For three centuries each generation of Americans has grown older with the conviction that “the winters aren’t what they used to be.” It may be true. The winter of 1780 was so cold that for days on end horses and sleighs crossed the ice from Staten Island to the Battery and from Boston across the Bay to Charleston. In 1816—“eighteen hundred and froze to death,” as it was called—the winter stayed right on. Even in midsummer Connecticut Yankees were still wearing thick overcoats and mittens as they worked or pitched quoits.

Those were phenomenal years, perhaps, but the records of still earlier New England winters seem to describe colder weather in general than we have today. In any case, it is certainly true that most of the colonists found the climate more rigorous than anything they had known at home. To thrive in their new habitat they had to do more about the weather than talk of it, and, according to climatologists, their success in keeping it out-of-doors was in fair measure responsible for Yankee achievement. In time American climate control was to become an almost notorious feature of national life. Those Englishmen who two or three centuries ago would particularly have noted the extremes of the New World climate—“a cold that froze the blood, and a heat that boiled it”—have for the past century complained rather of the infernal warmth of our winter rooms, and more lately, perhaps, of the unnatural chill of our air-cooling.

In few homes today does ink freeze on the pen by the fireside as it did at Samuel Sewall’s, or in few churches does water freeze on the christening bowl as sometimes happened in early Boston meetinghouses. These, of course, were matters of building and heating practice as much as of weather. In both matters the colonists brought with them the familiar techniques of their homelands. But in “the Free Air of the New World” those took on different values. When the Massachusetts governor advised Thomas Dudley “that he did not well to bestow such care about wainscoting and adorning his house, in the beginning of a plantation,” Dudley replied plaintively that he had only done it in an effort to keep warm, and, anyway, “the charge was but little being but clapboards nailed to the wall.”

Only shortly before America’s first settlement Englishmen still lived who found things “marvellously altered within their sound remembrance” by the addition of so many fireplaces and chimneys to ordinary English homes. Up until then most commoners had warmed themselves and cooked their food at a fire built in the middle of the hall or against the wall, allowing the smoke to escape as best it might through an opening in the roof. This, indeed, the earliest colonies did themselves in their “wigwames,” sod huts, and other provisional shelters. But in their first permanent houses, as in the houses they had left, it was the fireplace and chimney that not only dominated the plan of the building but to a considerable degree dictated household routine as well. The large central chimney pile that anchored the house to its site opened cavernously into the rooms that clustered about it for warmth. It was in front of such huge openings that early Puritans “made shift to rub out the Winters cold . . . . having fuel enough growing at their very doores, turning down many a drop of the Bottell and burning Tobacco with all the ease they could.” But, as Franklin remarked, they scorched before and froze behind and never hoped to warm the room throughout.

The hoodless fireplaces of the Hudson River region were, as Washington Irving said, of “patriarchal magnitude, where the
whole family enjoyed a community of privileges and had each a right to a corner.” They had the advantage of radiating heat in three directions, too, since they had no jambs, and their tile facings and hearths provided better reflecting surfaces than did ordinary brick. With their gay and sometimes sumptuous chimney cloths, used to discourage smoke from spilling out into the room, they offered an exotic spectacle to New Englanders who visited the Knickerbocker colony.

Wherever cooking was done, when families were large, when game figured so largely in the diet, and when wood in superabundance was used as fuel, fireplaces of great size were understandable even in small houses. But for warming purposes they were ill contrived. The current of air necessary to feed such a large flame was, when doors and windows were closed, a contraband that entered every crack and cranny of the structure.

Wood might be burnt prodigally so long as endless forests stood just beyond the clearing. As Pastor Higginson truly wrote in the brief winter of his life in America, here was “good living for those that love good fires.” It was with the thought of those fabulous forests that the English diarist John Evelyn in 1664 suggested moving all the wood-devouring iron furnaces to the New World to spare the dwindling woods at home.

As communities grew, however, the forests receded rapidly and the problem of a firewood supply became an urgent concern of all the northern colonies. During the winter of 1726 the snow across the Boston Neck must have been almost black with the ceaseless traffic of sleds carrying firewood into the little town. But there still wasn’t enough, although over five hundred loads were hauled a day, and the price at 51 shillings a cord was too high, and so a Town Meeting was called to

![An early fireplace from the Thomas Hart house, Ipswich, Mass., about 1640 (now in the American Wing). Its construction is utilitarian except for the dentil ornament across the lintel.](image-url)
Brass and iron coal grate, probably American, about 1760. Shown in a room from the Samuel Powel house, Philadelphia, 1768 (now in the American Wing)
discuss the problem. Only shortly afterwards, in 1737, alarm at the continued recession of the forests led to the first proposal for conservation in this country. But the practice of "mining" instead of "cropping" our resources went on. One hundred years later, Charles Dickens noted mile after mile of tree stumps and wasted woodland as he traveled in an over-heated railroad train from Boston to Lowell.

With the progressive differentiation of rooms in colonial homes fireplaces of more modest size were built everywhere but in the kitchen. In the average room they were more efficient, cheaper to operate, and less smoky. But by way of compensation for loss of size, what had once been but a hole cut in the fabric of the house for utility's sake became the most formally featured element of the interior architecture. It was, indeed, the focus of a room, and never more obviously so than in that age of highly stylized design. (Even a steam-heated world retains, from a lingering habit, its false fireplaces to "center" a room.) Chimney furniture, too, was designed with no less care. Decoratively molded iron
firebacks to prevent the chimneys from disintegrating were cast in America from the middle of the seventeenth century. Brass and iron andirons were used in colonial hearths practically from the earliest days, at first being imported and later also locally designed. American-made examples are often difficult to distinguish from English prototypes except when marked, a practice which seems to have started only after the Revolution. A particularly interesting marked pair cast at the Lynn Street foundry of Paul Revere and Son in Boston during the early years of the Republic may be seen in the current exhibition in the Junior Museum, where it is on temporary leave from the American Wing.

Franklin complained that all the attention paid to the embellishment of the chimney piece obscured the need for correct construction of the chimney itself. He pointed out that with the best of care at least three quarters of the heat generated by a fire on the hearth goes up the flue. Fireplaces, even when they drew well and did not smoke, could not adequately warm a house of any size. At their estate in the Flats near Albany the Schuylers were obliged to close up their “big place” and retire to smaller quarters during severe weather, and probably other colonial families did likewise.

When the supply of firewood had all but vanished from England, Englishmen still preferred an open fire with all its waste and nuisance to a “fyre secret felt but not seene,” as one Elizabethan quaintly described a stove he had examined. Occasionally the gentry used stoves “to sweat in,” but, as it was early explained, the very sight of a fire added “to the Roome a kind of Reputation.” It was an expatriate Yankee, Count Rumford, who made the English fireplace and chimney something more of an efficient contrivance. “Rumfordized” fireplaces with their contracted chimney necks, sloping jambs, and fire clay lining not only took more of the chill from London rooms but helped to remove some of that “fuliginous and filthy” smoke, long complained about, from the London atmosphere.

Transplanted in the New World, the Englishman’s love of an open fire was somewhat tempered by the need to contend with bitter weather. As far back as the middle of the seventeenth century one Yankee, in an effort to cope with the American climate, had patented an invention for “saving and warming rooms,” but what his idea was no one knows. From an early date, however, the colonists had imported stoves of types long familiar to the Dutch and the Germans and by the early eighteenth century, at least, had started to
make them here. Handsomely decorated five-plate stoves set into the back of a fireplace to protrude, boxlike, in the adjoining room; six-plate draft stoves, with fuel door and stove pipe, standing free in a room; ten-plate stoves with ovens; cylindrical “cannon” stoves: all these types were made in America before the Revolution, largely at the Pennsylvania furnaces of “Baron” Stiegel and his contemporaries. Even one porcelain stove appears in the New England records, possibly of the kind shown in the Swiss Room in the Museum, a kind that surprised Montaigne when he visited Switzerland, since he could actually take off his hat and fur indoors with such a device. It was to their “stove rooms” that Cotton Mather and Samuel Sewall retired for comfort when the weather got really cold. But by modern American standards even those havens were hardly cozy. In 1749 one Philadelphian remarked that “the highest they ever raised my thermometer was to 56.”

In 1742, combining two much earlier European inventions, Benjamin Franklin produced his celebrated Pennsylvania Fireplace. This device brought fresh cold air from out-of-doors by means of a duct and warmed it in a series of passages built into the back of the frame, but separated from the actual flame, before releasing it into the room. By carrying the combustion heat of the fire down behind the fireback before sending it up the chimney he utilized it three times instead of losing it up the flue almost at the moment of combustion. All the while the fire remained visible, consumed just enough of the replenished air of the room to maintain a steady, modest flame, and the cast-iron frame radiated heat in all directions.

Franklin, just about our first “fresh air fiend” and something of a heretic for that, was as much interested in health as in comfort and efficiency. Theoretically his stove eliminated the unhealthy and disconcerting drafts caused by the ordinary fire and at the same time ventilated a room more effectively than any other type of stove. For several reasons, however, it was not a practical success and was soon generally discarded both here and abroad. The so-called Franklin stoves we are familiar with today are usually nothing more than cast-iron fireplaces, useful in themselves, but incorporating no other original feature.

When asked to recommend a practical means for heating a Boston meetinghouse, Franklin candidly replied that he knew nothing that would work satisfactorily. Furthermore, he added, “Persuaded as I am, from philosophic considerations, that no one ever catches the disorder we call a cold from cold air, and therefore never at meeting, I should think it rather advisable to those who cannot well bear it, to guard against the short inconvenience of cold feet (which only takes place towards the end of the service), by basses or bearskin cases to put their legs in, or by small stoves with a few coals under foot, more majorum.” The very thought of a New England meetinghouse relying on artificial heat

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**Cast-iron front plate of a Pennsylvania fireplace. American, late xviii century**

**Cast-iron andirons in the form of Hessian soldiers. American, late xviii century**
rather than the fire and brimstone of the sermon moved one old-timer to lament in the Boston Evening Post:

"Extinct the sacred fires of love,
Our zeal grown cold and dead,
In the house of God we fix a stove
To warm us in their stead."

As time went on, however, the cast-iron stove, developing in a multitude of forms, became virtually an institution in this country—one of those "institooshuns" which visiting Englishmen found it so hard to forgive or understand. The Shakers, to whom an open fire was objectionable—a token of "passion"—cast stoves that were models of simplicity and efficiency, with something of the quality of abstract design of modern sculpture. In more worldly circles design tended to be considerably more exuberant. On his visit to this country in 1882 Oscar Wilde complained that everywhere he was confronted by cast-iron stoves decorated with machine-made ornaments which, he said, were "as great a bore as a wet day or any other particularly dreadful institution"—which precious remark drew the lively riposte from Thomas Nast reproduced on page 184.

The practical efficiency of coal had been recognized almost from the beginning of colonization. In 1706 Samuel Sewall had advocated the capture of Nova Scotia to procure coal against the firewood shortage, and, to judge from newspapers, inventories, and other records, coal fires were commonplace here during the eighteenth century. Oddly enough, hardly any of the grates, advertised and listed
for burning the “sea-coal” that was imported, seem to have survived. The one shown in the American Wing is a rare example.

As the Pennsylvania mines were more intensively worked during the early nineteenth century, as railroads and canals facilitated distribution and marketing, and as the use of anthracite became better understood, patents were filed for stoves in infinite variety. The evolution of a satisfactory cooking stove, the first patented in 1815, revolutionized kitchen routine. In parlor stoves the self-feeding, airtight base-burner, developed from an eighteenth-century English idea, became under a variety of trade names a household fixture throughout the land. By the time of the Civil War few “modern” homes were without their “Morning Glory,” “Crown Jewel,” or “Splendid”—all “planned with the view of supplying the wants of the million” and “designed to be useful as well as ornamental.”

Whatever the decorative possibilities of the parlor stove, the next stage in domestic progress was to eliminate it from the scene altogether, to drop it into the cellar as a central heater. In 1868 Daniel Pettibone of Philadelphia was prepared to warm and ventilate public buildings by hot air, and as the century advanced progressive home-owners yearned increasingly for such a convenience. By 1861 Anthony Trollope reported that every tenement in America was “infested” with those “damnable hot-air pipes” which brought a deadly flow of heat from infernal regions, baked the health out of Americans, and rendered prolonged life out of the question.

Central heating was no new idea, however; for in 1608 Sir Hugh Platt of London had suggested (as “a mere conceit”) the basic principle of piping heat from its source “into what place you shall think mete.” Platt’s intention was to control the temperature of hot-houses for growing plants. In 1851 that idea was given great significance when Joseph Paxton suggested a Crystal Sanatorium, where patients would have the benefit of complete air-conditioning as well as the benefits of extra oxygen from the plants and the sunlight made possible by hothouse building techniques. As Lewis Mumford has pointed out, the biotechnics of gardening have led to more important changes in human welfare than all the floral shapes and ornaments incorporated into building and decoration.

Oddly enough it was an expatriate American, Jacob Perkins, and his son, who developed in England a practical system for domestic heating by steam and hot water. Before he left America Perkins had invented a machine for cutting and heading nails in one operation and a steel check plate for engraving bank notes, and he is fondly remembered by English philatelists for printing the first penny stamps. When the “Perkins system” of hot-water and steam heating was introduced into America it found a wide market in the service of public buildings, flats, and, ultimately, ordinary houses. In 1845 or 1846 the Eastern Hotel in Boston became America’s first steam-heated building.
body, and can't get help for money" and Cotton Mather's proposition "that if God will bless me with Good Servants, I will serve him with more Fidelity and Activity," are more than prophetic complaints about America's chronic servant problem. They announce the evergrowing need of more manpower, however contrived, to develop the vast resources of the land as our country expanded across the continent. It is worth noting that in modern low-cost housing where the English must seriously consider traditional preference for open fireplaces, Americans think in terms of community central heating, such as was adopted in Virginia, Minnesota, last year. For all its cheer and entertainment an open fire is only modest comfort in a country where winter has a sharp tooth and where attentive servants traditionally have moved on to new opportunities and bigger jobs.

Perhaps by way of extra compensation for the frequent cold outside, perhaps as part of their adjustment to the summer's heat, perhaps because they habitually wear lighter clothes, Americans have come to like an indoor temperature at least five degrees higher than that the English favor. (But in both countries a "comfortable" temperature is becoming a higher one.)

That they have chosen to provide it in the simplest way possible is easier to understand. The wholesale American acceptance of mechanical contrivances, parlor stoves and central heating among them, has primarily sprung from the need to save labor and the expense necessary to carry on a household or an industry. John Winthrop's lament in 1709 that "or maide is gone home, and we have no

From "Harper's Weekly," September 9, 1882