

Designing Table Legs

Learn from the past to build for the future:
A short history of styles shows the elements of design



APPROPRIATE MATERIAL

Some styles just beg for a particular wood species. For example, simple, square oak legs look great on a Mission-style table.



LIGHTNESS

For a Shaker side table with a large overhang on the top and a narrow skirt, plain pine legs, tapered on two sides, lend a delicate look.



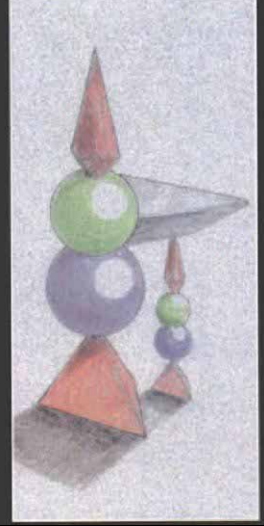
SOLID GROUNDING

A weight-bearing library table built in dark walnut needs hefty legs, a solid skirt and bottom stretchers to support heavy loads of books.



SOBRIETY

A Federal writing table built with deep walnut and mahogany tones calls for a restrained, classical leg design with stringing and a shaded holly inlay.



FLIGHTS OF FANCY

Polychrome geometric solids add visual interest and a sense of humor to this large dining table of post-Memphis design.

BY GRAHAM BLACKBURN

More often than not, legs are the defining features of a table. Once you decide on the shape and color of a tabletop, making it is largely a question of providing the required surface area with the chosen stock. But the support for the tabletop is a different matter. Table legs—whether in the form of monolithic blocks, single pedestals, trestles or in groups of three, four or more—may be provided in a bewildering array of forms. The variety of legs is virtually endless, both from stylistic and construction standpoints.

Providing reliable support may be the most fundamental requirement demanded of any leg, but deciding on an appropriate form and shape requires a reasoned understanding of the table's function and style. Whether you are designing with a certain period look in mind or venturing out into original designs, there is something to be learned by studying the furniture of the past. Frequently, period styles

LEGS MUST EXPRESS A TABLE'S CHARACTER.

are characterized by features that produce distinguishing effects. If the purpose of these effects is understood, they can be duplicated in original designs that don't represent any particular period.

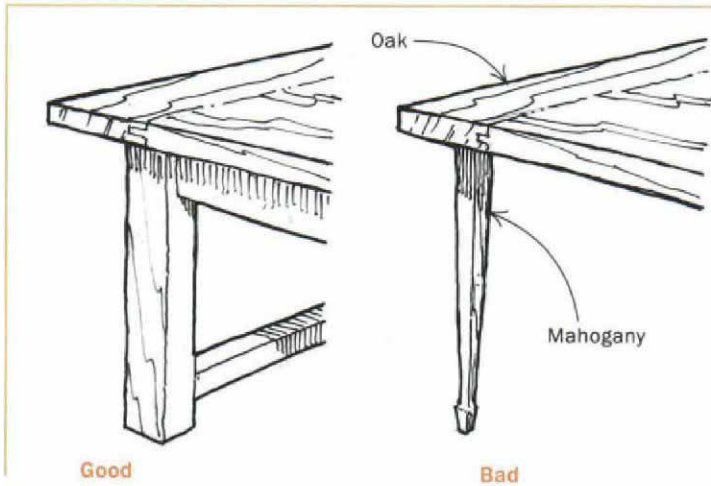
When planning a leg design, consider a few basic concepts that guide the process. Is the wood choice appropriate for the table design? Do you want the table to appear solidly grounded or delicate and refined? Should the table appear formal or relaxed? This article presents an overview of leg types, as well as their functions and construction methods, to make choosing a style and design easier for every table builder.

Function and form

Very often a table's use will determine much of its leg design. The legs on a dining table, for example, must make sitting at it convenient: No matter how handsome any given leg may be, if it prevents a comfortable seating arrangement, it will be a functional

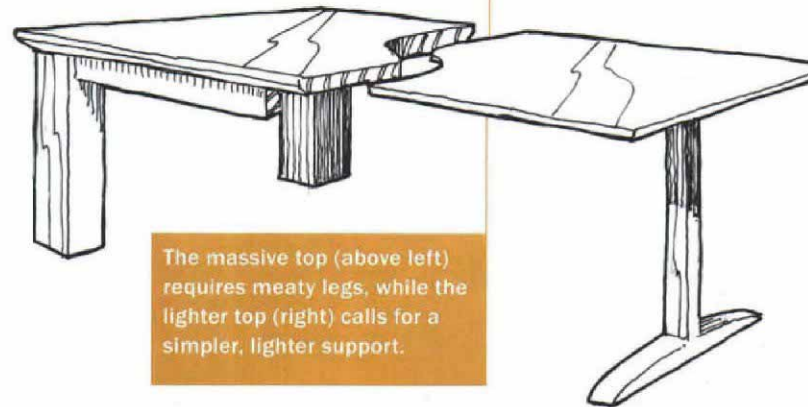
Mission pieces, for example, were traditionally made of solid oak—a material that accounts for much of the character of this style. To reproduce the Mission style, oak is the obvious choice but not necessarily the only option. If you choose to build in another wood, it should be for a sound reason. Woods close to oak in color and grain pattern, such as ash or elm, may complement the design. Or you may want to soften the heavy look of this style by altering the scale or by building in a lighter wood like cherry, but you should realize that you're no longer building a period piece.

A table may also have the appearance of being solidly grounded, or it may take on a more delicate look. A leg that rests on a solid base and is joined to other legs by low rails or stretchers gives the appearance of sturdiness. Using a substantial foot at the end of a leg also makes a table appear balanced and solid. A tapered leg, whether plain, square or turned, will give the look of delicacy, even of floating. This idea can be developed further by altering the



STYLISTIC APPROPRIATENESS

Near left is a Federal-style leg (perfectly fine in its own right) that's unhappily married to a Mission-style table. The square leg at far left is a more fitting choice.



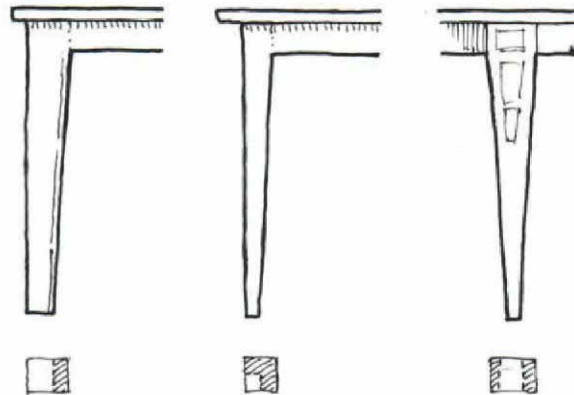
The massive top (above left) requires meaty legs, while the lighter top (right) calls for a simpler, lighter support.

failure. Similarly, if it is to be a heavy-load-bearing library table, it should not have delicate, spindly legs. A table that must be movable, adjustable or expandable should not rest on massive, stretcher-bound legs.

After a table's function has been taken into account, the question of style remains. Sometimes this merely means designing legs that are coherent with the table's essential character—stout, sturdy legs for a chunky, heavy-duty piece or delicate legs for a refined piece—but more often than not the table will contain references to a particular period or style. Adding inappropriately designed legs can result in an awkward combination that will spoil an otherwise soundly constructed piece.

Words like "inappropriately" and "awkward" may sound dangerously subjective, but in fact, style can be analyzed and understood quite objectively.

Design guidelines—When attempting to reproduce a particular period or style, wood choice is one of the main concerns.



End views

DESIGNING TAPERS

A shallow taper on one side (left) affords an elegant line without sacrificing the look of strength. Adjacent sides can be tapered to produce a light appearance (middle). Or opposite sides can be tapered (right) and the legs inlaid to achieve a period look.

LEGS MARCHING ACROSS TIME

A survey of tables, from Gothic to present times, shows a progression from simple to ornate and, in some cases, back to simple again.

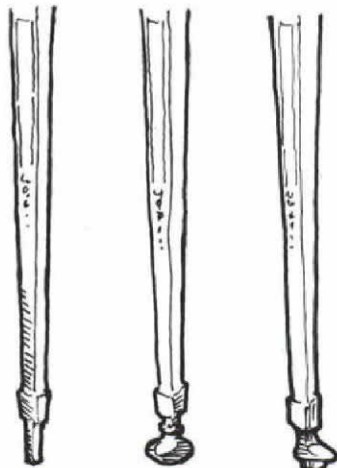
From left to right: **trestle table** made of pine and ash in a medieval design (photo by E. Irving Blomstrann, courtesy of Wadsworth Antheneum, Hartford, Conn.); **long joined table** in red oak with classically turned legs and a carved guilloche border on the apron (photo courtesy of Wadsworth Antheneum); **"thousand-leg" table** made of walnut, yellow pine and white pine, complete with gatelegs and numerous turnings (photo by E. Irving Blomstrann, courtesy of Wadsworth Antheneum).



GOTHIC

FEET MUST FIT THE STYLE

Adding a foot to a table leg can help ground a piece. The pad foot (right) and bun foot (middle) are inappropriate for this Federal-style leg from the late 18th century. This design calls for a simpler foot (left), lightening the piece and making the table appear to float.



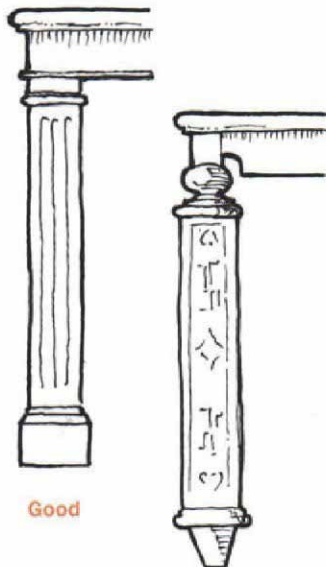
Good

Bad

Bad

DETAILS MUST WORK TOGETHER

The leg on the far right is composed of disparate elements—a turned fret pattern, poorly proportioned foot and bun head—that fail even though they all are from the same (mahogany) period. The leg on the left is modified for a more successful design: a substantial square foot on a simple fluted leg with an appropriate head.



Good

Bad

form of the taper: for example, tapering a square leg on one, two, three or four sides.

A classically designed leg in the Federal style might be more appropriate for tables requiring a dignified appearance. Conference tables, library tables or formal dining tables often need this sense of sobriety. But there is also room to be playful. Flights of fancy embodied in curvilinear pieces, both regular and free-form, can transform an ordinary table into a contemporary expression of individuality.

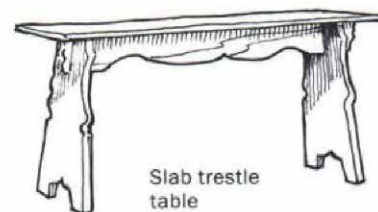
Whatever style you choose, make sure that it is environmentally compatible. This simply means that you must take the surroundings into account—either locally, in terms of the pieces directly around it, or globally, in terms of the larger surroundings in which the piece will live. Sometimes, of course, none of this is known to the maker, and you can do no more than aim to be as true as possible to the piece's own character—square legs on square tables, for example.

Designing legs that are appropriate to a particular era requires that you recognize the design parameters underlying the style. Knowing how particular styles developed, the features and techniques that were used and the characteristics the builder was after will help you design legs that are comfortable and right on any given table. It will also steer you away from infelicitous mistakes like trying to graft Jacobean legs onto a Chippendale piece.

From Gothic to contemporary: a brief history of legs

What follows is a chronological look at some of the major periods of Western furniture. It should provide not only a broad outline of the more important styles but also tell you what to look for when you're trying to decide whether a particular leg detail will be appropriate for the situation at hand.

Gothic/medieval—Apart from various esoteric pieces from antiquity, such as Egyptian chairs found in pyramid tombs and Greek and Roman furniture known primarily from artistic representations, furniture from the 14th and 15th centuries constitutes the first period from which actual examples are readily found. These were vigorous, if not violent,



Slab trestle table



AGE OF OAK



17TH-CENTURY WALNUT

VERY OFTEN THE TABLE'S USE WILL DETERMINE MUCH OF ITS LEG DESIGN.

times, and the furniture that remains is, appropriately enough, decidedly sturdy, relying largely on heavy hardwoods such as oak and chestnut.

Early tables often were placed upon trestles for mobility. These "proto-legs" were often ecclesiastical in character. They were sometimes carved with graceful Gothic tracery, using intersecting circles to form pointed arches and other geometrically inspired shapes. More commonly, they consisted of pairs of simple slabs, occasionally made single and supported by one broad foot.

The age of oak—As more permanence was achieved, "joined" tables became common in the 16th century. Dining tables were in-

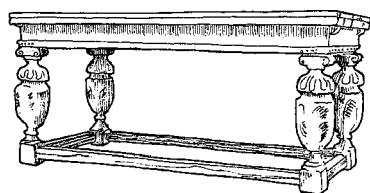
variably massive, with large legs typically joined near their bottoms by sturdy stretchers that served not only to strengthen the legs but also to provide a place to rest one's foot—off a drafty and perhaps dirty stone floor. Early types employed a central stretcher connected to pairs of legs. This stretcher system has the advantage of providing plenty of space for the sitter's legs.

Square legs were frequently chamfered and cusped, with square stretchers mortised into them and secured with pegs. Turned legs

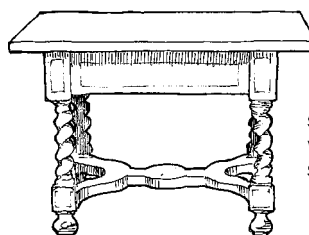
range from basic cylinders with simple rings and square ends to those with exaggerated shapes sumptuously carved and displaying a variety of motifs—from acanthus leaves to satyr heads.

Contemporary uses for legs made in this style might include a single turned and carved leg for a round dining table or simpler versions of the turned variety with square ends used in a kitchen or on a work table—as seen in much so-called "English country pine."

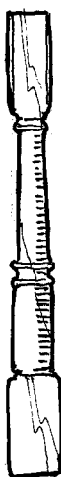
Seventeenth-century walnut—By the 17th century, tables—from large dining tables to



Heavy turned and carved legs with bottom stretchers (late 16th century)



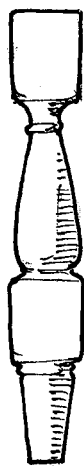
17th-century spiral twist leg with curved stretcher



Simple turned leg



17th-century turned leg



"Country pine" turned kitchen table leg

smaller altar or writing tables—became more delicate and fanciful. Their legs were no longer merely straight but often curved and exhibiting pronounced turned elements—spirals, double twists, cups and a variety of inlay. Stretchers connecting the legs also became more varied, with lighter, curved pieces replacing the heavy, structural members found on earlier tables. There is a distinct Renaissance influence in much of the carving of this period.

While it is possible to divide the period into numerous categories that vary widely from one to another—such as Jacobean in Europe and Pilgrim Century furniture in America—legs from this period were generally more sophisticated and refined than those from the Gothic/medieval and oak periods. At the same time, the legs were also more inventive and decorat-



Double-spiral twist leg

LEGS MARCHING ACROSS TIME (continued)

From left to right: **early Queen Anne table** by Janet Collins (photo by Lance Patterson, courtesy of North Bennet Street School); **drop-leaf Pembroke table** in mahogany (photo by E. Irving Blomstrann, courtesy of Wadsworth Atheneum); **Hepplewhite-style gaming table** by Peter Hoffman (photo by Lance Patterson, courtesy of North Bennet Street School); **Shaker breakfast table** built in cherry with swell-taper turned legs by Christian Becksvoort (photo courtesy of Christian Becksvoort).



QUEEN ANNE WALNUT



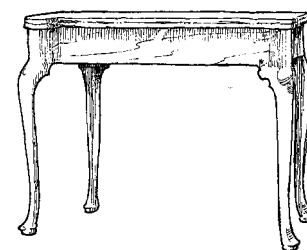
MAHOGANY FURNITURE

ed than those of the succeeding periods. The 17th century probably presents the contemporary designer with more choices than any other period, especially if he or she is not constrained by matching or harmonizing the piece with any other furniture or a particular surrounding. While the construction tends to be traditional, the shape, ornamentation and material are susceptible to infinite invention, as a visit to any museum with tables from this period will demonstrate.

Queen Anne walnut—At the beginning of the 18th century, a stylistic reaction to earlier exuberance set in. The so-called Queen Anne style—which lasted much longer than Queen Anne's actual reign—was typified by restraint and a lessening of ornament. More attention was paid to purity of line and elegance of design, and this

was particularly typified by the Queen Anne cabriole leg with pad foot and later the ball-and-claw foot, both with minimal carving.

This was the beginning of the classic 18th-century style of furniture, which came to be known in Britain as the Georgian period. In America this period was represented by such luminaries as Thomas Affleck and other Philadelphia cabinetmakers. Many other sought-after makers, such as the Goddards and Townsends of Newport, R.I., were recasting design. These men based their designs on classical paradigms and proportions derived from Greek and Roman architecture.



Card table with cabriole legs and pad feet

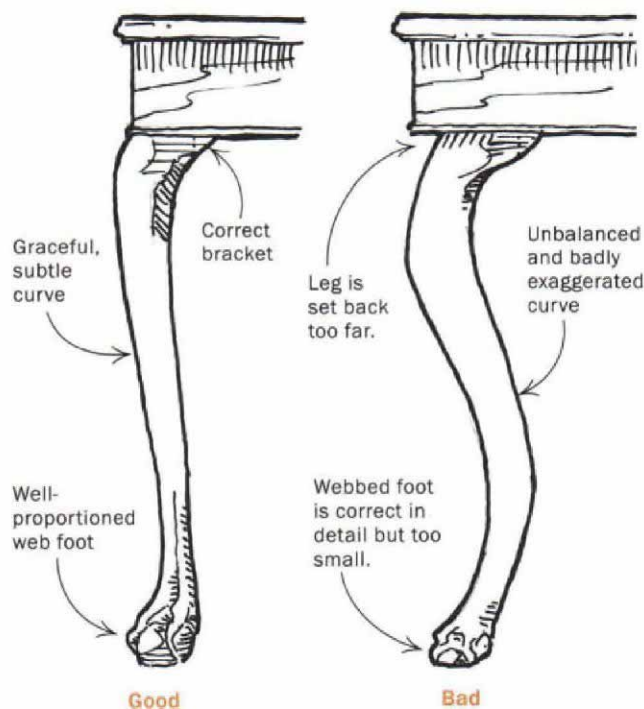
If you wish to design in this style, it is important to learn something about the underlying proportional system that dictates fundamentals—height-to-width ratios, for instance. Start by paying close attention to the wealth of published material that is available on this period.

Mahogany furniture—As the 18th century wore on, there was a return to ornamentation, and by the time of Chippendale, table legs were once again heavily carved with lions' feet, fretwork, flutes and all manner of brackets.

Although successful designs in this style require at least a passing awareness of basic underlying design principles, there are a host of details that identify separate varieties. Often, randomly mixing and matching in an attempt to repro-

CORRECT DETAILS ARE NO SUBSTITUTE FOR OVERALL BALANCE

The cabriole leg at far right is composed of congruous details but designed with no attention to the overall form. Not understanding or being sensitive to the underlying proportional rationale, the builder creates a leg that is misshapen and unhappy. The leg does little to give the table a feeling of comfortable support (it looks like it might easily break) or appropriate elegance. Poorly understood period pieces look silly, but overall form is even more important with contemporary pieces, where the design vocabulary is much more relaxed.





LATE 18TH CENTURY

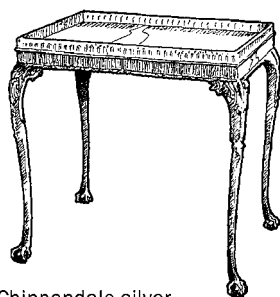


19TH CENTURY

DESIGNING LEGS THAT ARE APPROPRIATE TO A PARTICULAR ERA REQUIRES THAT YOU RECOGNIZE THE DESIGN PARAMETERS UNDERLYING THE STYLE.

duce the general flavor of this period fails and simply looks silly. But if you choose the details carefully—a particular foot, a certain stretcher type, an overall shape or proportion—and keep an eye on overall balance, both in terms of weight (as implied by the actual size and dimensions of various parts) and form (as constituted by color, wood species and ornamentation, such as carving or inlay), you can produce something new and exciting from ideas that have stood the test of time.

The important thing is to avoid replicating a particular style exactly—such as a New York side table from 1790—and, from a lack

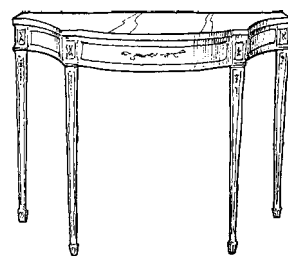


Chippendale silver table (with gallery)

of familiarity, giving it something incongruous, such as a Boston foot. Details should always be subservient to the whole. However much a particular detail may appeal to you, do not hesitate to alter or adjust it appropriately for the sake of the design as a whole.

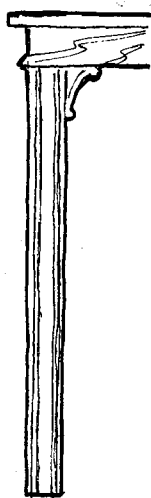
Late 18th century—By the end of the 18th century, designers such as Robert and James Adam, Thomas Sheraton and George Hepplewhite had introduced even more classical elements: stretcherless tapered legs; architectural details such as classically inspired spandrels, pilasters and fluting; and a great deal of inlay in the form of shells, urns, stringing and banding. This was possible, of course, because cabinetmaking techniques—based mainly on veneered construction—had largely overtaken the older forms of solid-wood joinery.

Realizing this, you can avoid using these techniques on legs destined for a table designed in an earlier style. Put another way, it is invariably better to restrict your design ideas to those elements that go hand-in-hand with the type of construction being employed.

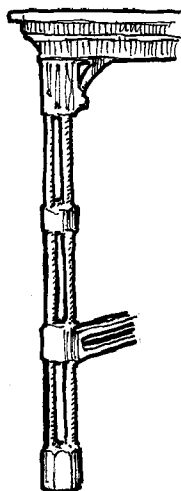


Hepplewhite/Sheraton-style table with stretcherless legs that are tapered and inlaid

Square, reeded leg



Cluster fretwork leg



Volute foot on carved cabriole leg



Nineteenth century—In the 19th century, the general introduction of powered machinery and the large-scale production of furniture began to affect the one-man/several-apprentice shops that had previously been the norm. It was also a period given to stylistic revivals. Consequently, there are as many distinct forms, fads, styles and schools originating from this period as from practically all preceding centuries.

A close look at some of these styles can be instructive. To start

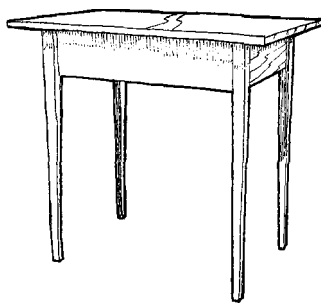
LEGS MARCHING ACROSS TIME (continued)

From left to right: Wendell Castle's 1985 table, "Never Complain," made of purpleheart veneer, leather and copper (photo by Mark Haven, courtesy of Wendell Castle, Inc.); maple end table made by William Walker (photo by Chris Eden); slab coffee table designed and built by George Nakashima in the 1940s (photo by George Erml, courtesy of George Nakashima).



20TH CENTURY

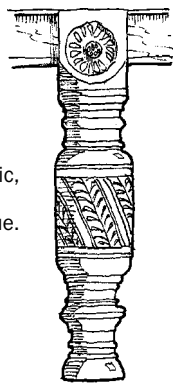
with, the very popular Shaker style is well known as a model of simplicity and unadorned sobriety. Construction is honest and straightforward. Very little is added that does not have an essential structural purpose. This demand for functional furniture results in simple turned or plainly tapered legs sufficient for the job of supporting the table. Legs were usually made from the most practical material at hand, eschewing the use of rare and exotic species that might require additional work. Try using these principles by designing a leg that represents the minimum possible construction for sufficient support.



Shaker table:
absolute simplicity

In sharp contrast to Shaker simplicity was mass-produced Victo-

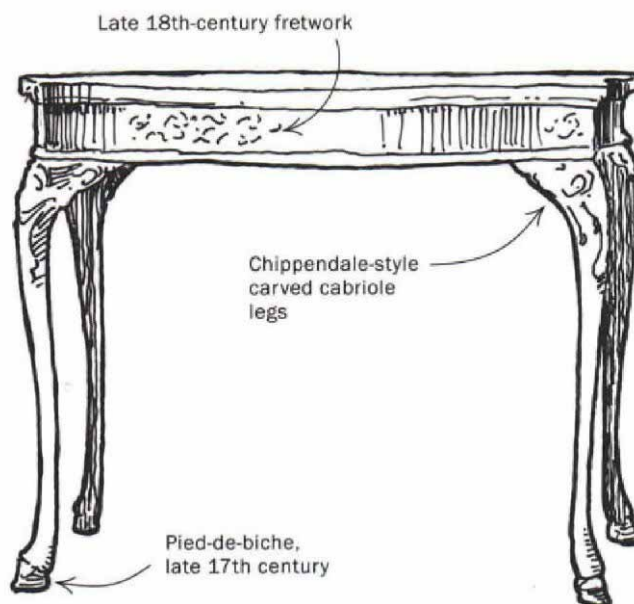
rian furniture, which sought to embody whatever fantastic element was the fashion of the day. This included applied veneer pieces, pressed patterns, gilded incised designs, spindled galleries, machine fluting and coarse carving (often on two-dimensionally shaped members). One well-known example of revivalist fashion is furniture inspired by the designer Charles Eastlake, who was responsible for introducing the principles of the English design reform movement to America. Originally conceived as a reaction against the melodramatic red plush and extravagant furniture of midcentury, this resulted in a series of more simplified styles drawing upon earlier models, such as Modern Gothic and Queen Anne Revival.



Victorian table leg is an eclectic mix of Gothic, Tudor and Romanesque.

OVERALL FORM IS MORE IMPORTANT THAN CORRECTNESS OF DETAIL

This table is composed of elements—such as the fretwork skirt, heavily carved knees and biche (deer) feet—that are all from different periods, making the table stylistically incorrect. But the design works because the overall form is graceful, and the various components make structural sense.



Today, much of this furniture can seem excessively busy, but it serves the contemporary designer as a model of how earlier elements can be reinterpreted. Although some of the results may be seen as a travesty of the pieces that inspired them, it is instructive to observe how they present a coherent identity when reinterpreted and incorporated into new work. This is another important idea to bear in mind: a well-designed leg—of whatever style—will stand on its own merits as long as you have fulfilled the structural requirements and have conceived the leg *and the table* as a whole.

Twentieth-century contemporary—With the arrival of the 20th century, several factors converged



KNOWING HOW PARTICULAR STYLES DEVELOPED, THE FEATURES AND TECHNIQUES THAT WERE USED, AND THE CHARACTERISTICS THE BUILDER WAS AFTER WILL HELP YOU DESIGN LEGS THAT ARE COMFORTABLE AND RIGHT ON ANY GIVEN TABLE.

to create a landscape that was, at least superficially, even more puzzling for the designer. On one hand, the 19th century's infatuation with rediscovering old styles—from Gothic to Turkish—had produced an almost limitless number of confusing design ideas. On the other hand, there was a severe reaction to everything overly ornamented and complicated. The Arts-and-Crafts movement's return to simple craftsmanship—starting with designers such as

William Morris and continuing across the Atlantic to people such as Gustav Stickley in upstate New York—had produced, by comparison, a spartan and four-square approach that foreshadowed the later Bauhaus movement of the midcentury. Added to these diverse approaches, the increase of

machinery, new methods of production and changing market conditions (due, especially, to World Wars I and II) all provided an extremely fertile ground for a variety of new styles.

Some lines of development continued the simple approach. Out of the Arts-and-Crafts movement came designers concerned with honesty, simplicity and good workmanship. People such as Edward Barnsley, Allan Peters and even James Krenov have continued to embody this approach. At the other end of the design spectrum, a purely artistic spirit produced the fluid and nature-inspired shapes of the Art Nouveau movement, which merged with the increasingly modern ideas of the Art Deco movement. This resulted in the exciting use of new and different materials, including sharkskin, aluminum and laminates. Designers such as Jacques-Emile Ruhlmann and Wendell Castle have expanded our ideas of what can be achieved if the constraints of traditionalism are laid aside.

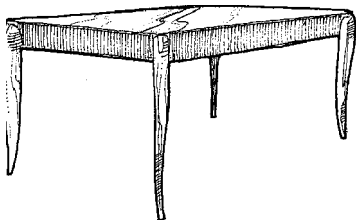
More recently there has been a flowering of talented new designers produced by a renewed interest in high-quality wood-working. There are now schools in Britain and America where the making of well-constructed and well-designed furniture—both contemporary and traditional—is taught.

The result has been a century with more choices than ever for the designer. It would seem that anything goes. But for all of the apparent variety, the fundamentals of good design remain; overall harmony, structural sufficiency and balance cannot be ignored.

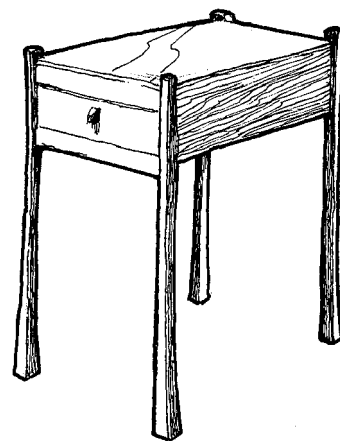
James Krenov's furniture may be well-known for its sensitive and delicate attention to overall harmony of color and grain, George Nakashima can be appreciated for his use of natural forms, and the Memphis style may stand out by virtue of its uncompromising and radical approach to color and geometries, but all three of these superficially different approaches succeed because their fundamental concern is with the given piece as a balanced whole. The successful and varied elements of earlier periods are still important and endlessly instructional.

No matter what construction methods you use, no matter what style you prefer, strive always to design a leg that bears the lessons of the past in mind. Remember, above all, to design legs that are an integral part of the whole piece. □

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1920s Art Deco (Ruhlmann table)



Krenov-style silver table