Has The Brain Trust Slipped A Cog?

HOME building encouragement, so far at least, seems to be no part of the New Deal. Strangely enough it appears to be the intent to take care of virtually everyone save the man who aspires to build himself a home. For him there is no money.

The billions of dollars which have been set apart to finance the New Deal have already gone in part or will eventually be disbursed to aid chiefly: The railroads, in the form of loans. Unemployment relief, through loans to states and municipalities. The banks, in some of which Uncle Sam has become a partner, and to all of which money will be lent at a greatly reduced rate of interest.

Public works, largely the government's own buildings. General construction is yet out on a limb. The farmers, in subsidies to the wheat, cotton and tobacco and hog growers, with others yet to be added. Slum elimination, a laudable experiment.

The army of mortgagors who will be aided through the Home Loan relief in staying off foreclosures. Other avenues for the flow of the government's financial aid will doubtless be provided as the exigencies arise.

Inevitably one of these will lead to construction. Conditions, sooner or later, will force it. Only the brain trust is insensitive to the long admitted fact that healthy construction conditions are indispensable to American prosperity. No other field of activity, when bowing along at normal speed, calls so generally upon industry or puts so many wheels to revolving. None demands such a variety of materials or contributes more to the income of collective labor. More of the building dollar than of any other one trickle's into the workman's pocket.

Construction must be aided, encouraged and stimulated if American prosperity is to attain its old time stride and the New Deal go triumphantly "over the top."

Filling the bank vaults with cheap money an encouraging greater credit will not solve construction's problem. More decisive and direct action will be necessary from Washington. Banks from coast to coast are loaded up with a heterogeneous collection of real estate, acquired by foreclosure, which they are seeking to dispose of at a 'sacrifice,' and which they must dispose of before they will begin making loans for new construction. If the brain trust doesn't realize this it is high time they were giving it consideration.

The building and loan associations are in too many instances just a few jumps ahead of the sheriff. Adequate aid from them is far in the distance. The New Deal must and eventually will come to the rescue of the construction industry. It is too big an interest, too vital to the country's welfare, too indispensable to industrial consumption, to be ignored. The surprising fact is that it has been ignored.

The revival of building will mark the last gasp of what we have known as the depression.

A Fire Loss Reducer

FIRE losses in 1931, as estimated by the National Board of Fire Underwriters, totaled $406,032,365, or approximately $4 per capita. For a number of years the losses have persistently hovered around the half-million dollar mark, sometimes more and sometimes less, but never very far away.

The most persistent campaigning on the part of those organizations devoted to the reduction of the annual fire loss has largely failed of effectiveness. Much of it has been misdirected, warning chiefly against carelessness in handling inflammable materials about homes and buildings generally rather than stressing the wisdom of using fireproof materials in the initial construction.

Most buildings are erected in a manner to ignite...
easily and that insures their burning readily once fire gets a start. It has been the practice for three centuries in America. No other industry has been so slow to learn.

Reinforced brickwork offers a solution to this problem. The Super-Safe Home at the Century of Progress Exposition, first of its kind, is brick from cellar floor to roof, inclusive. Such construction is astonishingly moderate in cost.

See it when you visit the Fair. Advise your architect to see it also. It is more nearly fireproof than any other type offered today.

And this construction is just as satisfactory for commercial or factory buildings.

Sensible Home Building

ELSEWHERE in this issue will be found the story of a successful experiment in small brick house construction by a development company in Reading, Pennsylvania. Right through the worst of the depression period this concern built houses and as diligently sold them.

Three distinct conditions made this possible. The houses were built of brick. They were attractive in appearance. The prices were within popular reach.

The company selected a favored material, employed a competent architect to design every one of them, and priced them in accordance with their cost and the times. That was good judgment all the way. And it sold their houses as fast as they could complete them. What more could be asked?

A Chance for Wardens

BROADCASTING over one of the leading radio networks, recently, the warden of an eastern penitentiary declared with every evidence of gratification that his institution had produced and sold, the last year, something more than $60,000 worth of manufactured wares. Made by convicts, of course.

At the same time the governor of his state was confronted with an unemployment situation unparalleled in the history of the commonwealth. Factories by the hundreds were idle. Bread lines were being supported in every large city. The governor's wife had been pictured serving soup in one of these.

It may be necessary to provide some method of keeping convicts employed, as wardens generally insist. But one wonders why some way cannot be devised that will not be in competition with workers who have not been convicted, who have observed the

laws only to be forced into the bread-line or upon the mercy of public charity. Who can find no jobs.

If the wardens applauded the publicity possibilities of such a discovery they might give it serious consideration and solve a momentous problem.

Build New or Renovize?

THIS question has bothered thousands since the launching of the renovizing campaigns the country over. It is still a moot question with many thousands who are undecided.

The nub of it lies in this one point: Do you want a new, modernly equipped home of the architectural type you most prefer, or a fairly good rebuilt old house with such architectural treatment as is possible to give it at reasonable cost?

Do not delude yourself with the idea that you can take an old house and remodel it, fit it out with all the up-to-the-minute conveniences demanded in modern construction, and save money in the operation. It simply cannot be done as almost everyone who has tried it will tell you.

It is all right to keep your house in repair. To add such of the things that have come into usage since it was built and are now regarded as essential to comfort and convenience, if the cost is not excessive or in fact prohibitive. This will all depend upon the character of its construction.

But go slowly about buying an old house and trying to make it all over. This experiment has been fraught with endless disappointment and financial woe.

It is inestimably safer and more satisfactory in the end to build a new house at present day costs and be assured that you will get what you want. Certainly you will get more value for your dollar.

Just Another Fallacy

THOUSANDS of prospective home builders have been reading, of late, with a growing interest, of the proposed mass production of houses of one kind or another. Most recently their attention has been attracted to the various types of steel houses. And again, as in the case of Edison's efforts some years ago with poured concrete, disappointment looms.

The paramount handicap to mass production in house building is the inescapable fact that it would precipitate an architectural tragedy. Designs would of necessity have to be more or less limited in number. Neighborhoods so built up would have a sameness that would be deadly. Not even price could ever make them attractive, were cheapness possible, which it is not.

Built in Time and Got Maximum Value For His Money

REPEATEDLY it has been emphasized in these columns during the last two years that the man who intended building a house was losing a fine opportunity in not doing it forthwith. At no time within that period was this bad advice.

One could build a better house at less cost than in years during that period. The experience of the man who built the one illustrated herewith is a case in point. He made a thorough canvass of all the properties held by the banks of his city as the result of a long season of foreclosures, and on the market at socalled sacrifice prices.

In the end he built a new house, even buying a lot to put it on.

This house speaks for itself. It is attractive to an exceptional degree for a house so small. Yet it is amply large for the average family. And most delightful in its arrangement. All of the rooms are comfortably large, lack none of the modern conveniences, and the equipment throughout is excellent. The exterior appearance is indicative of the character of the workmanship both without and within.

The brick used were from the Hudson River district and a rather dark red in color, some of them being a trifle overburned and adding to the charm of the walls. The roof is of slate. Some of the other distinctive features are concealed radiation, oak wood work, brass piping, copper leaders and flashings, steel casements and bronze screens. The house was completed recently at Searsdale, New York, at a cost of $15,900.

The floor plans and perspective prove it to be a lot of house for the price.

There is yet time for the man with ready cash to build his house to advantage. Material prices have increased somewhat under the New Deal and will yet go higher. But brick have not kept step in this advance. Their prices are still moderate.
More Than a Million Have Already Visited The Super-Safe Home

MORE than a million and a half visitors will have inspected the Super-Safe Home of the Future at the Century of Progress Exposition, Chicago, before the gates close the last of October, if the record of the first three months is maintained. The one-millionth visitor, registered on September 3, was Miss Florence Murphy, of 4017 Maillot Avenue, St. Louis. The house had been open to visitors less than three months at that time, making a record of better than 333,333 a month. Miss Murphy’s happening along in just the right time brought her, at the hands of Mr. Grant E. Miller, local district manager of the Brick Manufacturers’ Association, a collection of mementoes in the form of a beautiful copper 3.2 set, three copper cooking utensils, and three cases of assorted College Iron Food Products. Incidentally, on that same day the 1,200,000th person entered the Fair grounds, giving the Super Safe home an average of one person out of every 13 who visited the Exposition.

The Small House Group has constantly been a magnet for thousands. Daily there has been a long line in waiting at the Super-Safe home, and daily hundreds have been turned away or have left the line unable to gain entry without waiting, as they felt, too much time in the effort. Some of these have even visited the office here at headquarters to obtain the information they would not take the time to get at the Exposition. Hundreds are writing in with inquiries about one or another feature of the house or the brick garden adornment. One visitor from Canada writes that he is appropriating part of the garden plan in decorating the grounds at his home. Unquestionably the exhibit is arousing a keen interest in brick and brickwork, and especially in this application of reinforced brick masonry. The other half-dozen houses in the group have also been registering flattering attendances. And all this only reflects the tremendous temporarily damned-up home owning urge that sooner or later, as conditions develop to permit it, will break forth in one of the greatest building booms the country has known in years.

Just how much effect the types of architecture on display at the Exposition small house group will have upon the future American home is problematical. But one thing is fairly certain. Hereafter there will be more attention paid to fire-safety in construction, and to permanence. Thousands have marveled at this house of brick, without an ounce of combustible material in its entire make-up, with its floors and ceilings and roof of brick, its extended balconies of brick without visible supports, and its atmosphere of secure and unassailable fire resistance. It has radiated a sense of security that has impressed all alike; the assurance that one might leave a house like this one for days or months or years, knowing that when he returned it would still be standing unharmed. Here was building for peace of mind in the Nth degree.

Frankly the modernistic type of architecture, made imperative by the requirements of the Exposition management to fit into the general architectural scheme adopted for the event, may not be expected to suit the tastes of the average prospective builder. Nor will it ever become popular until American ideas undergo a radical transformation. The house was not built to sell its architecture. It was to introduce reinforced brick masonry to the small house field; a new and revolutionary type of construction which is applicable to any architectural type in the home for the average man at a moderate cost.

This house is the first of its type in all the world. Nothing of its kind had ever been attempted. Yet at a cost of approximately $7,000, a trifle less in fact, it could be duplicated almost anywhere in the United States. In some sections at even less. Yet it is practically indestructible. It is absolutely fireproof. It would come more nearly emerging from earthquake shock undamaged than any other type of construction. Its resistance to windstorm of whatever character, due to its being virtually welded together by its
Mud Brick Houses
Of Ancient Egypt
Had Vaulted Ceilings

By Prof. A. E. R. BOAK
University of Michigan

During the season of 1931-1932 the University of Michigan carried on excavations at Dime, the site of the ancient town of Soknopaiou Nesos, in Egypt. This town lies on a plateau on the northern edge of the Fayoum overlooking a large salt lake. It belonged to the Greco-Roman period of Egyptian history and flourished from about 250 B.C. to about 250 A.D.

The site is dominated by the precinct of the temple dedicated to Sokhe (Soknopaios), the crocodile god of the Fayoum. One of the temples has been completely destroyed and the other is in ruins, but large portions of the great precinct walls are still standing to their original height. The walls were built of sun-dried mud bricks and formed an irregular quadrangle with the east side measuring 123 meters, the west side 115 meters, the north 87 meters, and the south 86 meters. The walls were constructed in sections with the bricks laid in slightly concave courses so that the pressure would be towards the center and not the ends of each section. This has caused some of the sections to draw apart and have cracks in the walls. At the base the walls are slightly over two meters in thickness and their maximum height above the present ground level is about 13 meters. The size of the bricks is 20 x 15 x 12 centimeters.

The houses excavated outside the temple area were all of mud brick with stone or wood trim. In the earlier houses of the third and second centuries B.C. the builders laid their bricks in the Egyptian fashion. That is to say, each course of bricks consisted of a row of headers and a row of stretchers with a small space between the rows to allow the moisture to drain off. The courses were so laid that the rows of headers and stretchers alternated as inside and outside rows.

In the later houses, particularly those of the Roman period, there was a great variety in the bonding and the courses were solidly constructed without any space between the rows of bricks. Pieces of wood introduced into the walls served to strengthen them as well as to absorb any moisture that might accumulate in the brick. Then, as in earlier times, the bricks were set in a mud mortar.

One house, of the Roman period, presented unusually interesting architectural features, although only the basement and part of the walls of the ground floor remained. The outside measurements of the house were 18.80 x 17.20 meters. The exterior walls themselves were of unusual thickness; 2.10 meters at the base and 1.85 meters at their present height. The walls of the entrance hall were paneled with heavy strips of hardwood, fastened together with pegs and attached to the walls by wooden dowels set deeply into the brick. The basement rooms were 4.20 meters in height. The ceilings, with one exception, were brick vaults. The exception was a beautiful brick dome with pendentives.
Beautiful Wall of Reinforced Brickwork Incloses Steel Tank

INCLOSURE of a steel water tank in Baltimore, Maryland, with an ornamental wall of reinforced brick masonry seems to point the way to the solution of a municipal problem of long standing. It is the first time that construction of this type has been used for such a purpose and the result has elicited much favorable comment from architects and engineers who have seen the work. No longer will it be necessary to mar neighborhoods, in which city owned waterworks grounds have been parked or landscaped for parkways, with the unsightly bare steel tanks so often necessary as auxiliaries to the local water distribution systems. And the same thing applies to this type of gas tank so frequently encountered. A practical and suitable method of relieving this condition has long been sought by city engineers.

The tank so treated, in Baltimore, serves the Curtis Bay district and has a capacity of 4,000,000 gallons. Its primary purpose is to raise the hydraulic gradient during periods of heavy draught. Also it provides a 15-hour reserve water supply in case of interruption of the supply from the 30-inch main leading to that district. This main is laid through a water-front section crossing over several mud flats and has at different times displayed a tendency to settle, a condition of more or less constant menace to dependable service.

Baltimore has one of the finest waterworks systems in the country. All of the buildings at the central plant are of brick, far above the average in attractive architectural design and beauty. Constant criticism of the blight on the landscape in the Curtis Bay district led the city officials, more than a year ago, to decide upon beautifying it in some manner. To J. H. Strohmeyer, engineer of water distribution, was delegated the task of providing plans and designs for a masonry inclosure which must be artistic and yet possible of construction at moderate cost. Collaborating with him was Frank O. Heyder, architect for the bureau of planning and surveys, who eventually called into consultation the engineer of the Baltimore district office of this association who submitted data on reinforced brick masonry. The design eventually adopted provided for its use.

The tank, said to be one of the largest in the world, is 110 feet in diameter and 60 feet high from the base to the top of the plate section. Above this rises the roof, a spherical dome, to an additional height of 20 feet. The adopted design provided for a circular reinforced brick wall, 119 feet in outside diameter, completely enclosing the tank and leaving a clear space of 25 feet between the wall and the steel shell of the tank. The wall varies in thickness from 17 inches at the base to 13 inches in the courses above the pilasters on which the series of arches are built.

The entire wall is reinforced from the concrete base to the last few upper courses. Two 1½-inch steel rods were used in every eighth course of the first 20 feet; one 1½-inch rod in every fourth course for the height of the depressed panels and two 1½-inch rods for every fourth course for the rest of the wall above the arches. This reinforcement is sufficient to protect the wall against all contraction stresses.

A most unusual color scheme was adopted, shading imperceptibly from dark at the bottom to light at the top. Twenty varying color tones are represented in this face brick exterior. The concrete base was made of 1½-inch gravel specially selected to insure a dark brown shade when exposed by the scrub finish. The beginning brick courses were of a blending shade of dark brown from which the wall gradually shades into a light tan at the top. In the twenty-four depressed panels the color shading is reversed, dark at the crown of the arch and light at the bottom of the panel, producing a distinct contrast between the panels and the color of the dividing pilasters. The trim, belt courses and window grills, together with the ornamental top course is of terra cotta shaded to harmonize with the adjacent brickwork. The resultant ensemble is altogether beautiful and pleasing.

The lowest bid on the original design, providing for the use of 1,000,000 bricks and 600,000 common brick in the back-up, was $74,000. By the use of reinforced brick masonry the wall was reduced 25 percent in thickness, the number of brick for backup cut to 470,000, which, with other economies from substituting concrete for cut stone, and terra cotta grills for bronze, the low bid was brought down to $44,000. The brickwork alone cost $22,000.
Old Kentucky Home
Given Undying Fame
By Foster's Song

SURROUNDED by gnarled remnants of a primeval forest and sturdy specimens of second growth and facing the winding limestone highway from the brow of a table land that stretches away for miles to the south and was once a teeming plantation, "My Old Kentucky Home," just outside the village of Bardstown, in Nelson county, reflects with a singular fidelity the dominant characteristics of ante-bellum days. In its severely dignified Colonial outline, time-mellowed brick walls, exquisitely wrought fan-lighted entrance, tall, shuttered and gracefully curtained windows, spacious halls and great high ceilings, splendid early day furniture in mahogany and walnut, and its all-pervading atmosphere of culture and quiet elegance, it pre-eminently typifies the memory for which it stands before the world, the gracious, hospitable plantation home of the Old South.

Today it is a ward of the state. A shrine to which down the historic old Louisville pike annually travel thousands, native sons of Kentucky and incidental transients from the four corners of the earth, among them an occasional crowned head following in the footsteps of the exiled Louis Philippe, onetime king of France, to pay homage to one of the most beautiful bits of sentiment the gray old earth has ever known.

For more than a century it was owned and occupied by members of the Rowan family. Eleven years ago the last resident member thereof, Mrs. Madge Rowan Frost, sold it to the My Old Kentucky Home Association, which had collected some $61,000 by popular subscription, with the provision that it should be presented to the state and by it forever preserved as a shrine of Home. To Kentuckians the world over it is hallowed ground, sacred to the memory of the never-to-be-forgotten song which is the state's unofficial anthem and the best loved of all the many heart-twinging melodies of the immortal Stephen Foster, sweetest singer of the Southland.

Judge John Rowan, onetime United States senator from Kentucky, built the house. The original rear wing was erected in 1795, of brick brought overland from Virginia by ox cart. The main structure, added in 1818, was of brick made locally. It is two stories and an attic in height, a third story having been destroyed by fire many years ago. From the unusually broad and lofty Colonial center hall way open the expansive reception and drawing rooms. The dining room and kitchen might easily serve an ordinary hotel. A circular stairway leads to the upper floor where sleeping and sitting rooms are of the same generous proportions. Throughout the house are tall French windows shaded by Venetian blinds. The furniture in the builder's day was early American. Later John Rowan Jr. added many pieces brought from Europe. The house was the scene of many notable social functions and here Rowan, Sr., entertained La Fayette when Bardstown was one of the state's more important towns. Back of the house, beyond the formal gardens, was a small village of slave cabins and plantation buildings.

Both the door and adjacent windows open into the wide center hall.

Rowan, Sr., though born in Pennsylvania, became a typical Kentuckian of the old school, as jealous of the honor of the state as of his own. He came as a child to Bardstown, his father, a Revolutionary soldier, and High Sheriff of York county, Pa., under George III, settling on a grant of 1,000 acres surrounding the site of the old home. Rowan grew up to fight Indians with his father, to help clear the plantation, to win his education by the most severe application, and eventually to become acceptedly the greatest of that distinguished group of seven lawyers who because of their exceptional ability were known as "The Bardstown Pleiades." Incidentally the village, within a quarter of a century, contributed to the national government two Secretaries of the Treasury, a Postmaster General, and an Attorney General, in addition to providing the state with two governors, two United States senators and several members of Congress.

According to his fashion and the measure of his times, Rowan was doubtless a reverent man. He was just, honorable, of unquestioned integrity and dignified. And yet there was in him a dash of inexorable ruthlessness. At twenty-eight he was challenged to a duel by a former intimate friend of his own age, a Dr. Chambers, of Bardstown, the result of a heated argument in the old brick tavern which still stands. Rowan, feeling upon sober reflection, that perhaps he was at fault, declined to accept it, returning instead his sincere apology. This was rejected and the challenge curtly renewed. There was but one course, in honor; the challenge was accepted. The first exchange of shots left both unharmed. Rowan's second, knowing him to be a dead shot, felt that he had missed deliberately. Chambers insisted upon another exchange. "If it must be, I shall kill him," Rowan said to his second, indicating where the bullet would strike. At the second shot Chambers fell. In an hour he was dead.

Rowan named the estate Federal Hill, in honor of the Federal Party, some time before he had scornfully refused to take at any price the presidency of Aaron Burr. He was then admittedly the leading criminal lawyer in the South. Later he became chief justice of the state supreme court, and preceded Henry Clay in the United States Senate. He was a commissioner of the United States to define the boundary line with Mexico when he died in 1843. His will directed that no monument should mark his grave, his reason being that none marked the graves of either his father or mother, more entitled to distinction than he. Years later, however, one was raised.

John Rowan, the Second, "Young John," as he...
was generally and affectionately known, was a worthy successor to his intrepid father. Reared in luxury he had been carefully trained to the law. Without political ambition he found its honors eventually thrust upon him. Probably his earliest national recognition came through his oratorical clashes with the distinguished Thomas F. Marshall, with whom he fought a duel as the result of a particularly sarcastic exchange of repartee on the stump. Like his father, young Rowan was a dead shot, and something of a humorist. Just before the exchange of shots he told his second that he intended wounding Marshall so that he would not sit down for awhile. His shot, however, went a trifle wild and broke Marshall’s hip, permanently lamening him. Some years later, when both were on a Kentucky River steamer, Marshall fell overboard. Knowing his lameness, Rowan unhesitatingly leaped after him, saving him from drowning. They were friends ever afterward.

Refusing all other political honors, “Young John” eventually accepted election to the state legislature. Five years earlier he had married Baltimore’s most famous belle, Rebecca Carnes, and of the three children they reared at Federal Hill, had arrived. A few weeks after the legislature had convened President Polk appointed Rowan United States Minister to the kingdom of the Two Sicilies. With his official residence at Naples, he spent two years in the diplomatic circles of Southern Europe, resigning, as was the custom, when Polk’s successor was elected. The next three years he spent leisurely idling about the capitals and principal cities of the Continent, expanding his knowledge of the fine arts and increasing an acquaintance that eventually resulted in seeing his descendants married into the nobility of nearly every country of Western Europe. His return to Federal Hill in 1852 with his cultured and developing family was the signal for immediate renewal of social activities in his home of hospitality which drew upon Kentucky’s young life as a magnet.

Here, in the summer of that year, came Stephen Collins Foster, 26, shy, moody, dreamy-eyed and reserved. As a youth he had visited at the Rowan town house in Louisville, a cousin of Virginia ancestry although by the accident of circumstance born near Pittsburgh on that memorable Fourth of July that witnessed the deaths of John Adams and Thomas Jefferson. Foster was even then perhaps the greatest composer of native American music, as he is to this day. Already his songs had crossed the ocean and Rowan had heard them in a kindred and kindling sympathy which speedily ripened and served quickly to wipe out the twenty years difference in their ages. What effect his more mature ideas, his outspoken appreciation, his enthusiastic encouragement and his cultural influence may have had upon Foster is entirely problematical. Foster left no written expression on that score, but it is significant that he wrote, at Federal Hill, the one song Kentuckians love best, and followed in the years immediately succeeding with most of those others that have served to enroll him in the list of the immortals in music. What inspired the song is likewise unknown save that all of which he sings so touchingly was pictured graphically in the plantation village behind the house.

There are numerous tales, all of them varying and none authenticated, of when and where the song was written. Foster most likely wrote the words under inspirational impulse. Probably he composed the music at the old piano, although he used both his guitar and flute in such work, usually carrying the latter with him on his lone rambles through the countryside. The first rough draft, left at Federal Hill, was lost in the fire that later almost destroyed the house. All that is known definitely is that it was sung one night at a social gathering in the great drawing room by a young lady, now unidentified, who had learned it under Foster’s coaching. It scored an instant hit and its popularity has never waned.

FOLK will buy well-built, attractive small homes of brick quicker than any other kind if the price is right. This has been conclusively demonstrated times without number, in many localities. It is one of the reasons why this association has been so persistently seeking to develop a small house with modern equipment and conveniences which may be built at a cost of $5,000 or less.

The possibilities of the market for small brick houses has only recently been emphasized once more by the Lincoln Park Development Company in their allotment, some five miles from the center of Reading, Pennsylvania. Eleven such houses were built and promptly sold during the worst period of the depression at prices ranging from $2,000 to $2,250. Additional houses are nearing completion.
Dartmouth College
Early Accepted Brick As Standard Material

Dartmouth College is an outgrowth of what, in the Colonial days of the early part of the 18th century, won for itself a place in history as the Great Awakening. It is directly traceable to the impractical dream of Eleazar Wheelock, a minister past what was then considered middle age, whose ambition was to establish a college for the educating of Indian boys and girls and sending them back to their tribes to teach and to preach the gospel. He established such a school first at Lebanon, Connecticut, in 1754. Fifteen years later he transferred the scene of his endeavors to Hanover, New Hampshire. At that time he had under his instruction some thirty youths, fifteen of them Indians.

Wheelock, born at Windham, in 1711, graduated at Yale in 1733 and settled at Lebanon some years later as pastor of the second society. His efforts to induce support for his proposed school were slow in winning recognition, and when it was finally opened it was called "Moos' Indian Charity School," in honor of Joshua Moor, of Mansfield, its most liberal benefactor. Later considerable sums were contributed to it and by men of prominence in England and Scotland and placed in the hands of a board of trustees, of which the Earl of Dartmouth was the head. After its removal to Hanover it was incorporated as Dartmouth College, by act of the legislature, which declared Wheelock to be its founder and president and gave him the right to appoint his successor. A charter was also granted the college by King George III.

The site which Wheelock chose for his school was on the outskirts of an isolated settlement of half a dozen houses. Today a bronze tablet in the College Yard marks the site of his first log cabin. On it are inscribed the zealot's own description: "I made a Hutte of Loggs about 18 feet square, without stone, brick, glass or nail. . . . My sons and students made booths and beds of hemlock boughs." A little later he built, on what is now the Green, two larger buildings, both of which, long since, disappeared. In 1784 the original Old Dartmouth building, center of the older Dartmouth Row, was begun. It was of wood and took seven years to complete, chiefly because of lack of funds. It burned in 1904.

Wentworth Hall and Thornton Hall, built in 1829, marked the adoption of brick in Dartmouth construction. Practically all of the 40 odd structures used today in the current life and work of the college are of brick. The official history of Dartmouth says: "Before the buildings (Wentworth and Thornton) were begun, contracts had been made for all that was necessary. Benjamin and Nathaniel Hall, of Lebanon, contracted to furnish 600,000 brick of proper quality at $2.00 a thousand, and 5,000 tiles . . . Reed Hall, erected in 1840, is the last of the original Old Dartmouth group. All of these earlier buildings were painted white. Most of the later structures are in the natural brick colors. The architecture of the earlier buildings was severely Colonial and the outer walls were 18 inches thick. Interior partitions were of heavy hewn wood timbering. Last year Reed Hall, long used as a dormitory, was remodeled within for class room use, 12-inch brick partitions replacing the old wooden ones and concrete floors being installed. Its original cost was $20,000.

The present Dartmouth Hall was rebuilt of brick in 1904, on the site of the burned wooden building. It is a replica of the old structure, in brick instead of frame and, according to tradition, painted white.

President Wheelock, though largely dependent upon English support, in the early years, cast his lot student ranks to a mere handful. In both the Spanish-American and the World War, students from Dartmouth were in the first line of enlistments and of its patriotic showing the college is justly and exceedingly proud.

Dartmouth has consistently held to the Wheelock principle of training men. It has never expanded along university lines. Wheelock's appointment of his son, John, as his successor, which led almost to the wrecking of the college through mismanagement, eventually resulted in an effort to change this original policy. Dissatisfied contributors to the institution, in 1816, induced the New Hampshire legislature to annul the old charter, grant a new and amended one, enlarging the power of the trustees and permitting changes in policy, and to name new trustees. This action, resisted in the courts, developed the famous Dartmouth College Case in which Daniel Webster, after the lower courts had affirmed the legislative action, represented his alma mater in the U.S. Supreme Court which decided for the inviolability of the charter, declaring the acts of the legislature to be unconstitutional and invalid and reversing the judgment of the New Hampshire courts.
**Brick in The News And Humor Of The Day**

**NEW JERSEY PARISH HONORS CAPTAIN KIDD**

Middleton, N. J.—Capt. Kidd, and his pirate crew, were accorded recognition at the celebration here of the 350th anniversary of Christ Church. Bricks used in its walls were paid for by the pirate's gold. The land on which it stands was given by one of his band. Pictures of the intestines were a treasure hunt and a pirate ball. Records show the parish was endowed with property left by William Leeds, a counterfeit-striking henchman of the pirate chief. A monument to him has been erected on the grounds. Christ Church, according to tradition, was Capt. Kidd's favorite chapel and he never missed attending services there when he chose to visit the Jersey coast. The old church was partially gutted by fire in 1965 but was restored in replica.

**Bryan's Autograph**

On 42-Year Old Brick

Table Rock, Neb.—Forty-two years ago, when W. J. Bryan was making his initial tour for Congress, he visited the plant of the Table Rock Brick & Tile Co., accompanied by his wife and George A. Cotton, then a local Democratic leader. Cotton handed Bryan a neatly molded brick, suggesting that he autograph it. Bryan scrawled deeply: "W. J. Bryan and Mary, his wife." The brick went back on the off-beater's rack. Recently the brick was discovered in a sidewalk by a son of Robert Cordell, present owner of the plant. The boy pried it out and it is now available. The writing is clear and unmistakable despite its long service.

**Crime Wave Grows For Lack of Brick**

Washington, D. C.—"If I'd only had a brick that nappy would be new with me," Michael O'Connor, 50, of 584 Gresham Place, N. W., told police at the 100th precinct, in reporting an attempted hold-up. A young negro stepped up O'Connor on his way home from work, branched a pistol and demanded his money. When O'Connor swung at him the bandit fled at his feet and ran. After chasing him a block O'Connor lost him in a dark alley when he turned as aside. "I'd only had a brick," he lamented, "part of this crime wave would be over."

"James went through the World War without a scraper. I'd only had a brick to kill by a stoop falling from a roof."

"That was fate."

"Face, nothing; it was a brick."—Er.

**Huge Brick Chimney Stolen From Owner**

Salem, Mass.—AP—Some thief stop at nothing. Police were asked by Ernest A. Waters, builder, to recover a 6-foot brick chimney that his workmen completed the dismantling of an old leather factory owned by Waters, but left the chimney standing at Waters' request. When Waters went to look over the chimney, which was ten feet above the barn, with the intention of setting it, the chimney was gone.

**The Home Library**

By James J. Montague

In Er, the antiquarians say
"The only books we lack of is clay."

Which, baked in fires of reds and sticks,
In course of time were turned to bricks—
And of these square and slippy tomes
The Union built their happy homes.

And when he stayed at home at night
An Union took a tipple

And with a ladder close at hand
Against the lettered wall to stand,
Would, enterprising-like, advance
And read his favorite romances.

And when at last he'd gone through all
The books comprising every wall,
His mind more fully to improve,
His only resource was to move

Around and 'round and 'round and 'round
Where other volumes might be found.

If I had lived in Er, I'd say
Thus when I'd read the literature

Upon the wall of house or flat
That I should let it go at that;
Of education I guess,
But golly! How I hate to move!

**Dog's Footprint On 118-Year Old Brick**

Huntsville, Ala.—Offie De Young, contractor, is exhibiting a brick with the imprint of a dog's foot, which his claim was made at least 118 years ago. The brick was taken from the wall of the home of Dr. W. P. Jordan, which was built in 1813. De Young says that undoubtedly the dog stepped upon the brick while it was not in the kiln, thereby depositing the print which is so clearly defined now as it was at the time it was made.

**This OREGON CO. SWUNG A WICKED TAIL**

Tolson, Ore.—Jack Henshaw, high school student here, had to milk the family cows before reporting to his classes. Insured to sleep late, and not wanting to go through the nothing was usually a crook, hisanded by the interference from the cows' persistently switching tail. He finally hit upon a novel idea. He tied a brick to her tail. All went well until a hornet nest appears in an apparatus. Roopy gave a frightful yelp of her tail and the brick hit Henshaw fall behind the ear. When he awaked both cow and fly were gone. He has since discarded the brick.

**Homes-Made House Costs Rancher 300$**

Bart, Nev.—An Idaho rancher, made mud dog out of a wall, built the walls of Jack McCarthy's ranch bungalow in Washoe county. Built a bed and a stove all his furniture was home made. The lumber needed was hauled a distance of 58 miles and the house, furnished, cost him only $800. With his roof painted red and the adobe walls painted while it presents an alluring picture in a background of sage brush and Mrs. McCarthy's only complaint is that her nearest neighbor is ten miles away.

**Chimney a Relic of Boom Mining Days**

Tohopah, Nev.—Upshot 175 feet into the clear mountain air a brick chimney stands like a sentinel over the abandoned mining town of Belmont, near here, a grim testimonial to a bygone boom. The brick were hauled fromSacramento, a distance of more than 500 miles, by ox teams, and the chimney was intended to serve a monster smaller plant which was never completed, the hole graveling out before it was ready for operation. It was built 62 years ago.

Two Idahoans watching Stetson's parade:
"Who are these fellows, Mike?"

"They're Stetsones."

"And what are Stetsones?"

"Why, they're Masons."

"Sure and what the devil do they want now? They're getting 85 a day."—Joe.

"Listen to this. The boss of a mill is building a building. It's a wonder he couldn't build it himself."

"That hide's considering comfort and safety first, We're going to have some new visitors aren't we."—Er.
Reinforced Brick Masonry Wins Foothold
In Sewer Construction In Detroit District

By CHAS. H. FORK
Engineer, Detroit District, B.M.A.

Reinforced brick masonry was used for the first time in sewer construction in the Detroit district in some special construction for the Dearborn, Michigan, sewer system, necessary in diverting the sewerage from an existing sewer to an interceptor connecting with the disposal plant. This old sewer had been used for storm water only but was to be converted to a combined storm and sanitary drain by the new work. During dry weather all of the sanitary flow will be diverted to the disposal plant. Storm flow will be flushed over a dam in the sewer into a river outlet.

The work, located on Michigan Avenue, opposite the engineering laboratories of the Ford Motor Company, consisted essentially of replacing 30 feet of the existing 4-ft.-9-in.-diameter brick sewer with a rectangular sewer section 5-ft. wide, varying in depth from 4-ft.-9-in. to 6-ft.-10-in. and with an invert about 26 feet below the street level; of building a regulator and float chamber at one side of the sewer with bottom at 37 feet maximum below the street level; of installing a dam and baffle wall in the new section of the sewer; and of building a rectangular manhole at least 14 feet from the top of the sewer to the street level. With the exception of the invert of the sewer and the bottom of the chamber, reinforced brick masonry was used for all new construction.

The regulator and float chamber required side-wall reinforcement against lateral earth pressure, which varied from 600 lb. per sq. ft. at the top to 1,100 lb. per sq. ft. at the bottom. The roof of the chamber supporting the manhole and a 17½-ft. surcharge of earth, was assumed to carry a load of 2,500 lb. per sq. ft. It consists of beams placed at each side of the manhole and a 12-in. brick slab.

In the sewer section the lateral earth pressure varied from 600 to 800 lb. per sq. ft., and the earth load, top and bottom, was assumed to be 2,500 lb. per sq. ft. The side walls and roof were made 12 in. thick and reinforced for both positive and negative moments. Reinforcement was also placed in the horizontal joints of the manhole, inasmuch as the walls had to resist earth pressure varying from zero at the top to 240 lb. per sq. ft. at the bottom.

Allowable unit stresses (in lb. per sq. in.) used in the design were as follows: reinforcing steel, 18,000; brick, 550; shear without stirrups, 355; shear with stirrups, 75; bond, 110.

In general beam-and-slab construction was laid out so that it was bonded together with brick in one direction and with reinforcing in the other direction. No attempt was made to secure a brick bond across the line of vertical shear. The through vertical joints gave space for vertical stirrups or bonding ties, and these were used in the slabs to give additional bond between the horizontal courses. In the walls of the chambers the brick was laid up with alternate stretcher and header courses.

Construction started in an open cut, the float and regulator chamber being constructed first. This latter permitted the diversion of water from the existing sewer through the chamber while the new sewer section was being constructed. After the reinforced-concrete bottoms had been poured, bricklaying for the walls proceeded in the usual manner with horizontal reinforcing rods being well sluished in with mortar. Forms were necessary only for the beams and slabs. Beam stems were built up to the bottom of the slab, the bottom course of the slab was laid, the slab steel and the vertical bonding ties were installed, a slushy mortar was poured over the rods, and the next course of brick was shoved in place. The slabs being 12-in. thick, four courses of brick with two layers of reinforcing were used.

In building the sewer section the vertical steel in the walls and the dam was installed, and the brick construction was carried up to the underside of the slab. The centering for the slab was then completed, and the slab brick and steel were placed.

Common brick was used throughout. Tests showed the strength to average 2,100 lb. per sq. in., when tested flat and the absorption to average 22 per cent. A 1½ cement mortar with 15 per cent lime was used. The brick was well sluiced with water before being delivered to the brickyard. For the walls the mortar was kept just thin enough to prevent floating. For the slab it was sluiced to a mass above the bottom course. A 3½-in. joint was used in the walls of the chamber where the steel was laid in horizontal courses.

Placing 610 cu. ft. of brick masonry (8,900 brick) in the regulator and float chamber required 64½ bricklayer hours, including time required for plastering the walls with 3½ in. of cement plaster. In the sewer section, including the dam and baffle wall, 81 bricklayer hours were required, including also the plastering of the side walls and the top. There were 200 cu. ft. of brick masonry in this structure, which required 11,400 brick. For the manhole 19 bricklayer hours were required, representing work on 225 cu. ft. of brick masonry (3,600 brick).

More Than a Million—
(Continued on page 8)

The principal bedroom is in gray and yellow. The juvenile room, designed for a boy or girl of school age, is in blue and white with touches of red. This room is so designed that it may be used either as a study or play room. In this case it is fitted for a study or den. The roof garden has metal furniture, umbrellas and children's play equipment. The kitchen is finished in glass tile and modernly equipped. The bath is similarly finished in glass tile with modern fixtures. All doors and window casings are of steel. Interior trim likewise is metal. Brickwork in the walls is laid in running bond. That of the floors is in a basket weave pattern. All of the rooms are irregular polygons.

This description is necessarily brief and inadequate, but this portion of the story has been told hereafter and better. Description in this building leaves much untold. One must see the house in its entirety, absorb its atmosphere, sense its security, consider the ensemble rather than its component parts, fully to appreciate its appeal and advantages over the types to which we have been accustomed.

The house is well named. It offers with a moderate outlay to the man of limited means the kind of house present-day conditions rather make imperative, a house that will last, prove economical through the years and always afford peace of mind.

JULY - AUGUST - SEPTEMBER - OCTOBER, 1933

Page Twenty-One
Mud Brick Houses—
(Continued from page 9)

The remarkable thing about these ancient bricks is their excellent state of preservation. Their normal color was grey, but exposure to the air has caused those of the upper walls to turn white. Except where they have suffered violent damage or have been worn down by sand-laden winds, they are as solid as when they were made 1700 to 2000 years ago.

Low Cost Housing Conference
Growing interest attaches to the National Conference on Low Cost Housing to be held in Cleveland on October 25, 26 and 27, sponsored by the Cleveland Engineering Society. The purpose of the conference is to make an exhaustive study of the architectural, engineering, maintenance and planning problems arising in individual or group units whose costs does not exceed $6,000. This may get at the nub of the construction problem.
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DEAR SIR,

I am pleased to announce the following appointments:

NEW YORK:

Mr. J. W. Smith has been appointed Sales Manager for building materials and tools.

Mr. E. H. Jones has been appointed Sales Engineer.

Mr. W. H. Brown has been appointed District Manager.

Mr. R. L. Davis has been appointed Assistant Manager.

Mr. H. G. White has been appointed Office Manager.

The Board of Directors of Building Economy has appointed Mr. W. H. Brown as President of the company.

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