

in the manual training room. On the contrary it can be used to great advantage, and should be encouraged in the sketching of leaves, sections of trees, and the drawing of tools, apparatus, etc. The free use of the blackboard by the teacher to illustrate the object lessons will greatly help the above. Sometimes it is permissible to make freehand working drawings, especially where the pupil is working out an original model, (though this should be followed by a properly finished drawing), or where the model consists of a number of curves which are not easily drawn with instruments. This should not be carried too far, as it is likely to cause a deterioration in the quality of the work, and to counteract the tendency to habits of neatness and precision which result from accurate mechanical drawing.

To combine the accuracy of a working drawing with the picturesque effect of a freehand sketch is somewhat difficult, but this can be obviated by a judicious use of isometric projection. The chief advantages of this kind of drawing are that it is easy to read, much more so than orthographic projection, and is easy to represent, where the object is rectilinear. Its chief difficulty lies in the fact that the theory is rather beyond the understanding of young children. The principles, however, may be taught, and the theory left till later. It is also unnecessary to use the isometric scale, and this gives us another advantage, viz., that the drawing may be made to full dimensions. If this projection be used in the higher grades, it will be found more useful to make the drawing from the orthographic projection, rather than from the model, as this is of great benefit in helping the pupils to *read* a drawing, which is always more difficult than to *write* one.

Another feature, which is worthy the attention of manual training teachers, is that of ambidextrous drawing. Mechanical drawing lends itself to this form of training even more than freehand, on account of the assistance given by the various instruments. It has been objected to as a "fad" or a "novelty," but most authorities now recognize that it is based on the physiological principle that the muscles on both sides of the body should be equally developed. If it be started with the younger classes, no diminution in the quality of the work will be noticed in the following years, while the pupil will have reaped the benefit of using either hand with equal facility.

"Count that day lost whose low descending sun,
Views from thy hand no worthy action done."

A Teacher's Toast.

Elizabeth A. Meseroll, one of the clever school teachers of Trenton, N. J., made a hit at the recent re-union of the alumni of the state schools by her response to a toast. Among other things, she said:

"That the school teacher should be toasted is obviously fitting. For though this association boasts of its doctor, lawyer, merchant, chief, its rich man, its poor man, its beggarman and perhaps thief, yet in far more alarming measure does the school teacher abound. Semi-annually we hold our breath when the normal pours out its large classes upon the helpless state. We wonder what will become of the graduates. Sometimes we wonder what will become of the state. One by one, however, they find some channel of work and disappear from the general sight, except when on some such occasion as this one is fished out and held suspended before the public view. How eagerly shall we follow the short and simple annals! How irresistibly shall we be drawn to the conclusion which will run like a refrain through the glowing words —

"Some are dead and some are wed,
But most go on forever."

"The school teachers flourish distinctly in two armies—the one small but strong—the males; the other large, but feeble—the females. Down through the years militant they go—the small, strong army a step or two in advance; the large, weak army following with becoming meekness. Menaces and challenges have been thrown from one army to the other; sometimes actual engagements have occurred. But in the main the armies march forward amicably against the common foe, for the angel of tolerance and forbearance walks between and keep the peace.

"Forth they go, conquering and to conquer, battling against ignorance, vulgarity, and stupidity; warring against prejudice, struggling fiercely for life, liberty, and the pursuit of happiness, until one by one they make a triumphant entrance as Retirement Fund annuitants."

ARITHMETIC MATCH.—Select two leaders and let them choose sides as for any match. Give twenty or twenty-five mental problems and require the pupils to write the answers upon their papers, always concretely. Exchange papers, the opponents correcting each others' papers, the teacher giving the correct answers. Each correct answer receives one credit. Count the number of credits for each side to determine the victors. This may also be used as a spelling match, the pupils writing the words instead of spelling orally. This gives each one a chance to spell all the words, and is not so tiresome as the old-fashioned "spelling down."