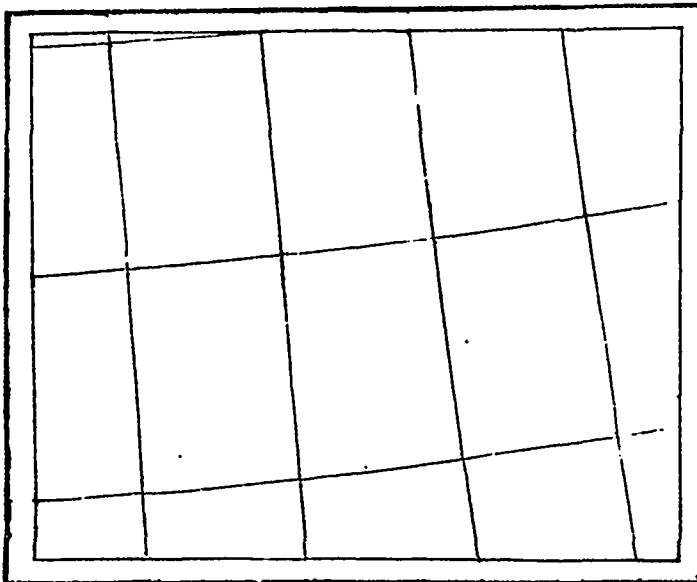


NUMBER TWO.



Having, as already instructed, drawn No. 2, the *projection* of No. 1, the pupil begins to draw the coast line, commencing at the N. W. corner. It is evident to any one that the parallels and meridians drawn in the *projection* may be used as construction or guiding lines in drawing the coast line and in fixing the position of every portion of the map. When the projection has been accurately drawn the outlining is a simple matter. It is only necessary to draw the small portion which lies in the figure formed by two parallels and two meridians at a time. Each step may be taken separately and the whole is certain to come out right. In the map now to be drawn, for instance, the pupil can easily see that the right hand coast-line begins on the border line a short distance below p. 48, and crosses m. 67 very near its intersection with p. 48. These two points of crossing should be first marked. He may then be led to see that between these two points the line very nearly forms a right angle. The line may then be drawn lightly and freely. The pupil should not attempt to follow the minor indentations of the coast line too slavishly. Boldness of movement in drawing the outline is very desirable. The points where p. 48 is crossed and re-crossed should next be marked, and the line drawn to the point where it crosses the second time. The point where it crosses m. 65 should next be marked, and the line drawn so far. In this way the pupil proceeds, guided always by the projection lines until the whole coast line is completed. Rivers may then be drawn, and the position of cities, &c., fixed. The projection lines still serve as reliable guides.

If it is desired to increase the size of the map, say three-fold, this can be accomplished by increasing the distances on the border lines between parallels or meridians to three times their original length. This may be done by means of a pair of compasses and the ruler with the scale of lengths. The ruler itself may be used without the compasses. It may be applied to the side of the map and the distance between two parallels noted. This should be multiplied by three, which will give the length of the border line between the parallels in the new map, &c. It must be carefully noted that the distances between the meridians at the top and bottom are different in most maps.

COLOURING.

Having drawn the outline in pencil, the next thing to do is to apply the colours. Water colours should be used. The colours should be formed into a *thin wash*, by rubbing the blocks of paint in the saucers with sufficient water. In laying on the colours, the camel's

hair brush should be well filled with colour and applied quickly, so that the paint may not dry in streaks. The same country should be gone over two or three times in succession to give it depth of colour, and smoothness of finish. If the paper used is porous, it will aid in securing a free flow of the colouring matter to go over the surface about to be coloured with a brush filled with pure water.

The sea line is usually done in blue, and is best finished when two or three lines of colouring are drawn around the coast line, that next the coast line being darkest.

The boundary lines of countries are sometimes the only parts coloured.

It is advisable to lay on the colour before lettering, or "lining in" in India ink, as the colour causes the ink to spread, if put on after it.

LETTERING AND LINING IN.

This should be done with India ink applied with a fine pen. The coast line, rivers, &c., should be "lined in" with ink where they have been marked in pencil. The lettering should be carefully done. Plenty of time should be taken in doing this part of the work. Practice in printing letters should precede map-drawing.

It is important that the names on a map should follow the general direction of the part for which they stand. Thus Northumberland Strait forms a *double curve*, and its name is printed in a similar curve. In such cases it is difficult to obtain the proper direction for the letters of the name. Whenever letters have to be printed in a curved form the direction of each letter must be different; they cannot be parallel to each other. The proper slope of each is found by drawing construction lines from the centre of the imaginary circle of which the curve forms a part, and continuing them beyond the circumference of the circle. In "Northumberland," for instance, the first part of the word from N to E forms a curve, which, if continued, would form a circle whose centre would be very near the R in the word "Prince," while the last part of the word, if continued, would form a circle whose centre would be near the head of the western part of the Bay of Fundy. It will be seen on examination that the letters of the word point towards either of these centres.

In making mountains the pupil should note the fact that the short lines drawn on each side are not parallel.

NOTE.—It must be remembered by the teacher that the method of map drawing briefly explained in the above and the preceding article is *not intended to be practised* in the school room. Such map drawing should be done as "home exercises." School exercises in map *sketching* will be continued in the June number of THE JOURNAL.

HEALTH IN SCHOOLS.

I.

LIGHT AND SIGHT.

Thoughtful and practical educators are more and more directing their attention to the subject of School Hygiene. It is admitted by all that the most cultivated intellect does not usually do much for the happiness of its possessor or the benefit of humanity, if it is joined to an enfeebled body. Teachers are, however, very liable to forget the complex nature of the beings which it is their duty to develop. They are generally satisfied if they attend to the intellectual growth alone of their pupils. Physically, socially and morally, the education of the young is commonly neglected altogether, or receives merely a *negative* attention in school. But the physical requirements of scholars cannot be attended to entirely by the teacher alone. The trustees are responsible to a great degree for some of the injuries inflicted too often upon pupils in school. Enough care is not taken, in building school houses, to