It honestly seems as though for the sake of compensation round curves and corners we have been carrying round a set of gears that have not only been the source of endless trouble, but have in actual fact been the perpetrators of the actual evil they were designed to avoid, that is, tire skid and wear. From reliable sources we learn that tests have already been carried out along these lines. Two axles, one fitted with the conventional differential, and the other a plain solid axle, were fitted with exactly similar tires, pumped to the same pressure, and driven over just the same course, with the result that the tires on the solid axle showed a decidedly longer life than those on the differential axle. There is going to be a great deal of argument from both sides before this matter is finally settled, but after all it must be settled on the road, for the finest and soundest theories are apt to fall down badly when put to practical test. At present the only tests available seem to point to the discarding of the differential in the near future, at any rate for the lighter class of car, and any small deficiencies the solid axle may exhibit, will probably be more than compensated for by the gain in cheapness of first cost and mechanical strength.

Municipal Motors.

In referring to municipal motors we are for the moment not concerned with passenger carrying vehicles. These may safely be left for the present, for their time is surely coming after the return of peace conditions.

As mechanical units nothing can be said against the efficiency of motors generally in the fact of their war performances, and the adoption of motors for passenger traffic will be fought out eventually, not on the units of the machines themselves, but on the basis of the distance it will be possible to convey passengers profitably for a penny fare. Municipalities have, however, in our opinion been unwarrantably slow in availing themselves of the motor possibilities offering for the efficient carrying out of city work. We still have the old road sweeping machines and the horse drawn water waggons, while the one horse garbage carts toddle slowly from door to door taking their unlimited time to poison the atmosphere with their vile odours.

All these duties and many others can be better and more cheaply done by motor, and although the present is not perhaps an opportune time to purchase, seeing that we all desire to buy only British made goods, it is certainly the duty of every councillor and municipal officer to watch the development of these mechanical aids to city cleanliness and efficiency that is taking place in oversea cities, against the time when it will be possible to bring our municipal departments somewhere into line with modern progress.

Our 48th Competition—*continued.*

There must be a hob fire on which simple cooking may be done. 3.—The upper floor may be partly in the roof, and must contain one large bedroom, about 160 ft. super., and two smaller ones.

There is supposed to be public water supply and sewerage, but hot water service is not intended. The design must be studied to give a good appearance from every side, especially from any point in the road.

The materials allowed are red brick (9in. and 4½in. walls) which may be rough cast at author's discretion, Marseilles tile roof. The upper storey may be timber framing weather-boarded at author's discretion, and if needed for accommodation may overhang about 1 ft. but this is not necessarily implied. Upper storey partitions may be timber framing. The height of lower storey must be 8 ft. clear, and upper 8 ft. to ceiling, and not less than 4 ft. of vertical wall at any point.

Points to be specially studied are:—(a) Uniformity and economy in structure; (b) Convenience of accommodation; (c) External appearance; (d) Equitable subdivision of site, so that every corner may be utilized for garden or other useful purpose.

The design must be illustrated by:—(a) A site plan to 1/16 inch scale, shewing block of buildings, paths, posts for drying lines, &c.; (b) ⅛in. scale plan of each floor; (c) ⅛inch scale plan of roofs; (d) Cross section of one cottage to ¼inch scale; (e) All dissimilar elevations. A Sketch Perspective taken from a point in the road may also be submitted.

The ground falls towards the North with a gradient of about 1 in 20, and the road, level with the site at "A" falls 8ft. from "A" to "B" where there is an 8ft. cutting. It is necessary to contrive an entrance to each garden plot without steps, so that a barrow may be run in. There must be no lights on any party or boundary line.

Messrs. Atkins & Bacon, Wellington have kindly set this subject.

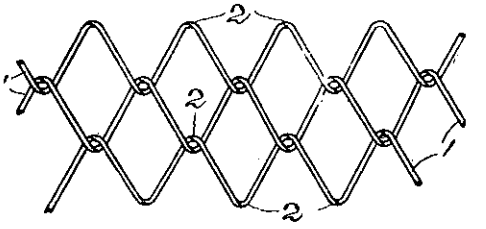
Designs must be sent in, in black and white under a nom-de-plume, addressed to **Progress**, 8 Farish Street, Wellington, and marked clearly "Forty-eighth Prize Competition" on outside with a covering letter giving competitor's name, and address of employer. Designs to be sent in by November 10th.

Conditions of "Progress" Competitions

The Editor reserves the right of publishing any or all the designs submitted, and while every care will be taken of drawings, no responsibility is accepted should any loss or damage be sustained. Those desiring their designs returned must send postage to cover cost of same. No award will be made unless at least three designs are sent in for any one competition. Unless otherwise stated drawings are to be in black and white only.

Recent Building Patents

Plaster, Foundation for.—Jas. L. Owen, of Christchurch has taken out a patent (No. 36013) consisting of a mesh comprising a series of galvanised-iron or steel wires 1 of sufficient gauge to ensure rigidity, and which wires are bent to flat open spiral form so as to constitute a series of trian-



gular loops 2. The loops are interlaced chain-wise so as to produce a continuous mesh of diamond form. This construction allows of the wires hinging one upon the other and so being conveniently drawn taut and secured upon the framework.