and these can be formed into twelve magic squares of four ; e. g. the central block of four is a magic square ; take it out, the top and bottom brought together make another square, the sides make another, and the four corner sixteenths make yet another ; again the block whose corner figures are 28, 73, 80, 21, is a magic square ; so also is the corresponding block below it ; take these out and bring the sides together and there are two more magic squares ; take the block 78, 19, 26, 79, its

corresponding block on the opposite side, bring the top and bottom together, and there are four more magic squares. In fact this magic square contains in itself twenty-five other magic squares.

(2.) Diophantine Problem. Find a triangle whose area is 56 sq. yds., whose perimeter is 56 yds. and whose sides contain each a whole number of feet.

EDITOR'S DRAWER.

EDUCATIONAL INTELLIGENCE.—We again invite teachers, inspectors. and all other friends of education to send us items of educational intelligence.

OUR CIRCULATION.—We are under obligations to many friends for their successful efforts to extend our circulation. Many others, however, from whom we might expect something, have as yet done nothing. Friends ! if the TEACHER Is to be a success, we must have a good circulation in every county in the Province. We appeal to you to sustain our undertaking if you consider it worthy of support.

TECHNICAL EDUCATION.—In England the movement in behalf of Technical Education has, of late, been rapidly progressing. During the present month, the first of the proposed Technological Examinations by the Society of Arts will be held. It will be remembered that these examinations are part of the result of a congress held last year, under the Presidency of Prince Arthur, to consider the best means of advancing technical education. The subjects for the present year, are nature and manufacture of Cotton, Paper, Silk, and Steel, and Carriage-building. The candidates will be examined on elementary abstract science, so far as it bears on their subject, and tested practically and theoretically on that subject. Three classes of certificates

will be awarded, Honours, Advanced Grade, and Elementary Grade.

CREDITABLE.—In the last No. of the "Philosophical Magazine," the highest philosophical periodical published in Britain, edited by Sir Robert Kane, L. L. D., F. R. S., &c., &c. Sir William Thompson, L. L. D., F. R. S., &c., &c., and Mr. Francis, Ph. D., F. R. S., &c., &c., we notice an article on Fractional Distillation, by our fellow-townsman, Mr. J. C. Glashan, School Inspector. The problem which appears hitherto to have escaped the researches of mathematicians, was proposed in February by Mr. J. A. Wanklyn, Member of the Royal Bavarian Academy of Sciences. Physically, as involving the nature of liquid solutions, it seems to have engaged the attention of several eminent chemists and physicists, especially Mr. Wanklyn and M. Berthelot. Mr. Glashan applies his formulæ, which are in themselves general, to a series of experiments on a solution of ammonia in water, and obtains for the co-efficient of volatility of the former $(2-L\ 52) \div (2-L\ 95)$ or $1\ 2.7488$, water being 1. (L. means logarithm.) The best preceding examinations of this particular case seem to have given ammonia a co-efficient lying *between* 9.6 and 18.5, rather wide limits and practically useless.