

Ernest Trobridge – “the Compressed Green Wood Construction” leaflet

While running a market garden at Haydon House, Kingsbury, during the second half of the First World War (to provide food for his vegetarian family, while there was little work for him as an architect), Ernest Trobridge was working on ideas to provide cheap but comfortable homes for ordinary people, once the war was over. His study of the rate at which freshly cut timber shrank, as it dried out, led him to devise a new method of constructing wooden homes, which he then applied to patent.

By the end of 1919, he was ready to launch his “compressed green wood” ideas, by both building an estate of his thatched wooden cottages on a field he had bought in Kingsbury, and to design houses that could be built by others using his method.

PATENT SPECIFICATION

Application Date: Sept. 18, 1919. No. 23,012/19. **155,630**


“ “ Oct. 29, 1919. No. 26,608/19.

“ “ Nov. 28, 1919. No. 29,739/19.

“ “ Feb. 4, 1920. No. 3483/20.

One Complete Specification Left: July 7, 1920.

Complete Accepted: Dec. 20, 1920.



PROVISIONAL SPECIFICATION.

No. 23,012, A.D. 1919:

Improvements in Buildings and in Floors and Walls therefor.

I, ERNEST GEORGE TROBRIDGE, Architect, of Haydon House, Hay Lane, Kingsbury, London, N.W. 9, do hereby declare the nature of this invention to be as follows:—

This invention consists primarily in an improved method of constructing wooden floors and walls, and possesses the advantages (1) that it enables unseasoned timber to be used whilst still in a green condition, (2) it enables normally unsuitable timbers to be employed, and (3) it provides an integral solid flooring or wall possessing great strength derived from arch action and adapted to disperse the total stresses over a wide area.

ing in materials, transportation, etc., and if applied also to walls, enables dwelling houses to be built wholly or chiefly of timber not usually employed, such as elm, which often can be found locally but in any case is available in considerable quantities within the realm.

Moreover, inasmuch as it dispenses with penetrable material and crevices, it provides a dwelling which will be to that extent proof against vermin.

Essentially, the invention consists in making a flooring or wall, either wholly or in part, of wedge-shaped boards, and preferably of green or unseasoned wood, the sizes of the boards being predetermined according to the known coefficient of shrinkage of the wood employed so as

Trobridge was invited by the “Daily Mail” newspaper to include one of his designs as a “show house” in their Ideal Home Exhibition, held at Olympia in February 1920. He gladly took up

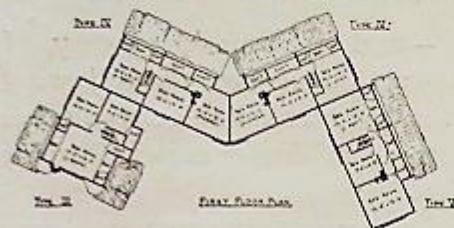


this opportunity to publicise the advantages of his new building method, and the photograph aside shows his exhibit.

He produced a leaflet on “the Compressed Green Wood Construction”, for the exhibition. It set out how what might be seen as an old-fashioned idea was actually ‘the most practical solution of the housing problem yet offered’. It could be built quickly and cheaply (‘half the price of a

brick-built house of the same dimensions’), and would be ‘fire proof, damp proof, vermin proof and weather proof’!

Brent Archives holds several copies of the leaflet in its Trobridge Collection, at reference 19794 / ADM / 2 / 1. A facsimile copy of this interesting leaflet is set out on the following pages:



— Scale of Feet —



Sketch of House, Section of Type II and V.



FRANKLIN ESTATE
 HOUSES ON PLOTS nos 3 to 10
 COMPRESSED GREENWOOD CONSTRUCTION

The COMPRESSED GREEN WOOD CONSTRUCTION

Rural cottages
 in which ancient
 construction is
 modified to meet
 modern needs

:: :: Approved by :: ::
 H.M. MINISTRY OF HEALTH

The COMPRESSED GREEN WOOD CONSTRUCTION

IT is claimed that this type of house is the most progressive step yet made towards meeting the present urgent demand for houses.

The ideal aimed at—and it is an ideal easy of realisation with this construction—covers the following all-important considerations: maximum convenience, comfort, and life of structure; minimum expenditure of costs and time for erection.

Study the plan and its lay out of rooms and you will observe first, that wasted space is entirely avoided, and secondly, that a reversion has been made to the ancient and scientifically sound principle of giving, as far as practicable, the cubic extent of air required, laterally instead of vertically.

The principal of the materials used—they are all entirely *British*—is elm wood; and of this long neglected British fire resisting hard wood, it may be said that there is an abundant supply convenient to almost every district in the United Kingdom. This means a very considerable economy in respect of transport alone. But not only is elm plentiful, it can be bought at less than a third the cost of the commonest imported soft wood; and of all European timbers, elm is the *least inflammable*.

It is an essential principle of this construction that, as the name implies, the timber be wrought whilst still green and soft to work, and immediately after leaving the saw. The reason for this departure from general practice is that elm assumes a rock-like hardness after seasoning, and has certain peculiarities which make for enormous expense and difficulty in its working when worked on usual lines.

Why Green Wood?

These peculiarities are *controlled* in the present construction by a system based on well known scientific laws. Since it is inadvisable to use seasoned elm the house can be made ready for occupation within eight weeks from the day the trees are cut.

One of the secrets of the success of this construction is the method of standardisation, all dimensions being governed by door width ; as a result, the doors and windows may be placed in practically any desired position without alteration to the main structure ; again, so integrated is the construction that joists and rafters are unnecessary.

The standardisation does not mean that all houses of this type must be of the same size and appearance ; it is applicable to large and small houses alike, and permits of the revival of all the ancient glories of the traditional English domestic architecture.

The system of control already referred to is a provision which renders the floors and roof absolutely air tight, while the walls are reinforced by means of a vertical damp course from ground to roof, the two features rendering the house superlatively weatherproof.

The compelling desiderata to-day with respect to housing are speed of erection and economy in materials and labour ; the former requirement has already been dealt with, and of the second the following points fall to be considered.

The cost of the house illustrated on the front page (and of which the Exhibition section is a part) is not more than 50 per cent. of a brick-built house of similar accommodation. The weight of the house is 23 tons ; a brick house of the same dimensions would weigh 130 tons. Consider the comparative cartage costs.

The Compressed Green Wood Construction requires no scaffolding for the erection of houses of the dimensions of the exhibit. It can be built, by reason of its comparative lightness, on reinforced concrete piles ; this latter feature gives ample air passage under the ground floor, provides against damp and the inroads of vermin, and renders costly foundations unnecessary.

While this construction permits of all the usual conventional methods of decoration, these, though they

may be desired, are not essential ; the inherent natural charm of the raw material used enables us to revert to the unadorned beauties which marked the homes of our ancestors. Thus is it not only possible, but advisable, to dispense with the cost of plaster, paint, and wall papers.

Not the least of the advantages of this construction is its essential simplicity. It can, if and when required, be delivered in sections and erected by anyone accustomed to the use of simple tools ; this, it will be readily appreciated, is a most important consideration in these days of extremely scarce building labour.

While the construction lends itself to the application of any roofing material, it is urged that thatch is the method most to be commended. Although seldom used in modern structures, on account of a variety of ill-considered reasons, thatch is recognised by competent authorities to be quite the most desirable of all methods of domestic roofing.

One of the many virtues of this, the most picturesque of all roof coverings, is its non-conducting qualities—a feature which makes for cosy warmth in winter and agreeable coolness in summer.

Thatch Recommended.

Thatch is of all methods of roofing the most weatherproof ; as an indication of its economy in maintenance it may be mentioned that it requires attention only once in a dozen years. *The danger of fire* is practically eliminated by a thoughtful provision in the present construction. In addition to an air-tight fire-resisting timber roof, there is embedded in the ridge of the roof a water sprinkler, which is controlled from the exterior at ground level. By this means, in case of alarm, the entire surface of the roof can be flooded in less than half a minute.

The foregoing outlines but briefly the manifold advantages of the Compressed Green Wood Construction over any existing method of providing *permanent homes*. To those who are interested, however, full details will gladly be sent at the termination of the Ideal Homes Exhibition. Enquiries will be acknowledged in the order of their receipt and with all possible speed.

IN BRIEF

From every point of view the Compressed Green Wood Construction is the most practical solution of the housing problem yet offered.

A British conception employing British labour and British materials entirely.

Built ready for occupation in eight weeks.

Practically the only fire proof, damp proof, vermin proof and weather proof house extant.

Costs half the price of a brick-built house of the same dimensions.

Renders unnecessary the expense of paint, plaster, and wall paper.

Can be delivered in sections and erected by non-specialised labour.

Dispenses with scaffolding for small houses.

It is approved by H.M. Ministry of Health.

APOLOGIA

Inasmuch as the adjustments controlling shrinkage and warping should be spread over a period of eight weeks, during which time comparatively complete control is effected, the section exhibited is somewhat unsuitable for demonstration purposes. Actually the timber used in this exhibit was felled on January 16th, 1920. Further, owing to the limited space, the cantilevers have had to be cut in half. Again, floors constructed of green timber ought not to be used to any extent for several weeks.

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