

1 iron rule, 1 try-square, 1 small mallet, 1 tool-basket, 1 marking-gauge. For general use: 3 smoothing-planes, 3 trying-planes, 2 try-squares, 5 bevels, 10 in.; 2 mortice-gauges, 1 rebate-plane, 2 firmer-chisels, 1 in.; 6 firmer-chisels,  $\frac{1}{2}$  in.; 3 gauges, various sizes; 15 gimlets, various sizes; 2 pairs pincers, 2 pairs iron compasses, 1 quart gluepot, 4 oil-stones, 5 hand-saws, 22 in.; 20 bradawls, various sizes.

One iron brace, one countersunk bit, seven centre-bits (various sizes), one screwdriver-bit, two pin-bits, four files (two half-round, 10 in.; one round,  $\frac{1}{2}$  in., 10 in.; one square,  $\frac{1}{2}$  in., 10 in. long), three spokeshaves, two frame bow-saws, two spare blades for same, two sharpening-slips, two oil-cans, five punches (various), one iron cramp.

The cost of the benches will be about £12 10s.; the cost of tools for twenty boys, £20; the cost of timber, glue, nails, &c., £4; shelving, cupboards, &c., £9: total, £45 10s.

There are many text-books upon the subject of manual instruction in wood-work, amongst which are—Barter's "Diagrams and Wall-charts" (Cassells and Co.); Barter's "Manual Instruction" (Whittaker and Co.); Barter's "Drawing for Wood-work" (Whittaker and Co.); Ricks's "Manual Training: Wood-work" (Macmillan and Co.); "Cards for Class-work," by Messrs. Barter and Ricks, published by Cassells and Co.; "Educational Wood-work," by Richard Trainor, of Manchester Technical School.

In considering the cost of establishing manual instruction classes it must not be forgotten that the Government offer pound for pound upon sums raised for manual and technical instruction, thus considerably reducing the initial cost where amounts are subscribed.

I regret that I am not permitted to publish the view of the manual instruction class at the Kelburn Road Board School. I forward the original presented by Messrs. Cassells and Co. for departmental information. I include, however, a view of the class at Rochester and three views of the Cambridge Manual Training School for Boys (see Plates XIII. to XVI.), published with the consent of the National Association for the Promotion of Technical Education.

*Instructors in Manual Work.*—If the work of manual instruction is to be successful, special instructors must of necessity be appointed. I would recommend the appointment of an organizing teacher in each district, whose duty would be to conduct the classes formed for the present, and to immediately undertake the training of the regular school-teachers, who would attend with the boys and assist in the instruction given. The appointment of qualified instructors would be invaluable, and enable the whole system to be carried out upon the most approved lines, in both town and country schools. In every district I visited such instructors or organizers were appointed, and upon them depended the success of the system.

The training of teachers is of the utmost importance, for, although in many cases artisans may act as instructors, the knowledge and habits of a regular teacher are a necessity. Classes should be held, free to all teachers, on Saturdays and in the evenings should sufficient present themselves, and every inducement offered to teachers to qualify themselves to conduct manual classes, a bonus of £2 being paid to all teachers obtaining a certificate in accordance with the requirements of the City and Guilds of London Institute, the syllabus of which is appended to this chapter.

*Departmental Assistance.*—Capitation is paid upon class attendances in accordance with the Technical Instruction Act. I further recommend a bonus of £2 to every teacher obtaining the certificate in manual instruction; a grant of £50 per annum towards the salary of each organizing instructor appointed; a grant of 10s. to each holder of a manual instruction scholarship; a grant of one-half of the cost of furniture and appliances in fitting up the workshops for manual instruction in wood or metal; and a grant of one-half the cost of erection of special workshops as centres of instruction, subject to the department's approval of the plans and specifications.

#### EXAMINATION OF TEACHERS IN MANUAL INSTRUCTION.

In this respect I suggest that the department should establish an annual examination upon the lines of the City and Guilds of London Institute; the English examination being open to such teachers as desire to obtain their certificate, the syllabus of which is here given:—

#### PROGRAMME OF THE CITY AND GUILDS OF LONDON INSTITUTE EXAMINATIONS FOR TEACHERS OF MANUAL TRAINING IN PUBLIC ELEMENTARY SCHOOLS.

##### *Manual Training—Wood-work.*

With the view of certifying to the efficiency of qualified teachers under the Education Department of public elementary schools to give instruction in wood-work in accordance with the provisions of the Code (1890), the City and Guilds of London Institute is prepared to issue certificates to such teachers on the following conditions:—

1. The candidates will be required to give evidence of having regularly attended, during the session preceding each examination, a course of at least twenty practical wood-working lessons given on separate days in a school or class registered by, and under an instructor approved by, the Institute. Each lesson should be of at least two hours' duration; and no two lessons may be given on the same day. In order that a class may be registered, it must be under the direction of a committee of a School Board, or Municipal Council, or technical school, or other public body.

2. The candidates will further be required to pass two examinations, one at the end of each year's course, to be conducted by examiners appointed by the Institute, and to pay a fee of 5s. for each examination.

##### *First Year's Examination.*

The examination to be held at the end of the first year's course will consist of (1) drawing, (2) practical exercises in wood-working. Provision for holding the examinations and arrangements for