AMERICAN BUILDER
THE WORLD'S GREATEST BUILDING PAPER

A SALES MANUAL FOR THE BUILDING INDUSTRY

Presenting
"FORTIFY YOUR FUTURE THROUGH HOME OWNERSHIP"

BUILD NOW FOR SECURITY
CELOTEX IS TELLING AMERICA—
NOW IS THE TIME TO BUILD!

BECAUSE:

- Financing is Easy
- Interest Rates are Low
- Material Costs are Low
- Labor is Plentiful

Portland, Oregon, home planned by Architects Cash & Wolff

Celotex Insulation Guards the Owner's Investment
Because It's Guaranteed for the Life of the Building!*  

IN EVERY Celotex national advertisement, from now to the end of the year, we are telling America, "NOW IS THE TIME TO BUILD!" With economic conditions changing rapidly, we firmly believe that the ownership of a new home is today's safest investment and a "hedge" against the future.

Buildings tell us that prospects are quick to appreciate the soundness of this reasoning. Many are going ahead with their building plans.

Prospective home owners in your community will ask you for the facts. And when you have shown them that this is the time to build, they will ask you how to build. Show them how Celotex Guaranteed Insulation protects investment, because it's guaranteed in writing for the life of the building. And it means low-cost protection, because Celotex Insulating Sheathing and Celotex Insulating Lath replace other needed materials. Ask us for complete information!

*When issued, applies only within Continental United States
CONTENTS FOR OCTOBER, 1940

Publisher's Page—This Is Not Recovery—by Samuel O. Dunn .................................................. 35
Editorial—Housing for Defense Workers ......................................................................................... 37
"The Best Investment You Can Make" ............................................................................................... 38
What $1 Per Day Buys in a Modern Home ....................................................................................... 40
Home Ownership vs. Rent Paying .................................................................................................. 41
The Only "Indestructible Security" .................................................................................................... 42
Security on "an Acre of Good Earth" ................................................................................................. 44
Quality Products Save More Than They Cost—Provide Security Against High Upkeep .............. 46
Newspaper Stories That Will Help Promote Home Building Now ................................................. 48
How to Avoid Paying $10,500 Rent ................................................................................................. 50
Detroit Approves Better Value Models ........................................................................................... 52
"Trade-In" Plan Offers Better Security ............................................................................................. 53
Security Expressed in Brick ............................................................................................................... 56
Security Homes Appeal to Chicago Buyers ....................................................................................... 58
New Panel-Size Plywood Siding Demonstrated on Oregon Home .................................................. 60
Asbestos Siding Featured in "Full Value" Homes—by J. Harold Hawkins ........................................ 62
Building Materials Store Displays Products in Use ......................................................................... 65
Modernizing Main Street—by F. T. Brown ....................................................................................... 66
Light Load Bearing Structures Feature Speed Welding ................................................................. 68
Service to Readers ............................................................................................................................. 70
Shopcrafters' Corner—Suggestions for Various Business Signs ..................................................... 78
Model Offices Show New Style Trend .............................................................................................. 80
Interesting Use of Pine in Small Chapel .......................................................................................... 82
What Thickness Insulation?—by W. T. Miller ................................................................................. 86
News of the Month ............................................................................................................................ 92
Unused Space Made Into Rentable Small Apartment ................................................................. 100
"Buy Home with Rent Money" Is a Timely Sales Approach for Builders .................................... 102
Books on Building ......................................................................................................................... 105
Letters from Readers ....................................................................................................................... 107
TruCost Department ....................................................................................................................... 115
Advertisers' Index ........................................................................................................................... 127
HOME OWNERS ARE MAKING NEW CLIENTS FOR YOU!

The NEW INSULITE WALL OF PROTECTION

When home owners are satisfied with a product they don't keep the name of that product a secret.

Thousands and thousands of homes have been built with the New Insulite Wall of Protection. These owners talk with pride to their friends and neighbors.

And no wonder, for Bildrite Sheathing applies quickly, easily, thus reducing labor costs. Bildrite has four times the bracing strength of wood sheathing when applied horizontally. It offers insulation against summer's heat and winter's cold, saves fuel and gives lasting comfort and protection.

Sealed Lok-Joint Lath, the other half of the Wall of Protection, is a smooth, safe plaster base. Its patented "loks" form one continuous strong wall with more than twice the bond of wood lath, thus reducing the danger of plaster cracks to a minimum.

Write for samples & specifications.

In the U.S. address Dept. AB100, Insulite, Minneapolis, Minn.

In Canada, address Dept. AB100.

EASTERN CANADA: Robert Bury & Co. (Canada), Ltd., King Street West and Sudbury Street, Toronto, Ontario.


Here's how the New Insulite Wall of Protection eliminates moisture and solves the condensation problem. Sealed Graylite Lok-Joint Lath, made with an asphalt barrier on the stud side of the wall, effectively stops vapor. Then, Bildrite Sheathing allows what traces of vapor may escape the barrier, to flow freely toward outside air.

INSULITE PRODUCTS INCLUDE

Structural: Sealed Graylite Lok-Joint Lath, Graylite Lok-Joint Lath, Ins-Lite Lok-Joint Lath, Bildrite Sheathing.

Interior Finishes: Ins-Lite, Graylite, Smoothcote, Satincote in 4 washable colors, Hardboards, Acoustilite, Fiberlite.

MINNEAPOLIS MINNESOTA

THE ORIGINAL WOOD FIBRE STRUCTURAL INSULATING BOARD
This Is Not Recovery

In a month there will occur a national election which may prove the most important in the history of this country.

The American Builder, being a business paper, has no politics. But, because it is a business paper, it is against all policies that it believes will restrict business and in favor of all policies that it believes will stimulate business—and it doesn’t care what politician’s or party’s policies they are, either. Also, being a business paper, it doesn’t know what policies will be good politics, but does claim to know at least as well as any politician what policies will be good for business—especially building.

Accordingly, this paper began some years ago and has been ever since criticizing certain policies of the New Deal because it has believed them inimical to business. Who do developments show has been right about these policies? The people are going to show what they think about that by the way they vote next month. On what are they going to base their decision? Well, on what did they base it in 1932, when they turned the Republicans out? They looked at facts showing that business, including building, had been bad during the three years 1930-1931-1932; and on the basis of those facts they decided to make a change.

If that was a sensible way to reach a decision in 1932, it is a sensible way to reach one in 1940. What, then, do the facts available in 1940 show regarding the effects of the New Deal’s policies on business, and, therefore, what should be done with the New Dealers?

We will use figures of the U. S. Bureau of Foreign and Domestic Commerce regarding home building in answer to that question, because home building is the business in which this paper, its readers and customers are most interested. Average annual expenditures for non-farm home building during the four periods of five years each from 1920 to 1939 were as shown by the figures in the accompanying table. Which of these figures indicate what would have been a normal average annual expenditure for home building in this country during the last five years if good business and prosperity had been restored? Obviously, not those of the five depression years 1930-1934. Why not those of the entire ten years 1920-1929, inclusive, when the average annual expenditure was over $1.5 billion dollars? That seems reasonable, because you can hardly say the expenditures of an entire decade were abnormally large. But if we are to conclude that an average annual expenditure of $1.5 billion would have been normal in the years 1935-1939, inclusive, what are we to conclude from the fact that in those years, under New Deal policies, the average annual expenditure was actually only $1.1 billion dollars, or 55 per cent less than in the ten years 1920-1929, inclusive?

What the American Builder concludes is that the figures prove beyond any reasonable question whatever that the New Deal has prevented the normal recovery of business in general and building in particular that would have occurred excepting for its policies, and that the people should turn the New Deal politicians out—just as they turned out some other politicians in 1932.

Samuel O. Dunn

SIMMONS-BOARDMAN PUBLISHING CORPORATION: SAMUEL O. DUNN, CHAIRMAN OF THE BOARD; HENRY LEE, PRESIDENT; BERNARD L. JOHNSON, ROBERT H. MORRIS, AND DELBERT W. SMITH, VICE-PRESIDENTS; ROY V. WRIGHT, SECRETARY; E. T. HOWSON, ASSISTANT SECRETARY; JOHN T. DE MOTT, TREASURER; EXECUTIVE AND EDITORIAL OFFICES: 105 WEST ADAMS STREET, CHICAGO; 30 CHURCH STREET, NEW YORK CITY.
NAVY’S SHIP-MODEL TESTING BASIN READY
SIX MONTHS AHEAD OF SCHEDULE

VITAL months saved . . . new plants in production weeks sooner . . . through good job planning and the use of ‘Incor’ 24-Hour Cement. Forms are filled with ‘Incor’ concrete one day, stripped the next, saving four to five days on each pour. Immediate form re-use cuts costs—fewer form-sets needed. And earlier completion reduces overhead expense.


‘Incor’s dependable 24-hour service strength saves time, cuts costs . . . and ‘Incor’ quality assures long-time durability. An ‘Incor’* engineer will be glad to confer with you on concrete problems. Lone Star Cement Corporation, 342 Madison Avenue, New York.

USE ‘INCOR’, FOR MAXIMUM SPEED AT MINIMUM COST

15,000 BARRELS of ‘Incor’ 24-Hour Cement, used in concrete roof of U.S. Navy Ship-Model Testing Basin, Carderock, Md., aided in completion six months ahead of contract date. About 60,000 bbl. of Lone Star Cement were also used.

13 YEARS’ performance: Over 10-million barrels of ‘Incor’ have been used. That means service and performance . . . based on the quality and uniformity of this first high early strength Portland cement.
Housing for Defense

STRONG support for this publication’s position on industrial housing (by private building and not by the Government) is furnished by the special research report of the Housing Committee of the Twentieth Century Fund, recently released. This research has been conducted by a staff headed by Miles L. Colean, former FHA Deputy-Administrator, and will be accepted as unbiased and authoritative. It should help to turn the present wild rush toward “war housing” by direct government action into a more sane and orderly encouragement of private home building and rental housing where needed in connection with defense industry expansion.

“Private industry has the capacity to provide the major part of the housing needs of our defense program but immediate action is necessary if we are to avoid the delays and mistakes that seriously crippled America’s war effort in 1917-1918,” this research report states.

“The housing crisis of the last war may lead us to think that the government is the only resort in an emergency, yet a careful study of that period does not prove it. Only in a comparatively few places did the ordinary processes of supplying houses break down sufficiently to create a necessity for direct governmental operation. These places were centers of high concentration of war activities where competition for labor and materials was intense, where transportation was overtaxed, and where the certainty of decline in industrial operations after the emergency discouraged private enterprise.

“Even in the most intense year of war activity, however, and after the governmental housing agencies had been set up, over 90 per cent of the total 200,000 dwelling units started represented private operations. It is also possible that if the need for housing had been clearly revealed in advance of the crisis there might have been less difficulty in maintaining housing production.”

THE RESEARCH report finds that the private building industry faces the present emergency with more favorable factors than in 1917-1918. “No general labor shortages in construction or manufacturing threaten us. Building materials of all kinds are readily available. There is, moreover, no likelihood of a general shortage of funds to lend for sound housing operations. In contrast to the last crisis, there is real momentum now behind the house building program. Today, the skill of designers and the capacity of builders are both much greater than they were twenty-three years ago. This is especially true in the low-priced field.”

However, the research staff sharply warns against undue optimism. “The experience of the last war, as well as these first warning signals from the present emergency, show that the work of providing adequate shelter for the workers in defense industries must parallel, and not lag behind, the expansion of those industries.”

The report gives striking examples of how failure to do this seriously hampered the production of war materials in 1917-1918.

“No advance effort had been made to estimate the housing needs of workers in the war industries. There was no effort to enlist the full resources of the building industry while there was still time for these resources to count. There was much groping after facts and duplication of effort on the part of many different federal bodies, no one of which had any authority to co-ordinate the others. Finally, after severe crises had developed, the government itself financed and built houses.”

The government’s activities were carried on by two agencies, the Emergency Fleet Corporation and the United States Housing Corporation.

Even more important than the actual construction of homes were some of the other services carried on by these agencies. They conducted registration and rental services to bring existing accommodations into the market, stimulated private building and remodeling and acted to improve transportation facilities to bring more dwellings within the work-commuting area.

The research staff reports that the two housing agencies “together were able to take care of something like 360,000 workers. This figure may be roughly broken down in the following way: 46,000 workers housed by direct government construction (assuming two workers per dwelling unit); 30,000 by private builders through priority licenses (estimated in the same way); 100,000 by placements through the homes registration service, and probably over 184,000 through transportation improvements. From this it is apparent that the great bulk of housing provided was in privately owned structures and that the most effective methods were the measures to extend and improve transportation and the homes registration service.

LOOKING to needs of the present defense program the research report says, “The chances of maintaining private housebuilding should be greater than in 1917 and 1918. We can see the obvious desirability of limiting, so far as possible, the administrative burdens of government and the general tax burden on the public. We can see, too, the probable greater speed, flexibility and economy of private as against public housing.”
"YOU CAN ANCHOR your living costs by building now, and turn your rent payments into home SAVINGS."

"The Best Investment You Can Make"

Advice of a father to his son and daughter-in-law on home ownership

"YOU'VE asked for my advice on buying a home, and here it is.

"Of course, it's a big step. That's the way I felt 30 years ago.

"It's one of the big events in life, like getting married or having a baby, or saving your first $500.

"Such things take effort and sacrifice—but they're worth it. And as for buying a home of your own now, the strongest way I can put it is, it's the best investment you'll ever make.

"A home of your own is a secure refuge when you're old, and the best kind of a saving plan when you're young.

"You young folks today have many advantages we didn't have a few years back. You can buy a house with monthly payments the same as you would pay rent—only rent is an out-of-pocket expense, while what you pay on a home is like putting money in the bank. Instead of just acquiring rent receipts you build up a savings fund in an equity in your own home.

"Let me tell you, it's the finest and safest investment you can make because it always has use value. Money you might put in stocks or bonds, or even in the bank, isn't much good if something goes radically wrong. But no matter what happens to business or to the country, your investment in a home pays dividends because you can live in it and enjoy it, and your children will have the proper surroundings.

"Of course, I expect you to be sensible and keep your obligations in connection with this house within reason. With a 25-year mortgage and lower interest rates than we've ever had in this country before, your monthly payments will buy a lot of house. But don't let that give you a Cadillac appetite for your Ford income. Figure out all the cost: taxes, upkeep, heat, insurance, everything—and make sure that it is a figure you can handle easily just as though it were rent. You can do it if you set out to.

"Right now there are some especially sound reasons for buying or building a home. With so many things uncertain, you need something you can tie to and count on, like a house of your own with your 'Security Number' tacked above the door.

"There's a good chance that rents and prices in general are going to go up—you can't spend 14 billions for national defense without setting off some far-reaching changes. Maybe it'll mean more jobs and more prosperity. Maybe a boom. Or, it may mean such a boom that we'd give it another name—inflation. In that case, you will be glad you are living in your own home with your monthly payments fixed for the next 20 or 25 years at a low interest rate. You may see people paying sky-


15 Reasons for Building Now

1. You protect yourself against increasing rents.
2. Prices are right—may go higher.
3. Interest rates and financing charges are lowest in history.
4. You make low monthly payments like rent—but instead of going to the landlord they pay for your own home.
5. A home is your best protection against inflation or a boom that means higher rents and prices, as well as higher wages.
6. Under the long-term FHA insured mortgage or savings and loan plan, your monthly payments are GUARANTEED not to increase, no matter how much rents or living costs go up.
7. A home is a safe investment which always will have some market value and can be lived in and USED. Because of this it is a safer investment than stocks, bonds or money in the bank, which may decrease in real value.
8. A home continues to provide SHELTER and SECURITY no matter what happens to political or economic conditions.
9. In case of war a home is a refuge against higher rents.
10. Men with families are least likely to be drafted.
11. Interest and real estate taxes paid on a home are DEDUCTIBLE ITEMS from federal and state income taxes.
12. A home of your own provides the kind of environment and surroundings you want for your children.
13. Rent is an out and out expense, but payment on a home is like money in the bank, an investment in the future.
14. You get a better home and higher value for your money than ever before. Home ownership costs, including low interest, low heating and upkeep, are lowest in history.
15. You protect your standard of living and fortify your future by building now.

high rentals, and you will be in the nice position of paying off your mortgage with 'cheap' money.

Owning your own home in the years ahead will be a big help in maintaining a decent standard of living for you and your children. You'll ANCHOR your living costs by building now.

While we're on this subject of protecting your standard of living, don't forget what it means to you and the children to be able to pick the kind of neighborhood you want to have them grow up in and have a house that's one they'll remember for all the comfortable, secure and happy days they spent there. You can't get that kind of secure feeling hopping around from one rented place to another. As I look back over the 30 years since we bought our home, it seems to me this is one of the most important things of all.

All the time you're living in and enjoying this house you also have the fine feeling that each month you're reducing the amount of your mortgage and getting closer to owning it clear and free.

You get a lot of house today for your money, too. More comfort, convenience and built-in value than ever before. You get insulation, automatic heat, modern kitchens and permanent life-time materials that we couldn't buy at any price a few years back. That's another thing that makes owning a home of your own today so desirable. They've taken all the drudgery and unpleasantness out of it.

Another reason why you'll be wise to build a home right away is that building costs are mighty reasonable now; but they may not stay as low as they are for long.
ONE of the most prominent and successful builders in the Southeast, H. C. Fonde and Son of Knoxville, Tenn., have adopted a straightforward way of showing what the person who buys one of their well-built homes for $1 a day gets. As illustrated in the table below under the title, "So Much for So Little!—$1 Per Day," they show the complete breakdown of ownership costs in a striking fashion. For instance, they show that the cost of completely automatic oil heat and insulation in their houses is only 10 cents per day.

This table is included in an attractive spiral-bound folder with the title, "Enjoy Better Living in a Fonde-Built Home." In another part of the booklet is presented a complete record of heating costs of a number of recent Fonde-built homes which shows that the average cost of automatic hot air heat, using fuel oil, was $33.28 the past year.

Another table of much interest included in Fonde's folder is the one shown below with the title, "Put Your Rent Money to Work," which shows that a person paying $50 a month rental would lay out $15,000 in 25 years and have only rent receipts to show for it. The same $50 rent would buy a Fonde-built home priced at $6,250, the table shows. The Fonde organization has several well-laid out and most attractive subdivisions in Knoxville which have been very successful. (The operations of the firm were described extensively in an article in the October 1938 American Builder.)

Prominent among the products featured by Fonde are the following: Airtemp oil furnaces, Chrysler Corp.; mineral wool, Standard Lime & Stone; Gold Bond board, National Gypsum; weatherstripped windows, The N. S. W. Co.; brass hardware, Skillman Co.; Streamline flooring, E. L. Bruce Co.; wallpaper and paints, Sherwin-Williams; Over-the-Top garage doors, Frantz Mfg. Co.; asbestos roofs and siding, Keasbey-Mattison; asphalt roofing and building felt, Logan Long Co.; millwork, building materials, Knoxville Builders Supply Co.

**SO MUCH FOR SO LITTLE!**

**$1.00 PER DAY**

(Estimates on 25 Year Loan of $3,800.00
in Knox County, Tenn.)

**HERE IS YOUR INVESTMENT**

| Principal and Interest | 70.4c per day |
| FHA Insurance          | 3.7c per day  |
| Fire and Tornado Insurance | 10.8c per day |
| Taxes                  | 15.1c per day |

**TOTAL** $1.00

HERE IS HOW YOUR INVESTMENT IS DIVIDED IN THE PURCHASE OF YOUR HOME AFTER THE REQUIRED 10% HAS BEEN PAID DOWN:

<table>
<thead>
<tr>
<th>ITEM</th>
<th>Cost Per Day Including Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lot appraisal value</td>
<td>9.2c</td>
</tr>
<tr>
<td>Excavation, grading driveway, shrubs, walks, steps</td>
<td>3.2c</td>
</tr>
<tr>
<td>Superstructure of house</td>
<td>10.0c</td>
</tr>
<tr>
<td>Flooring and siding</td>
<td>3.7c</td>
</tr>
<tr>
<td>Plaster or wallboard and papering</td>
<td>4.4c</td>
</tr>
<tr>
<td>Painting or floor finishing</td>
<td>4.1c</td>
</tr>
<tr>
<td>Roof</td>
<td>1.7c</td>
</tr>
<tr>
<td>Sheet metal and gutters</td>
<td>0.7c</td>
</tr>
<tr>
<td>Doors, cabinets, windows, shelving, trim, screens, bookcases, paneling, etc.</td>
<td>9.2c</td>
</tr>
<tr>
<td>Plumbing, including automatic electric water heater</td>
<td>8.5c</td>
</tr>
<tr>
<td>*Automatic oil heat, Chrysler &quot;Airtemp&quot;</td>
<td>7.5c</td>
</tr>
<tr>
<td>*Insulation and weatherstrip</td>
<td>2.5c</td>
</tr>
<tr>
<td>Barclay tile walls, linoleum floors</td>
<td>2.3c</td>
</tr>
<tr>
<td>Hardware</td>
<td>0.8c</td>
</tr>
<tr>
<td>Electrical wiring and fixtures</td>
<td>2.5c</td>
</tr>
<tr>
<td>Miscellaneous items</td>
<td>2.0c</td>
</tr>
</tbody>
</table>

**TOTAL COST PER DAY** $70.4c

*Notice that the cost of "Airtemp" automatic oil heat including insulation is only 10c per day. You can add to the above an electric dish washer and garbage disposal for an additional 10c per day.

**HERE IS NOWHERE ELSE YOUR DOLLAR CAN DO AS MUCH FOR YOU**

**PUT YOUR RENT MONEY TO WORK**

(The following is based on FHA 25 Year loan in Knox County, Tenn.)

<table>
<thead>
<tr>
<th>Rent per 300 Months</th>
<th>Expenses and Months Valued at</th>
</tr>
</thead>
<tbody>
<tr>
<td>$35.00</td>
<td>$7,500.00</td>
</tr>
<tr>
<td>30.00</td>
<td>9,000.00</td>
</tr>
<tr>
<td>35.00</td>
<td>10,500.00</td>
</tr>
<tr>
<td>40.00</td>
<td>12,000.00</td>
</tr>
<tr>
<td>45.00</td>
<td>13,500.00</td>
</tr>
<tr>
<td>50.00</td>
<td>15,000.00</td>
</tr>
<tr>
<td>55.00</td>
<td>16,500.00</td>
</tr>
<tr>
<td>60.00</td>
<td>18,000.00</td>
</tr>
</tbody>
</table>

Generally Not What Have You Now Own Your
Well Arranged; You? Home, Which
Needling Repairs; RENT RECEIPTS Represents a
Not Well Satisfied Saving as Shown to Your Need

*Indicates approximate values.
Home Ownership vs. Rent Paying

THE HIGH COST of a "pile of rent receipts" is graphically shown in the table below. At $40 a month, a renter pays out $12,000 in 25 years and has nothing but regrets and rent receipts to show for it. This same monthly payment of $40 would buy him a modern, well equipped home especially planned for his family. At the end of 25 years he OWNS the house clear and free, and from then on lives in it with no further payments except local taxes. He has PROTECTED himself against high rentals and has acquired a valuable property with money he might have frittered away in rent.

The COSTLY Rent Paying Way

YOU PAY $40 per month rent for old-fashioned, inconvenient quarters and have nothing to show for it. The landlord MAY raise your rent.

AT END OF 20 YEARS you have paid $9,600 and you are NOT getting any younger.

AT END OF TWENTY-FIVE YEARS you are STILL paying rent—or perhaps getting ready to move in on your son-in-law. You have paid out $12,000 and still have NOTHING to show for it. This is the costly rent-paying way.

NOTE TO BUILDERS AND DEALERS: THIS TABLE IS INTENDED FOR YOUR USE IN PROMOTING HOME BUILDING IN YOUR COMMUNITY, AND PERMISSION IS HEREBY GRANTED TO REPRINT OR REPUBLISH IT IN PART OR IN WHOLE. IT IS SUGGESTED THAT LOCAL FIGURES BE INSERTED SUITABLE TO LOCAL CONDITIONS.

The THRIFTY "Security" Way

YOU INVEST 10 PERCENT in a modern $5,000 home of your own built exactly to suit YOUR family. Your monthly payments on the 25-year FHA insured mortgage at 4½ per cent are then as follows:

- Principal and Interest: $35.02
- FHA Mortgage Insurance Premium: 1.81
- Taxes (estimated): 8.00
- Fire Insurance: .87
- Reserve for Upkeep: 4.50
- Total Monthly Payment: $40.00

YOU ARE PROTECTED against rent increases or inflation. AT THE END OF 10 YEARS you have built up a SUBSTANTIAL equity in YOUR OWN HOME—a valuable SAVINGS fund.

AT END OF 25 YEARS you OWN house clear and free—a safe, inexpensive refuge providing SECURITY in your old age.
The only
"INDESTRUCTIBLE"

"R
EAL estate is an imperishable asset, ever increasing in value. It is the most solid security that human ingenuity has devised. It is the basis of all security and about the only indestructible security."—RUSSELL SAGE.

The above quotation by the great Russell Sage appears on the cover of an attractive new booklet put out by Nelbren, Inc., builders and developers of White Plains, N.Y., describing the attractive houses they have built in Mayfair Acres, Chappaqua Ridge and Chappaqua Farms.

The quotation applies with particular appropriateness to the Nelbren-built homes, for they have the kind of charming Colonial appearance that inspires a sense of security in the minds of the home owner. The Nelbren houses are designed by Earl G. Nelson. In Chappaqua Ridge, the latest Nelbren development, the price range starts at $5,990, and the following minimum payment plan is advertised, using 4 1/4 per cent 25-year FHA insured mortgages:

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>House</td>
<td>$5,990.00</td>
</tr>
<tr>
<td>Down Payment on Contract</td>
<td>299.00</td>
</tr>
<tr>
<td>Upon Taking Title</td>
<td>300.00</td>
</tr>
<tr>
<td>MONTHLY PAYMENTS</td>
<td></td>
</tr>
<tr>
<td>FHA Insurance</td>
<td>2.16</td>
</tr>
<tr>
<td>Fire Insurance</td>
<td>61</td>
</tr>
<tr>
<td>Total Taxes (approx.)</td>
<td>980</td>
</tr>
<tr>
<td>Interest and Savings on Mortgage</td>
<td>$29.26</td>
</tr>
</tbody>
</table>

Total Monthly Outlay $41.83

Under the Nelbren building plan the firm advertises that "there are no unknown or unseen costs." They state, "We design your home, ar-
range the financing, prepare all plans and specifications and build that home complete in every detail, even to the window shades, screens, landscaping and shrubbery at a pre-determined cost which you are aware of before you commit yourself in any manner."

In addition to building houses on order in their own well laid out residential developments Nelbren offers to construct homes for clients on their own plots or will assist them in selecting desirable home sites elsewhere. It places at the disposal of the prospective buyer a complete real estate and building organization with 26 years' experience behind it. The Nelbren-built plan includes a complete designing service with free consultation to determine the needs and desires of the prospective home buyer. They handle all the details including real estate transactions, building and financing.

Included in the specifications of the Nelbren homes are the following:
- Johns-Manville rock wool insulation
- 3-coat plaster on rock lath
- Factory weatherstripped windows
- Full cement cellars
- Waterproofed foundations (with tile drains)
- Factory-finished cabinets
- Carrier air conditioning (hot water or steam heat optional)
- Plumbing and heating for future rooms
- Brass plumbing—copper leaders
- Briggs or Standard fixtures
- Overhead type garage doors
- Solid brass hardware.

HOME AND SECURITY are expressed in the lines of this early Colonial cottage built by Nelbren, Inc.

SECURITY

FLOOR PLAN features comfort and convenience. Typical Nelbren-built kitchen below reduces housework.
SECURITY on “an Acre of Good Earth”

Big market seen in “House and an Acre” projects for people of low income who raise part of own food.

By William W. Newcomb

In THESE Fateful Forties both the contractors and the building materials industry have conclusively shown that homes can be built at a much lower price than obtained in the Troublesome Thirties.

But few have figured out a way to bring land cost down within reach of low-income people. The answer is: acre-or-more plots in the country within commuting distance of jobs. Here lies real security for buyers.

This is what Ralph Borsodi, one-time economist for Macy’s department store, believed. Borsodi was not interested in real estate developments, home construction, or building materials. Borsodi had only one interest: show America a better life without government handouts. I think the story is worth telling.

Ralph Borsodi asks John Roe and all his fellow-Roes: Why don’t you join together, and buy land that you can develop communally. Lay out the project as any realtor would; put in your own roads, water systems, sewerage plants or septic tanks, and with your comfortable margin of land surrounding each of your houses, develop gardens and orchards; exchange your surpluses when you have them. Most important, use the country’s wide network of electric power for your homes and outbuildings. Have miniature gentlemen’s estates with your workingmen’s wages.

"THE LAND SHALL MAKE YOU FREE"

(Extracts printed by permission from an article in Cosmopolitan Magazine by Louis Bromfield.)

I THINK the happiest man I have ever known was a Frenchman named Victor Picquet. . . .

In the midst of doubt and disaster he had provided security for himself and his family. It wasn’t the dubious security of stocks and bonds (even nations can fall and go bankrupt); it wasn’t even the security of money hidden in the mattress. IT WAS THE ONLY FUNDAMENTAL AND ULTIMATE SECURITY THAT MAN CAN PROVIDE FOR HIMSELF AND HIS FAMILY: HE HAD A ROOF TO COVER THEIR HEADS AND A PIECE OF LAND WHICH COULD PROVIDE THEM WITH FOOD. When he was out of work, even when he was mobilized and at the front, his heart was content because his family had security.

“I had seen friends lose every penny they had saved and invested. I saw rising taxes taking away more and more of every man’s income: the bigger it was, the more the taxes took. Making money, even saving and investing it, seemed to mean nothing.

“In the years ahead of us security, thrift, common sense and consideration of the future are the only things that can make life agreeable or even, perhaps, possible for the individual as well as the nation. It seems to me that the security of Picquet . . . is something to be worked for.

“The earth is eternal and the fullness thereof. The folly is man’s. A MAN WITH HIS CELLAR FILLED WITH FOOD AND A SOUND ROOF OVER HIS FAMILY’S HEAD CAN BE A KING, EVEN ON AN ACRE OF GOOD EARTH.”
Borsodi's wife had an interesting experience 15 years ago that crystallized this idea of "rurban living." Mrs. Borsodi decided to can some tomatoes. But the economist in her husband came to the front, and said: "You can buy tomatoes cheaper at the store. A big concern is able to can tomatoes more economically than you can put them up at home. Here, you know, you have to figure in the value of your own labor, and not only the cost of the tomatoes, but also the wear on the utensils, the fuel, and so on."

Mrs. Borsodi decided to can the tomatoes. Mr. Borsodi decided to check. The results—labor included—showed that Mrs. Borsodi had saved between 20 and 30 per cent!

That experience started a new school of economics, or better yet a "School of Living." Borsodi, with true statistical zeal, discovered that between a housewife working in a factory, store, or office and engaging in food, clothing and incidental production at home with modern electric home appliances, she always came out better in home production, if her former city job income came to no more than $1,000 a year.

So Borsodi figured it this way: The average family head earning less than $2,500 a year frequently permits his wife an outside occupation to augment his income. The two put off having children and a house—both of which they keenly desire. The sense of well-being that permeated our forefathers did not hold with many an urbanite. A personally owned home, a flock of children, duties around the house—why, the tenants of the big cities did not know what they were missing in life.

Out of Borsodi's researches he established the School of Living, located at Suffern, N. Y., thirty miles from New York City. At this School one can take courses for a week end, or for an entire season. Here one learns the significance of real home planning. Most of those

(Continued to page 124)
Home buyers need to be shown the fact that low first cost is not as important as low maintenance and operating cost.

**By Joseph B. Mason**

What this country needs is not more low-cost houses but more houses that COST LESS TO OWN. In all the hue and cry about building a house for $2,500 or some other absurd figure, the public loses sight of the fact that it is not the FIRST cost that is important but the ownership or OPERATING cost.

The 20 or 25-year amortized mortgage popularized by FHA has changed a lot of things. One of these is that people can talk about home costs in terms of MONTHLY PAYMENTS rather than first cost.

Most people figure on a certain monthly budget which allows a fixed amount for their rent or total home ownership cost. They may live in a house that is cheap as far as the rent is concerned, but it may be sky high as to operating cost due to an inefficient heating plant.

One of those who has gone thoroughly into the subject of low first cost versus high upkeep is Clifford W. Stuart, manager of the General Electric Home Bureau. Through the far-flung research, engineering and service branches of that organization, he has been able to get together extensive data to show that high operating costs have made more people disgusted with home ownership than any other factor. He believes that in figuring home ownership costs, builder and owner should carefully calculate total monthly outlay to live in and pay for a house—not the amortization payment only.

When this is done, it becomes readily apparent that a home buyer is penny wise and pound foolish to neglect quality to save a few dollars' first cost.

The heating plant offers a particularly good illustration. A high quality, well engineered and properly installed system might cost $200 more to install than a substandard job assembled locally with units of no name or reputation. But, as Stuart points out, if appraisals are accurate, the home owner does not PAY $200 more; he merely increases his monthly FHA payments by $1.20 for the life of the mortgage. In return for this $1.20 increase in his monthly payment he could easily get a fuel saving of from $2 to $10 a month, depending on circumstances, and the quality job also assures him lower upkeep and maintenance costs and a longer life.

The same reasoning is true of many other types of products that go into a home, but it's particularly important in relation to OPERATING equipment where the fuel or power used amounts to a considerable item. Take, for example, the case of a water heater. There is a wide range of price in such equipment. But as anyone knows who has owned an inefficient unit, the cost of fuel is extremely important. A home owner who installs a water heater costing $100 more than some substandard type would increase his monthly amortization payments only 60 cents. But he may save from $1 to $5 a month in the cost of fuel. Certainly the extra investment for the quality product was worthwhile.

It is obvious that the above advice must be tempered with reason, for the amount a home owner has to spend is usually limited. The smart builder will try to keep the prospective buyer's over-all estimate of the kind of house he wants in a low enough bracket to permit doing a quality job throughout in that class of structure.

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**A SIMPLE WAY TO FIGURE MONTHLY FHA PAYMENTS**

One hundred dollars added to the cost of any house under $6,000 will, if appraisals are accurate, increase the monthly FHA payments only 60 cents. This is arrived at by computing the monthly payment to principal and interest on a 25-year loan at 4 1/4 per cent interest, which is $5.56 per $1,000. To this should be added the FHA mortgage insurance premium of 40 cents or less per month per $1,000. The total monthly payment is thus $5.96 per month for each $1,000 borrowed or, roughly, 60 cents per $100.
WHY CHISELLING, PRICE CUTTING AND SUBSTANDARD PRODUCTS DON'T PAY
A few cents more per month covers extra first cost of QUALITY products, and this is MORE than offset by lower UPKEEP and OPERATING costs.

QUALITY HEATING EQUIPMENT—The difference between a cheap substandard plant and a high quality, scientifically engineered and fully automatic system might well be $200. This extra first cost, however, amounts to only $1.20 A MONTH. The fuel saving and lower upkeep costs could easily amount to.................. $2 TO $10 PER MONTH.

QUALITY HARDWARE THROUGHOUT—For only a few dollars more, the buyer can have an overhead garage door, quality long-life hardware, 3 butts to a door and carefree, trouble-free locks, snaps and cabinet fittings. The increase in monthly FHA payments would be LESS THAN 40 CENTS.

A-1 PAINT JOB NEEDED—By skimping on paint materials, first cost of a house might be reduced $50. This would amount to 30 cents a month, but the UPKEEP COST resulting from the inferior materials would probably cost the owner a period of years........ $20 to $50 ANNUALLY.

SHINGLES AND SIDING—Picking the best quality shingles or siding which will give years of service without high maintenance, costs only a few dollars more than cheap, short-lived products—probably less than 60 cents a month. The resulting economy in upkeep would save the owner................ $10 to $50 ANNUALLY.

QUALITY KITCHEN RANGE—The difference between the cheapest and one of the best would run about $50, This amounts to only 30 cents a month. But the cheap, inefficient fuel-consuming stove would cost the home owner an extra.................. $1 TO $3 PER MONTH.

ECONOMICAL WATER HEATER—This item of home equipment, if it’s a substandard, inefficient product, can cost the home owner large sums for heating hot water. The difference in first cost of a cheap model and a good one would amount to less than 60 CENTS A MONTH. The fuel saving would amount to.................. $1 TO $5 PER MONTH.
Public Told: “Build Now”
Security Theme Gets Big Play in Leading Newspapers

INFLUENTIAL newspapers with a total circulation of nearly ten million have printed recent American Builder news releases distributed by this publication to further the “Build Now for Security” campaign. On July 12 an interview with the Editor was sent to every daily newspaper in the United States. This carried the title, “Peg Rental Costs Through Home Ownership,” and pointed out the advantages to renters under present conditions and outlook of becoming home builders and home buyers, applying their regular monthly rent payments against long term home buying contracts. Many leading newspapers published this interview and commented favorably on it. Among these were the New York Herald Tribune, New York World Telegram, Boston Transcript, Washington Post, Atlanta Constitution, New Orleans States, Cincinnati Times Star, and Omaha World Herald.

Following this release a second news and fact summary was distributed to the newspapers on August 2 carrying the title, “Avoid Rent Boosts by Buying Home Now, Building Authority Advises.” In this release American Builder was quoted as predicting an increasing shortage of homes and higher rentals because of national defense industrial activity, and again advised the shelter-renting public to protect itself against expected rent boosts by buying a home now and paying “monthly like rent.” This additional campaign material in behalf of local building likewise had exceptionally wide use in leading newspapers. The Chicago Herald-American, Los Angeles Examiner, Milwaukee Journal, Newark News, Indianapolis Star Journal, Detroit Free Press, and many other important newspapers gave prominence to this timely American Builder message.

To Our Building Industry Readers: Your local newspaper will be glad to co-operate by publishing an interview quoting YOU on this theme, Build Now for Security. On the next page you will find two news releases suitable for your own use. Have them copied, putting in your own name and local news and call on your local newspaper today.
HERE ARE NEWSPAPER STORIES THAT WILL HELP PROMOTE HOME BUILDING NOW

(Fill in blanks in articles below, copy and take to your local newspaper)

**Peg Rental Costs**

By Building Now

People who invest their rent money in a home of their own will be taking an important step to protect themselves against higher living costs, declared yesterday.

"A home of your own is the best protection against inflation or high prices," he said, and pointed out that under the long-term FHA insured mortgage plan the owner of a home pays a fixed monthly rental that is a guarantee against higher costs.

Rent Payments Total $12,000

"When you pay rent it is an out and out expense," he said, "but when you buy a home on the low monthly payments we now have—at the lowest interest rates in history—you are paying the rent to yourself because it is building up your equity in your own home.

"If you live in rented quarters at $40 a month you will pay out $12,000 in 25 years—and all you'll have to show for it is a pile of rent receipts," declared. "For that same $40 a month you can get a mighty fine modern home that is designed for your special needs and in a community that you admire. Part of the $40 each month goes to interest and the other part applies on the mortgage, so that in 25 years you own the house clear and free.

"You can get an up-to-date, well-built and well equipped house today at less monthly cost than you have to pay for rent. And each time you make a payment you have the satisfaction of knowing that it is an investment in your home security. Experience has shown that a home of your own is the best investment—better than stocks, bonds or even money in the bank, because no matter what happens it is an investment that you can use, enjoy and profit by."

Defense Program Aids New Home Building

The national defense program has already had an effect on residential building, according to ———, who says that government reports show that 245,000 non-farm houses were built in the first half of this year in the U. S., and that the total for the year will exceed 1929.

"You can't spend 16 billion dollars without having some effect on the economic system," he remarked, and said that many people were hastening to buy or build new homes as a protection against high rents and living costs.

Have Low Fuel Bills

"The low cost of new homes today makes them attractive buys," ——— declared. "Not only is the first cost low but the operating and ownership costs are lower than they have ever been before. For example, a new house with an efficient heating plant and properly insulated will, in some cases, cost less than half as much to heat as an old house.

"Another reason why home ownership costs less today is the low interest rates and long-term FHA insured loans. The low interest and the long term of years have brought the monhtly payments on a house way down. Or, putting it another way, you get a whole lot of house for a small monthly payment.

"That's the reason a man now paying rent can buy a brand new house with all the latest improvements at the same amount or less than his present rent.

Home Gives Security

"I believe one of the soundest reasons why so many people are thinking of home ownership today is their desire for greater security," Mr. ——— said. "In a world of war and turmoil, a home of your own is one thing you can count on—it's the best and safest kind of an investment, because no matter what happens it continues to provide shelter and security.

"Owning a home of your own in the years ahead will be a big help in maintaining a decent standard of living for the average family," he declared. "In case of a business boom or inflation, the home owner whose monthly payments are fixed for 20 or 25 years will be lucky. He may see people paying sky-high rentals all around him and will be in the nice position of paying off his mortgage with 'cheap' money."

49
How to Avoid Paying $10,500 Rent

Builders Point Out High Cost of "Tall Stack of Rent Receipts." 30 Homes Are Sold Before Completion to Industrial Workers

In INDUSTRIAL New England, where the national defense program is already having an effect on business, building of low-cost homes is on the increase. One of the most striking illustrations is Saltonstall Manor in East Haven, Conn., where builders Martin Olson and Abel Jacocks are selling 28' x 28' Colonial cottages faster than they can build them. They have built and sold 30 houses in a few months to industrial workers in that area.

A potent argument used by Olson and Jacocks in selling these homes is "protect yourself against rent increases."

"Where can you rent a new one-family home with automatic heat for $14.87 a month?" they ask. That's the net monthly cost of a home in Saltonstall Manor, they point out, with a down payment of only $390.

"Which would you choose to be when you want to retire," the builders ask the prospective buyer, "a renter or an owner?" They figure out that in 25 years as a renter (at $35 a month) he would pay $10,500, and all he would have would be a "tall stack of worthless rent receipts."

In a Saltonstall Manor home costing only $26.87 a
month he would pay $2,439 less in 25 years and would own the home absolutely free and clear. From then on he can live in his own home at no cost except the taxes of approximately $5.50 a month.

Thus Olson and Jacocks and their sales agents, Wm. T. Beazley Co. of New Haven, appeal to the basic desire for security of every individual.

The houses follow two typical floor plans, "A" and "B" illustrated below, although minor variations are made to suit clients. Plan "A," only 28' x 28' 6" in size, provides a 12' x 16' 6" living room, 2 bedrooms and bath, a 9' x 10' 6" kitchen, and a stairway to the second floor. There is space there for the owner to add an extra bedroom or two later on.

Plan "B" is slightly smaller but has a 10' x 11' kitchen which provides ample space for a dining table.

Houses are insulated with mineral wool, have an oil-burning hot water heating system, full basements, copper water tubing, shower bath and set-in tub, steel kitchen cabinets, inlaid linoleum.

TWO of the fast-selling Saltonstall Manor homes, at right, designed with minor variations around floor plan "B" below. Floor plan "A," which is used in row of houses shown on opposite page, has stairs to second floor where there is space for additional bedrooms to be added later.
Detroit Approves Better Value Models

THE attractive and secure-looking home shown above was one of the 32 models displayed in the 1940 demonstration project sponsored by the Builders Association of Metropolitan Detroit, and known as "Models on Parade." It proved to be one of the most popular with the crowds, running as high as 5,000 a day, inspecting the exhibit; as a further mark of distinction, the builder, Harry J. Durbin, received an award for its planning and construction from the Currier Lumber Company.

This year the annual Association exhibit was designed to demonstrate the high value and good security that sound construction would return to the buying public for its investment. This typical design offers comfort, convenience and livability within a compact and smartly styled exterior. The practical 4-room plan for 5-room living features many extras such as snack bar separating kitchen and dinette, efficiently planned kitchen cupboard space, planning desk, closets and tiled counter tops, powder nook in bath, and wardrobes. The full basement provides plenty of clear floor area for laundry, heater and recreation and storage facilities.

Construction and equipment include 10-inch poured concrete foundation; common brick veneer painted exterior; Fir-Tex insulating sheathing and 4-inch rock wool over ceiling; two-coat plaster on Rocklath, all corners and angles metal reinforced; heavy asphalt shingles over 15 lb. felt; Bruce factory-finished Streamline flooring; white pine enameled interior trim; drawers, cupboard and interior doors birch; ceramic tile floors in vestibule, coat-room closet and bath, tile wainscot in bath; Bard gas-fired winter conditioning system; Savutime water heater control.

![Floor Plans](image-url)
"Trade-In" Plan Offers Better Security

William T. Richardson, Los Angeles Builder and Developer, Takes Old Houses in Exchange for New and Broadens Opportunity for Increased Value

By S. A. Lewis

ABOUT 10 years ago William T. Richardson, veteran Los Angeles contract and operative builder, adopted a trade-in system that enabled home buyers to exchange old houses for new. So successful has this exchange plan proved that it is responsible for at least 50 per cent of Richardson's building sales and has become the backbone of his sales promotion policy. How well it works too, is seen in a record of over 1,000 houses, more than half of which were sold on this basis. Many of these were put up by Richardson on contract work. Additional evidence of the workability of the exchange plan is the fact that this method of selling is being extended to Richardson's newest subdivision—Colonial Village—a 70-acre tract in beautiful San Fernando Valley.

Richardson's first venture in home building was with low-cost homes for industrial workers close to the Goodyear Tire and Rubber plant in Los Angeles. After putting up several hundred houses in this area he developed and built up other sections of Los Angeles and in his first subdivision disposed of 70 houses in less than five months. In earlier efforts the house and lot were sold as one unit. At one time the average price range was from $5,000 to $6,000. In the last few years the price range has been extended to $10,000 and the average is from $6,000 to $7,000. A short time ago, West Pico Heights, a sizable tract near the mammoth Douglas aircraft plant, was opened. This is now fairly well completed insofar as building goes. Within recent months 70-acre Colonial Village was levelled off and cleared for home sites. Already 10 houses are under construction.

In this builder's experience, the exchange method of financing is of little value in marketing homes above $20,000. He says, "The price range in which we are interested is $5,500 to $10,000," and further, "In the marketing of new homes by the exchange method it is necessary always to trade down. In other words, accept only from 20 to 40 per cent of the price of the new home in exchange. We take in any old house in a good rental district provided it is clear of encumbrances or nearly so, as the initial payment.

"Before the old house can be sold to advantage, however, it must be reconditioned. Expensive alteration is inadvisable because it will reflect in too high a sale price. "Reconditioning items that do pay by reason of effect-
ing a quicker sale at a better consideration are: Cleaning and pruning the yard and lawn; landscaping; installing proper ventilation under the floor if necessary; repairing the roof; painting exterior and interior and installing linoleum and shades where necessary, as well as replacing defective lighting fixtures and locks.

“Where such repairs are made a quicker sale results at a price more than enough to take care of the repair expense. Sometimes it is advisable to install additional kitchen cupboards and linen cabinets and to clean and refinish floors.

“In the sale of an old house our rule has been to require from 15 to 25 per cent down payment, the balance payable at not less than 1 per cent per month.”

It may be noted that this builder has worked out a method of disposing of “the paper” so that the investment is realized and he is not burdened with too heavy a carrying load. Where the exchanged home is in a different locality than the development, it is turned over to a neighborhood broker for selling. If near the tract, it is handled by the builder’s own sales organization.

Richardson’s exchange plan is prefaced on that which prevails in the automobile industry. “Our most successful merchandising firms use the exchange method of selling,” citing the automobile industry as an example. “How many new cars would you or I purchase,” he asked American Builder’s editorial representative, “if it were not possible to turn the old car in as credit on the purchase price of a new one?”

One Price Regardless of Purchase Plan

According to Builder Richardson, there is only one price tag on a house whether it is sold on the trade-in system or straight-purchase plan. “Our prices are based on the amount necessary to result in a reasonable profit. Quantity production is ever the goal,” is his way of putting it, and he should have added quantity-purchasing as well, for wherever possible Richardson buys material in quantity lots, and thus passes on lower construction costs to the home buyer.

Advertisements like one of the specimens illustrated are typical of Richardson’s presentation of the exchange plan of purchase and the free appraisal service offered.

Demonstration homes, completely furnished and equipped with household appliances, also, are a definite part of Richardson’s operative plan. They chalk up a 20 per cent return in actual sales. The schedule calls for two to three such dwellings a year, so that there is always one open for inspection at the tract. Model homes remain on exhibition for at least 90 days and are planned and furnished in co-operation with two leading downtown department stores. Richardson has sponsored about 15
of these co-operative type home demonstration projects.

A nationally popular model home, outfitted in its entirety by the May Company-Wilshire branch, and adapted to California living, is the latest home on display.

Personality House, furnished as a model home by the Broadway Department Store, Los Angeles, and illustrated on these pages, had a popular run at the West Pico Heights tract; it sold within a week of its opening. The latter home cost approximately $7,900 and featured built-in electrical appliances, such as an electrical wall oven and electric range. Sanitas over plaster ceilings with paint over-all was a bedroom detail in this house.

In developing his first big subdivision Richardson opened the area to builders as well as home site buyers and himself put up houses on either a contract, operative or speculative basis. To builders and potential home owners a complete file of home designs and floor plans, in addition to specifications, is available without charge. Richardson also handles sales and financing on homes constructed on his developments by outside builders.

And that brings us to the architectural planning service which this builder offers to other builders and home seekers alike. Besides the services of a staff designer who also acts as construction supervisor, Richardson retains the services of an outside certified architect should extra plans be necessary. This means that clients, in addition to free access to plans and specifications on file, may also have plans drafted without extra charge. Anyone purchasing a home site receives a plan of his choice without charge, according to an announcement in one of Richardson's ads.

Another selling feature is that a client having a sketch or plan in mind that he wishes transferred on paper may have a plan drawn and house built according to his original draft. The Richardson organization encourages prospective home owners to plan their homes as much as possible, on the assumption that by doing so greater buyer satisfaction will be the result.

In addition to a free architectural planning and designing bureau, the services of a decorative consultant also are available, in the demonstration homes, and in the builder's own office. The latter, however, mostly concerns herself with such details as the proper color scheme for walls, woodwork, etc., suitable selection of tile and paper, for it is Richardson's belief that these are important selling points.

Unless so specified in contract work, no two houses are built alike. Where the same floor plan may be followed, as in speculative building, the exterior, however, will be changed.

Construction Practices: Plenty of ventilation under the house is stressed as well as keeping it high off the ground, as a termite prevention; No. 1 lumber is used in all Richardson-built houses and 2 x 10 floor joists mostly, with solid dwarf wall foundations through the middle and 2 1/2" hardwood floors throughout. All houses are equipped with Schlage locks and floor furnaces vented through the roof.

The policy of making ready-built houses as eye-appealing as possible is followed whether in reconditioning old houses for quick sale, or in new ones. Lawn and lawn sprinkler system are put in first and a gardener placed in charge of the grounds to see that landscaping is always fresh and trim-looking.

Quantity buying of material with the view of effecting lower construction costs as mentioned is another consideration. When construction began in Colonial Village, though only 10 houses were scheduled, lumber sufficient for at least 14 was purchased and hauled to the site. At Colonial Village too, Richardson is experimenting with the use of cost-reducing materials, such as Johns-Manville wallboard in bathrooms and rubber tile in kitchens.

The designing staff has also found a way to utilize stock members in novel effects and so cut set-up costs; for instance, in the knotty pine den at the left, standard run material is interchanged with detail members used elsewhere.

Builder Subcontracts Most Favorably

As happens with practically all reputable builders who do not have their own-maintained construction crews, Richardson finds it advantageous to employ subcontractors who are familiar with his construction methods. Many have worked with him for 10 or more years. By scheduling construction to a minimum of 15 or 20 at a time (sometimes the figure runs as high as 50 houses under construction at a time),
SECURITY
expressed in brick

John S. Christian of Richmond, Va.,
Creates Buyer Confidence with Substantial, 30'x24' Brick Homes of Good Design. Large Sales Show Acceptance

HOME buyers in Virginia like to have their houses express an air of security and permanence, and this is exactly what Builder John S. Christian is giving them in his several successful developments. The houses illustrated at right are part of a complete street in which the excellent floor plan below was followed with minor variations of plan and exterior. Christian uses a 23' 5" x 30' 3" floor plan drawn by Architect Elmo Pearmon, the outstanding feature of which is a 16' 6" x 21' 10" living room. Walls are of brick with U. S. G. Rocklath and plaster. Ceilings are insulated with 4 inches of mineral wool, and the roof is finished with Buckingham slate. White oak flooring is used. Heating system is 2-pipe hot water with an oil burner and a summer-winter hot water hookup. Included in Christian's kitchen equipment are Westinghouse Electric ranges and Crosley refrigerators. The attractively styled side porches, dentils, Colonial entrances and brick steps contribute much to the architectural appeal of these “security” brick homes.

FIVE-ROOM Christian-built houses have unusually large living room—16' 6" x 21' 10". Covered porch is a popular feature. Cubage of house is approximately 22,000.
UNUSUAL Colonial charm is achieved in the houses at left and below, built by John S. Christian. He has built and sold several streets in this style, giving minor variations in exterior with porch dormers and bay windows.

TEXTURE of the old brick, combined with the slate roof and authentic Colonial style, gives the houses a substantial, settled look that appeals to seekers of long-term home security.
Security Homes Appeal to Chicago Buyers

Attractive Designs in Colorful Brick
Find Ready Market in Fred J. Walsh’s Lincolnwood Estates; Over 100 Sold

One of the fastest growing moderate priced home projects in the vicinity of Chicago is Fred J. Walsh’s Lincolnwood Estates development. Starting about a year ago, in a Northwest suburb, the site chosen to be developed had all appearances of a wide, open prairie. Today, over one hundred houses are completed here or are under construction, making a miracle-like change of the area.

Other than having a model home for inspection, there has been no speculative building, all houses having been first sold and then custom-built. Lots have been laid out for 60-foot fronts so that the small homes could be planned for an attractive, rambling type design and the larger houses given a broad front with attached garages.

The result has been streets of picturesque homes with plenty of variety in the styling, but harmonized through the use of brick of several types and many colors and patterns. Dunbrik, cement building units in brick size, have been used on some of these jobs, and because of their wide range of color, have added to the pleasing effect of the group as a whole; examples of the use of this material are illustrated on these pages.

In the Walsh sales office at the site, sketches and floor plans mounted on large cards and bearing the legend, “Sold to Mr. and Mrs. (Owner’s Name),” line the walls, and exhibit the first group of several dozen designs to be built. From these, most of the subsequent sales have been made, the plans being changed in some slight details according to the purchaser’s wishes. The original houses for the most part were of the basementless utility room type; now, however, some of these same designs have been built with the conventional basement, as was the house shown below on this page, with plan indicating alternate first floor and utility room. Hot water heating systems of special design for use in the basementless houses were worked out to function perfectly and overcome what might otherwise have been a major objection to this type home (one of the first houses built in Lincolnwood as shown in the September, 1939, issue of American Builder explains this system).

Other materials and equipment used in the construction of these Lincolnwood homes include USG 3-in-1 asphalt shingles, Weatherboard insulating sheathing, kiln-dried pre-shrunk framing lumber, metallated Rocklath under 3-coat plaster, rock wool fill at eaves, Standard Sanitary plumbing fixtures, and unit kitchens of metal cabinets and bases.

Now that the project is well under way, with enough houses completed to indicate the trend in public taste, and the demand for well planned, well built security homes, even more rapid growth than that already experienced is anticipated for Lincolnwood. The substantial character of this new community of moderate priced homes appeals to buyers.

ALTERNATE first floor plan shows arrangement for five-room design pictured below if utility-recreation room is desired instead of basement.

FIRST and second floor plans of this house as built show five rooms on first floor with breakfast room and den replacing the utility room.

ATTRACTIVE exterior of this compact little home has walls of colorful Dunbrik, rustic white siding in gable ends, and bright harmonizing asphalt roof.
THE floor plan of the above house shows how base-mentless design has been worked out to give good circulation and convenient stairway location.

WHILE the exterior styling of the house below gives it an entirely different appearance from the one above, the floor plan is quite similar; the three bedrooms are larger, however, one replacing deck over wing.
New Panel-Size Plywood Siding Demonstrated

FROM the West Coast comes another demonstration of a new trend in home building. It is the use of wide Resnprest plywood siding, and its employment in residential construction is admirably demonstrated by Carl E. Asbahr, Portland, Ore., builder, in a recently complete attractive 1½-story, five-room home.

The front view shown below indicates the clean-cut modern effect which was desired and achieved. The styling required an exterior treatment which would harmonize with the simple roof lines, modern corner windows, recessed front entrance and basement garage door.

For this, Mr. Asbahr required a wide siding that would stay smooth and flat—that would not cup or buckle under any circumstances. Resnprest was found ideal for the purpose because of its crossply construction. Added advantages of the material were its ability to lay up fast, its superior insulating qualities, and its draft-proof, moisture-proof features.

On this home, the 23-inch width is “V’d” on two sides with the ends flush for a tight joint. “V” scoring through the center of the panel gives 12-inch siding effect when a 2-inch batten is nailed between each panel.

In discussing its construction Builder Asbahr says: “The new Resnprest wide siding, made by M & M Wood Working Company, Portland, Ore., stays flat, is easy to work and lays up without waste as the panels are ½ inch wider and longer than specified to take care of the shiplapped edges. I was so satisfied with Resnprest on this job that I have since used it on three others.”

The home has a full basement, hardwood floors throughout, and the interior of the house is papered. The five-room layout offers many plan advantages within its moderate size. Corner windows and fireplace in the living room give a nice decorative effect and leave wall space for furniture arrangement. Rear hall connects kitchen with other rooms in the house and stairway to attic, allowing access without going through the dining room; efficient U-shaped plan in the kitchen and adequate breakfast nook space have been cleverly worked out so that doors are grouped. There are plenty of closets and two cars can be stored in the basement. For sub-floors and sidewalls ¾-inch plywood sheathing was used. According to the builder, the sound insulating properties of the floor sheathing make it impossible to hear noises from the basement in the main room. Similarly, first floor noises are not heard in the upstairs rooms.

Kitchen built-ins are made of M & M flush cupboard stock with pine faces. The dining room has corner cupboards of Philippine mahogany to match the trim which is of the same material.

A basement party room is equipped with a fireplace.
and there is also a fireplace in the living room. For general heating a Montag automatic oil burner and air conditioner is used.

Upward-acting garage doors are made by the Iron Doorman Company of Portland.

The concrete foundation forms for the home were made with the plywood sheathing that was later used for sub-floors. This eliminated the necessity of finishing the concrete in the basement as the plywood left a smooth surface.

RIGHT: Construction details on method of installing plywood around windows, and six suggested joint treatments for the new plywood siding panels: the upper left batten style was used on the house shown here. Flush and joints of the panels are covered with 3 coats of lead and oil paint.

BELOW: The plywood siding panels are being installed on the Portland, Ore., home built by C. E. Asban: sheiplapped all around, to form a weather-tight joint, the 23" x 96" sheets are "V'd" on two edges and across the center to give a wide siding appearance, installed accurately and economically.
EXCEPT for the fact that Ford Motor Co. pays about 60 per cent of the city's taxes, Dearborn, Mich., is not different from a thousand other average-sized communities. In Dearborn, Fred Garling, head of the Garling Construction Company, has scheduled 500 houses for 1940. Several hundred are already completed and sold. The rest of the schedule is rolling right along.

Through my conversations with Mr. L. B. Krogh of the Garling Company, who showed me around Dearborn and took me over the building sections, I wasn't long in finding out the reasons for their home-selling successes. First of all, they advertise consistently—not big splurges of ads, but small, honest, straightforward ads. They regularly use both Detroit and Dearborn newspapers for their conservative announcements of Garling homes for sale. Their slogan, "Full Value Homes," is used always. They never say, "better" or "greater," or any word which might indicate to the public that their homes need to be compared with any other homes.

As in most localities, the rent situation in Dearborn is tough, which strengthens the demand for new homes. A recent newspaper ad read, "Garling Solves Your Rent Problem." All Garling homes are available through FHA insured mortgages, with 10 percent down payment. So, any family that can gather together the few hundred dollars necessary for the down payment and show income to cover the monthly payments can readily take advantage of owning a "full value" home. Monthly payments include taxes, fire insurance, interest and payment on principal. This monthly payment totals, on an average, twenty percent less than a duplicate house

...
SIDING Featured in "Full Value" Homes

Dearborn builder gives Ford workers "rent protection" and long-life security in well-built small homes

Dearborn builder gives Ford workers "rent protection" and long-life security in well-built small homes that would rent for under present conditions. This means "rent protection" and long-life security in home owning.

The Sunday editions of newspapers are always used. Houses completed and ready for inspection, and their addresses, are listed. A salesman is stationed at each house, and stays there until the house is sold. In many cases, besides each house selling readily as is, the houses exhibited are used as samples which can be duplicated for buyers at other locations. There is always a wide choice of vacant lots for buyers. This idea of duplicating any house almost always suggests minor alterations in the plan. Such plan changes are made but they have occurred so often that the company usually has blueprints available which already incorporate the desired alterations. These are shown to the client as well as the house or houses that have been built from the particular plan, as altered.

Approximately four out of five of the hundred and fifty odd Garling homes I saw were sided with asbestos sidings. The firm has found this siding material definitely attractive to home seekers and considers its use of asbestos siding one of the most effective selling features. In capitalizing on this natural appeal Garling salesmen use the fire-safe, permanent qualities, plus the special alloy nails and low up-keep values of asbestos siding, as clinching sales points for the home buying public.

The popularity of asbestos siding grows with its use in the Dearborn area. The two most popular kinds are white and gray. The application of asbestos siding is fast and can be done by regular carpenters without any special tricks to learn. Because of the nature of the material, which is a highly pressed combination of asbestos and cement, a special cutter is used to trim the sidings for fitting around openings and at corners. The asbestos siding cutter is also equipped with punches for making holes in cut sidings when needed.

Asbestos sidings are factory-punched, and they are nailed at the top edge and also near the bottom edge. The bottom nail head remains exposed, but staining is avoided by the use of a special alloy nail which the manufacturer of the asbestos siding furnishes. The upper nail is a pin point galvanized nail of a length indicated by the manufacturer of the siding. Corners are lapped, first one way then the other, or a metal corner bead or corner boards can be used. Window and door frames are caulked before asbestos sidings are applied.

It is a wise precaution to prime all woodwork and flashings and other places where water might drip before applying asbestos siding. The Garling Construction Company, by so doing, offers its homes in sparkling white contrast to many others one might notice in driving around the city.

The three floor plans illustrated were selected as the most popular of some twenty-odd basic plans which are available to buyers. These three small houses range in selling price, for duplication, from $3175 to $4200. This includes a full basement and warm air heating. The houses are all twenty-four feet across the front and vary...
FRED GARLING, head of Garling Construction Co., has been building for 20 years. Last year he was secretary of the Detroit Builders' Association, an outstanding co-operative unit.

IT IS HARD to visualize a more attractive small home for the average family: 4 rooms and bath.

in depth from twenty-six feet to thirty-four feet.

The Garling sign is as familiar to homeseekers in Dearborn as the street sign on the corner. The sign swings free on its stained post. A glance down both sides of a street from any corner will tell a homeseeker whether or not there is a Garling home for sale or being built in that block. The sign is placed on all sites for sale and remains there until a house is erected and sold. The swinging signs are all alike but for the street address of the site. The circular insignia is typical of all ads and practically all signs.

No opportunity is missed to keep the name of the company, and the “full value” slogan before the public. At vacant corners, and other locations where passing motorists can readily see, large arrow-type signs point toward completed houses that are open and for sale. The sales office of the company is located on a busy thoroughfare. It is housed in a sample Garling home that is covered with gleaming white asbestos siding. Electric illumination around the eaves lights up a large sign on the side of the house. Ample parking space is provided, and there is someone always ready to talk to visitors.

Considerable interest which led to many sales of homes was created during the summer by a co-operatively sponsored Ideal Home. A Dearborn newspaper ran a series of six full pages of a combination of editorial copy and advertising about the Ideal Home. Subcontractors and suppliers of materials for Garling homes, as well as the Garling Construction Company itself, put ads on the weekly page in the paper. The page was made interesting to the public because its editorial features included public happenings, visits of important people, and human interest items as well as stories about the house.

Garling houses are well constructed. Materials used in them are standard, recognized products which appeal to home buyers, as well as to the builder and his workmen. The predominant use of asbestos sidings is an example of this. Many of the buyers of Garling homes seek out these attractive small homes because they are asbestos covered, which fact seems to set a standard of quality for the whole house.

Footings and foundations are ready-mixed concrete. Basement walls are waterproofed with a special foundation coating. The interior of the cellar is coated with cold water paint.
Building Materials Store Displays Products in Use

HEN a firm in the building materials business undertakes to provide itself with a sales office and display room, one would naturally expect that the products handled would be put to some use, as has been so frequently done in such structures. However, in the instance described and illustrated on this page, the Reynolds Shaffer Corporation, wholesale distributors of building materials in Pittsburgh, has done an outstanding job along these lines. The firm has a new building which combines general attractiveness throughout, utility, and maximum product display. It was designed by Architect Harry Viehmann and built by W. P. Sweeney, both of Pittsburgh.

This sales office is located in the heart of the downtown section, convenient to parking and handy for lumber and building supply dealers, hardware dealers, architects, contractors, and department store buyers. The principal lines handled covered cover air conditioning, prefabricated ducts, fireplace equipment, incinerators, steel sash, metal trim, metal lath, insulation, prefabricated houses, and reinforcing fabric. As shown in the floor plan, the display room is at the rear, and has a large Strand upward-acting door installed along the driveway side allowing easy set-up and removal of large units. Ceilings are insulated with Reynolds aluminum foil.

Other items of manufacturers whom they represent and which have been used in the building include Alden white metal and brass trim, and brass thresholds, and Johnson Metal Products base, door bucks, trim and shelves. This latter line has produced large sales in connection with slum clearance jobs.

From the front, a neatly styled elevation with its modified Georgian Colonial design, attractive entrance, large casement window, and weathervaned spire present an appearance which would easily be adaptable to many types of small business enterprise.
NOT MUCH argument is required to convince most dealers that "Playing the Game" with other business interests of the old home town adds up over the years into substantial dividends of friendship, goodwill, and sales. More and more dealers and builders are recognizing the necessity of securing orders for the firm and assigning some good subordinate to the job of filling them. The most needed man in any organization is the one who brings in the business. Getting new business is frequently a result of a little head work, involving constructive ideas, coupled with a definite plan.

We have been greatly impressed by the marked trend today of rehabilitation of business buildings. Heaven knows, the country is filled with old-time shells that offer no end of sales resistance in getting customers to walk inside the store to look at modern merchandise. It's a difficult matter these days to deceive the eye. It is the first agent to create a favorable buying sentiment in the mind of the owner.

The movement to "Lift the Face of Main Street" has been growing by leaps and bounds in the larger centers where merchants are quick to grasp at every trade attraction that will bring new customers. Many smaller towns, too, have set up programs in their Chambers of Commerce to start rehabilitation of Main Street and wherever it has been tried it has succeeded most admirably.

One of the most outstanding stories of downtown improvements comes from Oakland, Calif. Business started moving away from the principal retail district some ten years ago. A downtown committee was organized to rehabilitate the old district and after seven years of work and promotion, thirty-three modernized projects were completed, along with many improvements in the handling of traffic. The downtown district was permanently re-established in its traditional location and the movement not only saved property owners from huge losses but it also brought thousands of dollars of new business to the building materials interest of that city.

The experience of St. Louis in building a magnificent plaza from the Union Station to the downtown district not only resulted in getting rid of many acres of outmoded buildings but it brought a new and famous thoroughfare lined with magnificent public buildings which created enormous demands for materials during the construction period. The successful outcome of this de-
Development is now being duplicated in the other end of the business district where thirty-seven blocks of old, antiquated buildings are being razed and a great park area will be created on the river front. The shift in business occasioned by this development, along with the demand for better business property, will unquestionably bring much new construction business to that part of St. Louis and keep the building industry busy for some time to come.

Kansas City, Mo., has a Downtown Committee organization in the Chamber of Commerce in which four hundred of the civic leaders of the city are engaged in a death struggle with "Old Man Obsolescence." He is already beginning to wobble at the knees. New traffic ways are being laid out, streets are being widened, landscaping is springing up along main thoroughfares, and four or five major modernization projects of well known business properties are under way at this time. Eighty-three downtown buildings have been washed or painted since the committee began functioning early this year. Twenty-eight old structures that have outlived their usefulness have been ear-marked for demolition. The Downtown Committee is snowed under with problems involving the improvement and progress of the district. Each of them is given the most careful and thorough consideration. Kansas City with a rich trade territory is projecting a downtown district with eye appeal and comforts and convenience in transportation. Increased trade will follow naturally.

Many other instances could be cited showing how the great commercial centers of the country are responding to this new movement to hold and encourage trade and maintain the good will of the people who come to spend time and money in their midst. The opportunities and benefits are no less outstanding in thousands of smaller cities and towns throughout the country. The automobile has changed life for everyone and particularly our buying habits. The big problem today with all business men is to retain and encourage business that has been with them thru the years, but has become transient by reason of the ease of travel.

Granted this movement is doing the job, most dealers and builders want to know how it can be done in their particular town. It might be wise to fall back upon the old adage that "charity begins at home." Step out on the street and take a good look at your own place of business and see how it stacks up with 1940 standards. Building material merchants over the country generally have been very active in improving their places of business and have seen the wisdom of taking on leadership in such matters.

Pictured in this article is an improvement at Clay Center, Kans., that shows the possibilities of making over an old lumber yard. Located on the south side of the public square, looks play a prominent part in keeping volume where it should be. Mr. C. B. Fullington, the President and Manager of this yard, sends us the following comment on this change:

"The Community in which we gain a livelihood has a right to expect us to maintain a place of business that contributes to the beauty of our town. Over a term of years, the neat, well kept establishment secures the most thriving trade. Since we dolled up, we notice particularly a great increase of business from newcomers to our town."

Since this improvement was made, a leading architect

(Continued to page 122)
Light Load Bearing Structures
Feature Speed Welding

Various Types of Buildings in This Georgia
Project Are Entirely Assembled by This Method

Unusual in a structural engineering sense, the Le Tourneau buildings also present a unique appearance, as shown in accompanying illustrations of the hotel, the hotel dome, the close-up details of the walls and the exterior of the house.

The basic element of the Le Tourneau structure which permitted the unique construction employed in all the buildings is a steel panel fabricated by arc welding.

This arc welded steel panel is 46 in. wide by 92 in. long fabricated of 12-gauge open-hearth structural steel sheets. These sheets are stamped under 600 tons pressure into a
sunken panel design, the edges being turned down 1 in. all around during the stamping operation. Two of these sheets, with the turned edges toward each other, are welded together with interior spacers set at intervals of not more than 24 in. to form a box-like unit. Maximum strength and rigidity are provided by pressed steel braces welded into a lattice web pattern all around the edges. Under test, one of these units withstands a weight of 100 lbs. per sq. ft. without any deformation. Approximately 8 minutes is required to set up, weld and remove from the jig one panel.

In field erection, the two turned edges of each panel provide a surface for welding it to an adjoining panel to form walls, partitions, floors or ceilings. Into each section mineral wool is forced by air to a density of 10 lbs. per cu. ft.

These panel sections are 6 in. thick for house construction and 18 in. thick in factory and other structures.

In construction of houses and smaller structures these panels are erected individually. However, in the factory building there was sufficient area of concrete floor to allow assembly of panel sections 23 ft. square and complete welding of each section in flat position before erection. These sections were then hoisted in place and welded.

The entire project, involving 5,500 tons of steel, consists of the following structures: a manufacturing building 370 ft. by 370 ft. by 23 ft. high; office building 160 ft. long by 11½ ft. high; a warehouse 92 ft. by 92 ft.; a hotel consisting of a center dome structure 100 ft. in diameter and 7 wings extending from the dome in fan shape, each 32 ft. wide by 125 ft. long; an airplane hangar 92 ft. by 92 ft.; 2 dormitories containing 9 rooms each averaging 11 ft. 6 in. by 15 ft. 4 in.; 40 employees' residences.

When completed the project will include, in addition to the above: a cattle barn 115 ft. long by 46 ft. wide; a milk cow barn accommodating 50 cattle; a pasteurizing building; a canning building; several silos; employees' recreation hall; a 200 ft. tabernacle; a 250 watt radio station; cafeteria; stores; additional houses (60 planned); and other miscellaneous structures.

The 60 arc welders installed in the factory are of the SAC type manufactured by The Lincoln Electric Company, Cleveland, Ohio.

At this writing approximately 75 tons of Shielded Arc type of electrodes supplied by the same company have been used. Two electrodes were employed, "Fleetweld 5" in ⅜ in., 5/32 in. and 3/16 in. sizes and "Fleetweld 7" in 5/32 in. and 3/16 in. sizes.
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EQUIPMENT ITEMS FOR MODERN BUILDINGS

**AB191** Electric dumb waiters in the past have been so complicated in design, with so many parts to assemble on the job, that even the most experienced mechanics and electricians have had difficulty in arriving at a satisfactory installation. The "Roto-Waiter" developed by the Sedgwick Machine Works, 154A W. 15th St., New York City, overcomes these objections, because of its basically different design with many less parts; also, because it is completely assembled at the factory and given a working test so that installation can be made quickly and correctly for trouble-free operation. There are many special features which contribute to better, faster and safer service. Noteworthy, is the overload switch which automatically cuts off power if car is loaded beyond capacity, or if load projects beyond car and engages side of shaft. Nor can the car jolt against upper and lower limits, with consequent damage to the load. This is particularly important where breakable articles are being carried. The "Roto-Waiter" serves two or more floors, with an arrangement of push button control which provides dependable operation under all working conditions. It is available in standard door height and "undercounter" styles. This new equipment not only costs less to install and less to operate and maintain, but it is also priced lower than the old type electric dumb waiters.

**AB192** This new thermostat by the Minneapolis-Honeywell Regulator Co., Minneapolis, is designed to control the "hi-low" or "hi-low-off" flame sequence for certain types of gas and oil burners. There are two circuits; one controls the high, the other the low fire valve—and both are actuated by the same bi-metal element and magnet. This prevents the device from getting out of step and assures proper operating sequence—so difficult to obtain when two bi-metal elements and independent magnets are used. This thermostat has a standard operating range of 74 to 86 degrees F. The same pleasing design is followed as in other standard M-H quality thermostats. Small in size (height 5", width 2", depth 1⅞") it is a wall fixture of quality and distinction.

**AB193** A bathtub made of a new clay product known as "Duraclay" is announced by the Crane Co., Chicago. Most bathtubs are made of enameled cast iron, so the announcement of a moderately priced bathtub of genuine ceramic material is real news. The Duraclay bathtub has all the easy cleaning properties of vitreous china because the hard, acid resisting surface is actually composed of glass over vitreous china completely fused to the Duraclay base under intense heat. Because of the strength of Duraclay, the weight of this bathtub is no greater than that of a cast iron tub of the same size. The bathtub now being introduced is known as the "Delmar," and has the panel design on the front and a low wide flat rim.

American Builder, October 1940.
A 32-page book that really tells all. Nothing has been taken for granted in it. Everything’s set down in black and white... and having it in your brief case is like having a whole staff of estimators in your pocket. We’ve called it an “ILLUSTRATED STEEL WINDOW PRICE LIST”... but that was just modesty on our part. It’s the complete and unadulterated factual story on everything you’ll want to know about Steel Sash. It’s filled with drawings, photographs and architectural details which will help you on all your jobs. It states simply and specifically all the sizes, types and prices on Steel Sash, doors and screens... the data is arranged conveniently for quick reference... and it opens a new vista for you if you’re out to make MORE PROFIT. Write for it today.

MESKER BROTHERS • ST. LOUIS, MO.
Write today for complete details on the Mesker Dealer Plan. Your territory may be open.
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WHAT'S NEW IN BUILDING MATERIALS

AB201 For modernizing old buildings The Ruberoid Co., New York City, announces new features in its low cost asphalt siding, "Brik Strip." Put up in roll form, this is not only less expensive, but can be applied rapidly over large areas at reduced cost. The general appearance is that of wire-cut or tapestry brick, in a wide range of color combinations, with appropriately contrasting mortar lines and with soldier courses for use over doors and windows as in ordinary brick construction.

AB202 Pre-fab moves into the tone fireplace field with the announcement of the Quarre-Pak fireplace recently placed on the market by the Burlington Quarries Corp., Burlington, Wis. The Quarre-Pak is a complete packaged unit of pre-cut and numbered stone, ready to set with complete setting drawings and instructions. In addition to the all stone models there is a variety of designs combining stone with wood mantels. The Sunset Stone used is a hard limestone of various stratified colors ranging from reds to pink then into buff and also shades of blues and green in soft pastel tones.

AB203 Silhouette weather vanes are ornamental and distinctive; they carry a sales punch far and away greater than their cost. The Independent Protection Co., Inc., Goshen, Ind., offers some 22 clever designs—of which No. 822 Rooster is a sample. This company also makes up special designs to order from architect's drawings, sketches or photographs. Vanes and mountings are of rust-proof material.

AB204 The Flexrock Co., Philadelphia, has developed a new active ingredient which, used in "Flextite," brings its activity down to a measure of seconds instead of minutes as in the case of other leak stopping materials. It is used with ordinary portland cement; and forced against water pressure and held for only a few seconds, it hardens to stop the leak. These may be in dams, retaining walls, dikes, concrete basins holding water at irrigation plants, reservoirs, concrete tanks and other such places. This new material is valuable also for waterproofing and damp-proofing generally in cellars or basements, in pits, tanks, and in construction work generally.

AB206 The new Coburn Trolley Track Co. (Holyoke, Mass.) No. 500 swing-over hardware set which has been greatly improved recently is illustrated. With this hardware any carpenter can easily transform a pair of troublesome swinging garage doors into a smooth-operating one-piece upward acting door. The door is counterbalanced perfectly by the correct amount of sand in the weight box, so the slightest pull of the handle will start the door gently upward. A similar slight pull on the rope will bring the door down.

FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 76
THIS IS A STORY ABOUT A SALESMAN. A REAL ENERGETIC SALESMAN HE WAS. HIS JOB WAS TO SELL HOUSES AND EACH DAY HE WENT TO THE SAMPLE HOUSE TO TURN HIS HIGH-PRESSURE TACTICS ON THE VISITORS WHO CAME TO SEE THE SAMPLE HOUSE.


ONE DAY HE DREAMED THAT A BIG WIND-STORM CAME ALONG AND BLEW THE ROOF OFF THE SAMPLE HOUSE. HE WOKE WITH A START AND LOOKED AT THE ROOF. THEN HE REALIZED WHY NOBODY CAME TO SEE THE SAMPLE HOUSE. THE ROOF WASN'T PRETTY... LIKE THE SHUTTERS AND WINDOWS AND THE DOORS. NOW THIS SALESMAN HAD SEEN AND READ ABOUT "COLOR-STYLE" BARBER GENASCO ROOFINGS... SO HE PERSUADED THE OWNERS OF THE SAMPLE HOUSE TO PUT A BARBER ROOF OVER THE ORIGINAL ROOF. ALMOST BEFORE THE ROOF WAS COMPLETED, CARS BEGAN TO STOP AND PEOPLE BEGAN TO COME INTO THE SAMPLE HOUSE... AND THE SALESMAN MET THEM OUT FRONT TO START HIS SALES TALK. AND, DO YOU KNOW, HE STARTED RIGHT OFF TALKING ABOUT THE BARBER ROOF... HOW IT'S THE ONLY ROOF MADE WITH TRINIDAD NATIVE LAKE ASPHALT... HOW LITTLE IT COSTS AND HOW QUICKLY IT CAN BE PUT ON... HOW MANY YEARS IT WILL LAST... AND HOW IT IS "COLOR-STYLE" BY AN EXPERT. NOW, WE WOULDN'T SAY THE BARBER ROOF ALONE SOLD ALL THOSE HOUSES, BUT WE DO KNOW THAT A BARBER ROOF HELPS TO SELL HOUSES. AND ISN'T THAT WHAT YOU'RE INTERESTED IN? THERE'S A BARBER DEALER OR ROOFER NEAR YOU WHO WILL BE GLAD TO SHOW YOU SAMPLES AND QUOTE YOU PRICES. OR WRITE TO BARBER ASPHALT CORPORATION, BARBER, N.J.
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HEATING & AIR CONDITIONING PROGRESS

AB207 The Rybolt Heater Co., Ashland, O., is out with a new model cast iron gas-fired winter air conditioner. A new type combustion chamber and flue economizer, both gray iron castings, minimize the effect of condensation of moisture in the flue gas. The chamber directs the generated heat upward through a series of baffled passages, where it is wiped against the inner surfaces, providing quick radiation of heat. Projecting into the return air chamber, the flue economizer serves as a preheater, thus promoting fuel economy. The furnace casing is finished in smooth gray Hammerloid enamel with black base. Equipped complete with burner, top mounted motor blower, automatic control and automatic humidifier. Five sizes are offered.

during the past several years. It is wholly automatic and will deliver coke direct from the bin to the furnace or boiler without requiring any attention by the householder. No blower is required since coke does not need a forced draft. A dustless ash removal system will remove ashes automatically from the ash pit to a covered ash can at the side of the furnace.

AB209 Gar Wood Industries, Inc., Detroit, has announced a complete new line of vertical and horizontal types of gas-fired automatic home heating and air conditioning models. For the line, the engineers perfected a method by which three standardized basic heating sections (5-, 7-, and 10-fluted) are used singly and in multiple to produce the seven different sizes and heating capacities. For example: Model 60V, the smallest of the line, has a 5-fluted heating section (60,000 input), while Model 120H&V uses two sections to total 10-flutes (120,000 input). Both vertical and horizontal types are included. The horizontal types—being less than 4 feet in height—are ideal for basements with unusually low ceilings. The vertical types, while also designed for basements, occupy small space and consequently are suitable for installation in heater-utility rooms located on the first floor where space is definitely limited. The Gar Wood model 60V, smallest and lowest priced in the new line is pictured. Inset shows one of the three standardized basic fluted heating sections.

AB210 The Herman Nelson Corp., Moline, Ill., offers a new heater for stores, offices, churches, corridors, markets, etc. Due to its large heating capacity a large area can be heated with one unit. Available for use with steam or hot water. Air is drawn through the recirculating grille into the unit through the heating element and filter, and is then discharged into the room through the discharge grille. The brass heating element is designed with loops to absorb the difference in expansion and contraction between individual tubes. Cabinet of modern design is constructed of heavy furniture steel with rounded corners and ends without any projecting parts. Finished in brown, baked enamel with trim of polished stainless steel.

AB211 The Anchor Stove and Range Co., New Albany, Inc., offers a convenience for the small home, a stoker-fired cabinet heater. This cabinet heater operates exactly like an automatic coal stoker equipped furnace. Once every day or two you simply fill the hopper with coal. Once a day you remove one small clinker. The rest of the time you enjoy plenty of clean, even heat—the amount of which is thermostatically controlled. The hopper holds 165 pounds of coal. Weighing about 1/3 of a ton, and 54 inches high, the entire unit will heat six average rooms.

Readers Service Department Continued to Page 76

FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 76
Choose Your Garage Doors
as You Would Your Car!

Smooth, Quiet Performance—Economy of Upkeep
and Years of Service are Important in BOTH

In a Car you want all the latest practical improvements. You wouldn't be satisfied with one designed a few years ago. You know that today's cars give more for the money. The same thing is true of Garage Doors. In appearance there hasn't been a great deal of change—but in every day operation the new Ro-Way Overhead Type Doors give you so much more. That's because—

Ro-Way
OVERHEAD TYPE DOORS
Embody Five Improvements at no Extra Cost

Three of these new features have to do with the spring power that operates the door. Another insures permanent sheave wheel alignment, and the fifth keeps the metal parts of your Ro-Way Door exceptionally free from destructive rust. So choose your Garage Door as you would your Car. Ask the Ro-Way Distributor nearest you to tell you about "Crow's Foot" Outer Bearing Supports, "Ro-To Live" Springs, the "Zip-Lock" Twin Torsion Spring Adjustment, "Tailor Made" Springs and Parkerized and Painted Hardware.

Ro-Way Service is Nationwide

Sales offices, with competent installation engineers, are located in principal cities. Write for name of one nearest you, or ask us for Free Ro-Way Door Folders, prices and complete information.

ROWE MANUFACTURING CO.
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GALESBURG, ILL., U. S. A.

There's a Ro-Way for every Door way!
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NEW MODELS, POWER EQUIPMENT & TOOLS

AB212 Boost the payload and up go the profits from truck mixers. The new drum sizes just announced by The Jaeger Machine Co., Columbus, Ohio, for its 1941 line of truck mixers, increase the payload to the maximum that the trucks themselves should carry—loading through the top in one quick drop. That’s allowing for ample void space, too, which is so necessary for producing highest strength concrete. This more than adequate void space, combined with Jaeger’s patented end-to-end “Dual Mix” action, gives a faster and more thorough mix, a better quality, more saleable concrete, and helps build up more profitable “ready-mix” business. These mixers have such advanced features as vacuum-controlled truck engine drive operated from the cab (separate engine drive if desired); shock-proof two-speed transmission; new Jaeger “Uni-valve”—one accessible water control panel for mix, tempering and flush valves, and patented Sypho-meter water tank.

AB213 Improved American Standard floor sanders in 8 and 12 inch sizes are offered by The American Floor Surfacing Machine Co., Toledo, Ohio. One of the most important improvements on these machines is their higher speed and greater cutting capacity. The drum speed on the American Standard Eight has been increased to 1600 revolutions per minute while the drum speed on the American Standard Twelve is 2000 revolutions per minute. This is over a 50 per cent increase in drum speed and the production capacity of these machines proportionately has been increased. These remarkable speeds are only made possible through the use of specially designed motors of great capacity and power. They are made to “take it” day in and day out.

AB214 The illustration above shows the Miles Lever-Operated Stripper Cement Block Machine used in connection with the Miles Automatic Power Tamper, as developed by The Miles Manufacturing Co., Jackson, Mich. This is a combination of units that supplies a large production of high quality concrete blocks or tile at the minimum expense. Miles Automatic Feeding Units are available for use with the above machines for the purpose of supplying a still larger production.

AB215 The Power King Tool Corp., Warsaw, Ind., has developed an ingenious electric hand saw and Multisaw Arm. Those who have used it say that it puts sawing on a production basis—the job or in the shop. It is portable, quickly and easily set up for rip, cross-cut, and mitre, either straight or bevel—ideal for accurate scoring of brick, stone and tile. The rigid construction of the Multisaw Arm means accurate work. The saw arm, supported rigidly by the heavy rib-braced column and mounting bracket, rides on eight ball bearings.

AB216 “Tubcoat” developed by the Protective Covering Co., Bridgeport, Conn., is a tough protective covering for bathtubs during installation, made in sizes to fit every tub, right or left hand. It is easily attached, quickly removed and nothing to wash or scrape away afterwards. A new 2-color folder illustrates and describes this service.

American Builder, October 1940.
Certain-teed Follows Through For You...

Remember "Look Homeward, America"? That, said builders and dealers from coast to coast, did more to sell houses and materials than anything the building industry had ever seen. Now Certain-teed has done it again with "American Unity Begins at Home." Unselfishly selling your houses and your products first, and Certain-teed products last, "American Unity" is a worthy successor to "Look Homeward, America." Millions will read it in national magazines. Why not merchandise it locally to help you make this the biggest profit season since 1929! Write for free 24 x 36 inch window poster enlargement of ad in full colors.

CERTAIN-TEED PRODUCTS CORPORATION,
100 East 42nd Street, New York, N.Y.

ASPHALT ROOFING, SHINGLES AND SIDING • STRUCTURAL INSULATION • WALL BOARDS • GYPSUM LATH AND PLASTER PRODUCTS
Suggestions for Various Business Signs

BUILDERS and designers are frequently called upon to produce effective and novel signs for various types of business enterprises. The collection presented below will be found most useful as a reference for such work, since there is here a wide variety of materials, shapes, and lettering styles adaptable to eating places, professional offices, lodging houses, real estate developments and specialty sales. Most of these are located in California, and are made of sheet iron, outdoor plywood, lumber, and wrought iron; they can be illuminated, if required, either as part of the fixture or indirectly with a small, concealed spotlight.—Hi Sibley.

(1) A sign worked out in %-inch rope; porcelain penguins display house numbers; (2) simple but excellent attention value; (3) distinctive Colonial illuminated panel; (4) wrought iron and attractive sheet iron silhouette; (5) outdoor plywood and simple mouldings; (6) applicable to many enterprises; (7) rustic throwback to the 90's; (8) clean-cut sheet metal panel on simple bracket.
Ackley, Bradley & Day, Pittsburgh

Insulate “Charette Homes,” Sewickley, Pa., with

KIMSUL INSULATION

Because it has the wanted features, KIMSUL* Insulation is specified by an ever-growing list of architects, builders and contractors. One of the many recent developments using KIMSUL is “Charette Homes”, a group of 20 homes for discriminating people in the Borough of Sewickley, Pa. This development is being built by the owners, Ackley, Bradley & Day, under strict architect supervision.

KIMSUL’s popularity is a result of its many advantages. KIMSUL is clean, light in weight and installs with remarkable speed and ease. Furthermore, it is highly resistant to fire and moisture. And because of the unique stitching feature which holds it in place, KIMSUL stays put—won’t sag, sift or pack down inside walls. Before you decide on any insulation, find out how little it costs to insulate with KIMSUL!... Dealers are invited to investigate the profit opportunities in KIMSUL.


MAIL COUPON TODAY

KIMBERLY-CLARK CORPORATION (Building Insulation Division)
Established 1872
Neenah, Wisconsin

☐ Please send a representative.
☐ Please send Free Book, “Greater Comfort—Winter and Summer”

Name ..............................................................................................................................................
Address ..............................................................................................................................................

City ........................................ County ........................................ State ..............................
Model Offices Show New Style Trend

The new trend in office design, featuring efficient utilization of space is exemplified in five model offices which have recently been opened for public inspection in the Broad Street Station Building, Philadelphia. The rooms are all located on the 10th floor and on the north side of the building. The space in each has been divided by ingeniously arranged partitions into two sections. One is a small but sufficient anteroom, with desk for a receptionist-stenographer and chairs for visitors. Opening from this is the office proper. The arrangements are intended to solve the problem of providing utility, dignity, personal privacy, complete working equipment and an atmosphere entirely modern, but not extreme, within limited floor areas.

Desks, chairs, cabinets, book cases and other fittings, both fixed and movable, have been specially designed for the particular requirements of each office with dimensions carefully proportioned to its size and shape. All furniture is of walnut, bleached after construction to produce lightness of grain. A new type of rubber flooring is used, noiseless, resilient and contributing in pattern and shades to the general pleasing effect.

The scheme of the decorations and furnishings as a whole is designated "contemporary in the style of 1940-1950." While highly modern it avoids all grotesque, exaggerated or extreme features and has been planned to remain "contemporary" in theme and detail for ten years or longer.

Lighting is of the newly developed fluorescent type, soft and diffused; the fixtures themselves, all located in the ceiling, are nearly not noticeable. Thereby a warm but warm illumination which seems to come equally from all directions without glare or concentration. This is accomplished in part by the character of the light itself, in part by having the fixtures attractively and symmetrically arranged over broad ceiling spaces and in part by the contributing effects of the tinting and textures of the reflecting surfaces of ceilings and walls, which have been worked out with a special view to good illumination.

Two of the offices are inside rooms and have been equipped with illusion windows having Venetian blinds and draperies so arranged that concealed fluorescent tubes along the sides create the appearance of subdued sunlight streaming in behind the curtain. These two rooms are also completely air-conditioned with apparatus of recent type. The other three rooms have outside windows with Venetian blinds and draperies blending into the rest of the decorative color scheme.

The styling and interior arrangements of all the rooms have been produced by Kenneth M. McCann, of New York City, consulting decorator for the Hotel Pennsylvania and the Statler Hotels throughout the country.

The Broad Street Station Building is one of the newest office structures in Philadelphia, located at 16th Street and Pennsylvania Boulevard, directly over the Suburban Station of the Pennsylvania Railroad.
When it's moving time in Missoula...

EYES TURN TO

Stucco

It's natural for people's eyes to be caught by this apartment building in Missoula, Montana. Prospective tenants stop short when they see its trim, clean lines...its fresh, modern beauty. For this apartment is faced with portland cement stucco—made with Atlas White cement!

It's not the first time Mr. Parsons, architect and builder, has taken advantage of this versatile material. Some time ago he built houses of stucco...and they sold like hot cakes, even before they had been finished!

So, for quick renting and lasting beauty, he again used Atlas White portland cement stucco. Like countless other builders, he knows that a thin, sturdy wall of this material provides a permanent, weather-resistant and fire-safe exterior that virtually eliminates maintenance. Moreover, its cost is surprisingly moderate.

Whether you plan new buildings or modernize old ones, it will pay you to consider stucco made with Atlas White portland cement. Universal Atlas Cement Co. (United States Steel Subsidiary), Chrysler Building, N.Y.

OFFICES: New York, Chicago, Philadelphia, Boston, Albany, Pittsburgh, Cleveland, Minneapolis, Duluth, St. Louis, Kansas City, Des Moines, Birmingham, Waco.

FACTORY-MADE STUCCO IS PREFERABLE

ATLAS WHITE CEMENT
A UNIVERSAL ATLAS PRODUCT
Interesting Use of Pine in Small Chapel

NESTLED in the pine-clad hills of the Klickitat country of Washington State and only a short distance from the mighty Columbia River, stands a new Lutheran Chapel that would be a credit to any community. The people of Klickitat, Wash., now have an attractive little edifice that is unique in many respects. The simplicity of the design, the beauty of the interior woodwork and paneling and the practicability of the entire structure offer suggestions that may well be duplicated elsewhere.

Klickitat is the location of one of the J. Neils Lumber Company sawmill operations. Officials of the company co-operated wholeheartedly in the construction of the chapel, so it was only natural that a generous use was made of their own forest products.

The new chapel has a seating capacity of 110 on the basis of five persons to a pew. The total cost of the building, complete with furnace, fixtures and furniture, was approximately $8500.

The exterior is covered with No. 4 Common Ponderosa pine sheathing and 6/4 x 10’ No. 2 Common Dolly Varden Ponderosa pine siding painted the customary white. The trusses, rafters and purlins are kiln dried Douglas fir from the local mill. The interior sidewalls are lath and plaster, while the roof sheathing is 6/4 No. 2 Common Ponderosa pine. The end walls and the entrance-way are paneled vertically with a selected No. 2 Common Ponderosa pine. The eamed pews were made locally from D Select Ponderosa pine. They harmonize nicely with the white plastered walls and the pine woodwork, paneling and cathedral ceiling. All the doors and windows are of Ponderosa pine. Maple flooring was used in the nave and oak in the chapel.

The Lutheran Chapel was designed by Architect F. R. Webber of Cleveland, Ohio; the contractor was Peter Westlund & Sons of The Dalles, Ore.; and the interior finish was by John H. Kruse of Bend, Ore.

The walls of entrance-way in Lutheran Chapel, Klickitat, Wash., are attractively finished in a light stain on the vertical pine paneling. Kiln-dried Douglas fir used for the trusses, rafters and purlins, as shown directly above, harmonize nicely with the white plaster and pews.

THE exterior of this neat little chapel is finished in white painted Ponderosa pine siding; roof is of red cedar shingles. Fenestration is unique.
“Bore-A-Hole” Installation Cuts Hardware Cost

SOME twenty years ago a new type of door lock and latch was invented of tubular design, which substituted a compact tubular arrangement of the working parts for the large square case of the customary mortise lock. In addition to certain special improved features of operation, this new tubular door lock offered a substan-
tial saving in time and labor of installation. It substituted a simple brace and bit operation for the difficult and costly lock mortising.

In the twenty years that have intervened the tubular type door sets have increased in popularity and use, additional manufacturers have entered the field and sales by dealers have increased. Today the emphasis on lower building costs, especially labor costs on the job, to make possible low cost homes has brought into new prominence the “bore-a-hole” installation advantages of tubular locks.

Sixty minutes to mortise a door for the mortise lock set is considered a fair average. Contrast this with the eighteen minutes it takes a carpenter to install a tubular set. Also considering the simplicity of the job as compared with the more difficult and highly skilled operation of mortising, it is probable that quite an advantage would be realized since any carpenter, without special skill, can install a tubular lock satisfactorily.

A brace and bit and a screw driver are the only tools necessary for this “bore-a-hole” installation. A 15/16 inch bit is used to bore a hole in the edge of the door, 3 3/4 inches deep to take the tubular lock case. At right angles to this another hole is bored to take the knob spindle. A “bit guide” is furnished (with the “Dexter” tubular locks) which is clamped on the edge of the door and serves the double purpose of locating exactly the position of the hole for the spindle and also assures straight boring for the tubular mortise. This bit guide eliminates the possibility of inaccurate drilling; which is quite a help when you consider the care and skill which otherwise would have to be exercised in boring a 15/16 inch hole, 3 3/4 inches deep in the edge of a door 1 3/4 inches thick. It would not take much of an angle to run the drill to and through the face of the door.

However, this bit guide eliminates the possibility of inaccurate boring. It clamps on to the door in the position where the lock is wanted and no measuring or squaring is needed; it self-centers and adjusts to the thickness of the door and accurately guides the bit. The wing of the guide acts as a templet to center the spindle hole. Notice that there are three holes in the guide wing, marked respectively for 1 3/4 inch, 1 1/4 inch, and 2 3/4 inch thick doors.

Lower costs in hanging and fitting doors can be had, in line with today’s drive for lower cost homes, without any sacrifice in quality by intelligent selecting of door hardware. It is safe to say that although the tubular locks and latches have been on the market since 1919 a great many carpenters and builders, to say nothing of home owners, architects and dealers, are still unfamiliar with them—and with the substantial saving in labor, time and cost in installing these sets by simple boring instead of by lock mortising.

Garage Door Set Now Comes Unassembled

TO increase the adaptability of their well known No. 900 Garage door set, the National Manufacturing Co., Sterling, Ill., has made available a similar set called the No. 901 which is identical with the No. 900 except for the fact that the hardware is not attached to door, the glazed section is not furnished with glass, and the brace bar on the top door rail and both inside and outside handles at the bottom of the center section are omitted.

The door is drilled for all bolts, and in order to insure correct attachment of hardware, location on door and each piece of hardware bear corresponding numbers. The door set comes packed, complete and ready for installation, in a door carton and box containing the miscellaneous hardware.
What Thickness Insulation?*
Heating Costs Analyzed for Test Home 
With and Without Ample Insulation
By W. T. MILLER**

A PAPER delivered before a national technical society concerning the application of the law of diminishing returns to the value of insulation left the author with the impression that the most economical clothing for winter wear was a suit of underwear, and that he had wasted money by purchasing an overcoat. It is true that the author wears underwear, and he also wears an overcoat, but he does not wear two overcoats at the same time and wouldn't even if he owned two of them. However, he feels that his one overcoat was a good investment.

The economic effect of the law of diminishing returns upon insulation as an investment is relative, and is dependent on what is considered as a good investment.

In order to illustrate the futility of the law of diminishing returns as applied to Mineral Wool insulation, the author has selected an existing house for the basis of calculations. This house is located on the Housing Research division of the campus of Purdue University and is used for test purposes. It is a one story house of orthodox frame construction containing five rooms, a bathroom and a utility room. The attic space may be either ventilated or unventilated. This house was selected because considerable is known about its performance, and because the relationship between a great many "assumed" conditions and the actual conditions is pretty well established. The house is close to 24' x 40', has 190 square feet of glass, 834 square feet of outside wall, 960 square feet of ceiling, and a volume of 7,680 cubic feet.

The calculations resulting in the figures presented are based on the overall coefficients of transmission, or U values, being as follows: outside wall, 0.26; ceiling, 0.69; glass, 1.13. A 70 degree temperature difference between indoor and outdoor temperature was assumed. The local average of 5,400 degree days per year was used. The cost of heat was based on the use of No. 1 fuel oil at the local price of 8 cents per gallon, and the method of estimating fuel consumption presented in the ASHVE Guide. An efficiency of 70 percent was assumed. The method has been found to apply very well (Continued to page 88)

TABLE I

<table>
<thead>
<tr>
<th>CEILING LOSSES</th>
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<tr>
<td>Thickness of insulation, Inches:</td>
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<td>U for ceiling:</td>
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<tr>
<td>Attic area—sq. ft.</td>
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<tr>
<td>Temperature difference, F:</td>
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<td>Ceiling surface temperature, F:</td>
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<td>Ceiling heat loss, Btu per hour:</td>
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<tr>
<td>Annual cost of heat loss, Dollars:</td>
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<td>Annual saving, Dollars:</td>
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<td>Cost of insulation, Dollars:</td>
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<td>20 Year total saving, Dollars:</td>
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<td>20 Year investment value of insulation cost @ 4% compounded annually:</td>
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TABLE II

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<th>SIDE WALL LOSSES</th>
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<tr>
<td>Thickness of insulation, Inches:</td>
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<td>U for walls:</td>
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<tr>
<td>Temperature difference, F:</td>
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<tr>
<td>Wall area—sq. ft.</td>
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<tr>
<td>Wall heat loss, Btu per hour:</td>
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<tr>
<td>Annual saving, Dollars:</td>
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<td>Cost of insulation, Dollars:</td>
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<tr>
<td>20 Year total saving, Dollars:</td>
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<td>20 Year investment value of insulation cost @ 4% compounded annually:</td>
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<tr>
<td>20 Year net saving, Dollars:</td>
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TABLE III

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<tr>
<th>TOTAL HEAT LOSSES</th>
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<tr>
<td>Thickness of insulation, Inches:</td>
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<tr>
<td>Heat loss through glass, Btu/hr:</td>
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<tr>
<td>Ventilation heat loss, Btu/hr:</td>
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<td>Side wall heat loss, Btu/hr:</td>
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<td>Ceiling heat loss, Btu/hr:</td>
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<td>Total heat loss, Btu/hr:</td>
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<td>Annual cost of heat, Dollars per yr.:</td>
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Heat losses and insulation of 4 thicknesses on Purdue University Testing House.

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(Continued to page 88)
NEW CURTIS CALCULATOR

Makes It Easier to Sell SILENTITE WINDOWS AND STORM SASH

CURTIS MAKES IT EASIER TO SELL THESE IMPORTANT ITEMS

This handy "slide rule" is brand-new help for you from Curtis. It's easy to use, clinches your sales arguments, helps you make profitable sales.

Here's what you can do with it—

Show your customers how storm sash saves fuel. Figure heat loss through double-hung windows with and without weather-stripping for them. Estimate installation cost of ordinary double-hung windows, Silentite "Insulated" Windows and Mitertite "Pre-fit" Trim easily and quickly.

This valuable time-saver can be obtained through your Curtis Dealer. He handles the whole family of Silentite "Insulated" Windows, Curtis Sectional Kitchen Cabinets and Curtis Woodwork. Ask him for your calculator now while the supply lasts! Curtis woodwork is sold by reliable dealers everywhere.

If you live in Canada, write the W. C. Edwards & Co., Ltd., 901 Somerset St. West, Ottawa, Canada.

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To figure installation costs of double-hung windows, frames and trim
**Scientifically Designed—Beautifully Styled—Built Right—Priced Right**

You will find in the extensive Moncrief line the type and size of winter air conditioner required, at a price that will command your interest. Every improvement that contributes to carefree convenience and finer comfort is included in Moncrief Winter Air Conditioners. Engineering is correct in every detail. Construction is most substantial and durable. Cabinets are smartly styled, modern.

For high efficiency, unusual economy, fine appearance, look to the complete Moncrief line. Write for new illustrated literature and data sheets adapted to your files.

**HERE'S A BIG IMPROVEMENT IN WARM AIR FURNACES**

Moncrief DeLuxe
Long Life Furnace

Automatic controls regulate temperatures constantly. Thermo-Drip Automatic Humidifier. Finished in handsome two-tone green enamel. Positively guaranteed for twenty years against any section burning out. Supplied with cast or steel heating unit. Truly the modern unit for the modern home.

Send for new descriptive literature

THE HENRY FURNACE & FOUNDRY CO.

3479 East 49th St. • Cleveland, Ohio

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**What Thickness Insulation?**

(Continued from page 86)

closely to the performance of the house selected. On this basis, the cost of heat is $2.33 per season per 1000 Btu per hour heat loss.

The calculation of the performance was based on an insulation conductivity of 0.30 Btu per inch per hour per square foot per degree difference. This figure is probably high, but is safe. The cost of insulation was determined from prices offered by Lafayette dealers. The cost of application was obtained from reliable contractors. Incidentally, roll type insulation was used for the side walls, and bat type insulation was used for the ceiling. The cost of the roll type insulation was $40.00 per thousand square feet of one inch, $50.00 per thousand square feet for two inch, and $65.00 per thousand square feet for full thickness or 3¾”. The cost of application was $17.50 per thousand square feet for all thicknesses. The bat type of insulation was quoted at $30.00 per thousand square feet for 4 inch, and the application cost was $20.00 per thousand square feet. For the sake of comparison, the bat insulation was computed on a cost basis of $12.50 per thousand square feet per inch of thickness.

The ceiling losses were based on the attic being unventilated, and proper consideration was given to the increased temperature difference due to the addition of insulation. It is known that it is poor practice not to ventilate insulated attics, however the probable attic temperature when unventilated can be very closely approximated in the house selected.

Results of computations are presented in Tables I, II, and III. Table I records the results for the ceiling losses alone, and includes for thickness of insulation from zero to and including four inches in increments of one inch, the coefficient of heat transmission, attic temperature, temperature difference, ceiling surface temperature based on 75°F air temperature at the ceiling, heat loss through the ceiling, annual cost of heat lost, annual saving due to insulation, cost of insulation, and the investment value of the insulation over a twenty year period. Table II and Table III present similar figures for the side wall heat losses and the total heat losses respectively.

The law of diminishing returns goes into effect at a thickness of insulation between two and two and one-half inches, as can be shown by noting the annual saving as a percentage of the cost of insulation. This percentage starts at zero, increases to a maximum of sixty-four and decreases to 54 percent at full thickness. However, a fifty-four percent return represents excellent investment and reminds one that the action of the law must be considered from the standpoint of relativity. When set up on a twenty year basis, the full insulated house shows a net saving of $1,159.30 which results from an investment of $136.00. Surely that return illustrates the futility of the law of diminishing returns as applied to Mineral Wool insulation.
MR. CONTRACTOR:

Do you want your buildings to be the talk of the town — the buildings that set the standard of values in your community? Then follow leaders like Mr. F. J. Walsh.

Salability through better appearance, wider color range and more accurate appearing walls are all extras you get with DUNBRIK without extra cost. In fact, DUNBRIK'S absolute accuracy in all dimensions and lighter weight will reduce your labor cost. Its greater strength and lower absorption is your assurance of trouble-free masonry construction. Its almost limitless color range gives you wider freedom in utilizing the colors and shades most adaptable to the architectural design in hand.

Its companion units, called DUNSTONE, that are exact two and three time multiples of the standard size DUNBRIK, offer a further opportunity for cost reduction and variance in design.

Ask your local Authorized DUNBRIK Manufacturer or write us for complete information on "Why DUNBRIK—DUNSTONE Builds Better for Less."

THE MANUFACTURE OF DUNBRIK IS TODAY'S GREATEST MANUFACTURING OPPORTUNITY. INVESTIGATE AND LET US SHOW YOU HOW YOU CAN OWN A DUNBRIK PLANT — HOW THE AUTOMATIC DUNBRIK MACHINE WILL ENABLE YOU TO DOMINATE THE MASONRY MATERIAL MARKET IN YOUR COMMUNITY. WRITE TODAY, WHILE YOUR TERRITORY IS STILL OPEN — NO OBLIGATION.

W. E. DUNN MFG. CO.
450 W. 24th St.          Holland, Michigan

Mr. Fred Walsh — Believes in building for permanence — in his Lincolnwood Estates development he advertises and requires that all construction be either brick or brick and stone.
2. AMERICAN SPINNER EDGER

Here’s a real money-maker and time-saver—the American Spinner for edging and matching the borders with the body of floor work. This is also an excellent machine for stair treads, halls, closets, landings, display windows and other hard-to-get-at places. The patented design and construction of this disc type edger makes it a favorite with the professional floor trade.

Modernize Diner with Porcelain Enamedel Panels

Once an old style roadside diner, Hoffman’s Diner, located on the Saratoga-Albany Road, near Newtonville, N.Y., was recently enlarged and dressed in an attractive new coat of porcelain enamel and offers an excellent example of what can be accomplished by remodeling when modern design and materials are used. It is one of the largest restaurants of its kind in New York state, being 100 feet long by 16 feet wide.

The Flexlume Corporation of Buffalo designed, fabricated and erected the building and signs, and approximately 3,000 square feet of Armco enameling iron was used as a base for the glossy porcelain enamel.

FROM the ground to the window tops, the enameled steel panels covering this roadside diner are a vivid Chinese red; those above the unbroken line of windows, which also contain the sign, are light blue, while the tower over the entrance is a combination of the two colors. A large lot provides ample parking space.

Wallboard with Four Beveled Edges Developed

A NEW development in the manufacture of wallboard has been announced by the Certain-teed Products Corporation, New York City, with the production of a gypsum wallboard having all four edges beveled; this makes possible concealed side joints as well as concealed end joints. When two pieces of this “Bestwall” wallboard are placed together, the two bevels form a depression in which the reinforcing tape is applied; the tape is then covered with joint finisher, forming a smooth, strong joint.

This four-bevel wallboard eliminates much of the “feathering-out” that was necessary in finishing the ends of the applied boards, thereby saving time and labor. Also, by permitting horizontal application, it furnishes additional bracing to the structure and provides greater strength to joints at all openings and corners.

Bestwall is now being manufactured in this improved form only at the Acme, Texas, plant of Certain-teed, and distribution is limited to the area served by this plant. During the coming year, however, the company plans to extend production to its other plants, and distribution will be made nation-wide.

Send Coupon Now

If you are at all interested in getting into something for yourself and getting out of the “old rut” or if you want to increase your profits in your present business, sign and send in the coupon below. There is no cost or obligation to you. Be sure to check the kind of machine you are most interested in on the coupon below.

3. AMERICAN PORTABLE SAW

Slow hand methods on many jobs can be replaced by this speedy, electric portable American Saw. Labor saved by this saw will run into hundreds of dollars yearly.

Send in coupon now.

Businesslike without loss of economy, the American Floor Surfacing Machine is designed for experts and general use. The American Floor Surfacing Machine is a speedier, more thoroughly efficient machine. It is not intended to be used by those who are not willing to devote their time and attention to the task of surfacing, but by those who desire to get into a field of work that is both profitable and rewarding.

Wallboard with Four Beveled Edges Developed

A NEW development in the manufacture of wallboard has been announced by the Certain-teed Products Corporation, New York City, with the production of a gypsum wallboard having all four edges beveled; this makes possible concealed side joints as well as concealed end joints. When two pieces of this “Bestwall” wallboard are placed together, the two bevels form a depression in which the reinforcing tape is applied; the tape is then covered with joint finisher, forming a smooth, strong joint.

This four-bevel wallboard eliminates much of the “feathering-out” that was necessary in finishing the ends of the applied boards, thereby saving time and labor. Also, by permitting horizontal application, it furnishes additional bracing to the structure and provides greater strength to joints at all openings and corners.

Bestwall is now being manufactured in this improved form only at the Acme, Texas, plant of Certain-teed, and distribution is limited to the area served by this plant. During the coming year, however, the company plans to extend production to its other plants, and distribution will be made nation-wide.

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What insulation helps SELL HOUSES?
"JOHNS-MANVILLE Ful-Thik Super Felt!"
... say America's smartest builders

That's why they identify the essential "hidden value" built into their houses with this eye-catching plaque

MILLIONS of home owners and prospects recognize Johns-Manville as the leading maker of home insulation. Why not cash in on this acceptance as hundreds of successful builders are doing... include the sales-making benefits of J-M Ful-Thik Super-Felt Rock Wool Batts in all your houses! This better home insulation costs but slightly more than thin, less efficient materials. It actually costs no more to install. And it adds these 4 advantages that make any home more salable:

1. Ful-Thik Super-Felt assures maximum year-round comfort.
2. It provides maximum fuel savings.
3. It gives maximum fire protection.
4. It builds up your reputation for quality work.

Get the facts. Ask for prices, and look at a sample of the handsome plaque which J-M provides FREE for each house in which J-M Super-Felt is used. Phone the nearest J-M office, or write Johns-Manville, 22 East 40th Street, New York, N.Y.
Building permits in cities having a population of half a million or over, all city size-groups showed increases, comparing the first half of 1940 with the corresponding period of the preceding year. The rural nonfarm area, which is comprised of incorporated places having a population of less than 2,500 and unincorporated areas excluding farms, also provided more dwelling units during the first half of the current year than during the corresponding period of 1939. Of the dwelling units provided during the first half of this year, 21,486, or 9 per cent, were in projects under the sponsorship of the United States Housing Authority. During the first half of 1939, USHA projects provided 19,537 dwelling units, approximately the same percentage as during the corresponding period of 1939.

A comparison of the family-dwelling units provided, by source of funds, is shown in the following table by population group, for the first half of 1940 and of 1939:

<table>
<thead>
<tr>
<th>Population Group</th>
<th>Total Sources of Funds</th>
<th>USHA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Private</td>
<td>USHA</td>
</tr>
<tr>
<td>500,000 &amp; over</td>
<td>14,161</td>
<td>1,832</td>
</tr>
<tr>
<td>100,000 &amp; under</td>
<td>24,131</td>
<td>1,419</td>
</tr>
<tr>
<td>25,000 &amp; under</td>
<td>28,325</td>
<td>2,682</td>
</tr>
<tr>
<td>20,000 &amp; under</td>
<td>33,085</td>
<td>2,100</td>
</tr>
<tr>
<td>15,000 &amp; under</td>
<td>38,160</td>
<td>1,175</td>
</tr>
<tr>
<td>10,000 &amp; under</td>
<td>45,344</td>
<td>1,156</td>
</tr>
<tr>
<td>5,000 &amp; under</td>
<td>52,307</td>
<td>1,075</td>
</tr>
<tr>
<td>Rural Nonfarm</td>
<td>64,309</td>
<td>2,056</td>
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</tr>
</tbody>
</table>

**PERFECTION STOVE COMPANY**

The perfect answer to the heating problem for the Low Cost House!... the new Model 80 SUPERFEX

**READ THIS GOOD NEWS:**
- A complete modern oil burning furnace priced to meet the heating budget for FHA or other low-cost homes.
- All the sales advantages of modern oil heat with an operating cost in line with the small home budget.
- Three combinations available—manual operation, automatic, or automatic air-conditioning—to fit low-cost houses of different price levels... yet one basic furnace handles all three.
- No assembly or installation headaches. Furnace comes completely set up and ready to go.
- It is forecast that 80% of 1941 new houses will be priced at $4500 or under—and here's the way to put modern oil heat, even with air-conditioning, into these low-priced houses.
- This is a real oil furnace with built-in oil burner, made of finest quality materials. Long flue travel, large heating surfaces, 53,000 B.t.u. at the bonnet.

American Builder, October 1940.
continue to show projects under the jurisdiction of the USHA as a much larger percentage of all public housing than the corresponding percentage for private housing. During the first half of 1939, 35 per cent of all dwelling units provided by private funds were in cities having a population of 100,000 or over, while 85 per cent of the USHA dwelling units were in this population group. In the first half of 1940 only 32 per cent of the dwelling units financed from private funds were in cities having more than 100,000 population, while USHA projects in these cities accounted for 77 per cent of the total number provided for by USHA.

The estimated number of new family-dwelling units provided in the nonfarm area of the United States during the first half of 1939 and 1940 is given below, by geographic division:

Estimated Number of Dwelling Units Provided by New Housekeeping Construction in Nonfarm Areas of the United States During the First Six Months of 1940 and 1939, by Geographic Division and by Type of Dwelling

<table>
<thead>
<tr>
<th>Geographic Division</th>
<th>First Six Months of—</th>
<th>1940</th>
<th>1939</th>
<th>1940</th>
<th>1939</th>
<th>1940</th>
<th>1939</th>
</tr>
</thead>
<tbody>
<tr>
<td>New England</td>
<td>1,065,000</td>
<td>837,000</td>
<td>692,500</td>
<td>575,000</td>
<td>455,000</td>
<td>1,088,000</td>
<td>618,000</td>
</tr>
<tr>
<td>Middle Atlantic</td>
<td>46,933</td>
<td>35,000</td>
<td>28,500</td>
<td>23,000</td>
<td>18,500</td>
<td>473</td>
<td>374</td>
</tr>
<tr>
<td>East North Central</td>
<td>20,635</td>
<td>15,500</td>
<td>12,000</td>
<td>9,500</td>
<td>7,500</td>
<td>5,000</td>
<td>3,500</td>
</tr>
<tr>
<td>South Atlantic</td>
<td>42,500</td>
<td>34,500</td>
<td>27,000</td>
<td>22,000</td>
<td>17,000</td>
<td>6,000</td>
<td>5,000</td>
</tr>
<tr>
<td>East South Central</td>
<td>12,500</td>
<td>10,500</td>
<td>8,500</td>
<td>6,500</td>
<td>5,500</td>
<td>5,111</td>
<td>4,000</td>
</tr>
<tr>
<td>West South Central</td>
<td>24,500</td>
<td>20,000</td>
<td>16,000</td>
<td>13,000</td>
<td>10,000</td>
<td>6,000</td>
<td>5,000</td>
</tr>
<tr>
<td>Mountain</td>
<td>2,500</td>
<td>2,000</td>
<td>1,500</td>
<td>1,200</td>
<td>1,000</td>
<td>2,000</td>
<td>1,500</td>
</tr>
<tr>
<td>Pacific</td>
<td>17,500</td>
<td>15,000</td>
<td>12,000</td>
<td>10,000</td>
<td>8,000</td>
<td>5,778</td>
<td>5,000</td>
</tr>
<tr>
<td>TOTAL U.S.</td>
<td>241,315</td>
<td>223,511</td>
<td>190,691</td>
<td>166,483</td>
<td>13,846</td>
<td>10,567</td>
<td>36,778</td>
</tr>
</tbody>
</table>

The number of dwelling units provided through private financing was higher in the Pacific States than in any other geographic division. The South Atlantic provided the second highest number of dwelling units, followed in order by the East North Central and Middle Atlantic States. Dwelling units provided through USHA financing in the first half of 1940 were highest in the South Atlantic States. The Middle Atlantic States ranked second and the West South Central States, third. The estimated permit valuation of new housekeeping construction in nonfarm areas of the United States during the first six months of 1939 and 1940 is given in the following table, by geographic division:

Estimated Permit Valuation of New Housekeeping Dwellings in Nonfarm Areas of the United States During the First Six Months of 1940, by Geographic Division and by Type of Dwelling

<table>
<thead>
<tr>
<th>Geographic Division</th>
<th>New England</th>
<th>Middle Atlantic</th>
<th>East North Central</th>
<th>South Atlantic</th>
<th>East South Central</th>
<th>West South Central</th>
<th>Mountain</th>
<th>Pacific</th>
<th>TOTAL U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-family dwellings</td>
<td>$5,000,000</td>
<td>$5,000,000</td>
<td>$5,000,000</td>
<td>$5,000,000</td>
<td>$5,000,000</td>
<td>$5,000,000</td>
<td>$5,000,000</td>
<td>$5,000,000</td>
<td>$824,476,000</td>
</tr>
<tr>
<td>2-family dwellings</td>
<td>$50,000</td>
<td>$50,000</td>
<td>$50,000</td>
<td>$50,000</td>
<td>$50,000</td>
<td>$50,000</td>
<td>$50,000</td>
<td>$50,000</td>
<td>$668,992,000</td>
</tr>
<tr>
<td>Multifamily dwellings</td>
<td>$5,000</td>
<td>$5,000</td>
<td>$5,000</td>
<td>$5,000</td>
<td>$5,000</td>
<td>$5,000</td>
<td>$5,000</td>
<td>$5,000</td>
<td>$46,786,000</td>
</tr>
</tbody>
</table>

Three combinations available in one furnace:

1. Manually operated.
2. Completely automatic, same furnace with thermostat and controls.
3. Automatic air conditioning, same furnace with thermostat, controls, blower, filter and humidifier.

DON'T WAIT! Orders being taken now. Shipments will be made in order of receipt. Write TODAY to PERFECTION STOVE COMPANY, 7268-A Platt Ave., Cleveland, Ohio

SUPERFEX

CLEVELAND, OHIO
NEWS—

Total permit valuations for dwellings of all types amounted to $824,764,000 during the first six months of 1940. Of this approximately $669,000,000, or 81 per cent, was for 1-family dwellings; nearly $47,000,000, or 6 per cent, for 2-family dwellings; and approximately $109,000,000, or 13 per cent, for apartment houses.

The highest expenditures occurred in the East North Central States, which accounted for total permit valuations of nearly $166,000,000. Other divisions accounting for an expenditure of more than $100,000,000 were the Middle Atlantic, with $161,000,000; the Pacific, with approximately $158,000,000; and the South Atlantic, with more than $131,500,000.

Permit valuations are shown, by source of funds, in the following table for each geographic division:

<table>
<thead>
<tr>
<th>Geographic Division</th>
<th>Estimated Permit Valuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>Private</td>
</tr>
<tr>
<td>New England</td>
<td>$264,679,000</td>
</tr>
<tr>
<td>Middle Atlantic</td>
<td>181,723,000</td>
</tr>
<tr>
<td>West North Central</td>
<td>69,474,000</td>
</tr>
<tr>
<td>South Atlantic</td>
<td>71,108,000</td>
</tr>
<tr>
<td>West South Central</td>
<td>53,371,000</td>
</tr>
<tr>
<td>Mountain</td>
<td>33,730,000</td>
</tr>
<tr>
<td>Total</td>
<td>$648,191,000</td>
</tr>
</tbody>
</table>

August Residential Volume Largest

Since July 1929; All Building Reaches Ten-Year High

The total for all types of construction activity reached a ten-year high mark in August with a volume of $414,941,000 in 37 states east of the Rocky Mountains, according to F. W. Dodge figures. Of this amount, residential building accounted for $152,988,000, also establishing a new high point in volume, the largest since July 1929, and 20 per cent higher than that of August last year.

Stimulated by the defense program, the total figures reflect the growing impetus of rearmament, both divisions of the industry, public and private, sharing in the gains.

Statistics for the four classes of construction in 37 eastern states are as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>August, 1940</th>
<th>August, 1939</th>
<th>July, 1940</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>$152,988,000</td>
<td>$127,163,000</td>
<td>$140,430,000</td>
</tr>
<tr>
<td>Non-Residential</td>
<td>119,189,000</td>
<td>69,882,000</td>
<td>138,954,000</td>
</tr>
<tr>
<td>Public Works</td>
<td>119,358,000</td>
<td>95,170,000</td>
<td>85,681,000</td>
</tr>
<tr>
<td>Utilities</td>
<td>23,406,000</td>
<td>20,113,000</td>
<td>33,608,000</td>
</tr>
<tr>
<td>Total</td>
<td>$414,941,000</td>
<td>$312,328,000</td>
<td>$398,673,000</td>
</tr>
</tbody>
</table>

Morrill Analyzes Effect of Conscription on Home Building

Will the registering of 16,500,000 men for military service in October check or halt the year's pronounced upswing of interest in home building throughout the country? This is the question which hundreds of thousands of contractors, dealers, architects and skilled building trades workers are anxiously asking themselves.

The answer, in the opinion of E. W. Morrill, general sales manager of the Insulite Company, is an emphatic "No!"

"Analysis of hundreds of sales reports sent in by salesmen and dealers from all parts of the United States since the recent passage of the selective service act indicate that conscription will stimulate rather than retard home building," said Morrill; and he continued, "Adoption of conscription as a national defense measure has led many potential home builders, long indifferent to the European War, to believe that our participation in the war is not so improbable, after all. And knowing that our entry in the war would result in rising prices, higher wages for skilled labor, increased rent, and a probable widespread scarcity of various building materials..."
for private use, many who have delayed building are hurrying to escape possible extra costs by building at once.

"Many married men of draft age now feel that they are almost certain to be called into service should war come. Thousands of these men are so concerned about their families' future that they are planning to build at once, so their wives and children may be assured of roofs over their heads should men with families eventually be called to arms. Another new group of prospective home builders now considering building is made up of those who are convinced that it is preferable to put earnings and savings into a permanent, tangible form of investment with high use-value, rather than in those depending for their value upon dividends or interest returns."

"These, and other such tendencies," concluded Morrill, "convince us that more new homes will be put up during the coming year than during any previous year in the past decade."

**Develop New Metal Corner Bead**

A NEW Super-Ex corner bead has been recently developed by the Milcor Steel Company, Milwaukee, Wis., through the use of a half-solid, half-expanded wing, combines the rigidity of a solid-wing corner bead with the plaster-bonding qualities of an expanded metal wing. The central section of the unit is a "backbone" of solid steel, perforated and double-fluted for extra strength. The remainder of the wing is of expanded mesh, insuring a tight plaster bond and a crack-proof building corner. The solid wings of Super-Ex extend far enough on either side of the nose of the bead to reach the base wall at all points, thus eliminating all irregularities due to rough corners. In case of an accidental blow to the corner, major shocks are transmitted directly to the solid wall, and resulting minor shocks are diffused by the expanded metal reinforcing the plaster. Super-Ex is precision stamped and expanded from one-piece 24 and 26 gauge Titecoat galvanized steel.

**Rents Low in Slum Clearance Housing**

MONTHLY rents averaging only $12.34 per home have been established for the first 85 public housing projects for which rents have been approved under the United States Housing Authority slum clearance program. These shelter rents which do not include light, heat, or other services, range from an average of $9.98 a month for 50 projects in the South to an average of $14.28 for 35 projects in the North. The 85 projects will provide homes for 27,605 low-income families, or about 110,000 persons. They are located in 58 communities in 18 states and one territory and are the first of the 475 low-rent public housing projects in the current USHA program to reach an occupancy status.

In addition to shelter rent, tenants in all projects pay a small sum each month for utilities—such as cold and hot water, heat, electricity and gas—where provided. With these extras added, the average monthly shelter rent plus utilities for the 85 projects is $17.82 per home. The range throughout the country is from an average of $13.75 in the South to an average of $21.18 in the North.

The estimated average income of the tenants in these pioneer projects will be about $756 a year, or approximately $63 a month.

Sixty-seven USHA projects totaling 21,671 homes now are occupied. By January 1, 1941, there will be 82 more projects, with a total of 30,684 homes, ready for occupancy.

In addition, 1,174 USHA low-rent homes for families of enlisted Army and Navy personnel and low-income civilian national defense workers are scheduled to be completed by the end of December.
Insulation Finish Applied with New Tool

The new Temlok De Luxe structural units are offering fifty per cent thicker insulation at no increase in their installed cost, according to an announcement by the Armstrong Cork Company of Lancaster, Pa. Extra strength is derived from the 34-inch thickness, permitting the erection of these panel and plank units on furring (or direct to framing members if true, even, and properly bridged) 16 inches on centers. Savings in furring cost and installation time actually more than make up for the slight extra purchase price of this thicker insulating interior finish.

These units are available in panels (16" x 16", 16" x 32", and 16" x 48") and in planks (16" wide by 8', 10', and 12' long). Cores are white and cream, and the base material is Temlok. Proper installation of these units calls for the use of Armstrong's Tem-Clips which provide permanent, invisible, mechanical support to furring strips or framing members.

ABOVE illustration shows how a 16" x 16" Temlok De Luxe panel is erected directly to the ceiling joists, with two Tem-Clips being nailed in place against the leading edge of each panel. Prongs of the clips extend to grip the male edge of the next panel to be put in place. The workman is using the special magnetic head setting tool (furnished by Armstrong) which conveniently holds Tem-Clip and nail in proper position.

FHA Appraisals Will Not Cover Unjustifiable Increases

Federal Housing Administrator Stewart McDonald has told manufacturers, distributors, and builders today that the FHA would not permit its appraisals of new home construction to cover any unjustifiable increases in materials prices.

In letters to representatives and members of the building industry, Mr. McDonald said that the FHA had noted with apprehension a tendency toward increased prices in building materials. He called attention to a statement by Leon Henderson, director in charge of Price Stabilization of the National Defense Commission, to the effect that recent price rises had not been justified by defense needs, and said, "Neither you nor the members of your organization, I am certain, will wish to permit anything to impede the current rate of home construction which is contributing so much to economic recovery and to national defense."

In letters to builders Mr. McDonald further stated: "I am aware that the building material dealers and distributors are not always solely responsible for increased prices, but that they are often obliged to protect themselves in their 60-90 day quotations to speculative builders, thus tying up their current inventories."

Realtors to Discuss Home Building Outlook at Annual Convention in Philadelphia

Both normal home building and the whole question of defense housing are matters of first importance in the real estate field today, and they will have an important place in the discussions of the National Association of Real Estate Boards when it meets for its annual convention in Philadelphia the week of Nov. 11. The convention will be held at the Bellevue-Stratford Hotel.

Hugh Potter, Houston, Tex., past president of the Association and a member of the Advisory Committee to the Federal Hous-
ing Administration, will open the discussion of what's ahead for normal home building, addressing the Land Developers and Home Builders Division, of which he is a past chairman. Mr. Potter, a past president of the Houston City Planning Commission and of the Houston Real Estate Board, is head of the River Oaks Corporation, developers of River Oaks, one of the most beautiful residential developments in the country, occupying a tract of 1,000 acres, and served by a business subcenter planned for the motor age.

David D. Bohannon, San Francisco, vice chairman of the Division, and head of the David D. Bohannon organization, which is developing a number of residential communities in the San Francisco area in various price ranges, will give the convention his experience as to what is wanted and what is practical in design, layout and marketing of a residential tract under present-day conditions. Writing in Freehold, magazine of real estate, in the Sept. 1 issue, Mr. Bohannon says: "Recent experience has brought home to me the importance of location. A 27-acre tract opened this spring in the heart of a long-established residential community, an area where large estates have for long held choice land off the market, has sold much more rapidly, even though lots were smaller, than has land in a similarly attractive subdivision with larger lots in an identical price range but lacking the location factor."

He gives further information as to market trend on size of lots as follows: Lot sizes approximately 60 x 170 feet have sold readily for 40 cents per square foot, including quality improvements. But on the part of the property which is zoned to require a lot 125 feet wide, with 17,500 square feet as a minimum, the lots even at 26 cents per square foot move more slowly. Price range of the houses being built on the tract is $9,500-$20,000.

How to build and sell homes in a really low price range will get careful study in the Division's sessions.

"ASQU," New Asphalt Roofing

A NEW asphalt roofing, identified by the name ASQU, has been perfected and placed on the market by its first licensee, the Philip Carey Company, Lockland, Ohio. Patents covering the process of manufacture, the equipment used in the process, and the product itself, have been granted. Almost complete saturation of the felt is the distinguishing mark of this new roofing material. Ninety-eight and one-half per cent asphalt saturation characterizes this roofing as compared with the minimum standard of 85 per cent saturation required by the Underwriters Laboratories.

Lack of uniformity in asphalt saturation and incomplete saturation of the felt base have been the causes of occasional unsatisfactory roofing performance, it is claimed, and these sources of trouble are eliminated by the ASQU manufacturing process. Accelerated weathering tests show that these fully saturated roofings are standing up longer and giving satisfaction under more severe punishment than builders have experienced heretofore. The Philip Carey Company has now introduced ASQU roofing widely to the trade, and reports nation-wide favorable reaction to the new product.

Ornamental Lead Lanterns for Homes

LEDLITE is the name of a new line of lead lanterns developed recently by the Products Research Company, Stamford, Conn., to meet the demand for low cost ornamental lighting fixtures. For centuries lead has been closely identified with beautiful ornamental metal work, lighting fixtures being one of the most popular applications. However, ornamental leadwork of this type in the past has been fairly expensive and restricted consequently to homes in the higher price brackets; modern Ledlite fixtures meet the budget requirements of even the most modest home, yet retaining all of lead's charm and beauty.

The everlasting lanterns are made in several models and designs with plain or ornamental beaten finishes. Both wall-hung and chain fixtures are available, as well as fixtures manufactured to the design of the individual specifier.

NEW lighting fixture of lead.
Die BONDERIZED STEEL WINDOWS
1818 The Name Guarantees 1940

THEIR EXTRA SALES APPEAL
Actually Costs No More

- Hope's Bonderized Steel Windows will make your houses easier to sell. Home buyers like these benefits: more light and 100% ventilation; effortless operation; safe, easy cleaning; freedom from sticking and rattling and warping; no trouble or expense for upkeep.

Best of all, Hope's Holford Windows are remarkably low in cost to the builder... require less time and labor to install... and there are no "extrav" to buy. Regardless of the price class in which you build, it will pay to investigate Hope's. Steel windows saved $996,629 in forty-six recent U. S. low-cost housing projects.

Write for catalog 68ABO
HOPE'S WINDOWS, Inc.
Jamestown, N. Y.

American Builder, October 1940.

Flexible Moulding Seals Joint at Tub and Wall

Nairn Tub Moulding is a new product created by Congoleum-Nairn, Inc., Kearny, N. J., for the purpose of sealing joints between bathtub and wall in installations of built-in bathtubs and Nairn wall linoleum. This moulding is a specially designed filet strip of sponge rubber faced with solid rubber to provide a permanent, watertight, decorative and sealing joint around the tub and wall. While primarily designed for use with Nairn wall linoleum, it may be used with tile or other wall finishes. It will also serve as a protective seal and joint between floor and tub.

Nairn tub moulding is flexible, will follow contours of the tub, and will accommodate seasonal movement between tub and wall without breaking the seal. Its flexibility makes continuous one-piece installations easy, and may be used from one end of the tub joint to the other without any cutting except for a small notch at the sharp right angle of the inside corner. The hard rubber outer surface is impervious to soap and hot water.

The new material is carton-packed, with a 15-foot strip of Nairn tub moulding, proper amount of adhesive, an applicator brush and an instruction folder.

RUBBER moulding applied around bathtub with adhesive permanently seals this joint between wall and fixture.

Low-Rent Public Housing Kept Simple

According to an analysis by the United States Housing Authority, elimination of frills and gadgets on dwellings for low-income families from the nation's slums is producing simple, economical and comfortable homes at low costs. This "de-gadgeting" process is keeping low-rent public housing definitely out of the "de luxe" class.

Among the major departures from design and equipment used by private builders which have radically reduced costs, the following are common to most homes built in the USHA program:

- Room areas are held to a minimum for health and comfort. These areas are smaller than are usually provided for dwellings for higher income groups.
- Cooking and dining space are combined, or dining space is provided in living rooms.
- Kitchen equipment—such as ranges, sinks and work top cabinets—are of the same height, but continuous kitchen counters are not provided.
- Porches and balconies are provided only where the climate makes them necessary for living comfort.
- Exterior and interior trim for decorative purposes are held to a minimum.
- Fireplaces, built-in bookcases, shower baths, tiled bathroom walls and similar items are omitted.
- All built-in is of simple and durable design. Latches only, instead of locks, are usually used for interior doors.
- Lighting fixtures are simple, but effective and serviceable.
- Doorbells and speaking tubes are installed only in buildings where they are deemed indispensable.
Unions Agree to Speed Defense

CO-OPERATING to speed up economical construction of low-rent housing for national defense workers, building trades unions throughout the country are agreeing to work double shifts of mechanics at straight time wages on defense housing projects financed by the United States Housing Authority.

This arrangement, which cuts building time in half without substantially increasing cost, has already been made in seven localities. It is based on resolutions adopted by the local unions which provide that they will furnish double shifts at straight time on an 8-hour day, 40-hour week basis. Only where individuals or shifts work more than 8 hours in one day, or more than 40 hours in one week, is an overtime rate to be paid.

Localities in which unions already have adopted this resolution are: Montgomery, Ala.; Columbus, Ga.; Pensacola, Fla.; East Moline, Moline, Rock Island and Rantoul, Ill.

Negotiations leading to the setting up of similar arrangements in other localities where USHA defense housing projects have been approved by President Roosevelt now are being carried on by Walter V. Price, director of the USHA Labor Relations Division.

* * *

IN THE recently completed Bankers Life Building, Des Moines, Iowa, shown above, all air must check its dirt at the entrance and take a bath before being admitted. Equipped with the new Westinghouse Precipitron System which removes as much as 99 per cent of dirt particles, it is estimated that about 270 bushels of material will be taken from the air that is cleaned in a year's time.
**Something every woman wants...**

**Unired Space Made Into Rentable Small Apartment**

ALTHOUGH there is nothing particularly newsworthy in the average home modernization covering the finishing of attic space into an extra bedroom or so, or in the fixing up of a basement for a hobby or game room, the conversion of unused space into a rent-producing unit in a home is of more than a little interest. As described here, the work covered the transforming of an old neglected fruit cellar into a modern bachelor apartment at comparatively small cost. Since there is similar space in the form of added rooms at the rear of many old homes, frequently called summer kitchens, woodsheds, or storage rooms, what has been done here may inspire other changes like this one.

In this case the completed apartment, located in a western city, brought a return of $30 per month rent, and several other units like it could have been filled from the list of applicants.

Before the rejuvenation, the out of the way room stood, an eyesore—its uneven brick wall broken in places, its common wooden steps and battered chimney apparently revealing an unrepairable condition. But less than thirty days later it was the pride of the neighborhood.

Following a general cleaning up of the room, the walls were lined with 1 x 12 knotty pine, a low cost construction material. From the ceiling to, within two feet of the floor, the pine boards...
MASONITE TEMPERED PRESWDWOOD

...Two Sides to the Same Question

Problem: Given two living-rooms with identical dimensions, how would you design each room so that it would not look exactly like the other?

SOLUTION No. 1 — By using Masonite Tempered Presdwood for walls, ceiling and built-in furniture, many surface variations can be achieved without basic structural changes. Tempered Presdwood is a low-cost, all-wood board that can be cut or sawed with ordinary wood-working tools and nailed to studs. In this solution, the outstanding feature is the bay-window effect produced by furring down the ceiling with Tempered Presdwood.

SOLUTION No. 2 — The design of this room stresses utility. The long window is left flush with the inside walls. Built-in Tempered Presdwood sofa is flanked on one end by a built-in Tempered Presdwood desk and on the other end by built-in radio cabinet. Additional bookshelf space is also provided. The marble-smooth surface of Tempered Presdwood can be painted or enameled. Properly used, the board will not warp, chip, split or crack.

If you would like to examine a sample of Masonite Tempered Presdwood for free, just fill out and mail this coupon to:

MASONITE CORPORATION, Dept. AB-10-40
111 W. Washington St., Chicago, Ill.

Name
Address
City
State

The Wonder Wood of a Thousand Uses
SOLD BY LUMBER DEALERS EVERYWHERE
COPYRIGHT 1940, MASONITE CORPORATION
"Buy Home with Rent Money"

Is a Timely Sales Approach for Builders

BUILDERS, bankers, realtors, dealers—all the active selling forces of the home building industry are taking advantage of the present very attractive and advantageous home financing terms to change renters into home owners. With a small down payment, future monthly deposits, “just like rent,” acquire the new home and eventually lead to complete ownership.

“How much do you pay in rent?” is the challenging question which many of the savings and loan associations are asking the renting public through their little magazine, “Home Life,” which is edited by the U. S. Savings and Loan League and distributed by its local associations. This article brings out the truly astonishing sums of money which the average renter pays out during a lifetime of paying rent to the other fellow instead of to himself. The explanation of this table and of other pertinent home buying facts, addressed directly to the renter or prospective home buyer, is quoted as follows:

“Here is a simple arithmetical schedule that has been set up to show you how much you will actually pay out in rent over a period of 1 to 25 years. It is simply the totals of the monthly rent added together. You could work out the same chart for yourself. But together these figures represent amazingly large figures—sums that are a little frightening when you think that they drain your pocketbook and all you have to show for the money spent is a pile of rent receipts.

“The amount of money you will spend during the time your family is growing up or during your married life-
time are figures which amount to the cost of a very fine home if you are to apply them all at once to the purchase. The United States Life Table has a chart which shows the joint expectation of the life of the husband and wife beginning at certain specified ages. These figures are based on fact and denote the number of years of family life the average married couple may expect to have together.

"These years are the years when your own home is

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<th>Rent Paid</th>
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JOINT EXPECTATION OF LIFE OF HUSBAND
AND WIFE AT SPECIFIED AGES*

- Present Age of Husband
- Present Age of Husband
  | Present Age of Husband |
  | Wife | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
  | 20   | 20.5| 23.8| 35.8| 31.4| 28.2| 25.1| 22.0| 19.0| 16.1| 13.2| 10.3| 7.4| 4.5| 1.6|
  | 25   | 23.8| 33.2| 35.4| 28.2| 25.1| 22.0| 19.0| 16.1| 13.2| 10.3| 7.4| 4.5| 1.6| 0.0|
  | 30   | 29.1| 27.3| 25.1| 22.0| 19.0| 16.1| 13.2| 10.3| 7.4| 4.5| 1.6| 0.0| 0.0| 0.0|
  | 35   | 27.5| 26.0| 24.2| 21.9| 19.0| 16.1| 13.2| 10.3| 7.4| 4.5| 1.6| 0.0| 0.0| 0.0|
  | 40   | 24.3| 22.8| 20.9| 18.7| 16.1| 13.2| 10.3| 7.4| 4.5| 1.6| 0.0| 0.0| 0.0| 0.0|
  | 45   | 21.1| 19.6| 17.7| 15.5| 13.2| 10.3| 7.4| 4.5| 1.6| 0.0| 0.0| 0.0| 0.0| 0.0|
  | 50   | 17.8| 16.3| 14.8| 12.6| 10.3| 7.4| 4.5| 1.6| 0.0| 0.0| 0.0| 0.0| 0.0| 0.0|

*According to United States Life Table.

A POWERFUL HELP in MAKING the HOME OWNER HAPPY—at a PROFIT—Install YOUNGSTOWN

PRESSSED STEEL Kitchens

The Proof of the Pudding is in the Profit!

Profit for the Builder—
Low Cost—
A product made inexpensive by mass production.
Easy and Quick Installation—
One man can install the average kitchen in a day.

Profit for the Home Owner—
Low Cost—
A new kitchen for about the price of a good refrigerator.
Increased Home Resale Value—
Always in style, always like new.

WRITE TODAY FOR BEAUTIFULLY ILLUSTRATED CATALOG AND FULL INFORMATION
MAKE THIS SIGN YOUR SELLING POINT

YOU can make the "Wolmanized Lumber" sign help you sell houses. Let prospects see the sign, then explain it like this:

"This house is really built to give you satisfaction. You've seen its many conveniences. Another important one is the use of Wolmanized Lumber for sills, joists, and subfloor. Wolmanized Lumber gives you protection against decay and termite damage. It prevents serious, expensive repairs. This house is built to last."

That is an honest, convincing selling argument, but not an expensive one. Using Wolmanized Lumber at danger points adds less than 2% to the total cost of a house. It is easy to handle, too, being clean, dry, odorless, and paintable.

Wolmanized Lumber is the only material of its kind which is always treated according to one standard set of specifications, and sold by lumber suppliers throughout the country under one brand. Its good reputation gives you dependable selling help. AMERICAN LUMBER & TREATING COMPANY, 1645 McCormick Building, Chicago.

Other Selling Helps
Send for samples of these folders, which help you explain forcefully to your prospects the advantage of construction with Wolmanized Lumber.

(Continued from page 103)
BOOKS on BUILDING

A REVIEW of current publications in the building field. For information about these books, write American Builder, Book Service Dept., 30 Church Street, New York City, or the publishers.


The Silver Anniversary Edition of these standard reference books for estimating construction costs of all kinds of buildings, completely revised and rewritten and brought up-to-date. They are as valuable to the small contractor as to the large one because they contain information, estimating and cost data on all types of house construction, as well as for industrial and business structures. All items entering into the making of construction estimates are arranged for ready reference, giving complete itemized material quantities and labor hours to perform any class of work. New materials, improved methods and labor-saving tools are also described. “The Vest Pocket Estimator” contains in tabular form often-used estimating and cost data for ready reference.


A practical manual of business methods and documentary procedure in the development and execution of industrial, power and building projects. The book covers the range of contract documents and provides useful checking lists, as well as specimen forms for a complete building project. Chapter headings are as follows: Contract Relationships; The Agreement; The Advertisement and the Information for Bidders; The General Conditions of the Contract and Special Conditions; Suretyship and Insurance; The

(Continued to page 106)

SEE YOUR HEATING DEALER
ASK HIM TO SHOW THESE

Gar Wood

NEW GAS-FIRED LINE (7 SIZES)
MODEL 001 (OIL-FIRED)

Compare specifications and you will know why these new Gar Wood Home Heating Units give your clients greatest value and best performance... are genuine Gar Wood products throughout... with desirable features found in no other units.

MODEL 60
Smallest and lowest priced in line of 7 Gas-Fired Units

The new Gar Wood units (oil or gas-fired) heat, filter, humidify and circulate conditioned air—provide air filtering and power-blower, comfort-cooling in summer.

Write for descriptive literature.

FRANTZ MANUFACTURING COMPANY
Sterling, Illinois

JUNIOR “Over-the-Top” Light Door Equipment made an instant hit with dealers, because it brought many of the distinctive selling features of the original “Over-the-Top” Door Equipment, at popular prices. Now equipped with the new automobile-type handle-lock, it should be easier than ever to sell. Though “Junior” is lighter, it is nonetheless efficient... it’s especially designed for the new, modern light doors of 150 lbs. or less, within the limits of 6½ to 7’ high and up to 8’ wide (which now can be obtained from your sash and door jobber)... and it’s priced for quick sales. Write today for information and prices.

Junior
LIGHT DOOR EQUIPMENT
Standard concrete masonry units help achieve a fascinating wall effect economically. Horizontal joints tooled; vertical joints obscured by striking flush in wide variety... one reason for the sales appeal of CONCRETE Homes. If you are looking for sales-making eye-appeal, consider Concrete! The wide choice of attractive textures and patterns obtainable with concrete masonry and reinforced concrete will help you give variety and distinction to your homes. CONCRETE HOMES ALSO ARE:

- Firesafe.
- More comfortable and dry in all weather.
- Resistant to dampness, termites.
- Free from sagging walls and other costly, annoying faults, as only a rigidly built home can be.

- BETTER VALUES! Concrete construction means little or no higher price tag—less cost to owner in the long run, thanks to low maintenance and high resale value.

Over 45,000 new concrete homes built in past 4 years, and you'll see more and more of them. Proof that people want concrete. Write for additional facts.

PORTLAND CEMENT ASSOCIATION
Dept. 10-3, 33 W. Grand Ave., Chicago, Ill.

BOOKS—(Continued from page 105)

Specifications; The Drawings; The Estimate; Syllabus of Business Procedure; The Check List; Example of Procedure and Practice for a Building Project in a Metropolitan Area.


A complete and easily understandable introduction to air conditioning, telling what it is and what it can do, and explaining its technical fundamentals, the methods of applying them, and the many types of equipment available and how they work. The book is divided into two parts: Part I covers the basic characteristics of heat, air, people, and houses, which comprise the fundamentals and essentials of comfort air conditioning; Part II covers the application and apparatus which comprise the more practical adaptation of the fundamentals of Part I. Necessary tables and charts are given in the Appendix.

SELLING REAL ESTATE TODAY—by Hobart Brady. 1940. 100 pages. 6 x 9, cloth. The Dartnell Corp., Chicago. $1.50.

A compact manual on real estate selling methods that will work today, written by a man in daily contact with the same practical problems of selling real estate that face every broker and salesman. The contents include: This Business of Ours; Why Brokers Are Necessary; Increasing Your Effectiveness; Your Prospect; Strategy of Creative Selling; The Art of Negotiation; and, Common Objections and Effective Answers.

HOW TO DESIGN AND INSTALL PLUMBING—by A. J. Matthias, Jr. 1940. 388 pages, 330 illus. 5 3/4 x 8 1/2, cloth. American Technical Society, Chicago. $3.00.

A "how-to-do-it" book containing information of value to beginners and apprentices as well as to experienced plumbers. Some of the subjects covered are: Municipal and private sewage disposal; materials used for sewer pipe and fittings; storm drainage; ventilation; soil; water supply; house service; domestic hot water supply, and plumbing fixtures.

STERLING CONCRETE CARTS
PLAIN OR ROLLER BEARINGS

No. 3 CART

6 Cu. Ft. Capacity — 14 Ga. Tray. • 30 In. or 36 In. Diameter Wheels. • Flat or Oval Tires. • Heat Treated Under Slung Axle. • Can be Furnished with 30 In. x 3 1/2 In. Pneumatic Tires.

STERLING WHEELBARROW CO.
MILWAUKEE, WISCONSIN
LETTERS from Readers on All Subjects
Facts, opinions and advice welcomed here

Plans to Reproduce World’s Fair Home
Milwaukee, Wis.

To the Editor:

In your June, 1940, issue of the American Builder you ran a story on pages 45, 46 and 47 on the Typical American Home, the dedication of which was attended by Mayor LaGuardia, Grover Whalen and other notables.

It is our ambition to reproduce this home in Milwaukee and we are naturally desirous of making such contacts that will enable us to obtain copies of the publicity that this home received in the New York papers.

It appears to the writer that the editors of some of the New York newspapers must have written up some editorial in their real estate sections on the dedication of these homes at the World’s Fair and as a subscriber of your magazine we appeal to you to send us whatever publicity you may have gathered from the newspapers, or otherwise to advise us where we can obtain copies of this publicity by quoting to us the newspapers and the dates that the story was carried.

JAY CONSTRUCTION CO.

For and Against the New Deal
Woonsocket, R. I.

To the Editor:

Your magazine is doing a fine work in trying to protect the contractors and builders from government meddling and government competition.

(Continued to page 108)

WAGNER GLIDE OVER GARAGE DOORS

Easy to operate—attractive appearance—simple to install—weatherproof.
Here is perfection in overhead door construction...no bulky or complicated mechanism to clutter up the interior of the building—so easy to operate women and children can easily open and close the Glideover door.

The Wagner Manufacturing Company have had many years of experience in building high speed elevator door operating equipment. This experience has been utilized in the design of the Glideover Door which accounts for the 100% satisfactory performance. Wagner Electric Door Controls may be furnished for Glideover or any other type of door.

Get the facts on Glideover Doors. Write for new bulletin giving complete details.

Wagner Mfg. Co.
Dept. AB 1040, Cedar Falls, Iowa
Serving The Building Trade For Over 33 Years

ONLY ILG HAS THE SELF-COOLED MIRACLE MOTOR THAT "Breathes"
NEVER "GUMS-UP"

Informed women who "shop" for modern homes or apartments want and expect ILG Kitchen Ventilators. For their complete satisfaction, specify the fan that is weatherproof ... trouble-free...smooth, effortless and supremely quiet in operation ... adjustable for different width walls ... has certified ratings ... and is backed by the time-tested "ONE-NAME-PLATE GUARANTEE"—that's ILG! Call in your nearby ILG sales engineer now, or write today for Bulletin H-511.

ADVERTISED NATIONALLY TO HOME-LOVERS
Cut down sales resistance by suggesting and specifying ILG—the nationally-accepted Ventilator! Consistently advertised for over 20 years—now featured in House and Garden and House Beautiful.

ILG ELECTRIC VENTILATING CO.
2852 N. CRAWFORD AVENUE, CHICAGO, ILL.
Offices in 42 Principal Cities

VENTILATION
AIR CHANGE...NOT JUST AIR MOVEMENT!
I want my kitchen modern!

And why not! A kitchen that has the benefit of modern planning is a pleasanter place to work. And the builder knows it’s the kind of room that helps sell a house to a woman.

Take the sink, for example. When you install a “formed” sink, porcelain enameled on ARMCO Ingot Iron, you not only have the powerful sales features of modern lines and long-time luster, but you can tell your prospects that the porcelain enamel is acid-resisting at no extra cost. With the increasing use of fruit juices, this is important.

Another sales advantage is the ARMCO label, which you can have not only on formed-iron sinks, but on laundry tubs, bathtubs and lavatories when made of ARMCO Ingot Iron. That label, backed by more than 25 years of national advertising, is your customers’ assurance of fine metal under fine porcelain enamel. Write for specifications and prices. The American Rolling Mill Company, 2541 Curtis Street, Middletown, Ohio.

ARMCO INGOT IRON
A NAME KNOWN TO MILLIONS

* Hot-water Hint: The newest thing in hot-water tanks is one that’s porcelain enamel-plied inside and out on ARMCO Ingot Iron. Less chance of corrosion leaks and rusty water.

American Builder, October 1940.

LETTERS—(Continued from page 107)

Do the government crackpots ever stop to think about what the ultimate result of their methods is? They spent millions for propaganda trying to create a building boom and then drive the sensible, responsible, builder and real estate developer out of business by putting on USHA programs or threatening them. They use the taxpayer’s money to put the taxpayer out of business. Here in Woonsocket real estate values take a drop with every report of the USHA program to be undertaken.

We are renting two-family, 6-room, 14-year old houses that cost $7,500 for $23 per month, and yet the government politicians are trying to catch a slam vote by bearing down on the property owners. If the government wants to increase building let them reduce the taxes and building will spurt ahead on its own initiative.

CARLTON J. ALDRICH.

1101 N. Estelle,
Wichita, Kans.

To the Editor:

Your editorial in the September 1940 issue takes the blue ribbon for stupidity and distortion. You better go back to kindergarten.

Historians, economists, and the preponderant portion of the American people agree that

1. The Republican Party, by its imbecility and intellectual sterility caused the wreck of 1929. That the business men who had a stranglehold on Government during the disgraceful Harding-Coolidge-Hoover era, were totally incompetent to correct the economic impasse they created.

2. That the New Deal has (1) ended abuse of the national well-being by the wealthy and powerful economic units; (2) has restored better and sounder business; (3) has brought a better sense of order and coherence to America than ever it had in history, and (4) has immeasurably added to the standard of living and security of more people than ever before in the U. S. A.

M. ROBERT SAMBER.

(The above communication was received on a postal card.)
Inquiry at Wichita, Kans., about the author brought the following reply:—EDITOR.

"Do not locate M. Robert Samber, 1101 N. Estelle, but have located M. Robert Samborski, 1103 N. Estelle. He is a Polish lawyer who came here from Chicago about a year ago. He is now with the Wichita Federal Savings and Loan Association, promoting savings accounts and general utility man."

To the Editor:

I have just received the September copy of American Builder. I note your message on Government Housing. It is my sentiment, and I am glad the American Builder has spoken. Every community where "Defense Workers" are called has men and equipment sufficient that can supply the need. As a taxpayer I protest the plea of the USHA. I wish you would forward this with your message to our congressman.

L. O. DANA.

Bridgeport, Conn.

To the Editor:

My answer to the last paragraph of your article on page 29 of the September issue of the American Builder is "yes." I believe the New Deal has done an exceptionally good job for building recovery, as well as other recovery, and the comparison is evident in your 1931-1934 being the lowest figure for a like period shown in your table—and that figure represents the wreckage of our economy that was turned over to the New Deal by the reactionary Republican party.

I subscribed to the American Builder on the assumption that it was a building trade publication and not a political one; therefore, will you cease sending it to my office.

EDWARD E. BRAY, President,
The Edward E. Bray Company, General Construction Contractors.

Sanford, Fla.

To the Editor:

What has a KNIGHT to do with the floors we build today?

500 years ago, when a knight set out for a tournament, he put on enough armor to build a miniature locomotive. Slightly awkward, but mighty good protection. For he was letting the armor take the punishment, meeting the blows with metal instead of flesh.

How to give floors a coat of armor

Floors today need plenty of protection against scuffing and furniture and wear. If a purely "penetrating" finish is used, it just sinks in, and leaves the wood itself exposed to damaging blows and use. If you use a built-up finish, such as a shellac, you're giving the floor a coat of armor. Then the finish—not the wood—takes the punishment.

Floors that look new when the house is old

Sturdy protection like that makes a home owner happy not just when the house is new, but down through the years. That's why it always pays to specify a good grade of pure white shellac.

Write to the Shellac Information Bureau, 70 Pine Street, New York City, for a free copy of the standard specifications for architects, as approved by the American Bleached Shellac Manufacturers Association.

SHELLAC INFORMATION BUREAU 70 Pine Street, New York City
LETTERS—(Continued from page 109)

Yes, I believe that those who have prevented recovery for seven and a half years are best qualified both to (1) cause recovery and (2) provide most economically and efficiently for national defense in the future.

The figures quoted perhaps are correct, but you must remember that the nation was in a critical condition when those who have prevented recovery took over the affairs. Banks were closing daily, deposits were subject to the bank being open when the checks were presented for payment, homes were being sold, life insurance companies had discontinued lending money here, property was not selling for enough to pay off the mortgage, and it took time to readjust the hellish condition that existed at that time.

Our town did no construction from 1927 to 1934, seven stagnant years; since 1934 we have been building more and more houses each year.

I subscribe to your magazine for the purpose of learning about building and not as an advocate of political issues. To stuff your magazine with such editorials for your subscribers to read is in my opinion the same as businesses stuffing pay envelopes trying to dictate to employees how to vote.

The local lumber yards who have enjoyed an increased business during the past five years of the seven and a half years of New Deal Administration and some of your advertisers whose products they sell, if they should happen to read your “Business Under the New Deal,” will I believe feel the same way as I about stuffing your magazine with this kind of political propaganda.

C. M. BOYD,
C. M. Boyd & Company, Mortgage Loans, Insurance, Real Estate.

To the Editor:
A group of local contractors, real estate men, etc. are trying to buck a proposed Federal Low Rent Housing Project here in Pottstown, and at a meeting of these men they asked us to write you to secure information on low cost homes.

We would especially like to secure some photographs of a...
development of low cost homes similar to page 34 of September 1940 issue: If possible, we would like to have a set of plans for this house, and also any other information that you may be able to give us to help us in defeating this project. This project has already passed the first reading in the Town Council and you can readily see that we need all the information that we can possibly get and as soon as possible.

FREDERICK BROTHERS, INC.
By R. F. Frederick

More About Soil and Cement Construction
Chicago, Ill.

To the Editor:
In the "Letters from Readers on All Subjects" Department of your September issue of American Builder, page 84, is a letter from R. Burton Rose, M.A., San Jose, Calif., describing the use of soil and cement for building low cost houses. This letter has prompted several inquiries to us for more information since the Portland Cement Association was mentioned in Mr. Rose's letter. No doubt your readers would likewise desire more information.

In 1935 the Portland Cement Association began research and field work to determine the possibility, practicability and economy of mixing roadway soils and cement to produce a low cost, light traffic road. This work resulted in the development of scientific methods for combining soil and cement to achieve this objective. This is shown by the Portland Cement Association receiving the 1939 award from the American Trade Association Executives, by the recent action of the American Society for Testing Materials in approving the soil-cement tests as Tentative Standards and the construction, to date, of the equivalent of over 600 miles of soil-cement roads by the Public Roads Administration, state and county highway departments, and cities.

It was obvious, as soon as scientific control methods for soil-cement mixtures had been developed and proved, that this new structural material would have many other uses. Low cost houses were naturally included. As soon as road experience gave reliable

(Continued to page 112)
background on probable construction costs, estimates were made of probable costs of building soil-cement houses. These estimates showed that where concrete aggregates were available for usual concrete ashlar, concrete block and monolithic concrete construction, there would be little savings in soil-cement construction. However, in areas where concrete aggregates are expensive and where labor costs can be ignored, soil-cement might produce economical construction. These facts reduced the places where soil-cement house construction might be economical to limited areas which at the same time have limited population.

In spite of the limited, practical use of soil-cement houses, the Portland Cement Association is developing research, test, design, cost and construction data. At the present time we regret we are not in a position to assist on testing or construction or to make recommendations because our work on soil-cement houses is still in the research, development and demonstration stage. We are accumulating the needed data on construction methods, both block and monolithic, on design, on structural values, insulation values, and other basic information needed to make dependable recommendations. All research completed to date is most encouraging. We are extending this work as rapidly as possible. When the necessary background is developed, our organization will issue booklets and test data for the engineering profession.

PORTLAND CEMENT ASSOCIATION
By M. D. Catton, Development Dept.

Reports "Cotton House" in the South

Birmingham, Ala.

To the Editor:

A "Cotton House" is an innovation in farm home construction offered in this section by the Farm Security Administration. Several such houses were recently constructed near Elba, Ala.

The houses can't be described as all cotton. The structural phase of the regular frame dwelling is retained, a smooth base provided by a layer of plywood, and then a cotton cover glued on by a formula developed by the U. S. Navy in ship building. The cotton is in the form of canvas duck, selected for its fire resistance, im-

Houses today are made comfortable. Insulated, storm windowed and weatherproofed against the elements; air-conditioned for further comfort. Comfortable for human beings but tough on building materials. It's up to modern builders to keep pace with these fundamental changes. The science of wood preservation has kept pace. Doors, windows, trim, cupboards, etc., can be protected so that they give life-long, trouble-free service.

On the cover of our new WOODLIFE folder "Keeping Up With The Times" is illustrated a door entrance that certainly "took it" under unusually trying circumstances. We would like to send you a copy.

Protection Products Mfg. Co.
Research Laboratory and Plant KALAMAZOO, MICH.
 perviousness to moisture, and durability. The canvas is used not only on the outer walls but for the roof as well, which is of the same material.

The canvas is laid on in such a way as to avoid air pockets, which would eventually cause sagging. It is laid on in strips—each overlapping the next by some four inches. After the duck covering is in place, it can be painted as any other ordinary surface.

According to W. V. Albright, district engineer for the FSA, the "cotton house" (four-room structure as shown in the picture) can be built for about $1,350, which is about the cost of an ordinary frame dwelling with wood siding and shingle roof. The house is ceiled with plywood.

The houses are now about 18 months old and from all appearances the cotton exterior is entirely satisfactory. Occupants of the houses say they are warm in winter and cool in summer. There are no leaks, no cracks or sags.

GEORGE H. WATSON.

Wants Advice on Basement Floor Problem
Washington, D.C.

To the Editor:
The basement of my house is damp due to condensation which

(Continued to page 114)
114

YOUR ANSWER
TO "BUILD FOR SECURITY NOW"

ROOFS
SIDE WALLS

RU-BER-OID ETERNIT
ASBESTOS CEMENT
FIRE-PROOF • ROT-PROOF
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You sell Building Security when you sell these improved Ruberoid-Eternit building products. Security against fire — security against rot and decay — security against upkeep costs.

For example, roofs of Eternit Asbestos-Cement Shingles. Here is beauty to sell — colorful shingles resembling "Wood Texture" or "Rugged Rock"—shingles that cast deep shadows, make interesting roof lines.

But there's more! Eternit Shingles offer security. They cannot burn. They are fire-proof. They won't dry out or rot—this year, next year or ever. They are time-defying. Periodic painting or staining is never needed to prolong their life. That is real security—investment security.

For another example—Side Walls of Eternit Asbestos-Cement Siding. Beautiful to look at. Modern as tomorrow. Colonial, Thatch or Weather-board designs. Smooth or textured like wood. Yes, you can sell eye appeal. But you can also sell security—for Eternit Sidings are both fire-proof and rot-proof. Termites get fooled. Paint protection is not needed. Fuel bills go down. Isn't that a real security story?

Both Eternit Asbestos Roofs and Sidings are Ruberoid-made— the best assurance of exacting quality and performance. Get all the facts. It will help you sell the idea, "Build for Security Now". Address Dept. AB-10.

The RUBEROID Co.
Executive Offices: 500 Fifth Avenue, New York, N.Y.

LETTERS— (Continued from page 113)

collects on the cement floor only. When the house was built, the basement floor was laid directly on the dirt. The contractor said a cinder base was not needed as the house is situated on a hill. However, the house is in a wooded section surrounded by numerous large trees.

I feel sure the dampness is caused by the hot, moist air condensing on the cold cement floor. There is no dampness during the winter or during the summer when the weather is cool. I have tried exhaust fans, but this only increases the dampness. I have also painted the floor with deck paint but while this remained dry during the winter it became sticky in hot weather. The paint had to be taken up. I also laid solid rubber floor covering in places, but dampness collected under the rubber. The house is three years old.

It is almost impossible to dig up the cement floor, lay a cinder base, and put down a new cement floor. I realize this would be the best solution.

I am now considering laying a composition tile floor on top of the cement floor. I hope this will keep the cold ground temperature from coming up to the surface of the basement floor. To further this object, I have in mind putting an asbestos base felt-paper between the cement floor and the tile to increase the insulation value of the tile.

Will you kindly give your advice in answer to the following questions:
1. Do you think this will stop the condensation?
2. Is it practical to lay the felt-paper between the cement floor and the tile or will this cause a layer of dampness between the two surfaces or cause the tile to become loose or raise up in places? Would the paper decay in time and cause the tile to settle?
3. Is there any better material with higher insulation value and longer life to substitute for the felt-paper as a base for the tile?
4. What tile would you recommend that has a durable finish as well as high insulation properties?
5. Is there any better way to correct this condensation?

PLANT & GORDON, INC.
By A. H. Plant

PLANT & GORDON, INC.
By A. H. Plant

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This profit trio gives you a choice of the BEST for your work. They are built to move fast—mix fast and last longer. Wonder Tilters and the new CMC 3½ Non-Tilt lead the industry.

Before buying, get the new CMC catalog of mixers. Tilters from 2½ to 10 cu. ft. Non-tilters to 1 yard size, and 1 and 2 bag Hoe Type. Pumps, Hoists, Power Saws, Carts and Barrows.

CONSTRUCTION MACHINERY COMPANY
WATERLOO, IOWA
Page 42, October: Nelbren, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE:
- Basement Walls, 162 lin. ft.; Trench Walls, 72 lin. ft.; Basement Floor, 1240 sq. ft.; Garage Floor, 180 sq. ft.; Excavation per ft. deep, 52 cu. yds.; Outside Walls, 20.00 sqs.; First Floor, 12.40 sqs.; Second Floor, without fin. flg., 8.00 sqs.; Ceiling, 12.40 sqs.; Roof Pitch, 9" rise per ft. run; Roof, 17.00 sqs.; Hips and Valleys, 20 lin. ft.; Cornice, C & F, 188 lin. ft.; Partitions, 170 lin. ft.; Inside Finish OS Walls, 162 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opqs., 12 opgs.; Windows and Casements, 17 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 28 lin. ft.; Main Stairs, 1; Porch Floor, 1.12 sqs.; Porch Ceilings, 1.12 sqs.; Porch Beam, 30 lin. ft.; Porch and Balcony Post and Newels, 5; Porch Roof, 1.40 sqs.; Porch Cornice, 34 lin. ft.; Terrace Fence, 12 lin. ft.

Page 43, October: Nelbren, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE:
- Basement Walls, 146 lin. ft.; Trench Walls, 100 lin. ft.; Basement Floor, 1225 sq. ft.; Garage Floor, 286 sq. ft.; Excavation per ft. deep, 54 cu. yds.; Outside Walls, 21.50 sqs.; First Floor, 13.35 sqs.; Second Floor, without fin. flg., 7.50 sqs.; Ceiling, 13.35 sqs.; Roof Pitch, 7" rise per ft. run; Roof, incl. Porch, 20.00 sqs.; Hips and Valleys, 24 lin. ft.; Cornice, C & F,

(Continued to page 116)
ONE HAND
Drives A STANLEY Safety Saw

STANLEY ELECTRIC TOOLS
"COST LESS PER YEAR"

TruCost Figures—
(Continued from page 115)

244 lin. ft.; Partitions, 184 lin. ft.; Inside Finish OS Walls, 166 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 2 opgs.; Garage Door 15 ft. wide, 1; Inside Doors and Cased Opgs., 16 opgs.; Windows and Casements, 25 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 26 lin. ft.; Main Stairs, 2; Porch Floor, 70 sq.; Porch Ceilings, 70 sq.; Porch Beam, 10 lin. ft.; Porch and Balcony Post and Newels, 4; Porch Cornice, 10 lin. ft.

Page 44. October: Borsodi

Page 45. October: Borsodi
"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 140 lin. ft.; Utility Room Floor, 60 sq. ft.; Excavation per ft. deep, 34 cu. yds.; Outside Walls, 17.00 sqs.; First Floor, 8.00 sqs.; Second Floor, with fin. fig., 7.50 sqs.; Ceiling, 15.50 sqs.; Roof Pitch, 13° rise per ft. run; Roof, 13.00 sqs.; Hips and Valleys, 24 lin. ft.; Cornice, C & F, 275 lin. ft.; Partitions, 258 lin. ft.; Inside Finish OS Walls, 240 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 2 opgs.; Inside Doors and Cased Opgs., 16 opgs.; Windows and Casements, 17 opgs.; Chimney, 28 lin. ft.; Main Stairs, 1.
Page 51. October: Olson & Jacocks, Bldrs. (Plan A)

“TRUCOST” ESTIMATING FIGURES FOR THIS HOUSE:
- Basement Walls, 113 lin. ft.; Trench Walls, 26 lin. ft.; Basement Floor, 744 sq. ft.; Excavation per ft. deep, 21 cu. yds.; Outside Walls, 15.00 sqs.; First Floor, 2.44 sqs.; Second Floor, without fin. flg., 5.00 sqs.; Ceiling, 7.44 sqs.; Roof Pitch, 10° rise per ft. run; Roof, 9.60 sqs.; Hips and Valleys, 20 lin. ft.; Cornice, C & F, 130 lin. ft.; Partitions, 125 lin. ft.; Inside Finish OS Walls, 113 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Opgs., 12 opgs.; Windows and Casements, 16 opgs.; Gable Sash and Louvers, 3 opgs.; Chimney, 28 lin. ft.; Main Stairs, 1; Porch Floor, .50 sqs.

Page 51. October: Olson & Jacocks, Bldrs. (Plan B)

“TRUCOST” ESTIMATING FIGURES FOR THIS HOUSE:
- Basement Walls, 112 lin. ft.; Trench Walls, 15 lin. ft.; Basement Floor, 700 sq. ft.; Excavation per ft. deep, 30 cu. yds.; Outside Walls, 14.00 sqs.; First Floor, 7.00 sqs.; Ceiling, 7.00 sqs.; Roof Pitch, 10° rise per ft. run; Roof, 9.44 sqs.; Hips and Valleys, 20 lin. ft.; Cornice, C & F, 130 lin. ft.; Partitions, 97 lin. ft.; Inside Finish OS Walls, 112 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Opgs., 9 opgs.; Windows and Casements, 14 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 28 lin. ft.; Porch Floor, .20 sqs.

Page 52. October: Durbin, Bldr.

“TRUCOST” ESTIMATING FIGURES FOR THIS HOUSE:

Build more beauty into YOUR BATHROOMS with MIAMI BATHROOM CABINETS MIRRORS and ACCESSORIES

BEAUTIFUL BATHROOMS help sell homes—they “catch the woman’s eye”. Make your bathrooms more attractive with MIAMI Cabinets and Accessories.

The beauty and distinction created by MIAMI Cabinets far exceeds the proportional investment—write for the MIAMI Catalog. Dept. AB.
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The Sink America Is Buying! And no wonder! There's no substitute for the EBCO Dishwashing Sink. It offers so many improvements you can't afford to be without the details. It reduces dishwashing to three simple steps. The round compartment is patented—and more efficient. The permanence and quality of the porcelain enamel (in a choice of colors) can be demonstrated. Location of fixtures eliminates back-of-wall piping. Level rim insures watertight mounting. Offering many other features and available in various sizes, it's ideal for home or apartment. When it's an EBCO you are sure of the best!

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AmERICAN BUILDER, October 1940.

TruCost Figures—
(Continued from page 117)

Page 54, October: Richardson, Blmr.
"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 320 lin. ft.; Service Porch Floor, 65 sq. ft.; Garage Floor, 270 sq. ft.; Excavation per ft. deep, 70 cu. yds.; Outside Walls, 28.00 sq. ft.; First Floor, 20.00 sq. ft.; Ceiling, 20.00 sq. ft.; Roof Pitch, 5.00 rise per ft. run; Roof, inc. Porch, 33.00 sq. ft.; Hips and Valleys, 112 lin. ft.; Cornice, 10th. inc. Porch, 300 lin. ft.; Partitions, 210 lin. ft.; Inside Finish OS Walls, 300 lin. ft.; Front and OS French Doors, 3 opgs.; Rear and Grade Doors, 2 opgs.; Garage Door 16 ft. wide, 1; Inside Doors and Cased Opgs., 23 opgs.; Windows and Casements, 26 opgs.; Gable Sash and Louvers, 1 opg.; Chimney, 18 lin. ft.; Porch Floor, 2.70 sq. ft.; Porch Ceilings, 1.44 sq. ft.; Porch Beam, 36 lin. ft.; Porch and Balcony Post and Newels, 5.

Page 56, October: Christian, Blmr.
"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 107 lin. ft.; Trench Walls, 72 lin. ft.; Basement Floor, 690 sq. ft.; Excavation per ft. deep, 30 cu. yds.; Outside Walls, 18.00 sq. ft.; First Floor, 6.90 sq. ft.; Second Floor, with lin. flg., 5.70 sq. ft.; Ceiling, 12.60 sq. ft.; Roof Pitch, 12” rise per ft. run; Roof, 10.00 sq. ft.; Hips and Valleys, 16 lin. ft.; Corner, C & F, 176 lin. ft.; Cornice, 6”, 36 lin. ft.; Partitions, 145 lin. ft.; Inside Finish OS Walls, 203 lin. ft.; First Floor and OS French Doors, 6 opgs.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Opgs., 11 opgs.; Windows and Casements, 20 opgs.; Chimney, 32 lin. ft.; Main Stairs, 1; Porch Floor, 1.96 sq. ft.; Porch Ceilings, 1.66 sq. ft.; Porch Beam, 60 lin. ft.; Porch and Balcony Post and Newels, 20; Porch Roof, 2.00 sq. ft.; Porch Corr, 68 lin. ft.; Porch and Deck Rail, 10 lin. ft.

Page 58, October: Walsh, Blmr. (with Basement)
"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 108 lin. ft.; Trench Walls, 12 lin. ft.;

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Basement Floor, 642 sq. ft.; Excavation per ft. deep, 28 cu. yds.; Outside Walls, 15.00 sqs.; First Floor, 6.42 sqs.; Second Floor, with fin. fig., 4.76 sqs.; Ceiling, 11.18 sqs.; Roof Pitch, 12° rise per ft. run; Roof, 9.75 sqs.; Hips and Valleys, 40 lin. ft.; Cornice, C & F, 140 lin. ft.; Cornice, 6", 76 lin. ft.; Paritions, 172 lin. ft.; Inside Finish OS Walls, 190 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Ops., 13 opgs.; Windows and Casements, 21 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 32 lin. ft.; Main Stairs, 1; Porch Floor, 24 sqs.

Page 58, October: Walsh, Bldr. (without Basement)

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 146 lin. feet.; Utility-Recreation Floor, 172 sq. ft.; Excavation per ft. deep, 20 cu. yds.; Outside Walls, 15.00 sqs.; First Floor, 4.70 sqs.; Second Floor, with fin. fig., 4.76 sqs.; Ceiling, 11.18 sqs.; Roof Pitch, 12° rise per ft. run; Roof, 9.75 sqs.; Hips and Valleys, 40 lin. ft.; Cornice, C & F, 140 lin. ft.; Cornice, 6", 76 lin. ft.; Paritions, 162 lin. ft.; Inside Finish OS Walls, 190 lin. ft.; Front and OS French Doors, 1 opg.; Inside Doors and Cased Ops., 11 opgs.; Windows and Casements, 15 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 28 lin. ft.; Main Stairs, 1; Porch Floor, 24 sqs.

Page 59, (top), October: Walsh, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 180 sq. ft.; Garage Floor, 200 sq. ft.; Excavation per ft. deep, 20 cu. yds.; Outside Walls, 26.00 sqs.; First Floor, 7.68 sqs.; Second Floor, with fin. fig., 7.20 sqs.; Ceiling, 14.88 sqs.; Roof Pitch, 7° rise per ft. run; Roof, 10.00 sqs.; Cornice, C & F, 316 lin. ft.; Cornice, 12", 48 lin. ft.; Paritions, 236 lin. ft.; Inside Finish OS Walls, 256 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 2 opgs.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Ops., 18 opgs.; Windows and Casements, 24 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, 24 sqs. (Continued to page 120)
Every Edwards Metal Roof is a Perpetual Advertisement for the Concern that Sells it...

The Edwards Steel Shingles on Mr. Seward’s home and Steel Sheet Roofing on his barn have been giving troubleproof service for forty years. They are still protecting his property from weather, fire and lightning and still look as handsome as when new. It’s easy to sell Edwards Metal Roofing at handsome profit wherever there is one Edwards job to show to prospects and one owner of an Edwards roof to refer to.

Write for Catalog No. 95
THE EDWARDS MANUFACTURING CO.
542-562 Eggleston Avenue
Cincinnati, Ohio

TruCost Figures—
(Continued from page 119)
Stairs, 1; Porch Floor, .18 sqs.; Garage and Balcony Post and Newels, 12; Garage and Vest. Roofs, 4.88 sqs.; Deck Rail, 84 lin. ft.

Page 59. (bottom), October: Walsh, Blldr.
“TRUCOST” ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 184 lin. ft.; Utility Floor, 190 sq. ft.; Garage Floor, 190 sq. ft.; Excavation per ft. deep, 25 cu. yds.; Outside Walls, 25.00 sqs.; First Floor, 5.25 sqs.; Second Floor, with fin. flg., 2.25 sqs.; Ceiling, 14.00 sqs.; Roof Pitch, 7° rise per ft. run; Roof, 12.32 sqs.; Hips and Valleys, 10 lin. ft.; Cornice, C & F, 184 lin. ft.; Cornice, 6", 88 lin. ft.; Partitions, 240 lin. ft.; Inside Finish OS Walls, 252 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 2 opgs.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 18 opgs.; Windows and Casements, 23 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, .32 sqs.; Vestibule Roof, 40 lin. ft.; Vestibule Cornice, 16 lin. ft.; Deck Rail, 16 lin. ft.

Page 60, October: Asbahr, Blldr.
“TRUCOST” ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 149 lin. ft.; Trench Walls, 21 lin. ft.; Basement Floor, incl. Garage, 150 sq. ft.; Excavation per ft. deep, 49 cu. yds.; Outside Walls, 17.60 sqs.; First Floor, 11.50 sqs.; Second Floor, without fin. flg., 6.50 sqs.; Ceiling, 11.50 sqs.; Roof Pitch, 10° rise per ft. run; Roof, 13.50 sqs.; Hips and Valleys, 48 lin. ft.; Cornice, C & F, 150 lin. ft.; Cornice, 8", 78 lin. ft.; Partitions, 170 lin. ft.; Inside Finish OS Walls, 150 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 15 opgs.; Windows and Casements, 28 opgs.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, .36 sqs.; Porch Ceilings, .18 sqs.; Porch Beam, 10 lin. ft.; Porch and Balcony Post and Newels, 1; Porch Roof, 25 sqs.; Porch Cornice, 10 lin. ft.

PLUMBING ESTIMATING SIMPLIFIED

Guide to Estimating Materials for Practical Plumbing Installations
By HENRY W. MEYERS

This 22" x 30" 5-color wall chart shows everything you need for estimating materials for plumbing installations. The new edition illustrates all kinds of practical installations, including sewers and waste lines, air and electrically controlled ejectors, hot circulating, cold water and fire systems extending to all types of fixture outlets. All sizes and fittings for sewer, drainpipe and ventilating systems are pictured and identified, with a different color for each system. Indexed for easy reference. Saves time when ordering, designing, estimating and writing specifications.

Price $3.00. Money Refunded if Not Satisfactory

American Builder, October 1940.
**AUTOVENT'S Low Cost FURNACE BOOSTER Solves Every Gravity Heating Problem**

- Low original cost—Low installation cost—All 'round Economy
- Real Forced Air Heating

Here is an inexpensive propeller type furnace booster fan that gives maximum heating efficiency to every gravity warm air furnace.坟房 of heating evenness to every furnace is improved. Furnace air heating evenness is increased to prevent hot spots and cold spots in the heated area. Write for details and new literature.

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**FIR ZITE**

THE SUPERIOR FIR PLYWOOD PREFINISHER

FIR ZITE tame "wild," raised grain, helps eliminate hairline checking in Fir Plywood. Enables subsequent materials to "take" better, producing rich, smooth finished effects. A big help to Contractors on both regular and "DRI-BILT" construction. A profit-builder for Dealers. Made by specialists with years of experience in the development of fine natural wood finishes.

BREINING BROTHERS
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**LET YEAR 'ROUND ''Indoor Weather Control''**

SELL YOUR HOUSES

Throughout the nation, successful builders are letting comfort appeal help sell their houses! And no comfort appeal is stronger than that of year 'round automatic temperature control.

The gas-fired, streamlined PAYNE Zoneair, boosts, circulates, ventilates, filters, and humidifies—dependably and economically. Used singly, or in batteries. For information, see your PAYNE Dealer or Gas Company. Or write us.

PAYNEHEAT
BEVERLY HILLS * CALIFORNIA

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**"Trade-in" Plan**

Continued from page 55

he assures them of steady employment and at the same time is able to secure favorable contract prices.

Richardson pursues a vigorous sales promotion and advertising program that calls for an expenditure of about $600 a month in newspapers alone. Various types of this builder's advertising are shown. A 24-page booklet issued monthly and sent to a select list of doctors' and dentists' offices and beauty shops was a means of publicizing Richardson-built homes, the trade-in system and free appraisal service. Back-page ads carried coupons inviting inquiry of the home pictured or the exchange plan.

The organization consists of the builder, who is very active in affairs of the local and National Realty Boards; Thomas M. Banning, Jr., manager; A. J. Engdahl, sales manager, and Helen D. Gordon, decorative consultant. Besides the home designing service, as mentioned, the services of an outside certified architect are retained in addition to a selling force of from seven to ten.

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**Modernizing Main Street**

Continued from page 67

in the town has set up a general plan for buildings on the public square which will in time create a modern business center and draw increasing number of buyers from the surrounding country. The lumber yard is always a good place to set the pace for building improvements.

The town of Manhattan, Kans., has enjoyed a substantial increase in business because of the attractive changes made in the downtown district thru a general...

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**There's PROFIT in ALLMETAL WEATHERSTRIP**

EASIER INSTALLED MORE EFFICIENT

Every home should have ALLMETAL weatherstrips on doors and windows. Homebuyers demand it. Architects recommend it. You can make EXTRA PROFITS installing these well known, consistently good weatherstrips.

Write for our prices on Metal Weatherstrips, Calking Compound, Metal Thresholds, Metal Wall Board Trim, Counter Edging, Sill Risers, etc.

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OVER 25 YEARS SATISFACTORY SERVICE

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This Free Trial Lesson on "How to Read Blue Prints," and a set of blue prints plans—sent to show you how this 37 year old school for Builders makes it easy for men in the building industry to lay out and run jobs, read blue prints, estimate costs, superintend construction, etc. Drawing of plans included if wanted.

LEARN AT HOME IN SPARE TIME

Men with this training are needed now to handle expanding business in building construction. This knowledge leads to promotion. Building contractors urge employees to get this training. For Free Trial Lesson address:

CHICAGO TECH COLLEGE
N-125 Tech Building, 118 East 26th St. Chicago, Illinois

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American Builder, October 1940.
plan, set up in advance by the civic interests. Some fifteen new fronts have already been installed in keeping with the general plan.

Kirksville, Mo., found that setting up a plan of modernization brought benefits to the city, the unemployed, and the property owners and tenants. One building that was renovated at a cost of $3800.00, resulted in salvaging an investment that was about gone and created a building that will be good for the next twenty-five years. It also brought an excellent financial return to the owner, increased business with the tenants and a substantial reduction in fire insurance rates. Dealers in the town sold three thousand dollars of building materials on this job.

Every town in the country presents innumerable examples of this type of modernization if the dealers will take the "bull by the horns" and create a program for Main Street. It will take a little time; it will take organized effort to set up a Downtown committee to study and act upon the many problems that will be dumped into their laps by the general public. It isn't hard to find what the public wants if they can express themselves and clear their needs thru an established agency. Here is opportunity for every dealer and builder to lift the standard of his town and community and at the same time insure its trade prosperity. It's an excellent way to absorb unemployment in the building industry; to create payrolls and purchasing power in the community. It is also good insurance for perpetuating dealer business. It will place the dealer out in front on the selling line where he is most badly needed today. A growing country needs operating generalship, but a grown up country demands salesmanship. We are living in a grown up country.

(Continued to page 124)
for WEATHER-TIGHT WINDOWS

The best weatherstrip or caulking can't make a box frame weather tight. Ask your dealer or sash and door jobber to show you a weather-striped unit balanced by Pullman. There's a window without chance for leakage of cold air or dust, a frame you can pull up, a sash that moves freely and stays where it's put without help of friction. Write for catalog and specifications. Pullman Mfg. Corp., 1160 University Ave., Rochester, N. Y.

PULLMAN UNIT SASH BALANCE

SAW FILINGS

Carpenters Make up to $2 or $3 an Hour in Spare Time

With a Foley Automatic Saw File you can file hand, band and circular saws better than the most expert hand filer. Cash business, no canvassing. No eye-strain, no experience needed. Louis P. Wadowick, Ohio, says: ''I have filed Saws in spare time and have earned $850.00 due to my filing contacts and coupon for 'FREE PLAN, no obligation."

Large Contractors and Builders who have many saws to file can increase production, do better work and reduce filing costs with a Foley Saw Filer. Soon pays its cost. Get the facts.

FOLEY MFG. CO., 1024-40 Foley Bldg., Minneapolis, Minn. O Send Free Plan on Custom Saw Filing. O I want to file saws for crew of about (10—25—50—100) men (Check No.)

ONE TRIAL OF STEEL BRIDGING WILL PROVE THESE POINTS—

1 Installed cost of Union Metal Steel Bridging is no more, frequently less, than wood because it can be installed in 4% to 8% the time.

2 Better floor construction obtained because Steel Bridging has greater ability to reduce floor vibration, also freedom from warpage and shrinkage.

Union Metal Steel Bridging is made from genuine Ternplate, a special lead coated steel which is highly rust-resisting. It is available in lengths to fit all regular joist sizes and spacings. Write for free sample, descriptive folder and prices.

THE UNION METAL MANUFACTURING COMPANY • CANTON, OHIO

Modernizing Main Street

(Continued from page 123)

Why not take a fling at this highly interesting and modern way of going after business? Start the ball rolling in your community now. The building business is your business and you are trained by experience and aptitude to lead. Be the first to shove off in a movement that gives every promise of an old-fashioned revival for the building industry.

Security on an Acre of Good Earth

(Continued from page 45)

who attend the School are educators, students of sociology, housing specialists and clergymen—the latter seeking a better way of life for their parishioners.

But one does not have to travel to Suffern to learn what is there. Bulletins on every conceivable phase of home production are available for the price of 25 cents.

Of interest to the building profession are the bulletins "How to Economize in Buying Land" and "How to Economize in Planning a Home." Not that there is anything new to builders in these bulletins. What should be of interest to them is that a man established a school to show people how to get more joy out of life—and the prime requisites of this happy living means having a home.

There are now four communities developed through the Borsodi plan. The School of Living and its associate organizations, Independence Foundation, Homeland Foundation and Free America Magazine, will give ready counsel to those interested in home- stead developments.

Thirty-seven houses have been built or are now under construction in the four communities. One of the most successful is Van Houten Fields, located in West Nyack, N. Y., on the site of a 106-acre farm of an early-American settler. Another is the Bayard Lane development in Suffern, N. Y., where the School of Living is located. The houses are built with local materials, as
far as possible, many of them using natural fieldstone. They differ from ordinary city dwellings, largely in the extensive use of utility rooms, larger kitchens and ample storage and utility space.

The builder should serve as a developer of the restricted community. If the project possesses common property, such as woods, a lake, an athletic field or a social house, the administration of these properties should be arranged by democratic procedure in which all the members of the community take part.

No titleholder, as a resident of the community, should be permitted to subdivide his land into less than one acre, unless the entire community democratically approves.

Because this homestead program envisions an annual economic sustenance of $500 to $800 worth of foodstuff (including the canning, drying, freezing, etc., of the soil's product) this land must have cultivation qualities and ought to be within approximately the following acre costs to the homesteader (including roads, sewerage and water):

Outside cities of over 4 million (per acre) $800
Outside cities of between 2 and 4 million (per acre) 600
Outside cities of between 1 and 2 million (per acre) 450
Outside cities of between ½ and 1 million (per acre) 400
Outside cities of less than ½ million (per acre) 350

It will be noted that with the exception of the top population (the New York region) the variations are slight. While the land costs depreciate markedly, the cost of servicing the communities with water, roads, etc., remains about the same. Those who join homestead projects outside extremely large cities have further to commute and will feel the land costs more acutely, of course. But these same people get slightly higher wages, as well, and seek satisfactions of home ownership that "suburban" rows of flats can never supply emotionally to the degree that "rurban" homes can!

There are hundreds of thousands of acres of land outside the greenbelt areas of our cities which offer good homestead possibilities. There are good highways between our urban centers, and most of them enjoy good commuting facilities. Thousands of people who can't afford to be gentlemen farmers, or even urban home owners, will welcome this opportunity.

Now YOU can install METALANE... at Real Profit

We'll show you how to start a real weatherstrip business of your own... with plenty of prospects and a sweet profit on every MetaLane job you install. National advertising has made home owners familiar with METALANE... the weatherstrip material that cannot corrode, turn black or stain paint, stone or woodwork in any climate; that lasts as long as the house itself. Write today for details of the new METALANE plan that enables you to make quick, easy profits in your territory. MONARCH METAL WEATHERSTRIP CORP., 6504 Hazel Avenue, St. Louis, Mo.

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ELIMINATES HEAT LOSS AND SMOKE
PREVENTS UNHEALTHFUL DRAFTS
ASSURES FIREPLACE EFFICIENCY

Write for Bulletin BS-5

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LOUISVILLE, KY.

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Unfailing Dependability • Superior Performance
Has Never Been Equalled

A complete portable Mill that will make every cutting you need and do all your sawmill work without any large initial outlay with the "MASTER." Complete with a self-aligning motor and feed, the "MASTER" can be erected anywhere and can be operated by any one who is proficient in using the "MASTER" mill with self-aligning motor and feed.

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The Master Woodworker Mfg. Company
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"It Is Easy to Be a CONTRACTOR"

Learn to estimate, to plan buildings, to take contracting jobs, and make money on them. Here are 9 up-to-the-minute books on building, estimating, and contracting which cover in an interesting way, the subjects that carpenters, builders, and contractors should know to make the most out of their jobs. Roof Framing, The Steel Square, Architectural Drawing and Design, Estimating, Painting and Decorating, Heating, Air Conditioning, Building, Contracting, Concrete Forms, and other subjects are all well covered.

Boss Carpenters in Demand

Vast public works jobs, immense projects, and the rapid growth of home building, are making jobs for MEN WHO KNOW HOW. These books give you quick training. With them you won't be afraid to tackle any job, for needed facts can be found in a hurry.

Brand New 1940 Edition

These books just off the press in 1940 are the most up-to-date, complete we have ever published.

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Turns Out the Work!

8 full-sized machines in this combination, each independently operated, sturdy, compact, and built for many years' hard service.

NEW MODEL "A" PLANNING MILL SPECIAL

Does complete job from rough lumber to finest trim and finish. Low in cost and operating expense.

Complete line of individual and combination machines

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CALBAR PAINT & VARNISH CO.
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SAVE TIME in making layouts and in giving lines and grades
SAVE MONEY by reducing labor costs for using a

WARREN-KNIGHT TRANSIT-LEVEL

This instrument is made for the Contractor who knows that he can work more efficiently with up-to-date equipment.

This instrument gives you what you have always wanted in a low priced instrument—high power telescope—close focus—vertical arc with clamp and tangent—sensitive level—patented vernier—versatile reading to one minute—extra large shift—steady construction—low maintenance costs.

10 Day Free Trial—No obligation to purchase
For complete details write for new Bulletin P-318
Liberal allowance for your old instrument.

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Cabinet Showers

BUILD added sales appeal into every home you construct—large or small, simple or luxurious—by using these modern, leak proof cabinet showers. Extra baths easily possible in small space. Patented Foot-Grip. No-Slip floor of vitreous porcelain. Send now for details and specification data, without obligation.

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IRON-RAILING for BEAUTY PROTECTION

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Write for our latest Folder
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