

A SCHOOL SCRAP-BOOK.—Let me make one suggestion which I have found most valuable in my school-room, and that is a scrap-book, made from newspapers and magazines. Items are to be found, in every one I take up, on all manner of subjects connected with the different countries of the world, many of which are awakening to progress and liberty from the steps of centuries—items which are to be found in no school-book, nor indeed in any book, and help both teacher and children to feel that the world is alive, and the country and people they are studying of in some far-off land are quite real, with their interests very closely interwoven with their own. My scrap-book tells of sleepy Turkey waking up to the necessity of railroads and the advantages she will gain therefrom; and wonderful descriptions of the Mont Cenis Tunnel, that no text-book has room for; of the visit of Shah, so romantic in its de-

tails; and yet seemingly so important in the opening of the Eastern to Western civilization; of Chinese coal-fields, and Canadian salt deposits; of African adventure and discovery, and a strange journey in the heart of Asia; of Arabian deserts and curious Eastern cities; of the freeing of the slaves of Brazil, and of the opening light in Japan. It has stories of life in Lapland, Siberia, Borneo, and China; it contains pictures of remarkable trees of different lands, and a real grey silky leaf from the South African forests. It relates of Amadeus' abdication, and the royal progress and coronation of the Scandinavian monarch, King Oscar. It describes the late funeral of an Indian Prince, the Russian Ice Palace, fetes in Turkey, and wonders of South America. So it interweaves interests of to-day with every land or nation we touch upon in our geography lessons, and makes the children understand their reality and life.

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### 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.

#### ANSWERS TO PROBLEMS.

47. Time of flight of arrow fired vertically was not less than 36 seconds.

∴ time in ascent was not less than 18 seconds.

∴ initial velocity was not less than  $18 \times 32$  ft. per sec.

The arrow ranges farthest fired at an elevation of 45 degrees.

Resolve the initial velocity vertically and horizontally.

Horizontal velocity was not less than  $18 \times 32 \times \frac{1}{2}$  (s. q. 2) ft. per sec., (s. q. for square root,) which exceeds 277 miles per hour.

But Hiawatha's rate must have exceeded the horizontal velocity of the arrow for the latter to have fallen behind him, hence his speed exceeded 277 miles per hour.

This problem in a slightly different form was first proposed as a "College Question" at Cam-

bridge; it found its way into several collections, and was set in the form given in the TEACHER, in Toronto University.

48. Take moments about the centre of gravity. Ans. 32 and 48 lbs.

49. *Suit* seems to be governed by *in* understood, but this is an example of what grammarians of the old school never recognized or acknowledged; the word may be *correctly* parsed by different speakers in different ways. Card-players, for instance, would probably take this for a metaphor, make, *follow* transitive and *suit* its object; if they *think* as they *parse*, they are right. The Editor has found at least two who, on the other hand, *think* 'follow to suit,' i. e., 'follow to his suit.' These would be right in parsing in accordance. More anon.

50. *Horse* is used by synecdoche for the species; it is the *generic* masculine or neuter. *Violin* is used by metonymy for *the art of playing on the violin*; it is a common, not an abstract, noun. The etymology follows the word, not its tropical meaning, except in tropes derived from personification.

51. *Well* was used both as an adjective and an adverb. Examples of its adjective use are, "of here wel dedes," (of her good deeds) line 65, "wo is the rewme," (woe is the realm) line 152, both of Passus iii, of Piers the Plowman. B—text.

"I am well" arose from "well is me," a dative: