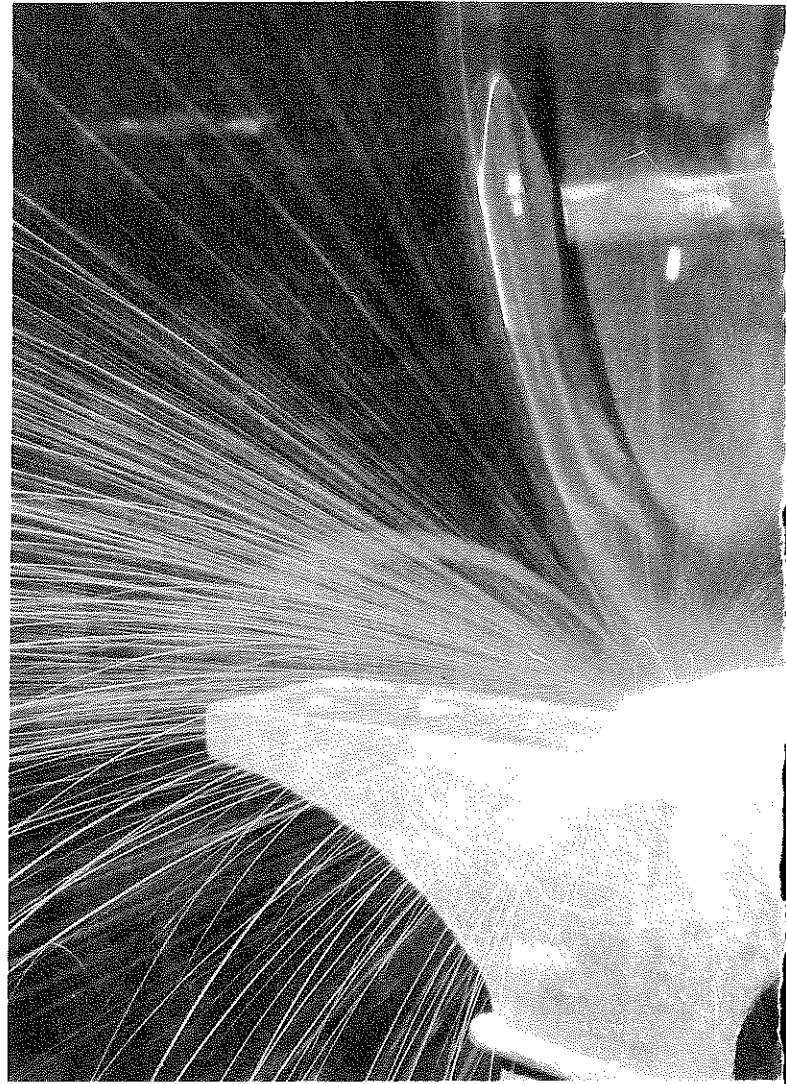




Yellin at his Arch Street studio anvil around 1925, the year he received Philadelphia Civic Award.

Sparks fly from white-hot iron bar being forged in Yellin workshop, still going strong in Philadelphia.



By Ty Harrington

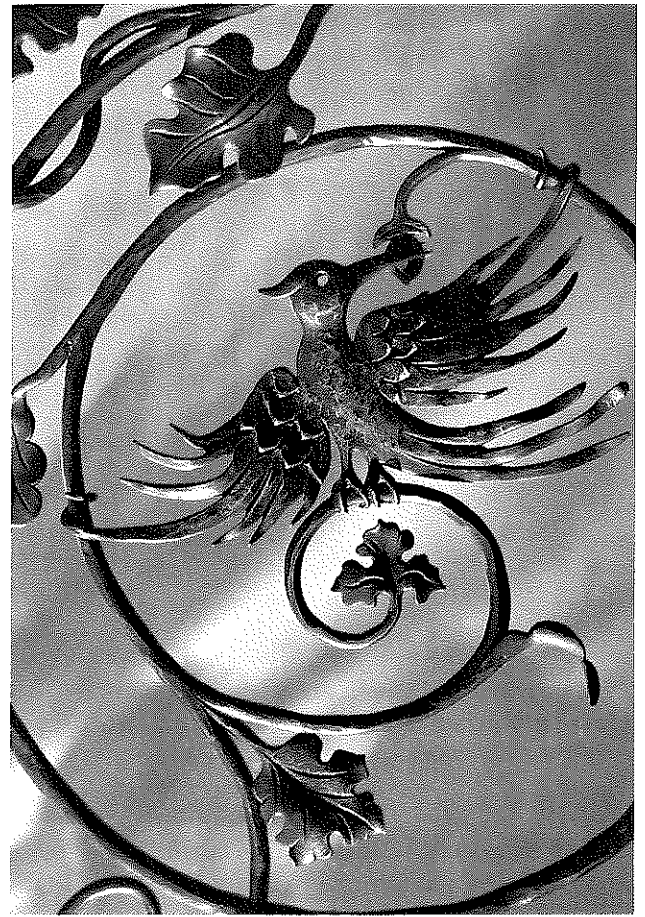
The wizardry of Samuel Yellin, artist in metals

He liked to call himself a blacksmith, and things he wrought in iron live on as a durable testament to vast talent

In the winter of 1905, a blustery, cold night greeted a steamer bound into Philadelphia from England. Among the several hundred immigrants disembarking at the foot of Delaware Avenue stood a rather short, black-haired man wearing an immaculate tweed overcoat and three-piece suit. He looked like a successful London banker on holiday; but broad shoulders and powerful forearms betrayed him as a man of full-time, strenuous physical activity.

Samuel Yellin told immigration officials he was a blacksmith. His trade? Metalwork—any he could find. There is no record that the officials paid any particular attention to the intense 20-year-old, though, if they had, they might have remarked that the United States, humming with industry, was no place for a patient handcraftsman. Yellin would have shrugged off such a comment. He badly needed a setting for his designs in wrought iron, and after reading about the Columbian Exposition in Chicago he sensed that America was approaching the dawn of “a Cathedral Age.”

Yellin was right. He had anticipated the coming of



An example of his artistry is airy detail of hammered iron fragment in the Samuel Yellin Museum.

a classical and Gothic revival, a period of one of the greatest building booms in the nation's history. When it arrived, he was ready.

A tireless perfectionist driven by restless energy, Yellin was so talented and prolific that two decades later he had established himself as probably the greatest known artist in wrought iron of all time. He embellished our grandest architecture. He became not only the personification of his medium, but also a spokesman for excellence in all of the arts, fighting a war against mass production: "I am preparing by making my own swords and armor for the battle."

When Samuel Yellin arrived in this country he was not yet old enough to vote, but he was already a highly versatile and experienced smith. He came from a small village in Galicia, Poland. While still a toddler he started drawing and playing with scraps of sheet metal. In early childhood, a small hammer was his favorite toy.

A teacher at his school was so impressed by Yellin's drawings that he invited the seven-year-old to work

afternoons at his part-time smithy. At 12 Yellin broke the family tradition of law and apprenticed himself to a small shop. He began to learn the trade under the rigid Old-World tutelage of a stern Russian foreman "who was extremely critical of everything I did and often boxed my ears." Every day, including Sundays, from sunrise to sunset and by candlelight until eight o'clock in the winter, "while other boys were playing I was working in the shop, the windows darkened so we could tell the heat of the flame, and I never regretted a single moment."

For two years Yellin swept floors, fetched groceries and did other routine chores, but already his compulsion to learn the ways of metals set him apart from the other smiths. They gave him the lifelong nickname, "The Devil Born with a Hammer in His Hand."

One day a large order arrived: beds for a local insane asylum. The next morning the smith whom Yellin was assisting turned up for work too drunk to wield a mallet. Yellin took up the tools. The bed he forged drew praise from the most experienced smiths and,



Doorway arch and panels at George Eastman House in Rochester, New York, are Yellin's work.

though by custom Yellin was still classified as a novice apprentice, he was soon given a forge and an assistant of his own. His reputation spread through the Polish countryside. When a farmer came to town to have a special tool made, he would seek out Yellin; when a traveler needed a fitting or a repair, usually Yellin would get the job.

By the age of 17 he was a master craftsman, extremely capable with brass, copper and nickel. But iron, worked by hand, had become almost an obsession. "I work in iron in the belief that I can say in it anything that I wish," he said later. "No material is more plastic, more ductile, more expressive. . . . It has a beauty and a music in it and every hammer mark reflects the personality of the smith."

When his apprenticeship was completed, Yellin was offered a job in the shop, but he was far too restless to settle down to a journeyman's life. Instead, he set out alone across Europe, working his way through the metal shops of Poland, Russia, Austria, Germany, Belgium and England. He spent every minute of his spare time walking city streets, copying the finest medieval wrought iron. Often he worked at a shop only a few months before his wanderlust carried him on. Everywhere he went, his intensity gave fellow workers the

Ty Harrington, who lives in Connecticut, is an author-photographer whose most recent book, Never Too Old, was published last autumn.

feeling he was possessed. The nickname "Devil" traveled with him.

Yellin felt that the time he spent copying the works of medieval masters honed his ability as artist and designer. But in Europe in the early 1900s there was little monumental building going on; there were simply no opportunities to create original works in metal for contemporary architects. So he set out for the New World.

At first, prospects in the United States did not look much brighter. Even if his first job was not actually on an assembly line, it didn't seem much farther up the ladder. Arriving penniless and finding no shop needing a smith, Yellin applied for a job at an ornamental bedpost factory. "The foreman asked what I could do. Lots of things, I told him. Could you make one of these? he said, pointing to a hideous post. I took hold of the material and made one. He seemed surprised I had finished so quickly. Such things, I told him, ought to be done quickly, or better yet, not at all." Yellin was not surprised when he got the job.

It gave him badly needed money, but Yellin found no satisfaction hammering out identical bedposts. "I soon became extremely frustrated and depressed," he later recalled. "If I had the money, I would have taken the first boat home. Whenever I had free time I wandered the back streets, searching Philadelphia for more challenging work, and when I heard the sound of a hammer striking metal, I would walk in and apply for a job. I was miserable, caught in a trap."

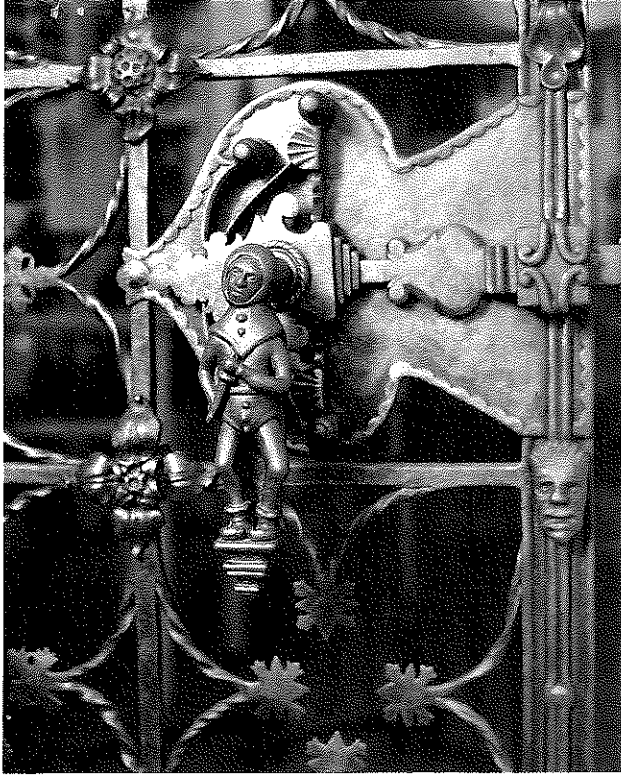
After several months of making bedposts he took a job casting metal lamps. "Mass producing lighting fixtures according to popular design made me unhappy. It was like someone who loves symphonies listening to poor music. I began to forget how to smile."

Anything to keep his hand in

In his boredom, Yellin devised a better type of mold for casting. He was rewarded with a raise and assigned the task of replacing all the dies. He finished far ahead of schedule, and so worked himself out of a job.

Again unemployed, Yellin enrolled at the Philadelphia School of Industrial Art to keep his hand in at the forge. His proficiency dazzled the faculty: within a year he was appointed by the dean to head the iron department. This began his lifelong career as teacher and scholar, an avocation he pursued part time, first at the School of Industrial Art, later at the University of Pennsylvania and as a traveling lecturer. Yellin became so knowledgeable in his field that, as a recognized authority, he was chosen to write the definitive article on iron for the 14th (1929) edition of the *Encyclopaedia Britannica*.

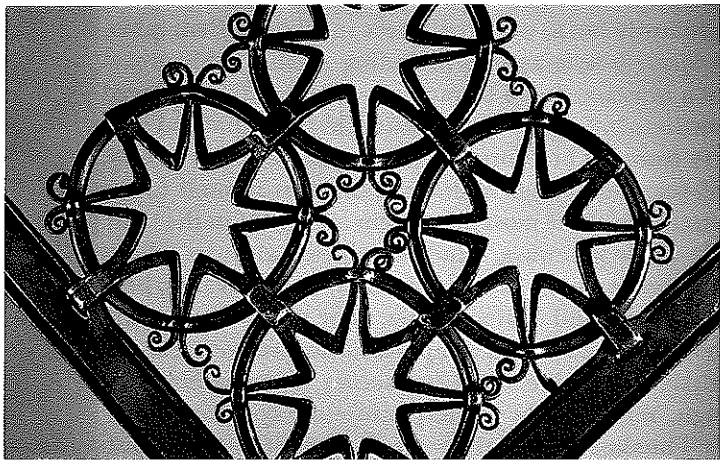
In heart and soul, however, Yellin remained a black-



Small jester is the exquisitely formed handle that turns to open or close a Yellin gate.



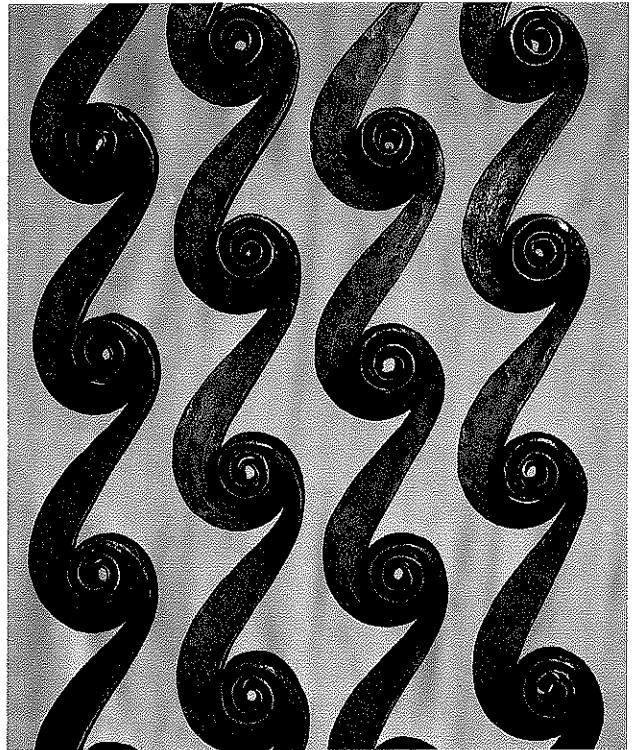
This intricate spiral of iron was wrought from one piece of metal, with no welding.



Yellin used this interlocking decorative design, attached to frame of wrought iron, on screens.



At St. Mark's Church, Philadelphia, a fanciful door is embellished with master's handiwork.



Detail of a graceful scroll design shows technique used by Yellin in fashioning grilles.

Beauty in the beast: a head of wrought iron serves as a bolt on an iron door at his museum.



The iron wizardry of Samuel Yellin

smith, longing to return to a working forge. As soon as he had saved \$150 he rented a fourth-floor attic, installed an anvil and opened his own shop. Conditions in his Philadelphia garret smithy were far from ideal. When Yellin raised his hammer for a full swing, it struck the ceiling. If the wind blew the wrong way, it filled the shop with black smoke. But the Devil persevered, constantly making the rounds of local architects with samples of his designs.

Within a year he had enough small orders for original work to keep three full-time assistants busy. Unfortunately, the constant pounding shook the building so severely that it made work impossible for a surgical-instrument maker three floors below. The shop had to move. But that required money and, despite the flow of commissions, profits were slim.

Yellin stayed on temporarily in the garret, and, by scrimping, saved enough to outfit himself in a new topcoat. Properly attired, he set out to drum up business from the nation's largest architectural firms. He had to haul his heavy samples on the train to New York City, but the response was encouraging. Cass Gilbert, the internationally known American architect, was so impressed that he called out his entire staff to examine the samples. Everyone he visited praised his designs and craftsmanship, but all were understandably reluctant to assign a commission to a shop with only one smith.

The J. P. Morgan estate opens the door

The first real break came when architect Christopher LaFarge, about to assign a small gate for the J. P. Morgan estate on Long Island to a well-known British firm, decided to hold off long enough for Yellin to submit a design proposal. He won the commission and that opened the door to the big time.

Now a steady flow of larger work found its way to his attic. With it came comparative prosperity. Yellin promptly built, on Arch Street in West Philadelphia, a Spanish-style atelier, including room for his dream of a museum and a library, as well as a high-ceilinged medieval office—an elegant establishment that was a far cry from his first forge. After 15 years in this country, 35-year-old Samuel Yellin had brought himself to the attention of the most prominent architects in the land. He made gateways, window grilles, balconies, chests and boxes, locks, fireplace screens, weathervanes, beds and tables and chairs, hinges, door pulls, doors, mailboxes, signposts and lamps—and no two were exactly alike. If he were asked to execute someone else's design, Yellin would politely refuse the commission.

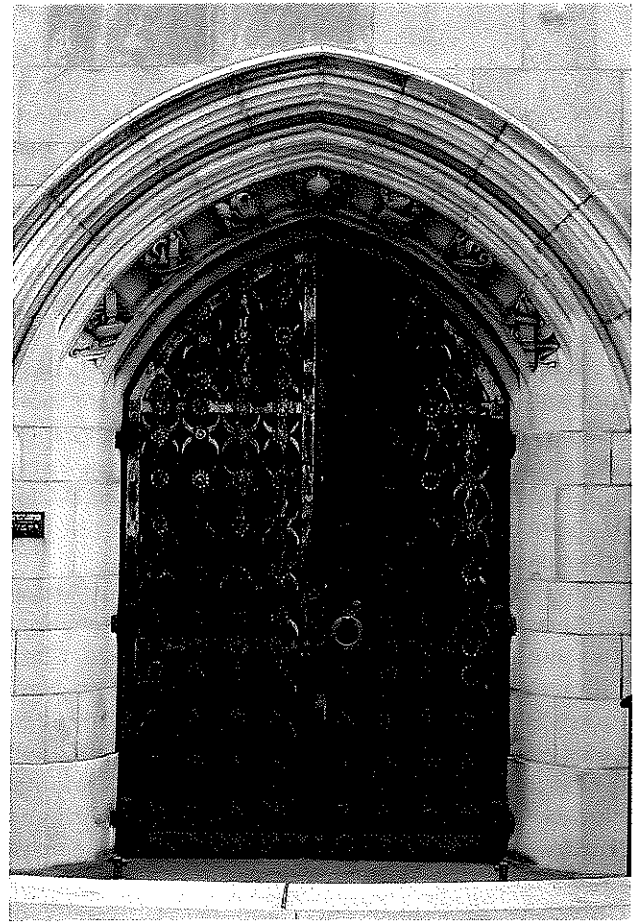
The shop had all the work the master and his assistants could handle: Yellin had reached the height of his profession. But the Devil was restless. The new



Gateway at Washington's National Cathedral, site of what Yellin considered his most important commission.



A teller's window at the Federal Reserve Bank of New York, done when artist was virtually unknown.



This entrance to Sterling Memorial Library at Yale displays Yellin's craftsmanship in monel metal.

Cathedral Age he had predicted was in full swing; everywhere the country was abuilding, with palatial private homes and monumental government offices, with colleges, libraries and new corporate headquarters. It was the setting Yellin sought for his creations, an opportunity to embellish the New World with the best architectural artwork, displayed publicly.

His son Harvey recalls: "My father rarely slept except fitfully. He kept a yellow pad next to his bed and would lie there filling pages with sketches and patterns. Even during the day, he used his uncanny ability to judge exact distances at a glance, visualizing spaces filled with iron. He was truly possessed, not by a demon, but with extraordinary energy, drive and determination."

The architect's design for a New York Federal Reserve Bank in 1920 included a great deal of wrought iron. However, except for general guidelines, the architectural firm of York and Sawyer left out the details of the form the metal was to take. Instead, they invited the prominent metalworkers of America to submit designs for a competition—the best entry would win.

Yellin's shop was still too small to compete with the larger companies for such a major project, but when

he heard of the contest he jumped on a train to New York City. He went directly to Philip Sawyer of York and Sawyer, and asked permission to throw his hammer into the ring. The architect tried to discourage him: the undertaking would be an enormous task for even the largest shops; for a lone smith it would be impossible. But Sawyer finally accepted his entry.

Several months later, when Yellin's designs arrived, the judges unanimously agreed that his were far and away the best submitted. Despite still serious doubts that the small shop could handle the enormous volume of work, Yellin was awarded the \$300,000 commission—the largest of its kind in history. It is difficult to imagine that Samuel Yellin was not overwhelmed at the enormity of the undertaking, but he immediately began organizing and expanding his business. Across from his Spanish-style smithy on Arch Street he built a factorylike second shop with 45 more forges, then hired the scores of smiths, helpers and draftsmen needed to execute the myriad designs he must produce.

What he wrought then still stands today. Massive grilles guard the Federal Reserve's windows; huge lamps hang by the entrance; inside, large decorative panels conceal radiators; reticular gates defend the

entrances to corridors; dozens of tellers are secure behind an intricate bank screen running the business counter's entire 500 feet—and all are handwrought in iron. The array is seemingly endless: there are hundreds of lighting fixtures alone, including the lamps beside the rows of phone booths, not to mention the fireplace screens and tools, all of the clocks, even the inkwells on the customers' wrought-iron desks.

All of this was not created overnight. Under Yellin's constant, close supervision, 200 men labored for more than two years, hammering, twisting, bending, splitting and chiseling the patterns into iron. Arch Street supplied the Reserve with many works not called for in the architect's plans. Yellin simply could not pass up an excuse to embellish with iron.

After this tour de force, the Samuel Yellin Metalworkers flourished. Requests came from throughout the country: Grace Cathedral in San Francisco, Clark Library in Los Angeles; the National Bank on Nantucket Island; in Washington, D.C., the Chamber of Commerce, the Federal Reserve Board Building and the National Cathedral; the courthouse in Sarasota, Florida; Yale, Harvard, Princeton, Bowdoin and Northwestern; more than 30 buildings in Pennsylvania, including the Curtis Institute of Music, the University of Pennsylvania and the University of Pittsburgh. The complete list of private homes fills many pages.

Now when an immigrant arrived in Philadelphia and said he was a blacksmith, he was sent to Arch Street. "Whether you could make a nail or a suit of armor, as soon as you got off the boat there was a job for you at Yellin's," says Max Segal, one of only two Samuel Yellin metalworkers thought to be still alive. "He had big work and small work. He needed trained people badly because he had so much work—and from among the people he hired, he got the finest smiths in the world.

A metalworkers' League of Nations

"Yellin produced so many designs it took nearly 200 workers to keep up with him. Imagine the sound of 200 hammers striking metal at the same time. The craftsmen were from all over the world and each spoke his own language; it was like the League of Nations. At lunch they ate separately in small groups because they had difficulty talking to each other, but after lunch they all spoke the same language with a hammer. Yellin just gave you a job and went away. He might make a suggestion now and then, but he didn't stand over you. No matter how much time it took to finish, it didn't matter. You had as long as you needed to make it right—and if, when you finished, you weren't satisfied, you could throw it away and start over."



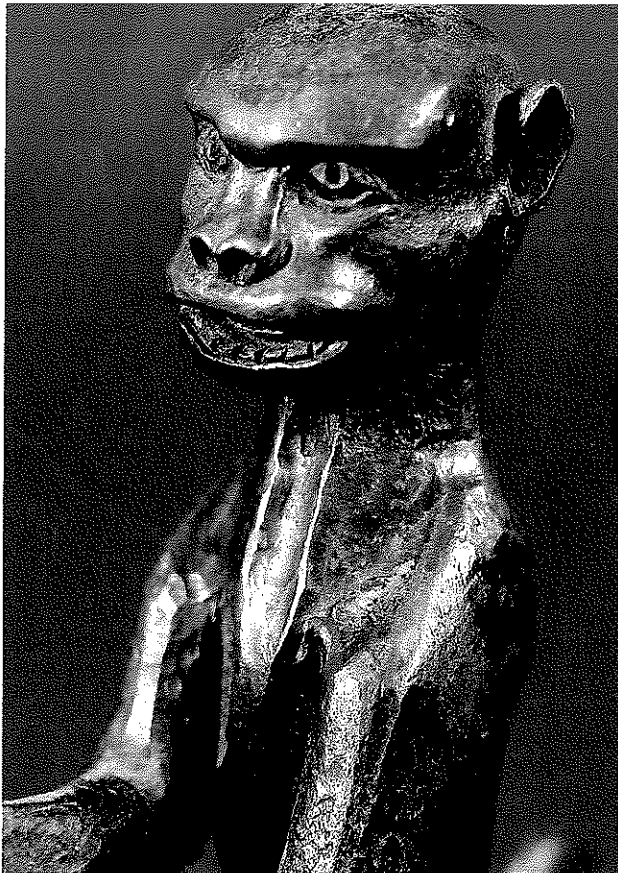
A dialogue in wrought iron between two heads that Harvey Yellin, son of the artist, says



Typical iron figment of Yellin's imagination, sea monster—or whatever—stands 20 inches high.



were made "for fun" by his father, who never made two heads exactly alike, whatever the job.



A small grotesque bears the mark of the sculptor, who never made clay models prior to work at anvil.

Time, when measured against quality, was irrelevant under Yellin's law. In downtown Philadelphia, for instance, the gates for the Packard Building are 21 feet across and 33 feet high. All ten tons are meticulous handwork, hammered and split and twisted and carved for 12 months. The Harkness Memorial gate at Yale took six months.

Once in a design calling for soldiers, he followed the tradition of the great sculptors, by leaving their details crude and flat in his drawings because, he said, "they will grow up at the forge."

The Devil could speak eloquently

There were instances when the Devil showed up to put final touches on an assembled job and decided to scrap the entire work because he thought it just wasn't right. This, to the men in the shop, was a source of pride rather than a reprimand. Yellin couldn't tolerate angles that were an eighth of an inch out of line. "A piece of work can only be good or bad. I cannot afford to do anything inferior to the best I know."

Everyone in the shop—draftsmen and others who did not do the actual metalworking—had to take in-house courses in basic ironworking; metalworkers were asked to become knowledgeable in other mediums: "A smith cannot busy himself with iron alone," Yellin once wrote. "He must be on familiar terms with his brother crafts—to speak of one of the arts is to include them all."

To encourage study Yellin filled the shop's museum with a personal collection of wrought iron—at the time, far surpassing that of the medieval department of the Metropolitan Museum of Art in New York City. "A museum," he said, "is the craftsman's library." Yellin's actual library was filled with hundreds of volumes on arts and crafts in many different languages.

As the years passed, he sought more and more to make his shop the fulcrum for a crafts revival that would produce a generation of American masters. In addition to his regular teaching duties at the University of Pennsylvania and his lectures, he now opened the gates of his shop, the museum and the library every evening "to those who want to learn."

Much to his surprise, he became the first individual who was not a public figure to receive the prestigious Philadelphia Civic Award—with its \$10,000 prize. Yellin took the occasion to make a plea for a perfectionist school for craftsmen: "It has become my ruling passion to found a school. . . . In the handicrafts of today so much is false, so little is real. There is so imperfect an understanding of the limitations of a material."

The school was never to become a reality, though Yellin spent a good deal of his time petitioning for funds. He became more restless and energetic than

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ever, puffing on his pipe, striding around the shop emptying his pipe, refilling it, lighting it and puffing again, sitting with a draftsman for a few minutes, then pacing alone in his medieval office, always arguing and pleading for things to be made beautiful or not at all.

He was personally fastidious. Often when ordering food he would specify, "I'd like an egg, but don't take it out of the shell," or "I'll have an apple, but don't peel it." When he was invited out to dinner he often told the host in advance what he would like to be served. "What a peculiar person I am since, unless I can get really good food, I would prefer to do without and starve—and this same mental attitude applies to most of the things occurring in the course of my life."

Yellin's habits, on the whole, were, if highly irregular, very regularly so. He was always in bed between ten and eleven—but there were incessant hours of delving into his personal library and of sketching. He was always immaculately dressed and spotlessly clean—even his forge-working hands were carefully rubbed regularly with Vaseline to keep them supple. Harvey Yellin recalls that his father liked to go to the movies; he rarely, however, sat through an entire show unless the theater was very cool.

In his lighter moments the serious perfectionist seemed almost to step out of character: he was said to be a great storyteller with a strong sense of humor. Although he had an unmistakable air of authority, those who knew him said he was very modest generally—but when it came to iron, he knew that he knew.

When Yellin was 45 and had been turning out his great works for only a decade, the stock market crash and the beginning of the Great Depression brought a halt to the era of lavish construction. But by then Yellin was comfortably off and could have simply shut down most of his forges. Instead, determined to keep the masters he had trained working, Yellin brought out his sketchbooks and said, "Make one of this and one of that." Throughout the Depression he kept them working, executing samples of his designs—fragments of gates and grilles—draining the personal fortune that he had amassed during better times.

Once when asked how he could spend his own money to keep the forges blazing, Yellin revealed his attitude toward the dollar: "If you want to know what God thinks of money," he said dryly, "just look at the people he gives it to!"

In his mid-40s Yellin suffered a severe heart attack which ended his vigorous working career, but it was during his next ten years of forced rest that his mind was most active. He constantly sketched new designs—many now considered his very finest. They were then executed by the masters in his shop with whom he kept in constant touch through fatherly memoranda, letters, notes and, when his health permitted, personal visits as well.

Yellin died at the age of 54 in 1940, just as the era of skyscrapers—which Yellin scornfully called "concrete boxes"—with no room for wrought iron was in full swing, but his spirit lives on as the modern metalworker's muse. "When I die," he once noted, "I will take forge, hammers and anvil with me, and when I go before the gates of heaven, if I am denied admission I will fashion my own key."



In Florida's Bok Tower Gardens, wrought-iron birds are finials on the carillon tower bridge.

Repoussé brass door of Bok Tower depicts Biblical story of creation; Yellin signed "Let there be light" panel.