

# TIMBER FRAMERS NEWS

Published by the Timber Framers Guild of North America, Inc.

Number 11, February 1989

## Habitat Frame Underway

THE HABITAT project, expected to be a significant chapter in the history of the Guild, is moving forward on schedule. With a target date of May 18 for the frame raising at Hanover, Pennsylvania, the framing plans are in their final stages. The mailing to the Guild membership soliciting donations of one or more cut timbers has produced an enthusiastic early response, and the possibility remains strong there may be two frames produced in the end. Shop drawings will be distributed to the volunteers this month.

The schedule for raising day calls tentatively for six bents to be assembled between 8:00 and 10:30 AM, the raising to begin at 11:00 and finish by 12:30. Pre-cut panels will go on next, together with windows, doors and roofing as the paneling proceeds, and the house will be completely closed in by 4:30 PM. Habitat volunteers will then continue working around the clock to finish the house (or houses) by Sunday noon, May 21.

The problems of developing a standard language for layout and checking and achieving standard size for pins and pinholes have presented the Guild's Habitat Committee an intriguing challenge. However, the possibility of a miscut timber has been anticipated—at one corner of the site a supply of spare timbers will be waiting on sawhorses, together with "ten of the fastest timber framers" in the Guild.

## '89 Conference Broadens Range

EACH YEAR, the Conference Speakers Committee tries to invite speakers dealing with a healthy mix of topics including business, history, engineering, construction, safety, tools, technique and design. At this year's conference in Millersville, Pa., acoustical engineer Tom Esslinger will speak to us about sound insulation and sound transmission in timber frame houses, and USDA Forest Products Lab Project Leader and *Fine Woodworking* contributor Bill Feist will talk about paints and finishes. Historian Bob Ansminger will join us to describe his work with Pennsylvania forebay barns. Philadelphia architect Alvin Holm will discuss the design and detailing of architectural woodwork (window and door trim, cornice work, panelling, etc.) and other elements strongly influenced by classical architecture.

In France today timber framers are still active, part of an unbroken tradition stretching back through the Middle Ages. The *Compagnons du Devoir*, the French trade guild, measures its age in centuries. Equipped with slides from the guild archives, *Compagnon* Michel Jambon will join us from Toulouse to speak about ancient and modern timber framing in France. We also hope to have on loan from Paris one or two masterpieces—exquisite wooden models produced by French framers at the completion of their formal training.

This year's conference will be closely interwoven with the Habitat for Humanity project, starting with the Habitat raisings on Thursday



Ed Levin / Autocad

*Machine perspective drawing of proposed frame designed by the Guild for the Habitat house. An alternate version will use common purlins instead of the common rafters shown here. More drawings appear on page 3.*

and ending on Sunday with the dedication of the finished houses. During the conference, York Habitat project coordinator Jean Shipman will speak to us at the opening ceremonies on Friday morning. The designer of the Guild-Habitat house, architect Katherine Cartrette of Minneapolis, will talk about "The Making of a Place," a how-to design seminar offering a basic design philosophy emphasizing simple solutions, exemplified by the Habitat house.

THE FLOW of timber framing across the continent has generally been from East to West. This year we reverse that trend by repeating two workshops first given at the 1988 Guild Western Conference. Adjectives like riveting or inspiring are seldom applied to business seminars, but John Reed's marketing seminar was acclaimed as the best ever by all those who attended. Judith Landau of Port Townsend, Washington will repeat her popular talk tracing the role of timber framing in American vernacular architecture, focusing on the influence of this history on her own work as a designer for Timbercraft Homes.

In addition to John and Judith, the 1989 conference features a number of presentations by Guild members. Doug Nash of Timbercraft will give a hands-on workshop dealing with jigs. Two panel discussions are scheduled. Tools will be the subject of a session titled "State of the Art, What's Missing" and "The Dream Shop" will explore ideal working environments for timber framers.

The remaining four sessions cater to a range of skill and experience levels among our members. For the beginning or intermediate framer, Chris Madigan and Tom Page of the Timber Frame Workshop will cover "The Fundamentals of Timber Framing" and Mack Magee of Riverbend will present an "Introduc-

### Call for Nominations

Five director's terms of office will expire this Spring. In accordance with Guild bylaws, a nominating committee has been appointed by the Board to receive nominations in advance of the election at the May conference. Nominations will not be taken from the floor at this year's election. Please therefore submit names promptly to any member of the Committee—Jim Benson, John Libby, Dennis Marcom or John Reed.

tion to Structural Engineering." For old hands, Benson Woodworking's Dennis Marcom will examine creative solutions to difficult joinery problems, while Ben Brungraber and friends take a look at "An Engineer's Worst Fears."

Finally, 1989 marks the start of an exciting new offering at the national conference, the presentation of short, highly specific talks by Guild Members. The Speakers Committee sees this as an excellent way of sharing our knowledge and experience and insuring that the conference program meets the needs of the membership.

—ED LEVIN

## Bridge Design Competition Announced

THE STATE of Vermont has opened a design competition for a standardized wooden bridge to be used to replace deteriorated municipal steel and concrete bridges throughout the state.

In announcing the competition Governor Madeline Kunin said she has "long dreamed of creating a contemporary Vermont wooden bridge that would be practical, cost-effective, a tourist attraction and a boon to our wood products industry." The competition is cosponsored by the Vermont Agency of Transportation and the Vermont Council on the Arts, whose director Joanne Winship remarked "we hope to bring out the artist in the engineer."

The design will be limited initially to spans of under 60-ft., though eventually these could be longer. "The Governor wants a prototype design that would signify Vermont," said Mary McDonald of the Agency of Transportation. "Basically we are talking about town bridges at this point."

Specifications for the competition will be published at the end of this month and the winner announced in June. A copy of the specifications may be obtained by writing The Secretary, Vermont Agency of Transportation, Montpelier, VT 05602. The deadline for submission is May 15.

# Forest Service Answers Guild On Old-Growth

THE OLD-GROWTH letter addressed to the U.S. Forest Service and published in the August, 1988 issue of the *News*, as well as in the September/October issue of *American Forests*, has received this official answer from Mr. George M. Leonard, Associate Chief of the Forest Service:

The letter dated June 9, 1988, from the Board of Directors of the Timber Framers Guild of North America, offers five recommendations to the Forest Service and BLM regarding management of Federal timberlands. I would like to take this opportunity to respond to those recommendations.

1. There will be ample supplies of "old-growth" timber from the National Forests over the next 100 years. At current rates of harvest, most of the timber harvested from the National Forests during this period will be substantially over the planning rotation age.

2. Approximately 20 percent of the area to be managed for timber production on the National Forests is planned for management on extended rotations. This often means rotations as long as 250 years. We estimate that these lands can produce a harvest of about 3 billion board feet per year on a sustained-yield basis. There will be ample supplies of high quality, fine-grained timber.

3. We define below-cost sales as sales in which the benefits to the public are less than the cost of making the sales. Based on this definition, we agree that such sales should be phased out over a time period long enough for dependent communities to make economic adjustments.

4. The export of unprocessed Federal timber is prohibited in the western States where most National Forest timber is harvested. This is true whether the timber is old-growth or second growth. Currently, Port-Orford cedar is permitted to be exported as a surplus species. This exception would be ended if there was evidence of a domestic market.

## Help Wanted

Vermont timber frame company seeks a working supervisor to manage a crew of six installing stress-skin panels. Also a designer-draftsman-timber framer who would also be able to take on some management responsibilities. Please send resumé to Wayne Kondor, RR 1, Box 2794, Cambridge, VT 05444.

## Customers Wanted

Catskill region sawmill eager for new customers offers timbers and custom sawing in oak, pine and other species. Call Valerie at 914-657-8051. Boiceville Lumber Mill, P.O. Box 178, Boiceville, NY 12412.

## TIMBER FRAMERS NEWS

Number II

February 1989

Published Quarterly  
by the

Timber Framers Guild of North America  
Box 1046, Keene, NH 03431  
Telephone 603-357-1706

Editor: Kenneth Rower

Subscription \$20 Annually  
Or by Membership in the Guild



I 9 8 5

5. Small business firms, as defined by the Small Business Administration, currently buy more than one-half of the sawtimber sold on the National Forests. Under terms of the small business timber set-aside program, small business shares are established for each National Forest. If small business firms are unable to purchase their established share, sufficient sales are set-aside for preferential bidding by small business firms in order to assure such firms the opportunity to buy needed timber without competition from large business firms.

We appreciate the interest of the Timber Framers Guild in the management of the National Forests. I enjoyed meeting Ed Levin, a member of your Board of Directors, at a recent meeting in Charlottesville, Virginia. We would be pleased to have the opportunity to discuss management of the National Forest timber resource with you.

GEORGE M. LEONARD September 26, 1988

## Call for Abstracts

WHEN the Guild holds its national conference in May at Millersville University in Lancaster County, Pennsylvania, one seminar room at the conference will be devoted to short presentations by Guild members. These presentations will be limited to twenty minutes followed by ten minutes of discussion. You are requested to submit an informative description (abstract) for a presentation related to timber framing. Abstracts should be limited to 250 words or less (see example below) and submitted to the Conference Speakers Committee no later than March 15, 1989. Any topic related to timber framing is fair game: layout, cutting, design, business, engineering, computers, raising and rigging, safety, tool and product evaluations, history, and so on. Our goal is to encourage greater member participation in the annual conference and to better share our collective wealth of information. Please send abstracts to Speaker's Committee, Timber Framers Guild of North America, P.O. Box 1046, Keene, NH 03431. If you have any questions, call Andy Greif (207-829-6482) or Ed Levin (603-523-4812).

*Sample Abstract:* Article in *Fine Homebuilding* No. 48, August/September 1988, pp. 44-47.

## CURVED TIMBER

Three techniques to form curved timbers from straight stock are described: (1) Hewing, (2) Bandsawing, and (3) Steambending. Hewing straight timbers can create curved beams by increasing tension in the undressed sapwood side of a timber. This technique was accidentally developed by hewing an 8x12 summer beam on three sides and leaving the bottom of the beam in the round. The bandsaw technique has been employed to introduce curves into wind braces. Start with 3x10 stock and rough cut the radius with a bandsaw. Clean the curves with a compass plane and remove blemishes with a steel scraper. Using the bandsaw technique for heavy timbers (flared posts) requires moving the saw rather than the stock. Support the stock on sawhorses and wheel the saw through the cut. Steambending timbers has been employed to eliminate several problems associated with bandsawing: (1) wasting wood from oversize stock, (2) checking during drying resulting from cuts through the heart, and (3) straight grain pattern conflicting with curved edges. The steaming heats and plasticizes the wood fibers so that the stock does not return to its original shape after the bending load has been removed. The steambending process involves springback and overbend calculations and the fabrication of a bending table and steambox. Timbers can thus be curved by several methods other than relying on curved pieces found in the woods.

—ANDY GREIF

## LETTERS Education

A RECENT proposal to the Education Committee and the Board of Directors would have established a series of traveling workshops to deal with basic shop technique and layout theory in a hands-on manner in small groups. The idea was shelved by both the Committee and the majority of the Board as unnecessary and not in demand at this time.

During the scheduling of events for the 1989 National Conference the decision has been made not to include a participatory forum on technique and layout. Even though this event last year got very positive responses it has been decided to leave the interaction with the membership to the seminar speakers and impromptu get-togethers.

These actions indicate that we may be headed away from the implementation of our by-laws, which state: "The Guild is organized exclusively for educational purposes . . . to encourage and facilitate the establishment of training programs and educational circumstances for dedicated timber framers on all skill levels." This drift can be changed by the membership.

Please take a moment to think about how you feel about this topic. If you feel that an open forum for exchange of ideas about what we do in our shops is very important and should be offered each year at our conference and at other locations, take the time to write or call John Reed or myself, or the Education Committee through Mark Witter or the Guild office. You can also plan on attending this year's conference business meeting and making your thoughts known.

RUDY R. CHRISTIAN

BURBANK, OHIO

## CALENDAR

### Conferences

Timber Framers Guild  
Fifth National Conference  
May 18-21  
Millersville, Pennsylvania  
*Timber Framers Guild*  
Box 1046, Keene, NH 03431  
603-357-1706

### Timber Framing Workshops

Riverbend Timber Framing  
April 10-28  
Penland, North Carolina  
*Verne Stanford, Director*  
*Penland School*  
Penland, NC 28765  
704-765-2359

Northern Timber Framing  
April 21-23  
Grand Rapids, Ohio  
*Northern Timber Framing, Inc.*  
12525 Box Road, Grand Rapids, OH 43522  
419-832-1616

### Other Workshops

Al DeBonis  
Visual Stress Grading of Hardwoods  
March 3, Millbrook, New York  
March 4, Princeton, Massachusetts  
*Timber Framers Guild*  
Box 1046, Keene, NH 03431  
603-357-1706

Robert Meadow  
Hand Tool Workshops  
March 11-12  
April 15-16  
Saugerties, New York  
*The Luthierie*  
2449 W. Saugerties Rd., Saugerties, NY 12477  
914-246-5207

# BOOKS

## Chinese Framing

*A Pictorial History of Chinese Architecture*, by Liang Ssu-ch'eng, M.I.T. Press, 1984, 200 pp., 11 in. x 12 in., \$34.95.

FOR THOSE of you searching for information on Chinese joinery or curved roofs, look no further. This is the book.

The late Professor Liang's work provides a look at the history of Chinese timber frame architecture. Along the way we are treated to sections entitled "The Chinese Structural System," "Cave-Temple Evidence of Timber-Frame Architecture" and "Monumental Timber-Frame Buildings." This compendium of Chinese timber framing, which also includes a section on masonry structures, begins by delving into the Chinese system of structure.

This "order" was first published by the dynastic powers of the Sung period. The original order or building standards consisted of 34 chapters dedicated to estimating, design, joinery, carving, ornamental painting, etc. Things probably haven't changed much between Chinese building inspections and the ones we enjoy today, aside from the fact that today nobody dies if found to have strayed from the "order."

The curved roof and bracket sets are the distinguishing features of the governmentally-imposed structural system of 1101-1125 A.D. The curved roof is covered in great detail in layout and joinery. The curve of the roof is actually an illusion. There are no curved members in a traditional Chinese roof. The layout of the roof or "bending the roof" was determined by the "raising" or rise of the ridge purlin. Pitches varied with the size of the structure. Small homes normally received a 1:2 pitch, while large halls were 2:3. Purlins were "depressed" or lowered in the roof line in a systematic progression of halvings, creating the illusion of a curved roof.

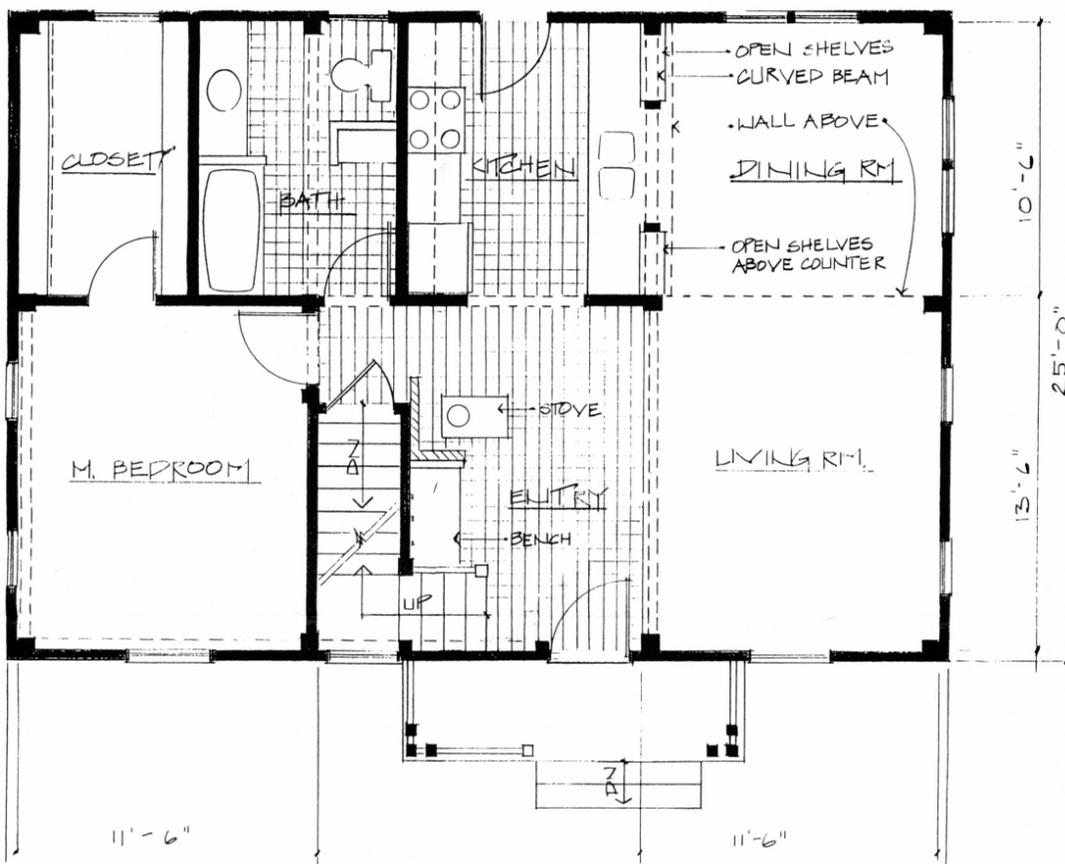
A LATER major revision to the original rules or "order" around 1734 dealt with creating specific ratios between the diameter and height of the columns, dictating the width and height of the building based on the bracket sets and increasing the width of beams. The last raises the curiosity of the author and this reviewer. We all know an increase in depth is more appropriate to gain strength. It begins to sound even more fishy to discover that an "overall rule of making the beam two inches wider than the diameter of the column" was implemented at the same time. One wonders if this was an early form of bureaucracy taking a bow in the Chinese ministry of construction or if there really was a logical or aesthetic reason attached. The author dismisses the width rule as "irrational and arbitrary." After further learning that details relating to the shaping of rafter tails and instructions for decorative painting are omitted, the question arises whether they were relaxing the rules to increase creativity or discarding certain rules due to political whim.

The section on monumental timber frame buildings is pretty exciting. There are several photos with accompanying descriptive texts of pagodas and great halls that still survive. Would you believe five stories of timber frame pagoda built in 1056 still standing proud? All 183-ft. of solid wood. The halls are nothing to scoff at either. Their sprawling stature would probably attract and consume a framer for at least a day of mental building dissection.

It almost goes without saying that this is an excellent book for timber framers. Although this work is not nearly so in-depth as Nakahara's *Japanese Joinery*, the insight on layout and roof systems will get the creative juices flowing. For the designer, it offers plan views of the many different sizes of halls, a large number of line drawings depicting various structures and systems and exceptional photos of the architecture indigenous to China. —SEAN DARM



## Habitat Designs Revised



Front elevation and floor plans of the Habitat house designed by Katherine Cartrette of Mulfinger, Susanka (Minneapolis). The facade has been simplified somewhat and the floor plans adjusted in part to take account of framing requirements and requests by Habitat. The object of the design is to achieve a house that is small, simple, pleasant and capable of interesting variations, particularly in the likely case the Guild produces two frames. Above, plan of the first floor. Below, the second floor.

