:18
Bethlehem Conference Commentary, 42:13	Vermont Museum Sets Raisings, 5:1	Tying Joint Variation IV, 26:16
Price, Paul	Committees: Bennett Heads Testing, Gardner	Cruck Apexes, 24:9
Less Cackling, More Eggs! 50:8	Carries On, Lukian Takes Chair 5:2-3	Tying Joint Variation III, 23:12
New Roof at Scotland's Stirling Castle, 47:4	Directors Meet, Elect Officers, Review Events, 5:3	Tying Joint Variation II, 21:16
(with Steve Lawrence and Ken Rower)	Wide Ranging Workshops Enrich Weekend, 5:4	An Ancient English Frame, 19:2
Winchester Cathedral's South Transept Roof, 46:4	Tips on Getting Them up without Breaking Anything, 5:5	Silhouettes: Mystery Man (Paul Martin), 18:4
(with John Winterbottom)	Recent Work in Slide Show III, 5:5	A Variation on the English Tying Joint, 14:6
Double-Cutting and Historic Scribe Framing, 40:16	Len Brackett on a Japanese Apprenticeship, 5:6	Johannes Lawyer Barn, 12:6
Williamsburg '95 , An English View, 37:14	New Tools and Materials at Show, 5:7	Pitch, Measure, Proportion, 9:3
Charlton Court Barn, a Medieval Frame and its	Members Raise Issues at Annual Meeting, 5:8	Visit with the Canadian Log Builders, 7:5
Conservation 34:4	Recent Raisings Ancient and Modern Style, 4:1	Ancient Barn Surveyed (Harmondsworth), 7:6
Proulx, David	Western Meeting Brings 100 Framers to Oregon	Pilgrim Dugout, 4:3
Massachusetts Barns, 28:14	Mountain (Timberline '87), 3:1	New Fort for 17th-Century Village, 3:2
Reed, John	1987 Conference Set for Vermont, 3:1	Richard Babcock Discusses Early Barns, 2:3
Old-Growth Symposium Yields Basic Agreements, 19:10	West Coast Frame Raised in Japan, 3:4	Sousa, Jill
Midwest Region Meets, 11:7	325 Attend 1986 Conference (Marlboro '86), 2:1	Wake House, Blanchard, Wash., 37:7

Southworth, Tom
Lost Nation Cabin, Lancaster, N.H., 42:15

Stahle, D.W.
Letters: Dendrochronology, 33:2

Stevens, John R.
Dutch-American Timber Framing, 44:6

Strauss, Tom and Meta Wahlstrom
Letters: Kudos

Sturgis, Arron
South Berwick, Maine, Churches, 44:4

Sullivan, John
Campbell Residence, Hulalai Walkway, 51:5

Tarule, Rob
Early Woodworkers in Massachusetts Bay, 54:16

Thompson, Nancy J.
Topics: D-I-Y, 14:2

Topi, Ludovico
A Return to Order, 13:12
Are Timber Frames Well Designed? 9:7

Troth, Dan
Ross County Barns, 40:1

TTRAG Proceedings
1998, 48:4: Greenwood, Huber, Ensminger, Wingender, Kovacik
1997, 44:3: Grassi, Sturgis, Lewandoski, Christian, Stevens
1996, 40:8: Simmons, Sinclair and Hedges, Brandt, Dauerty, Smolen, Troth
1995, 36:4: Sobon, Carr, Huber, Greenwood, Lanoue, Christian, McCurdy, Sinclair
1994, 31:8: Haarmann, Lehmer, Nash, Sobon, Rower, Levin, Kricker and Young, Murray, Brandt
1993, 28:12: Sinclair, Haarmann, Christian, Brandt, Sobon, Proulx
1992, 24:8: Madigan, Brilliant, Lawson, Huber, Lewandoski, Nash, Gee, Yonne

Turney, Terry
Timber Frame Foundations, 17:11

van Beest, Koby
Topics: Pegs, 10:5

van Olst, Ellen L.
Traditional Farm Types of the Netherlands, 27:6

Vincent, Jonathan
Books: *The Old Way of Seeing*, by Jonathan Hale, 41:2
Books: *Norwegian Wood: A Tradition in Building*, by Jerri Holan, 40:3

Vogel, Neal A.
A Traditional Dutch Frame in New York, 19:8

Walter, Randall and Paul Freeman
Timber Frame Nerds? 45:12

Warchaizer, Andrea
Exhibitions: *Mechanical Marvels in the Age of Leonardo*, by Paolo Galluzzi, 47:2
Books: *Earth to Spirit*, by David Pearson, 39:2

Wechsler, Peter
Japanese Teahouse in Maryland, 51:4, 20

Whitefield Wetlands Study Gazebo Consortium
Gazebo, 45:8

Wilkins, Nancy
Sustainable Forestry, 27:15
Guild Notes & Comment: Sunny Days Ahead, 27:19
New Perspectives Commentary, 21:14
Timber Framer's Journal, 20:6
Apprentice Program Underway, 17:10
Pricing the Work II, 17:12

Wilson, Kevin
Letters: Hugo, 14:2

Wingender, Jörn
German Frame Typology III (Roofs), 52:7
German Frame Typology II, 51:16
German Frame Typology, 49:4

Winter, Amos G.
Letters: Foam Wars, 4:3

Winterbottom, John and Paul Price
Winchester Cathedral's South Transept Roof, 46:4

Witter, Mark
Books: *Barns of Roots America*, by Richard Babcock, 33:3
Guild Notes & Comment (Historic Review), 31:14
Guild Notes & Comment (**Bucksteep '93**), 30:15
Guild Notes & Comment (**Rindge '93**), 29:15
Guild Notes & Comment: A Miscellany, 27:19
Silhouettes: Hewer of Wood (Tim Berube), 26: 4
Silhouettes: The Arch-Druid (Brendan Costello), 24:12

Products: Junior Crane, 23:5
Back to the Fundamentals, 13:5
Products: Rope Comealongs, 9:11
Education Committee Reports, 9:11

Woodburn, Preston
French Compagnonnage Briefly Explored, 13:14

Wormington, Brian
Topics: Eyes Wide Shut, 53:2
Guild Notes & Comment, 49:12

Wormington, Janice
Holding the Timber Framing Industry Together, 53:13
Bonnie Trip to the Land of Chips, 50:4
Silhouettes: Swords into Ploughshares, 46:12
How I Spent My Spring Vacation, 44:15

Wroblewski, Al
Letters: Kudos

Yancy, Margaret
Guild Notes & Comment: Economics, 31:15

Yonne, George
Leaf Springs, 24:9

Young, Jim
How to Plot a Site Plan, 23:3
Directions: West, South and North, 22:3
Directions: News and Progress, 21:3
Directions: Introductory, 20:3

Cabin Creek Timber Frames

Joseph Bell
360 N. Jones Creek Road
Franklin, NC 28734
828-369-5899
jbell@dnet.net

www.cctimberframes.com

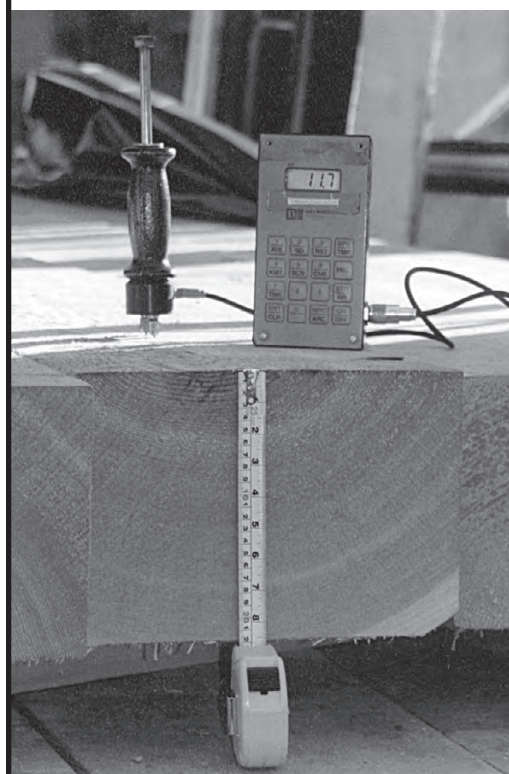
Fine Frames



Octagonal Pins
Locust and
Other Species

FRASERWOOD INDUSTRIES

KILN DRIED TIMBERS



**“Your timbers
offer the reality
of which we
have dreamed
for many years.”**

Ben Brungraber, PhD, PE, Operations
Director, Benson Woodworking Co.

Fraserwood Industries' radio frequency/ vacuum kiln with its unique restraining system can dry timber of all dimensions and up to 40 ft. long to 12% MC with minimal degrade

FRASERWOOD INDUSTRIES

Please contact Peter Dickson
(604) 290-7107
e-mail pdickson@direct.ca
for more information

Foard

P A N E L

Enclosing timber frames is our specialty.

Check us out at:
www.foardpanel.com

Foard Panel, Inc.
P.O. Box 185 (53 Stow Dr.)
West Chesterfield, NH 03466
603-256-8800
603-256-6902 fax

TIMBERS

White Oak and Red Oak
Timbers up to 40 ft. Long



*Accurate Custom 4-sided
Planing up to 15x24x40*



Also 2x6 and 1x6
T&G White Pine

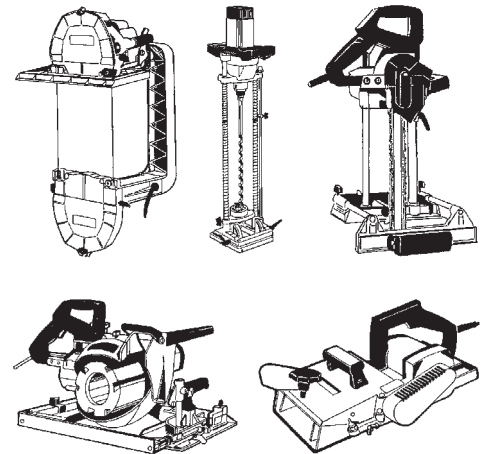


Send for timber price list.

HOCHSTETLER MILLING
552 STATE RTE 95
DEPT TF5
LOUDONVILLE, OH 44842
419-281-3553

MAFELL

**The widest range
of specialized
machines for
timber framing**



MAFELL North America Inc.
1975 Wehrle Drive, Suite 120 · Williamsville, N.Y. 14221
Phone: (716) 626-9303 · Fax: (716) 626-9304
www.mafell.com **mafell@msn.com**

"APPRECIATE" YOUR INVESTMENT



Enclose your timber frame with America's premier insulating panels for the utmost in living comfort. Our polyurethane panels' patented cam-locking system allows for the quickest of installations. Available in R-values of R-28, R-35 or R-43. Our EPS panels are available in R-16, R-23, R-30, R-38 or R-43. Whether you choose polyurethane or EPS, consider Murus for all your SIP needs.

murus

STRUCTURAL INSULATING PANELS

PO Box 220 • Rt. 549 • Mansfield, PA 16933
570-549-2100 • Fax 570-549-2101
www.murus.com • murus@epix.net

Foam Laminates of Vermont

*Supplying quality stressskin panels for
Timber Frame structures since 1982*

- * Superior Quality
- * Built to your Specifications
- * Curtainwall and Structural
- * Professional Installation Available
- * Friendly, Knowledgeable Service
- * Specializing in Timber Frame Enclosures

P.O. Box 102 Hinesburg, VT 05461
(802) 453-4438 Phone
(802) 453-2339 Fax
E-mail: foamlam@sover.net
www.foamlaminates.com

MOUNTAIN

Timber Frame Co., Inc.

*Building the Future
Historical Houses of
America*



James Whitcomb

Timber Framers Since 1982

3 Spruce Street
North Walpole, NH 03609

Phone and Fax:

Office 603-835-7970

Home 603-445-2259

jimritaw@sover.net

TIMBER FRAME • HYBRID • STRUCTURAL

• STRUCTURAL PANEL SOLUTIONS FOR ALL YOUR BUILDING NEEDS •

PANEL PROS, INC.
P.O. BOX 1689
KEENE, NH 03431
PHONE: 800-721-7075
FAX: 603-352-7475
WEB SITE: www.panelpros.com



PANEL PROS, INC.

Services — Some or all, no job too small

- Panel Sales — sizes from 4' x 8' to 8' x 24'
- CAD design & layout
- Complete precutting
- On site advisors
- Installations (by Panel Pros' installers)
- Building code listed — BOCA / SBCCI / ICBO / NER
- Structural & nonstructural panels available

Northeast distributor / fabricator of

INSULSPAN
STRUCTURAL INSULATED PANEL SYSTEM

THE TIMBER PANEL EXPERTS

- Curtain-wall and structural
- Interior finishes of drywall or T&G pine or cedar
- Sizes 4x8 ft. to 8x24 ft.
- Cores 3 5/8 in. to 11 3/8 in.
- Code listed
- Third-party quality control
- Limited lifetime warranty



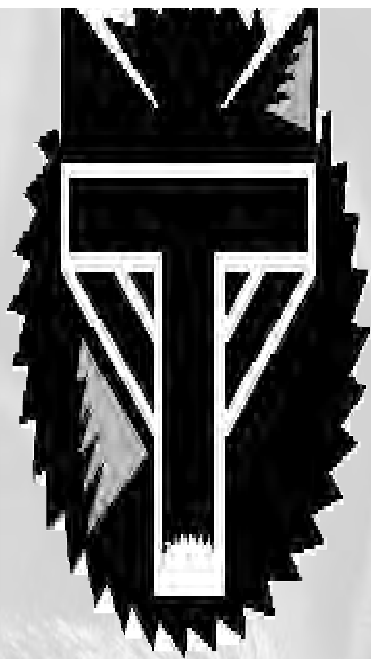
INSULSPAN

STRUCTURAL INSULATED PANEL SYSTEM

CALL FOR INFORMATION
AND NEAREST LOCATION

www.insulspan.com

1-800-726-3510



TIMBERWOLF TOOLS

YOUR SOURCE FOR:

Chain Mortisers	16 5/16" Circular Saws
Chisel Mortisers	6 1/8" Planers
Tenon Cutters	6 3/4" Planers
Housing Routers	12 9/32" Planers
Groove Cutters	Curved Planers
10 1/4" Circular Saws	Wheel Brush Sanders
13 1/8" Circular Saws	Portable Band Saws

Stop by our booth to see Timberwolf Tools' new curved planer.

WINTER PANELS perform in every season!

Urethane or EPS Cores

4 x 8 to 8 x 24

Full CAD/CAM

Pre-Cut Services

Timber Frames, Hybrids,
Structural Homes

802-254-3435
Fax 802-254-4999
74 Glen Orne Drive
Brattleboro, VT 05301



We deliver anywhere in North America.

Visit us on the Web
www.winterpanel.com

Custom-Laminated Curved Timbers

Glue lines in our grain-matched timbers are almost invisible.
Looks like a solid beam!



Call or fax for quote:

Bill Recarde

Summerbeam Woodworking, Inc.
277 West Sahdy Road
Kirkwood, PA 17536

717-529-6063 phone

717-529-4015 fax

www.summerbeam.com



Dreaming Creek
Timber Frame Homes, Inc.
Powhatan, VA 23139 804•598•4328
Fax 804•598•3748
www.dreamingcreek.com
DCTFH@aol.com

QUALITY TIMBERS

OAK AND SOUTHERN YELLOW PINE
LENGTHS UP TO 45 FT.
FAST DELIVERY ON STOCK SIZES

Pacific Timber Supply Ltd.

Douglas Fir, Red Cedar, Yellow Cedar, Sitka Spruce

Any size. Any specification
All grades to 100% clear temple wood
RF/V kiln drying
Competitive, delivered prices

World's finest fiber, accurately sawn for appearance

(604) 414-6888

Rasmussen Bay, Lund, BC V0N 2G0
Fax (604) 483-4563 timber@aisl.bc.ca



EVERGREEN SPECIALTIES LTD.

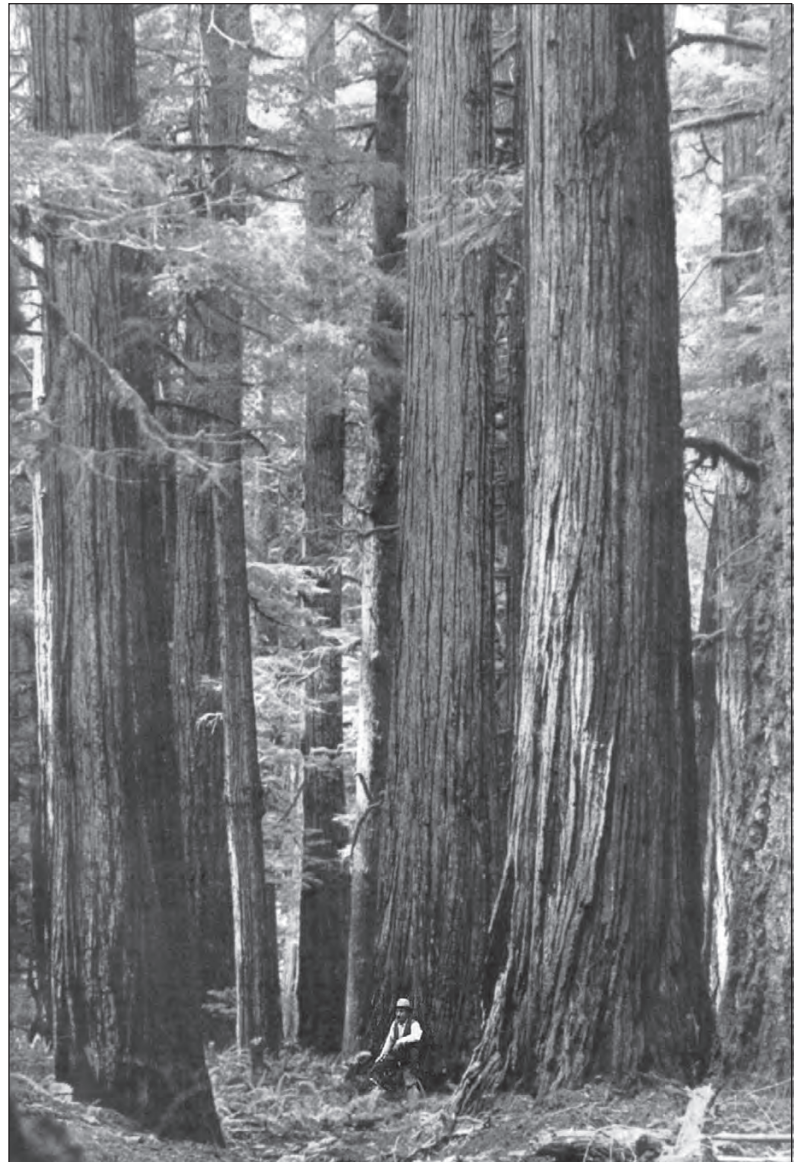
OUR QUALITY. . . .

Limited only by Your Imagination

Green, Air Dry, R-F Kiln Dry Timbers for
Select Projects since 1989

When Compromise is Not an Option,
Call Us.

Toll Free 877-988-8574 Fax 605-988-8576



Port Orford Cedar, Curry County, Oregon

*Trees selectively harvested.
Timbers sawn to your specifications.*

EAST FORK LUMBER CO., INC.
P.O. Box 275 • Myrtle Point, Oregon 97458
Tel. 541-572-5732 • Fax 541-572-2727 • eflc@mail.coos.or.us

Hundegger USA



Ask us about the updated
K2 Joinery Machine
and the new
PBA Panel Machine

Call or e-mail us for a free video

(435) 654-3028 OR (801) 361-4030

INFO@HUNDEGGERUSA.COM-WWW.HUNDEGGERUSA.COM

SunDried™ Conquers Green Timbers!



Nature saturates living trees through and through with water. In fact, newly cut timbers are as much as 75 to 90 percent water. As green timbers age and dry, they shrink. They check and twist. Then they move some more.

It's a problem all craftsmen have faced throughout the ages. Just ask your timber framer.

And now the problem is solved.

SunDried Wood Technologies has refined a unique radio frequency/vacuum technology that uniformly kiln-dries whole timbers, bringing the percentage of the wood's moisture content down to single digits. SunDried™ timber is as dry at its heart as it is on the surface.

With SunDried™ Timbers you get

- **dimensional stability.**
- **optimal structural integrity.**
- **no additional checking.**
- **furniture-quality pre-finishing capabilities**
- **peace of mind.**

Most hardwoods and softwoods, including Northern Red Oak, Douglas Fir, and Eastern White Pine can be SunDried™. Your builder wouldn't think of using green wood in any other aspect of your dream home. Why would you compromise on the most important element of your timber frame?

Insist on SunDried™

www.sundriedwood.com

P. O. Box 130
Elkview, WV 25071
Fax (304) 965-7795



**Call (304) 965-7700
for a free brochure.**

CHOOSING RECLAIMED TIMBERS

Choosing reclaimed timbers ensures high quality and integrity in joinery, and it is a choice that preserves history, one that you and your clients can benefit from. Call us for information regarding pricing, moisture content, species availability or visual considerations. We look forward to hearing from you.

Douglas fir, heart pine, oak and redwood, as well as barn timbers. S4S, roughsawn, sandblasted and hewn.

Request our brochure and samples

PIONEER MILLWORKS

1180 Commercial Drive
Farmington, NY 14425
716-924-9970 Voice
716-924-9962 Fax
800-951-WOOD (9663)

TIMBERS

Red and White Oak
Eastern White Pine
Eastern Hemlock

Timbers up to 26 feet

Dressing

Grade Stamping

14 Lumber Patterns

Phone 413-549-1403

FAX 413-549-0000



W.D. COWLS, INC.
134 Montague Road, PO Box 9677
NORTH AMHERST, MA 01059

BOOKS

A Visitor's Guide

A Guide to Medieval English Tithe Barns, by James W. Griswold. Published by Peter E. Randall, Portsmouth, New Hampshire, 1999 (ISBN 0914339737). 10 in. x 7 in., 85 pp., copiously illustrated. Softcover, \$15.00.

AVOID Fornication! According to Paul Price, editor of that fine occasional journal, *The Mortice & Tenon*, this is the text of the exhortation to be found incised into a stone plaque 8 ft. up the side of St. Mary's Braemore Church, in (Old) Hampshire. Paul was one of our team who recently repaired the tower frame. What, dear reader, does this have to do with the price of pegs? Why, a picture of the church appears on page 46 of the book at hand!

I'll buy or read any book about barns, but I took a little time to work out exactly who this book is aimed at. I decided that it makes a very good guide for a visiting North American, as it's small enough to carry around while exploring the countryside. I would add that carrying as well the highly portable *Discovering Timber Frame Buildings*, by Richard Harris, and referring to this latter work on matters of framing, would neatly sidestep most criticism that *A Guide to Medieval English Tithe Barns* might attract. (While this is not a review of *Discovering Timber Frame Buildings*, it's worth pointing out that this pocket-sized book is probably the most useful brief guide available on English timber framing.)

Mr. Griswold rightly points out in his overview that we British have slipped into a tendency to call any old or large barn a tithe barn, especially to enhance its standing or perceived value. Having neatly passed the blame for an issue of nomenclature to the natives, the author goes on to set his boundaries. He covers from 1066 (the date of the last successful invasion of England) to the dissolution of the monasteries in 1555, and sensibly includes all large barns and those of historic importance, avoiding academic distinctions between monastic and tithe barns.

Mr. Griswold rightly draws attention to the magnificent Great Coxwell barn, and notes the compliments paid to it by William Morris and Frank Lloyd Wright (an architect much admired by myself), but also includes my favorite barns: Bradford-on-Avon and especially the barn at Lacock. The latter is magnificent, I never tire of visiting it, one always finds it a calm oasis and a cool (in all meanings of the word) place, no matter how many tourists are clogging up the rest of the village.

Lacock, a National Trust Village, has

many fine buildings in the vernacular style and is very much worth a visit. (It will be on the TFG-UK Frame Spotting tour proposed for the autumn of this year.) Having made me happy, Mr. Griswold then goes on to mention the barn at Priory Farm in my own village of Kington St. Michael, also known for the famous Jolly Huntsman pub and its Old Speckled Hen beer.

The *Guide to Medieval English Tithe Barns* is not a book on timber framing, nor is it an academic attempt to deliver the last word on a big subject. What it does do is cover most of the bases. It explains tithes and tithing, gives basic history and touches on social history and population, agriculture and timber.

Of course, when we hit construction, it is easy to nitpick. For example, I have never encountered crucks derived from the method shown on one page (22), and the scarf joint on another (28) would ideally have a pair of folding wedges as the key. And, while I'm nitpicking, I could mischievously point out that it might have been appropriate in a book about English barns that the English stone tiles be hung on English wooden battens with English aluminium pegs, or, better still, the cleft oak ones that we make.

I liked the hints on finding barns and the suggested etiquette when trying to gain access to privately owned barns. I was especially pleased to see the author's assertion that having a North American accent seemed to be an advantage.

Mr. Griswold includes what he honestly calls A Partial Inventory of Medieval English Tithe Barns. I'm sure that for many people this section alone will justify the purchase price of the book. If incomplete, it is a good starting point. I can update the entry for Pilton Barn. This stone building was hit by lightning in the early '60s and burned. It is said that the local farmer kept piling up the timbers, with the result that it burned for three weeks, and nothing survived of the framing. But another local farmer, Michael Eavis, who is also the promoter of the world famous Glastonbury Rock festival, bought the remains of the barn, and formed a trust to bring the building back into existence and into communal use. This barn is now undergoing restoration by the capable hands of McCurdy and Co. The existing masonry walls are being carefully conserved, and a new roof built based on those of the Glastonbury Abbey group.

I took the book with me recently on a visit to our Scottish yard so the crew up there could have a look. Our Canadians in Scotland decided that the volume written by the American about the English barns was "A neat little book." I agree. —BILL KEIR
Bill Keir (bill@carpenteroak.co.uk) is managing director of Carpenter Oak & Woodland in Chippenham, Wiltshire.

NON-PROFIT ORG.
U.S. POSTAGE
PAID
EAST BARRE, VT
PERMIT NO. 2