a still larger saving is effected by the use of unskilled instead of skilled labour.

The latter consideration only begins to be appreciated in this country, but it is clearly realised in the United States. It tells greatly in favour of concrete in comparison with materials that require a larger amount of labour. The immense electric power works at Niagara Falls are a case in point Their "intake bays" have miles of retaining walls which could never have been built of ordinary masonry. Last November I saw some of them which had swallowed up hundreds of thousands of barrels of cement. Most of it came from Pennsylvania, and including import duty it had cost on the spot about ninety cents per barrel. It must have risen considerably since then however

THE PANAMA CANAL

If something like half a million barrels of cement could be dumped on a section of the Niagara River only two or three miles long, how many million barrels will be needed to line the sides of the Panama Canal, build all its locks and warehouses, and form harbours for it at either end? More interesting still, if the greed of the American Trusts should raise a fiscal revolt against them and precipitate a sweeping reduction of the prospective duties they batten upon, what a market for English cement the Panama Canal would offer. Anyhow, the English trade is evidently at the dawn of happier days It has got more control over its own market than it ever had before, and it is also gaining ground slowly but surely in foreign markets. That is proved by the almost universal increase of its exports during the last eighteen months.

EXPORTS AND IMPORTS

The following table shows substantial increase in every foreign and colonial market, with the single exception of Australia. This year Australia also has taken an upward turn —

Exports of British Cement, 1904 and 1905		
South Africa, tons	83,609	85,009
India.....	87,685.. .	.97,864
New Zealand.....	24 805. .	28,351
Australia...	16,292	15,432
Canada..... . .	15,561 .. .	28,303
Argentina..	12,014	17,688
Brazil.....	6,445.....13,919	
United States.....	5,073.....11,590	
Netherlands	1,925..... 3,319	

Another satisfactory feature of the same year was a substantial decline in the imports of foreign cement into this country. In 1904 they amounted to 272, 954 tons, but last year they fell to 234,588 tons. The imported article is chiefly Belgian, and its chief market is among jerry builders. Fortunately it is not so progressive as the British exports. These have scored another large gain in the first seven months of the current year, their total having risen from 259,254 tons to 358,551 tons. Fully half of the increase was due to the larger demands of the United States, which during the seven months advanced from under 4,000 tons to nearly 61,000 tons. This year the Americans promise to be our best customers for cement Whether they want it for San Francisco or the Panama Canal matters little. There is every likelihood of their being large buyers for several years to come In every other direction the prospect of the cement trade is once more healthy and hopeful The rise in cement shares which started so suddenly is, therefore, a very natural anticipation of better earnings and higher dividends than have been in vogue hitherto.

Town Hall for Auckland.

Messrs. J. J. and J. E Clarke, architects, of Melbourne, have been awarded the first prize of £400 for the best design for a Town Hall for Auckland. The second prize of £200 went to Messrs William and Herbert Black, also of Melbourne, and the third of £100 to Messrs. Clegg and Miller, of Ballarat. There were forty-six designs handed in. It appears coincidental that all three prizes should go to Victorian architects, when by far the majority of the plans sent in were executed by New Zealand architects. The new Auckland Town Hall buildings, which are to be erected at the head of Queen street, in the reserve near the fire bell tower, are to cost £60,000 They will include municipal offices, a clock tower, and two concert halls, one of which is to be about the same size as the Wellington Town Hall.

You can do little without enthusiasm

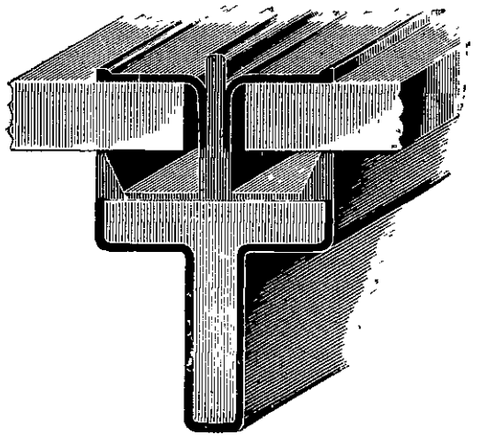
After the shades of evening fall, keep out of the way of drafts, but during business hours get in all you can.

"British Challenge" Glazing Bar.

The accompanying illustrations serve to show this excellent glazing bar in two aspects, namely, for side rail adjustments, and ¾ glass The special features of the "British Challenge" are of such a nature as to commend them to architects and builders alike The system may be primarily acclaimed on account of the familiar steel bar being completely covered with pure jointless lead which allows for the contraction and expansion of material and also for vibration A gutter provides for the condensation of moisture

The "British Challenge" glazing bar has already been adopted by the architects and builders of New Zealand they thereby following the lead of their English brethren

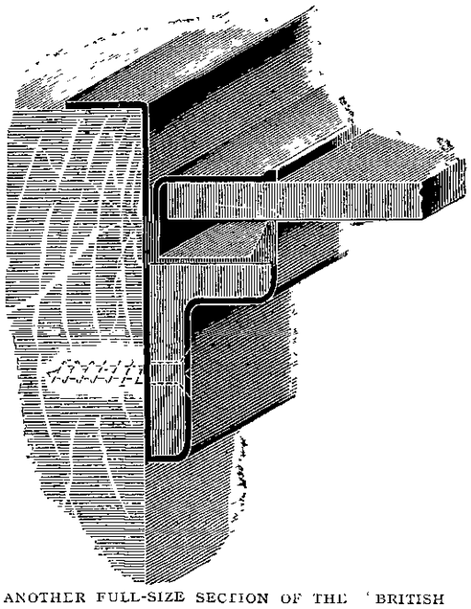
We are indebted to Messrs Smith and Smith for our illustrations



FULL-SIZE SECTION FOR ¾ GLASS OF THE "BRITISH CHALLENGE" GLAZING BAR WHICH IS WITHOUT JOINT IN THE CLOTHING OR CAP

Artificial Marble and Stone.

We are so accustomed to regard stone as a natural product that artificial stone—although making headway in the building industries—has become almost a by-word The Lithographic Stone and Marble Company (Limited), of Ponder's End Middlesex, and 11 and 12, Finsbury-square, E C, have, however, brought out under a recently patented process results of an extraordinary character Marbles and building stones, from the most expensive to the most common kinds, are reproduced with marvellous fidelity All stones are made from waste debris and blast furnace slag even is also utilised for the manufacture of high-class marbles The technical description of the process may thus be given A pure carbonate of lime is composed of 56lb of lime and 44lb of carbonic acid gas The necessary amount of stone is calcined in closed retorts for the purpose of liberating the gas and obtaining lime The gas thus obtained is liquefied and stored in bottles for future use The oxide is then withdrawn and mixed in a revolving drum, with a certain proportion of the ground carbonate. When the lime and fine powder are thoroughly mixed, the whole is slaked The hydrate of lime thus obtained is now in a fit state for pressing into slabs or other forms desired Should, however, a coloured marble be desired, the colour, which is principally due to iron in its various combinations, is thoroughly mixed with the proportionate parts of the limestone and lime The whole is then slaked This method ensures absolute evenness of colour throughout the mass, whether it be red, sienna, green, black, or other colour.



ANOTHER FULL-SIZE SECTION OF THE "BRITISH CHALLENGE" GLAZING BAR.

The plastic material is now taken to a hydraulic press capable of exerting a pressure which will give a cubic measurement to the block equal to the best and closest grained stone to be found in nature. After the stones are removed from the press, they are taken to a drying room to expel the remaining moisture The desiccated blocks are then placed in a cylinder, a vacuum is created, and the carbonic acid gas originally extracted from the limestone and stored is now brought into action. The gas is first fed into the tank at practically no pressure, but the assimilation of the gas by the lime is so rapid that heat is speedily generated So long as heat is maintained, the tank requires feeding regularly only, but if signs of decrease are shown, then pressure must be gradually applied until such time as the gauge remains stationary When this occurs, the lime previously disseminated throughout the mass has become carbonate again and the blocks are not to be distinguished from the natural stone.

All this, however, conveys but a faint idea of the beauty of results, which possess durability and uniformity unequalled by the natural marble itself.

Natural marbles when carved become very costly. By the company's treatment, at an intermediate stage, floral and other designs can be easily produced and the labour upon the finished article is infinitesimal when compared with that upon the natural stone

The company also produces all kinds of building stones used in masonry, whether they are compact, magnesium, or oolite We have inspected samples of Portland, Bath and Hopton Wood stones, which are not to be distinguished from the quarried products. These stones are not only superior in quality, as is admitted by the foremost building-stone experts, but they have many advantages over the natural stones They can, in most cases, be moulded to the required design When this is impossible, the masonry required is done at the intermediate stage, and at less than one third the cost of dressing the natural stone They can if needful, be produced from ¾in. to any desired thickness —*Builder.*

Anaglypta.

We are enabled to publish on the opposite page, through the courtesy of Messrs. E A. Christie & Co, two excellent illustrations of Anaglypta, the new ceiling fabric This material is really a papier-mache manufactured from plastic pulp The low relief is in rolls, while the high relief is in square sheets and may be put up by an ordinary paperhanger in the same way as wall paper Some of the special features of Anaglypta are that the relief is not lost when the material is pasted, and that the contractions and expansions of the fabric on the wall, due to variation in atmospheric moisture, do not take away the relief, as is the case with so many other relief decorations Moreover, there is none of the strain on the fibres that exists in the case of those papers which are embossed when the paper itself is made All designs are executed by first-class Home artists who have established a high reputation in domestic art of the internal decorative order Anaglypta, although ordinarily manufactured from plastic pulp, can also be supplied in asbestos, thus making it one of the most fire-proof ceilings at present on the market.

Ford Stone.

Among the many artificial stones now available for the use of builders, that which is associated with the name of Mr. Lewis P Ford undoubtedly occupies a leading place. Perhaps, indeed, it may fairly claim to occupy a place by itself, since it differs radically from other artificial building stones, all of which are concretes made of cement, with sand, granite chippings or other aggregates It has no outer skin like concretes, and unlike them, being of uniform texture throughout, it can be sawn, worked, and carved in the same way as an ordinary natural stone and produces the same artistic effects This gives the architect and stonemason an unrestricted scope, which they cannot get with concretes and