

TEACHERS' DESK.

J. C. GLASHAN ESQ., EDITOR.

Contributors to the 'Desk' will oblige by observing the following rules :

1. To send answers with their questions and solutions with their problems.

2. To send questions for insertion on separate sheets from those containing answers to questions already proposed.

3. To write on one side of the paper.

4. To write their names on every sheet.

CORRECT ANSWERS AND SOLUTIONS RECEIVED

R. Barron, Queensville, 46.

S. F. Passmore, Brantford, 46.

M. Ferguson, Bosanquet, 48, 49 50.

Alex. McIntosh, Pinkerton, 49, 51, 52.

A. G. Campbell, Durham, 48, 49, 50, 52.

Con. O'Gorman, White Lake, 49, 50, 51.

Levi Palmer, Sutherland's Corners, 43, 44, 45, 46.

Wm. S. Howell, Sophiasburg, 42, 43, 44, 45.

H. T. Scudamore, Sutherland's Corners, 43 and

47. (A full and elegant investigation of latter.)

ANSWERS TO CORRESPONDENTS.

A SUBSCRIBER.—The following named works will be found useful :

Peacock's Arithmetic, \$1.50.

De Morgan's Elementary Arithmetic, Walton and Maberly, \$1.50.

Sang's Elementary Arithmetic, Blackwood & Sons, \$1.50.

Sang's Higher Arithmetic, Blackwood & Sons, \$1.50.

Munn's Theoretical Arithmetic, Blackwood & Sons, \$1.50.

The A B C of Arithmetic by Sonnenschein and Nesbitt. Teacher's Book, Preliminary Edition, Whittaker & Co., 30 cts.

Sandeman's Pelicotetics, an Elementary Treatise on Algebra and its groundwork Arithmetic, Deighton, Bell & Co., \$6.

The first two of these works are out of print, but are by no means scarce, and can often be picked up second-hand by an agent. Sang's works are excellent of their class—they are suited to one who understands the elementary operations and seeks arithmetic reduced to a system. Munn's is the best of them all for a teacher.

The A B C of ARITHMETIC is just out, and the Editor has not yet seen it, but from the names of the authors, he supposes it contains a description and examples of application of their new *Zahlbil-*

der, or number-pictures, and their Improved Abacus, by which they claim to give optical exhibition of numbers up to a million. It is, in fact, an arithmetical exposition of what the Germans call "Anschauungsunterricht," or 'Instruction based on sense-impressions.'

The last work I would not advise anyone to buy unless he is well read in Arithmetic and Algebra, and has no small knowledge of Geometry and Trigonometry. He must also be prepared to overlook the style which is often uncouth and most repulsive. Let him surmount this and he will never regret the effort.

"In this Second Volume on Arithmetic an account is given of the doctrines of Powers, Roots and Logarithms, so far as that can be well done without the aid of general symbols," SANG'S HIGHER ARITHMETIC, *Preface*.

"This book seeks to make Arithmetic and Algebra a science,—a piece of knowledge to wit every where reasoned out in an orderly way from principles expressly laid down,—and toward that end has to run wide of the track of the common books." SANDEMAN'S PELICOTETICS, *Preface*.

H. T. S. Thanks for the 'railway problem, which is interesting indeed.

ANSWERS TO PROBLEMS.

43. There seem to be two principal propositions following 'But' and 'And' respectively, and two subordinate adjective ones each commencing with 'that.' (By the way, has not somebody been *polishing* Byron here. Did not the poet write 'which?')

Fill is a verb in the middle voice. (Will be taken up in answer to question 52.)

Mountaineers is subject to 'fill.'

44. The proposed answer is incorrect if Tuesday noon means *Tuesday noon*, but correct if 12 m. by the clock is meant. The gain is in proportion to the time *true* or *false*, but antecedent and consequent must be both *true* or both *false*.

45. Clearing of fractions, we find

$8 \text{ of A's steps} = 5 \text{ of B's.}$

$\therefore 24 \text{ of " " } = 15 \text{ " "}$

Also,—

A makes 44 steps while B makes 65.

$\therefore A \text{ " } 88 \text{ " " " " } 130.$

$\therefore A \text{ " } 55 \text{ of B's steps while B makes } 130.$

$\therefore A \text{ makes } 11 \text{ of B's steps while B makes } 26,$
giving B a gain of 15 of his own steps, i. e. bringing him up to A. Ans. 26.