PLAINTIFF'S EXHIBIT
USG-1625





Building



COVER: Typical of the hundreds of attractive new housing developments springing up across Canada is this one at North York, Ontario. This air view photograph by The Photographic Survey Corporation Limited shows the pleasing variety in architectural styling being achieved by the building trades.

FIRE RESPECTS NO ONE! It can be friendly when used properly. Often it is a vicious enemy that strikes anywhere at any moment—resulting in tragic losses, suffering, and deaths. Reports in daily newspapers indicate that fires are striking in increasing numbers.

The grim totals of fire results are staggering! 493 people lost their lives, and property losses totaled over $67,100,000 in Canada *during 1948 alone*. In the last

BB021 0399



Here's how incombustible gypsum retards the spread of fire



1. Gypsum in the form of rock is brought from the quarry or mine. In its natural state, gypsum is composed of approximately 60% by weight of calcium sulphate and 20% by weight of chemically combined water, $CaSO_4 2H_2O$. This chemically combined water gives gypsum its fire resistant qualities.



2. Gypsum is crushed and then cooked or calcined. As a result of this operation, 75% of the chemically combined water is removed, and the rock is converted into Plaster of Paris, the basic ingredient of all gypsum products. The chemical formula is then $CaSO_4 \cdot \frac{1}{2}H_2O$.



3. The plasterer on the job adds water to gypsum products in application. When the plaster sets, the gypsum, 80% calcium sulphate and 20% water, both *percentages by weight*, has returned to its natural state. In the manufacture of SHEETROCK wallboard or ROCKLATH plaster base, water and other ingredients are added to the Plaster of Paris at the plant. The Plaster of Paris re-absorbs an amount of water equal to that which was removed in calcination. The finished product has the same type of fire-resisting qualities of natural gypsum, being by weight 20% water. After the addition of water, the chemical formula returns to $CaSO_4 2H_2O$, the same as the natural rock.



4. Fire resistance in plastered walls comes from the incombustible ROCKLATH core in combination with 1/2 inch of gypsum plaster. Gypsum will not conduct temperatures high enough to ignite other building materials until it is completely dehydrated.

10 years, fire deaths were 3,441, and total property loss about $390 million. Mr. W. J. Scott, Fire Marshal of Ontario, reports that during 1948 in Canada and the United States, there was a house fire every 1½ minutes, a store fire every 11 minutes, an industrial fire every 14 minutes, a farm fire every 15 minutes, a school fire every 3 hours, and a hospital fire every 6 hours. Not all of these fires were major disasters, but all could have been.

Many fires originate through negligence—a lighted match tossed carelessly into a waste basket, faulty wiring, discarded oily rags, and many other reasons. A builder cannot prevent the occurrence of fires that are caused by negligence, but he can with proper materials and construction build fire protection into the walls and ceilings and other hazard spots to retard the spread of flame. Severe losses have often been minimized or entirely prevented through the safeguard of proper construction.

One of the finest safeguards in building materials is *gypsum*. Gypsum is a rock, a mineral of unusual composition. It is composed of approximately 80% by weight of calcium sulphate and 20% by weight of chemically combined water. When absorbing heat, gypsum gives off this water in considerable quantity, and in so doing, forms a protective blanket of vapor around itself. When the surface of gypsum is heated to about 212 F., (boiling point of water), the crystalline water "melts out" from the gypsum to resist the fire and dissipate the heat. This unique process makes gypsum an ideal material for protecting wood and steel framing members in a building.

Homes especially should have ample fire protection, as evidenced by the number of fires in homes. Residence fires accounted for over 70% of the 53,048 fires reported in Canada in 1948. While gypsum cannot always prevent a house from burning down, it has again and again confined fires until help could arrive and thus averted tragic losses from the ravages of fire. Be sure to specify gypsum in the materials that go into the homes you build—for you can be sure, with *incombustible* gypsum, of having added protection against loss through fire.

88021 0400



The Albert Mill at Hillsborough as it was in 1860. The plaster was shipped in barrels manufactured at the mill's own cooper shop.

the Aristocrat of White Plasters

FROM CANADA'S OLDEST GYPSUM DEPOSIT

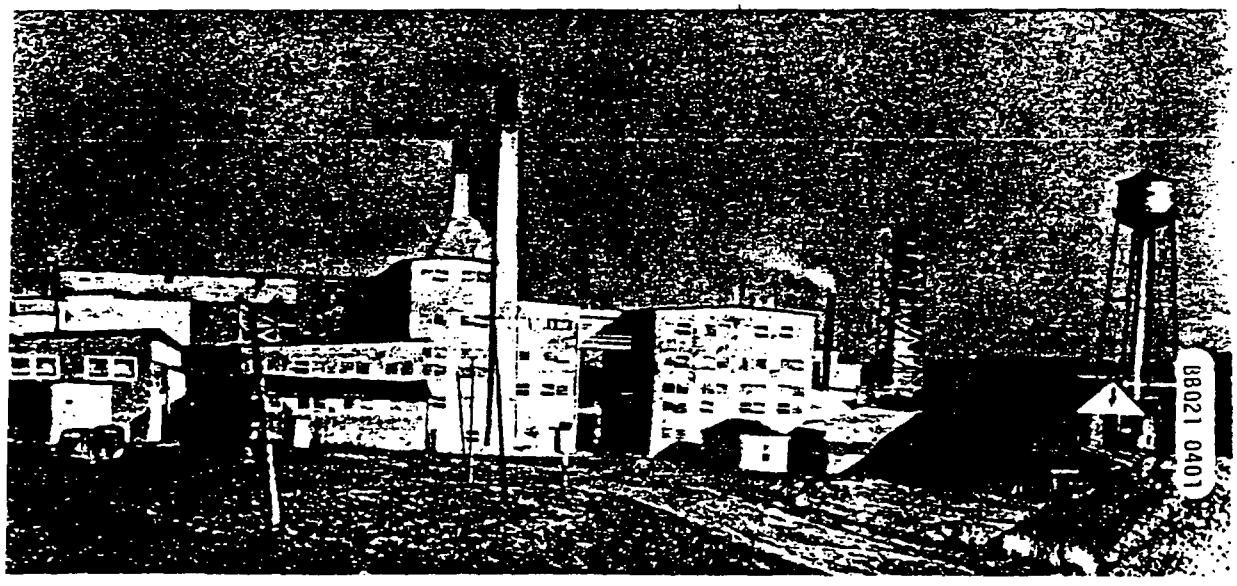
For over one hundred years the Plaster of Paris made from the deposits of unusually pure white gypsum at Hillsborough has been famous both in Canada and in the United States for its workability. To all those engaged in the plastering and building material trades, in arts and orthopedic work, this white plaster has a well-earned reputation for superior texture and fine quality.

In 1930, the deposits and mill were acquired by the Canadian Gypsum Company, Limited. Such technical improvements as required were made, and today the white plasters and board products produced at Hillsborough more than fulfill those requirements demanded by today's high building standards.

Based on years of satisfactory performance, CGC white plasters from Hillsborough are reliably chosen for best results on the job and in the specialty shop.

Canada's best white plaster comes from Hillsborough, Canada's oldest working gypsum deposit.

The Hillsborough Mill today. This modern Canadian Gypsum Company mill at Hillsborough, New Brunswick, manufactures the finest quality white plaster and board products.







For architectural work and inside decorations, superior white plaster is required. For this reason, novelty shops throughout Canada prefer CGC white plasters. This plaster comes from Hillsborough.

In novelty work, CGC plasters are known to hold their creaming properties under adverse conditions, and have unusual freedom from pin holes.

For beautifully finished walls and ceilings, RED TOP *Gauging Plaster from Hillsborough, together with* IVORY *Hydrated Finishing Lime are the favourites among plasterers.*

RED TOP *white plasters mixed with* IVORY *lime are well-known for their efficient working quality on the job.*

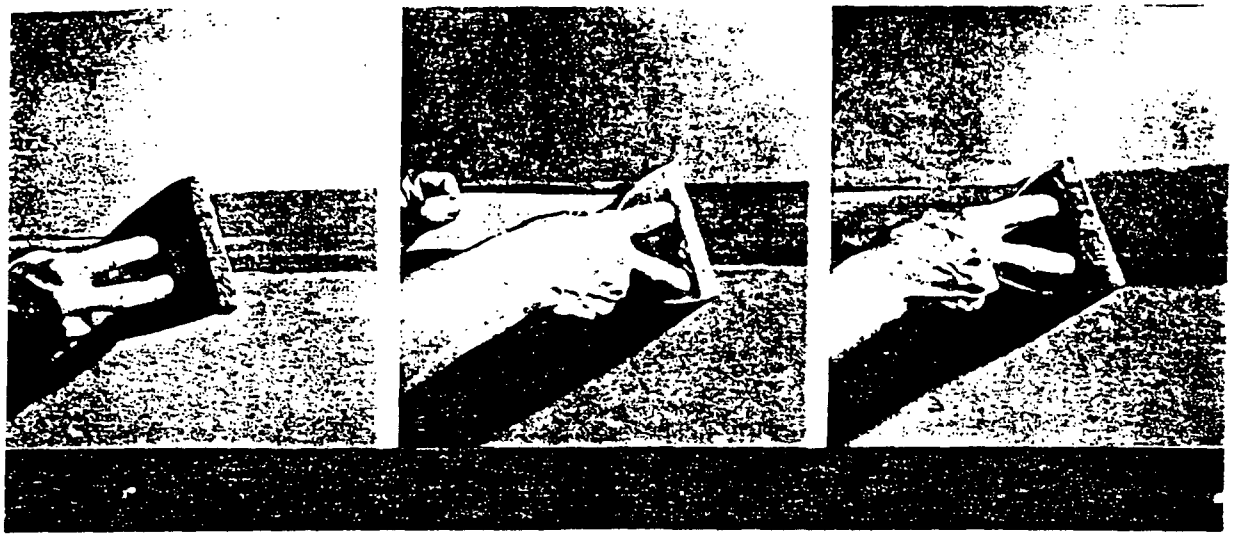




The inside story

Perf-a-tape Application

For beautiful continuous wall surfaces use the PERF-A-TAPE joint system with SHEETROCK wallboard.



1. BUTTERING THE JOINT. After mixing the cement with water, use our joint finishing knife and butter the cement into the channel of the recess, filling channel evenly and fully. Full details for mixing and applying cement are in every package.

2. EMBEDDING THE TAPE. Centre the PERF-A-TAPE reinforcement and force down into the recess by holding our joint knife almost vertical to the SHEETROCK wallboard and drawing along the joint with sufficient pressure to remove all excess cement.

3. COVERING THE TAPE. As soon as tape is embedded, cover it with a thin layer of cement to fill recess flush with face of board. At this time, nail heads should be spotted. (For information on spotting nail heads, see illustration No. 5).



Corner Application. For inside corner, butter cement into the corner and embed tape which has been creased down center. Apply second and third coats the same as to a flat joint. For outside corner, butter cement both sides and embed tape; then apply second and third coats.

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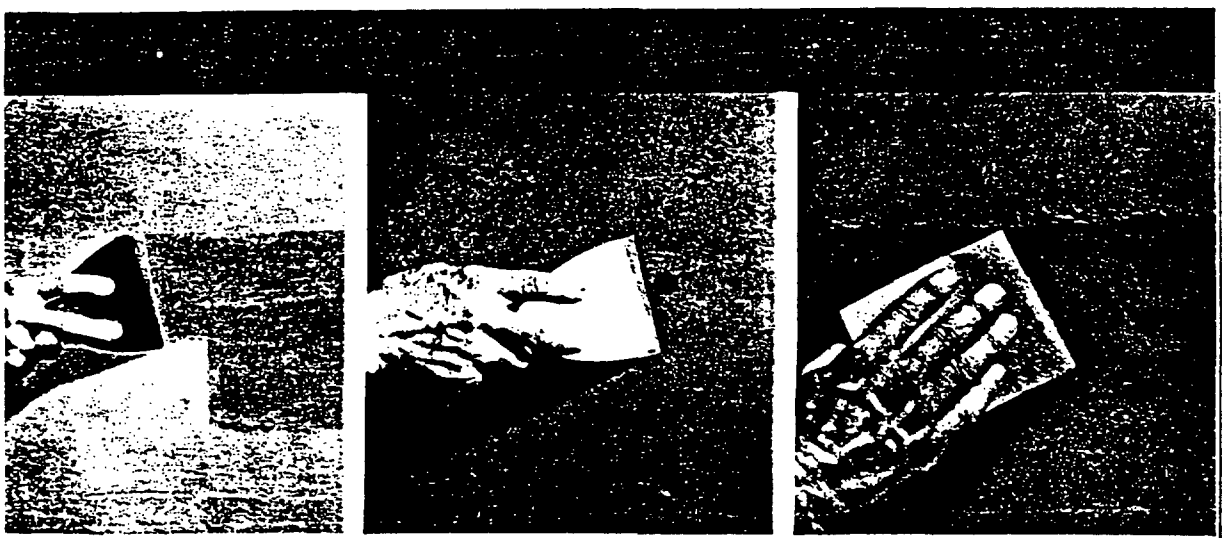
Curved Edge Application. Fold PERF-A-TAPE *reinforcement just as for corner application. At intervals, snip from the edge applied to the wall, but only to the crease. This makes the tape flexible. Apply cement according to standard method.*



4. SECOND COAT. After embedding coat has dried (usually next day), smooth with sandpaper as required. Then cover with second coat of cement, feathering edges of cement an inch or two beyond shoulders of recess. After drying, sand lightly if required, and apply third "finishing" coat.

5. SPOTTING NAIL HEADS. Apply a covering coat of cement over all nail heads using sufficient pressure on the knife to finish cement level with wall surface. Feather out second and third coats. Allow sufficient drying period between coats.

6. SANDING. If, after each application of cement, the joints have not been left smooth enough under the knife, it is necessary to sand in order to ensure this smoothness. Sufficient time must be allowed for the cement to dry (24 hours). Light, final sanding may be necessary after the third or finishing coat.

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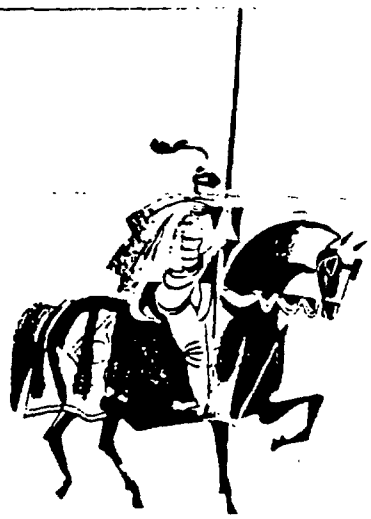


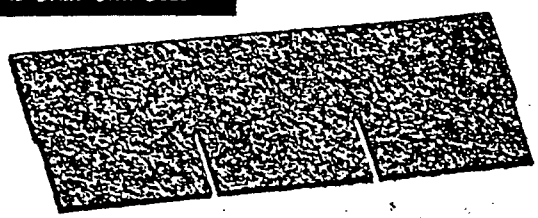
FOR WANT OF A NAIL . . .

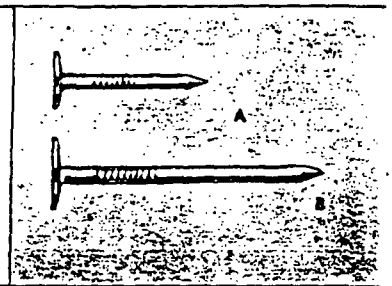
NAIL

For want of a nail,
the shoe was lost.
For want of a shoe,
the horse was lost.
For want of a horse,
the rider was lost.
For want of a rider,
the battle was lost.
For want of a battle,
the Kingdom was lost.

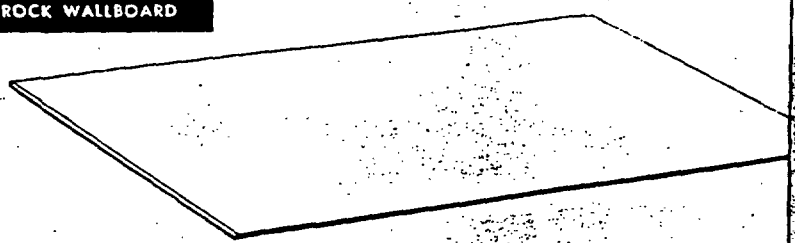
PERHAPS the use of the wrong nail in the construction of today's homes and buildings will not lead to such

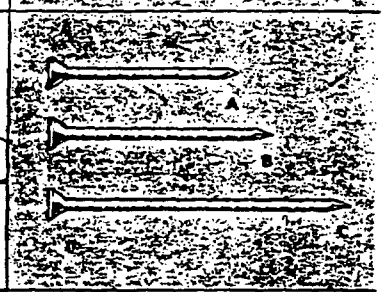
GENTRY AND STRIP SHINGLES





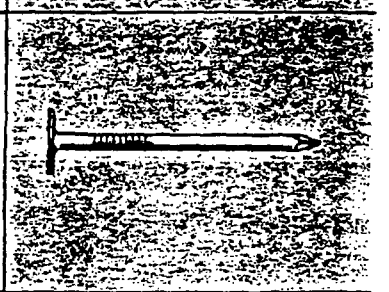
SHEETROCK WALLBOARD





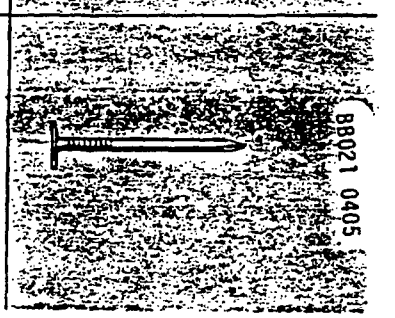
GYPLAP SHEATHING





ROCKLATH PLASTER BASE





88021 0405

HART

the right nail means a better job

tragic endings as the above verse implies—but the use of the *right* nail is important!

Iron nails, similar in shape to those we use today, were in common use eighteen hundred years ago during the Roman occupation of Britain. Unfortunately, these nails could stand little strain without *snapping*.

During the 18th century, there were over 40,000 people engaged in the forging of nails in Britain. Nails were forged from iron nail rods heated in a small smiths' hearth. They were hammered on an anvil, cut to length with a chisel, and the head joined to the spike by dropping it into a "bolster" of steel.

Because these nails were brittle, wooden pegs were still widely used until the middle of the 18th century. At the turn of this century, the first cut and machine headed nail appeared. When improved methods of tempering steel were introduced, the French or wire nail came into wide use. Making use of the methods developed in France and England, Ezekiel Reed, an American, in 1786 patented the first machine to manufacture these nails.

Since these early beginnings, years of scientific research have gone into the manufacture and use of nails. Today, there is not just one *good* nail, but a *right* nail for every job.

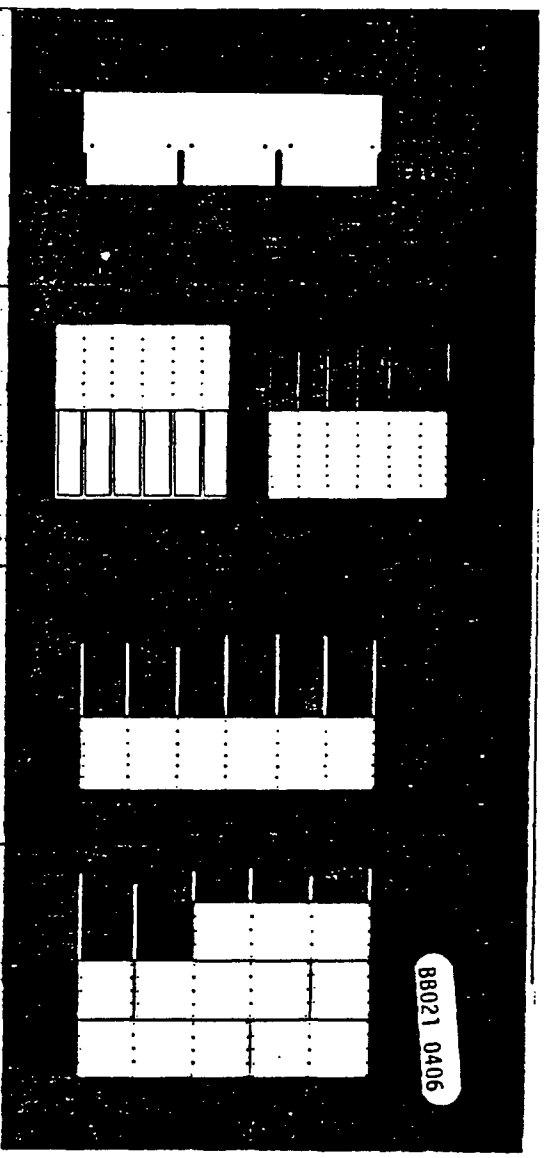
Just as you select the best product for the job, it is also your responsibility to select the correct nail. Canadian Gypsum Company urges you to take advantage of all the research that has gone into the modern nail—select the right one—you will do a better job.

NAILING CGC ROOFING SHINGLES In the nailing of all CGC shingles for new work, a 1" 11 gauge nail with a 7/16" head is recommended for best results. (Nail A) When it is a re-roofing job, a 1¾" nail should be used. (Nail B) Each strip of GENTRY shingle requires 6 nails as indicated in the diagram on the right. (Complete directions for nailing and application are packed with all CGC shingles).

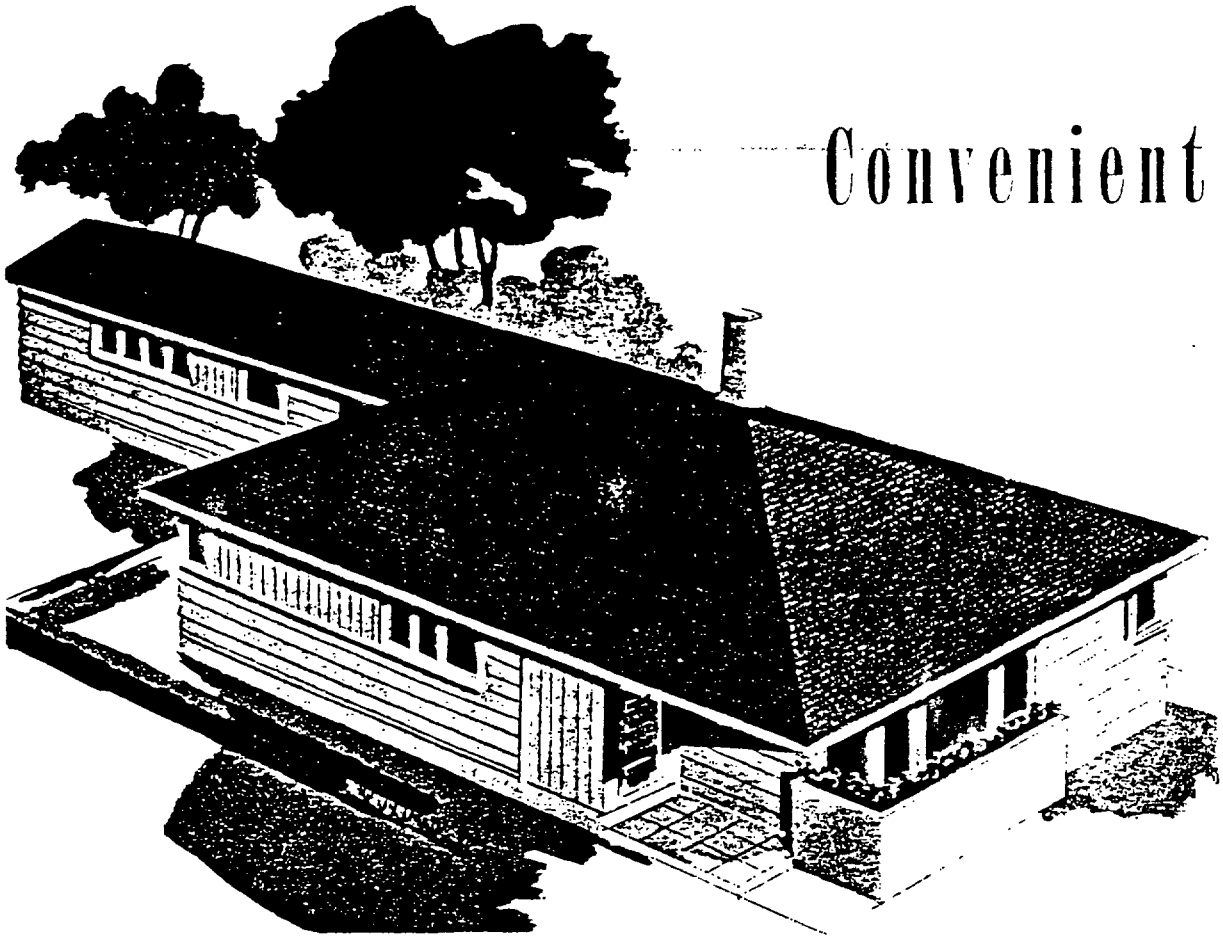
NAILING SHEETROCK WALLBOARD A 13 gauge, 1¼" long, 7/32" countersunk head, diamond pointed corrosion proof coated nail is recommended for best results. (Nail A) In nailing ½" Sheetrock, a 1½" nail should be used (Nail B) Over plastered surfaces a 2" length should be used. (Nail C) Nails are to be spaced 7" apart on walls, and 6" apart on ceilings. The nails should be driven home so that the hammer dents, but does not fracture the surface of the board.

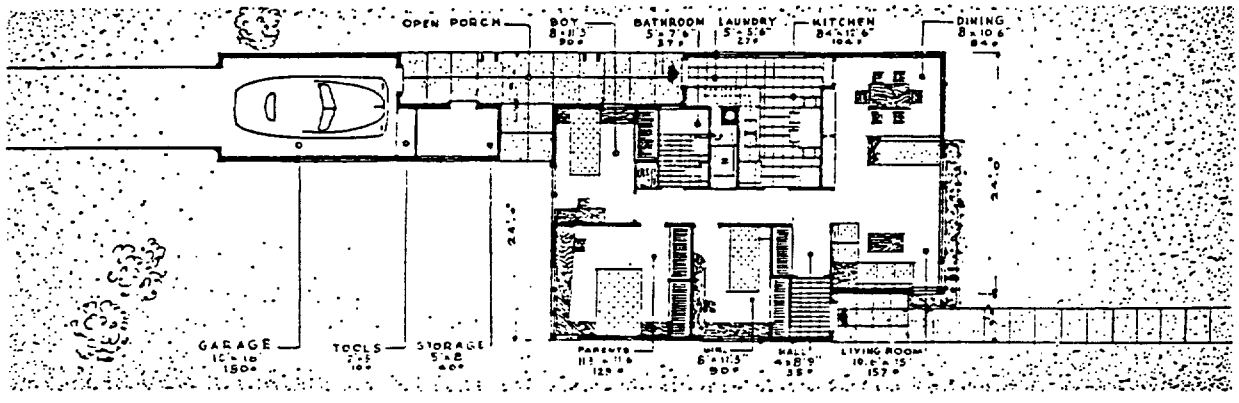
NAILING GYPLAP SHEATHING An 11 gauge 1¾" long 7/16" flat head galvanized diamond point roofing nail is recommended. Sheathing is secured to studs with nails placed approximately 4" o.c., 7 nails per support per 24" sheathing width, and not less than ¾" from edges or ends of sheathing. In the case where exterior finish is secured to the frame with nails driven through sheathing and into studs, nails should be spaced 8" o.c., 4 nails per sheathing width per stud.

NAILING ROCKLATH PLASTER BASE ROCKLATH is nailed with an 11 gauge blued nail, 1½" long and with a 5/16" head. The lath must be butted at all edges, and the nails are to be placed 4" apart along the supports, and ¾" from the edges and the ends. Nails should be driven home, making the lath secure and providing both greater bracing strength, and a rigid plaster base on the walls and ceilings.

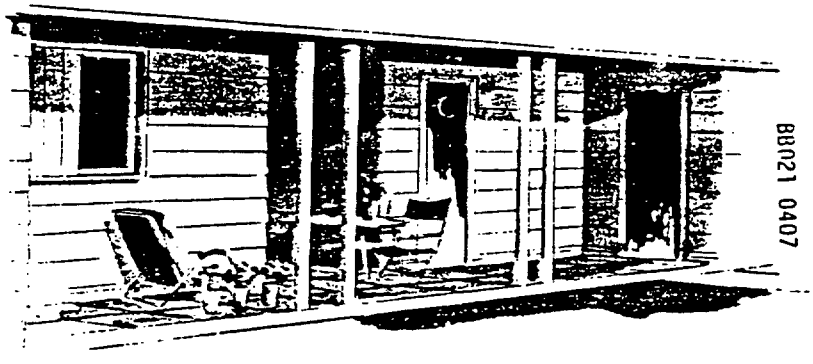


Convenient





FIRST FLOOR PLAN



PORCH AND BREEZEWAY

BB021 0407

and Inviting

AN INVITING HOME—from the spacious hall there is easy access to all the rooms. A feeling of openness and depth, gained at the doorway, lends a warm, hospitable air to this charming house. Ample cross ventilation and window space are gained from this thoughtful planning.

The living-dining room adapts itself to the high standards of gracious living demanded by young Canada. It is suitable to modern or period decoration. The combined porch and breezeway invites leisurely entertaining or quiet relaxation periods.

Needs of the modern homemakers were kept in mind as this kitchen was designed. Efficient planning provides for the installation of space and labour saving equipment that marks the modern kitchen. Today, more than ever, colour plays an important part in decoration, and in this kitchen it can be used freely and tastefully. There is space for "built-ins" to provide snack bars, breakfast nooks, and handy desks.

Roland Dumais, Architect, designed this home—another of the prize-winning homes in the Canadian Small House Competition, sponsored by the Central Mortgage and Housing Corporation.

Blue prints of this plan are available only from your closest branch of Central Mortgage and Housing Corporation for just $10.00. Ask for design No. 47-31.

LIVING-DINING ROOM





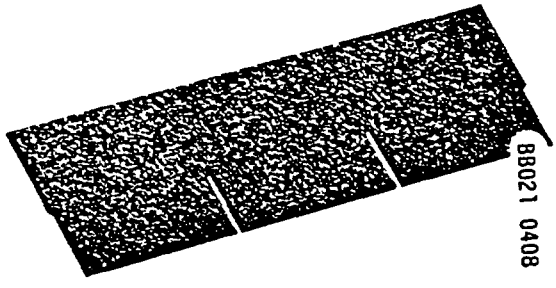
Ready for Rough Weather!

THE HARDY SEA CAPTAIN knows from experience that his ship must always be prepared for heavy weather. At any instant, from any direction, a storm might break—he and his ship are ready to ride it out.

The homes you build, too, should be prepared for every season, every type of weather—and here is where experience pays off again.

CGC GENTRY shingles are the result of years of research and development to give homes a front line of defence against the weather.

For home owners with discriminating taste, GENTRY shingles offer four beautiful blends of distinctive design — Clover, Briar, Sunset, and Marine; and five attractive colours — Robin Red, Mountain Green, Royal Blue, Grey Green, and Black.



BB021 0408

Canadian Gypsum Company, Limited

TORONTO MONTREAL

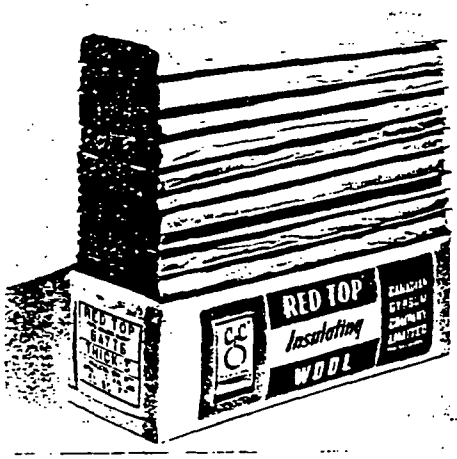
new! RED TOP Blanket BATTS



RED TOP *blanket batts cross piled ten cartons high ready for shipment to CGC dealers.*



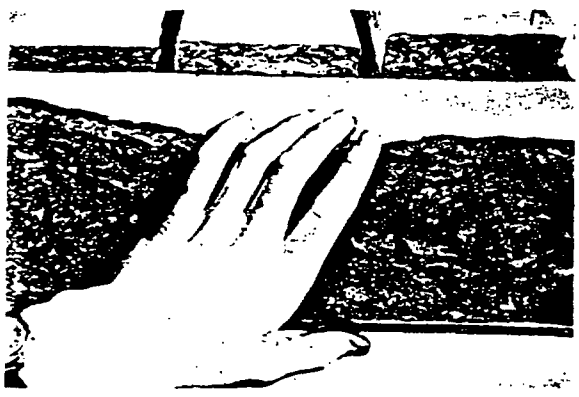
Easy to open—just strip the corner tape and remove the carton top.



New type of resilient fibers compressed in cartons are released and piled on carton to show thick insulation.



Lighter and more rigid RED TOP *batts are easier to handle and fit into walls and ceiling spaces.*

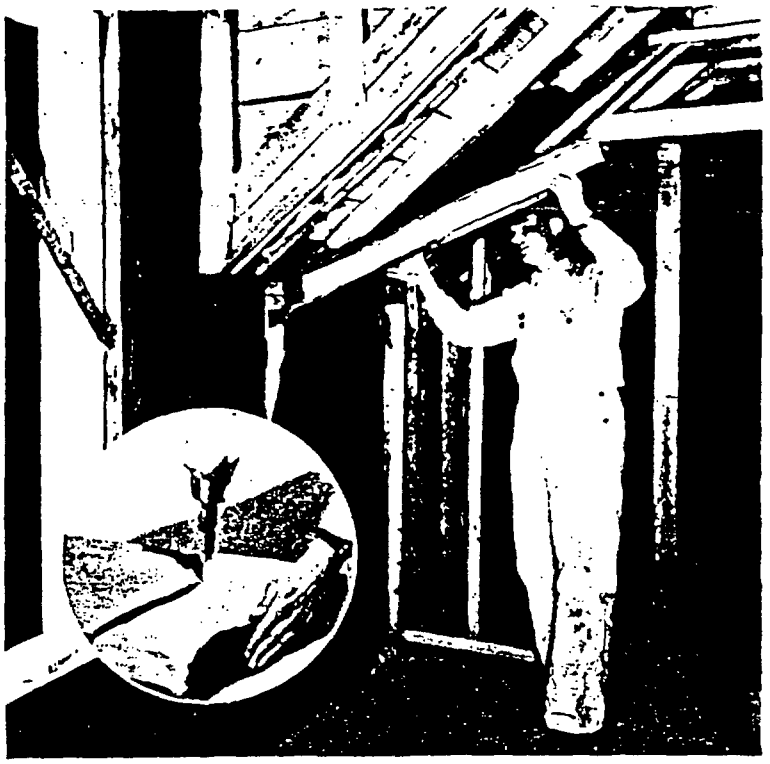


RED TOP *long wooly fibers are felted into light weight batts, paper enclosed. Available in three thicknesses—Extra thick, Thick, and Medium thick.*

BB021 0409



RED TOP *batts in eight foot ceiling high length are easy to apply and give continuous vapour barrier and insulation.*



RED TOP *eight foot batts provide continuous vapour barrier on side walls and slopes. Cut wool away at plates for a snug fit.*



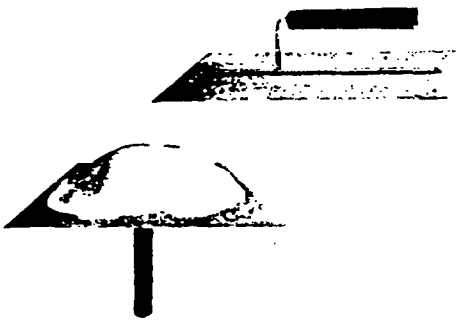
RED TOP *batts are easily sprung between joists and stapled securely in place.*



RED TOP *batts backed with vapour barrier paper forming a triple thick nailing flange are easy to install between studs.*

BB021 0410

Red Topics:



SOUND CONTROL is receiving more attention every day from architects and builders. Acoustical materials are being specified for use in public buildings, hospitals, office buildings, theatres, and schools.

There are two important types of sound control:
(1) Absorption treatments to clarify reception of sound and reduce noise levels within a room.
(2) Barrier treatments to prevent the transmission of sound from one room to another.

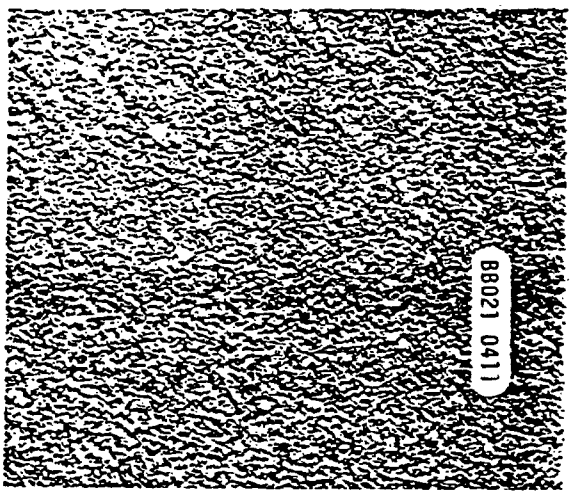
In this article we will deal with type No. 1, namely, acoustical treatment within a given room to reduce the noise level. Sound is a force that causes the air to pulsate or vibrate, resulting in sound waves that travel approximately 1100 feet per second in all directions. When these sound waves strike a wall, ceiling, or other hard surfaces, they are reflected back into the room just as a rubber ball might bounce back. Excessive reverberation causes an over-lapping of sound waves which make it difficult to hear clearly. In rooms with curved walls or ceilings, there is an uneven distribution of sound intensity creating a still greater problem. We have all noticed the echo which occurs in an unfurnished room bounded by hard walls and ceilings.

In our homes this acoustical problem is corrected largely by rugs, drapes, furnishings, etc. But in public buildings these fixtures are not always practical, and therefore, we must utilize scientific treatment such as the application of SABINITE acoustical plaster to bring about acoustical correction. We can get some measure of the worth of SABINITE acoustical plaster when we consider that a painted smooth plaster surface absorbs only 8% of the sound which strikes it, whereas, SABINITE acoustical plaster by reasons of its soft, porous nature absorbs up to 55% of that sound that strikes it.

SABINITE acoustical plaster is specially processed to produce a cellular structure when applied. The aggregate used is light in weight and extremely porous, and the SABINITE itself when mixed with water forms thousands of tiny air bubbles which are broken to form cells when the material is applied to a dry gypsum basecoat. After mixing, if you place your ear close to some SABINITE acoustical plaster, you can detect the fizzing action—similar to that which occurs in carbonated beverages. That accounts for the reason we recommend that SABINITE be thoroughly mixed (3 or 4 minutes—machine mix—7 or 8 minutes hand mix) prior to use.



SABINITE "F" is a highly efficient acoustical plaster which provides a float finish effect.



Here are some of the advantages of Sabinite acoustical plaster in comparison with acoustical tiles:

FIRE PROTECTION

SABINITE acoustical plaster is basically mineral and therefore incombustible. It has fire resisting properties similar to those of other gypsum products.

ECONOMICAL.

With the plastering contractor already on the job, he is equipped to apply SABINITE acoustical plaster for considerably less than it would cost to apply tile. SABINITE gives more sound absorption per dollar invested than most other commonly used acoustical materials.

ADAPTABILITY.

SABINITE acoustical plaster is particularly adaptable on ceilings where radiant heating is used, for SABINITE does not act as an insulator against the source of heat. Like any plaster, SABINITE is flexible in use and adaptable to any architectural design—lending beauty to any decorative plan.

CLEANING OR PAINTING.

When properly applied, SABINITE acoustical plaster has a light float finish, and there will be no droppings or rough areas to catch dirt. SABINITE acoustical plaster may be cleaned with a vacuum cleaner, using standard hose and brush attachments, or it may be painted in any desired colour, using a good water thinned casein base or resin base paint. This type of paint should be mixed with equal parts of water and sprayed, using type MBD No. 30 nozzle with about 30 lbs. pressure. SABINITE acoustical plaster may be painted in this way many times before the acoustical properties are materially reduced.



The interior of the beautiful chapel of Sanatorium St. Joseph of Rosemount in Montreal. The Architect, Gagnier, Derome, and Mercier; the General Contractor, Dansereau Ltd.; and the Plastering Contractor, Antonio Archambault.

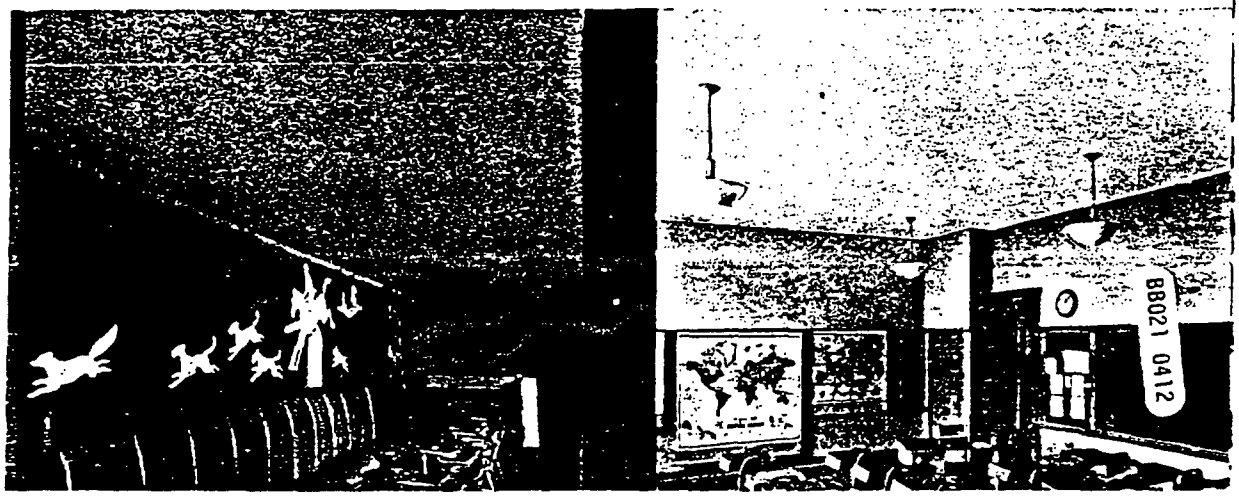
HOW TO APPLY SABINITE.

The plasterer applies SABINITE over a *hard dry* gypsum basecoat which has been roughened slightly. After thoroughly mixing the SABINITE, the first (scratch) coat is applied to the dry gypsum basecoat. This coat is ¼" thick, and after darbying, it is scratched to provide a key for the second coat. After an interval of 24 hours, the second coat is applied ¼" thick, and after the material draws for awhile, the excessive water is soaked into the basecoat, and it is floated with a shingle or cork float to a true, even surface. Just before the SABINITE sets, the plasterer goes over the surface lightly with a steel trowel to remove any loose particles which would catch dirt.

Acoustical corrections or noise reduction is an important part of every hotel, office building, church, and other types of modern construction. Your plastering contractor is ready to work with you in solving acoustical problems on your jobs with SABINITE acoustical plaster.

A view of "Times Square" at the King Edward Hotel, Toronto. The Architect, Maroni and Morris; the General Contractor, the T. Eaton Co. Ltd.; the Sub-Contractor, Dalton Engineering and Construction Co.; the Stylist, Joseph Hunton, and the Plastering Contractor, Charles Balmer and Sons.

One of the fine class rooms at the new Weston Senior Public School on which SABINITE was used. The Architect, Govan, Ferguson, Lindsay, Kaminker, Maw, Langley, and Keenleyside; the General Contractor, Bennet-Pratt Ltd.; the Plastering Contractor, W. J. Crowe Ltd.



BB021 0412

SHEETROCK SCORES AGAIN

with a stronger
SHEETROCK wallboard...



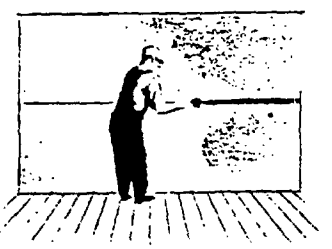
AGAIN

with a finer paper finish
for a better paint job.



AGAIN...

with a new recessed edge
for a better, stronger
surface and for ease of
application.



AND AGAIN...

with a new end tape for ease and
convenience in opening package.



CANADA
POSTAGE PAID
POST PAID
1 c.
No. 4467
TORONTO

Postmaster: Do not forward.
Return to: Canadian Gypsum Co. Ltd.,
170 Bloor St. W., Toronto.
Return Postage Guaranteed.

BB021 0413