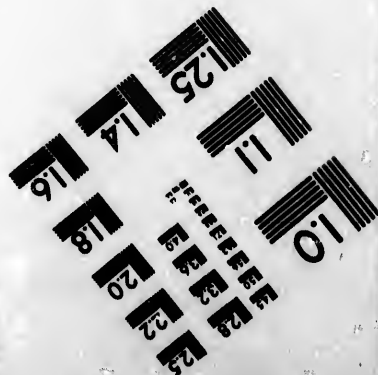
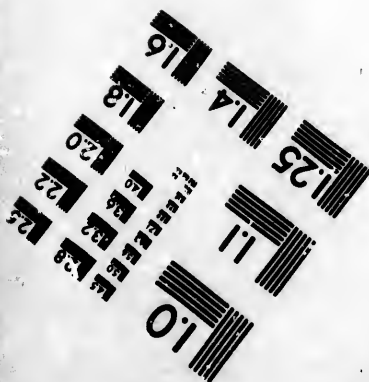
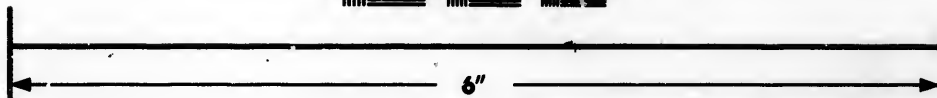
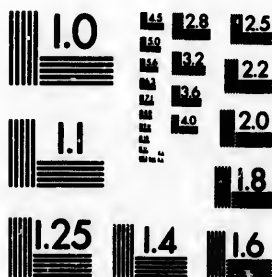


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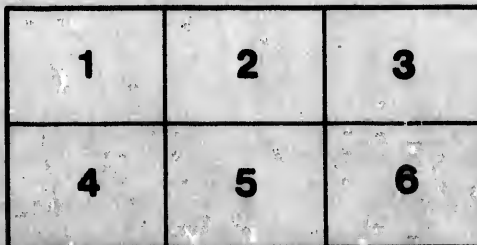
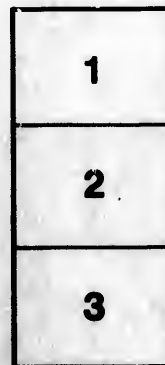
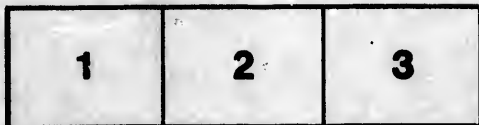
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*In*

*In Carl Grey's Des. Circular, 28 Jan'y 1852*  
*From 5 - 140*

COMMITTEE OF COUNCIL ON EDUCATION.

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MEMORANDUM

RESPECTING THE

**Organization of Schools in parallel  
Groups of Benches and Desks.**

---

PRELIMINARY REMARKS.

Before a schoolroom is planned,—and the observation applies equally to alterations in the internal fittings of an existing schoolroom,—the number of children who are likely to occupy it; the number of classes into which they ought to be grouped; whether the school should be “mixed,” or the boys and girls should be in different rooms; should be carefully considered, in order that the arrangements of the school may be designed accordingly.

A. Every class, when in operation, requires a separate teacher, be it only a monitor acting for the hour. Without some such provision it is impossible to keep all the children in a school actively employed at the same time.

The apprenticeship of pupil teachers, therefore, is merely an improved method of meeting what is, under any circumstances, a necessity of the case; and, where such assistants are maintained at the public expense, it becomes of increased impor-

tance to furnish them with all the mechanical appliances that have been found by experience to be the best calculated to give effect to their services.

B. The main end to be attained is the concentration of the attention of the teacher upon his own separate class, and of the class upon its teacher, to the exclusion of distracting sounds and objects, and without obstruction to the head master's power of superintending the whole of the classes and their teachers. This concentration would be effected the most completely if each teacher held his class in a separate room; but such an arrangement would be inconsistent with a proper superintendence, and would be open to other objections. The common schoolroom should, therefore, be fitted to realize, as nearly as may be, the combined advantages of isolation and of superintendence, without destroying its use for such purposes as may require a large apartment. The best shape (*see diagrams annexed*) is an oblong about eighteen feet in width. Groups of desks are arranged along one of the walls. Each group is divided from the adjacent group or groups by an alley, in which a light curtain can be drawn forward or back. Each class, when seated in a group of desks, is thus isolated on its sides from the rest of the school. The head master, seated at his desk placed against the opposite wall, or standing in front of any one of the classes, can easily superintend the school; while the separate teacher of each class stands in front of it, where the vacant floor allows him to place his easel for the suspension of diagrams and the use of the black

board, or to draw out the children occasionally from their desks, and to instruct them standing, for the sake of relief by a change in position. The seats at the desks *and* the vacant floor in front of each group are *both needed*, and should therefore *be allowed for* in calculating the space requisite for *each class*.

C. By drawing back the curtain between two groups of desks, the principal teacher can combine two classes into one for the purpose of a gallery lesson; or a gallery (doubling the depths of rows) may be substituted for one of the groups. For simultaneous instruction, such a gallery is better than the combination of two groups by the withdrawal of the intermediate curtain; because the combined width of the two groups is greater than will allow the teacher to command at a glance all the children sitting in the same line. It is advisable, therefore, always to provide a gallery.

The drawings annexed to the following rules purport simply to show the best internal dimensions of schoolrooms, and the best mode of fitting them up, the doors and windows being placed accordingly. The combination of such rooms with others of the same kind, with teachers' residences, and with the remainder of the school premises, as well as the elevations which may thereby be obtained, depending, as they always must, upon local circumstances, are not intended to be here shown.

The Committee of Council do not recommend that the benches and desks should be immovably fixed to the floor in any schools. They ought to be so constructed as to admit of being readily



removed when necessary, but not so as to be easily pushed out of place by accident, or to be shaken by the movements of the children when seated at them.

The reasons of the following rules will be readily inferred from these preliminary explanations.

---

1. In planning a schoolroom, if it be not more than 18 feet in width, about 8 or 9 square feet will be sufficient for each child in actual attendance. If the width be greater, there must be a proportionate increase of area allotted to each child.

2. A school not receiving infants should generally be divided into at least four classes. (*The varying capacities of children between seven and thirteen years old will be found to require at least thus much subdivision.*)

3. Parallel benches and desks, graduated according to the ages of the children, should be provided for all the scholars in actual attendance (*see Preliminary Remarks, B.*); and therefore a schoolroom should contain at least four groups of parallel benches and desks. (*See Rule 2.*)

4. A group should not contain more than three rows of benches and desks (*otherwise the distance of the last row is too great for the teacher to see the children's slates, and he must also raise his voice to a pitch which is exhausting to himself and adds inconveniently to the general noise*).

5. As a general rule, no group of benches and desks should accommodate *more* than twenty-four children, i. e. eight children in each of the three rows of the group, (*otherwise the width is too great. See Preliminary Remarks, C.*)

6. The proper lengths are 7 feet 6 inches for five children in a row; 9 feet for 6 in a row; 10 feet 6 inches for 7 in a row; 12 feet for 8 in a row; i. e. 18 inches for each child.

[The other dimensions and details are shown in the annexed drawings.]

7. Each group of desks must be separated from the contiguous group, either by an alley for the passage of the children, or by a space sufficient for drawing and withdrawing the curtains.

It will be sufficient to provide an alley for the passage of children *at one end only* of each group. At the other end a space of three inches will suffice for drawing and withdrawing the curtains.

[Alleys intended for the passage of children must not be less than 18 inches wide in the smallest school, and need not be more than 2 feet wide in any school, unless where a door or fireplace requires a greater interval.]

8. The best width for a schoolroom, intended to accommodate any number of children between 48 and 144, is 17 or 18 feet. This gives sufficient space for each group of benches and desks to be ranged (with its depth of three rows) along one wall, for the teachers to stand at a proper distance from their classes, and for the classes to be drawn out, when necessary, in front of the desks around the master or pupil teachers. (*No additional accommodation being gained by greater width in the room, the cost of such an increase in the dimensions is thrown away.*)

9. Where the number of children to be accommodated is too great for them to be arranged in five, or at most six, groups, an additional school-room should be built and placed under the charge of an additional schoolmaster, who may, however, be subordinate to the head master, or a large

school may be built on the plan of diagram No. 6. Where neither of these arrangements can be accomplished, the schoolroom should not be less than 32 feet wide, and the groups should be arranged along both sides of the room, the children in all cases facing the centre. (*But such an arrangement is very inferior to that of the single row along one wall. The opposite classes see each other, and their several teachers have to stand too close together. See Preliminary Remarks, B.*)

10. A curtain, capable of being readily drawn and withdrawn, should separate the several groups; but not so as, when drawn, to project into the room more than 4 inches in front of the foremost desk.

11. If the schoolroom be lighted from above, which is the best possible mode, great care should be taken to prevent the skylights from leaking, and to provide channels for the water which the condensation of the children's breath will deposit on the inside of the glass.

12. All sashes, both upper and lower, should be hung; and all windows, whether in the roof or elsewhere, should be made to open.

13. It is better to have a few large and well placed windows than many small ones.

14. It is important to provide that the faces of the children and teachers, and also the black boards and diagrams, should be placed in a full clear light.

15. If the schoolroom be not lighted from above there should be windows, if possible, at each end and on one side of the room. The windows should be carried up as high as possible; and those which are placed at the backs of the children, an arrangement which should be avoided as far as possible, should not come down within 5 feet 6 inches, or at least 5 feet, from the floor.

16. When the benches and desks are arranged on both sides of the room it should be lighted from above, or there should be, if possible, windows in *each* of the side walls.

17. Except when a schoolroom is very broad there should be no fireplace in the centre of an end wall.

[A good place for a fireplace is under a window.]

18. The desks should be either quite flat or *very slightly* inclined. The objections to the inclined desk are, that pencils, pens, &c. are

constantly slipping from it, and that it cannot be conveniently used as a table. The objection to the flat desk is, that it obliges the children to stoop. A raised ledge in front of a desk interferes with the arm in writing.

19. A large gallery for the simultaneous instruction of two or more classes, without desks, may advantageously be provided in a classroom or at one end of the schoolroom. Such a gallery may be better placed along, than across, the end of the schoolroom, for the reasons stated in the Preliminary Remarks, B.

20. No such gallery, nor any gallery in an infant schoolroom, should be placed in front of a window, unless it be very high up above the heads of the children when they stand on the top row of the gallery.

21. No infant gallery should hold more than 80 or 90 infants.

22. An infant school should (besides a large gallery) have a small group of benches and desks for the occasional use of the elder infants.

23. The alleys leading to a gallery should be at its sides, not in its centre. (*See Rules 5. and 6.*)

24. Great care should be taken that the valves which admit the fresh air into the schoolroom should be placed so as not to create draft where the teachers and children sit.

25. An easel and a black board should be provided for each class, and a larger black board for the gallery.

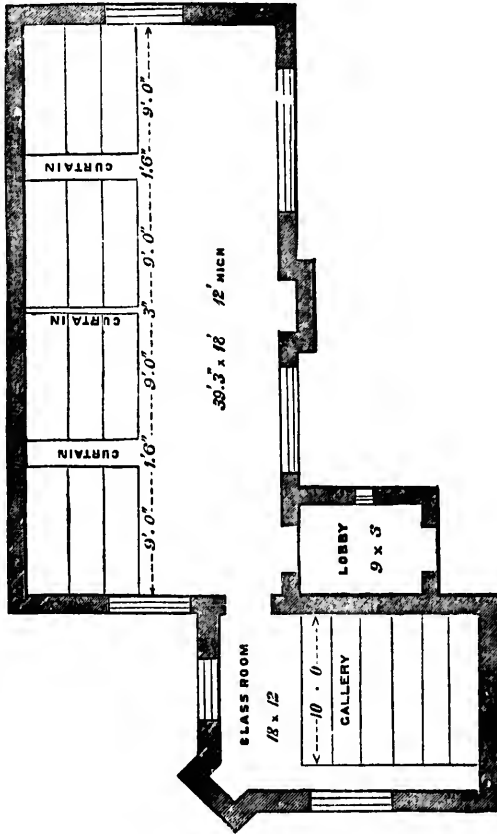
26. The dimensions shown in the drawings annexed to this Memorandum are adapted to children of from eleven to twelve years of age. *It is very important that these dimensions should be graduated to suit the sizes of the elder and younger children in a school.*

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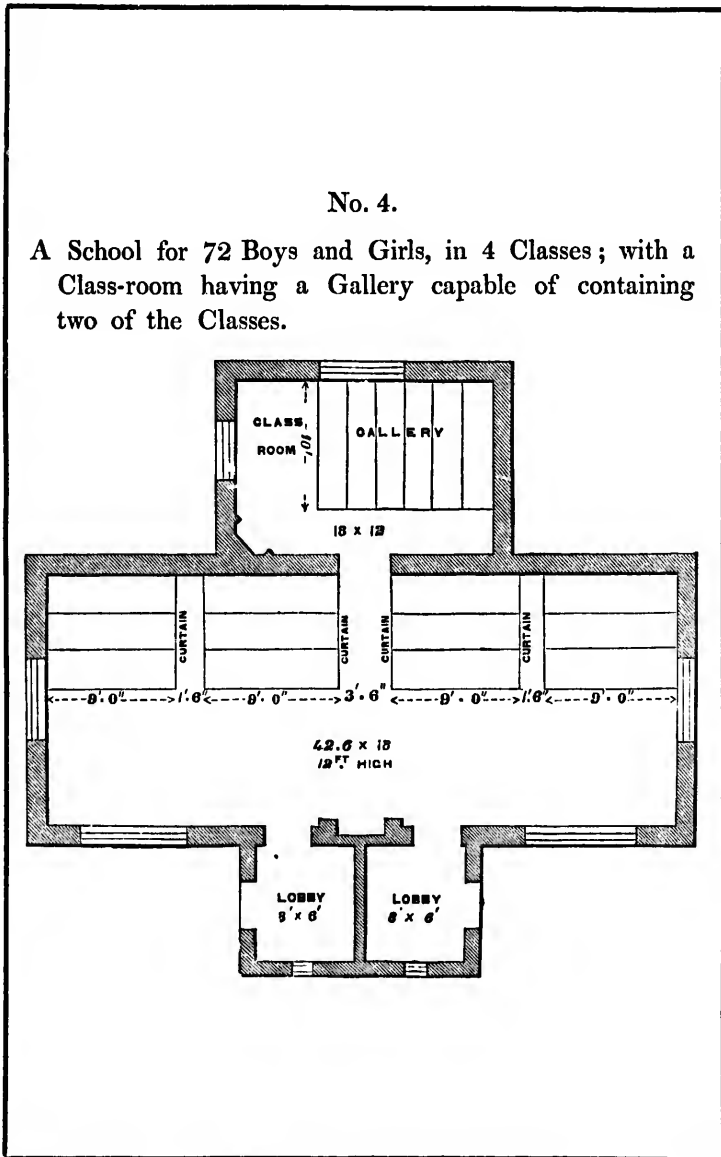


No. 3.  
 A School for 72 Children of one sex, in 4 Classes; with a Class-room  
 having a Gallery capable of containing two of the Classes.

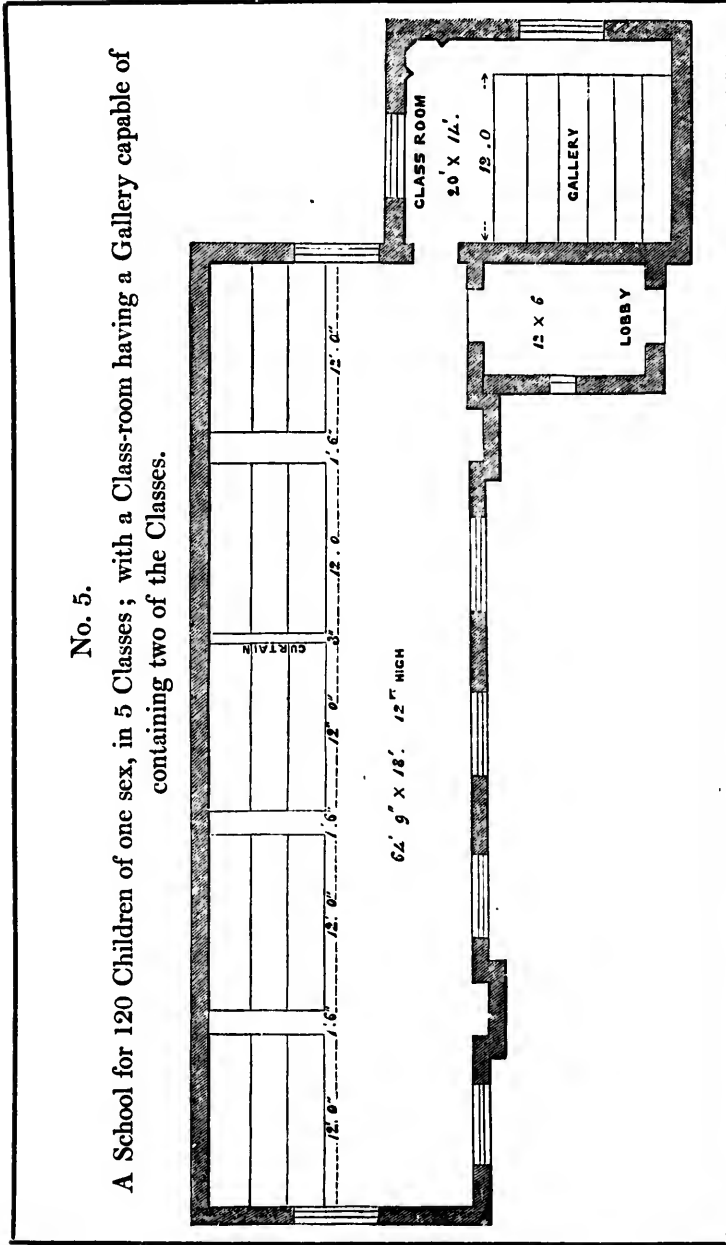


## No. 4.

A School for 72 Boys and Girls, in 4 Classes; with a Class-room having a Gallery capable of containing two of the Classes.



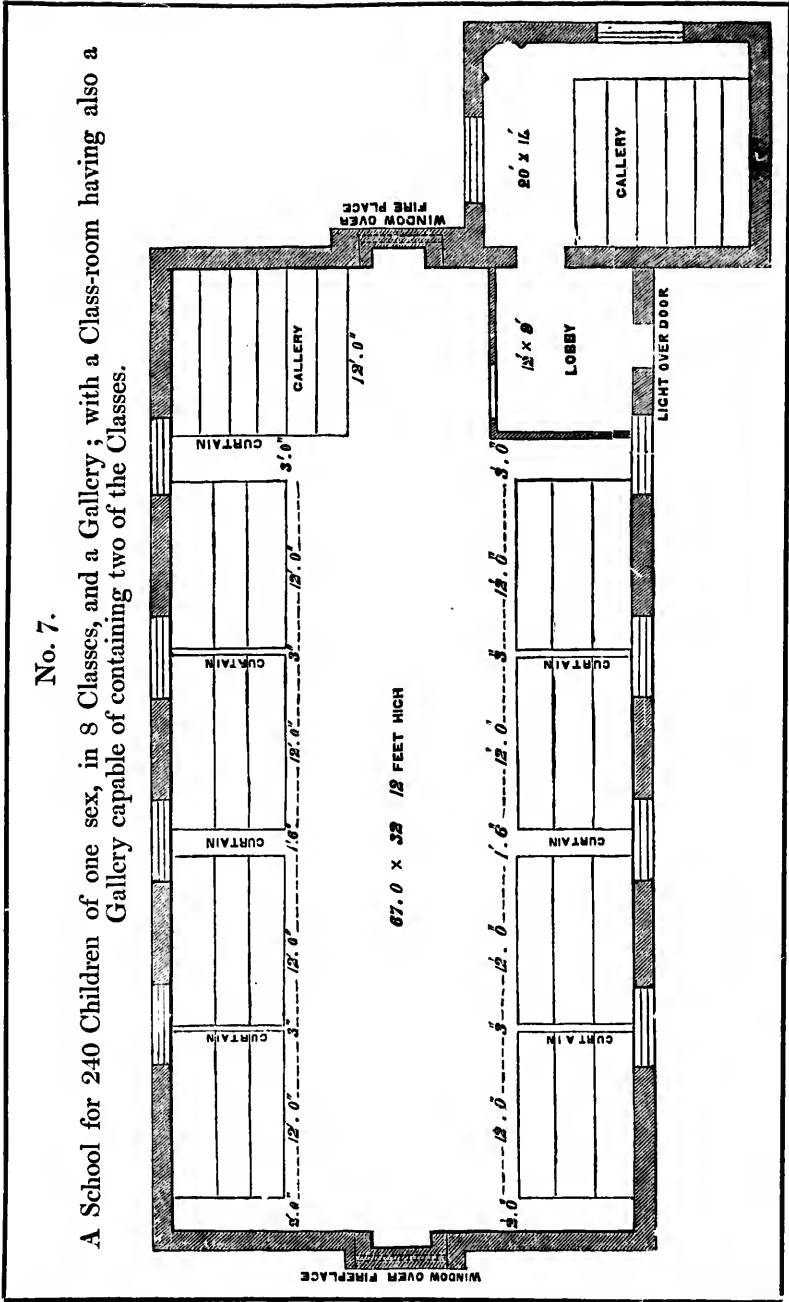
No. 5.  
 A School for 120 Children of one sex, in 5 Classes; with a Class-room having a Gallery capable of containing two of the Classes.





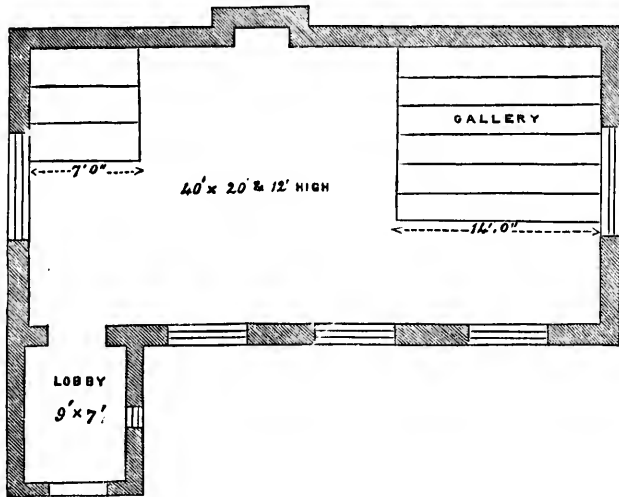
No. 7.

A School for 240 Children of one sex, in 8 Classes, and a Gallery; with a Class-room having also a Gallery capable of containing two of the Classes.

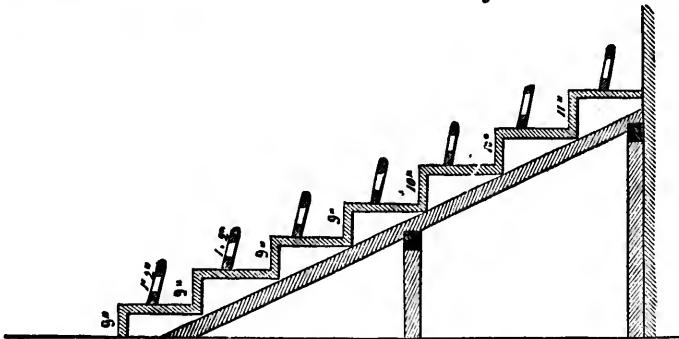


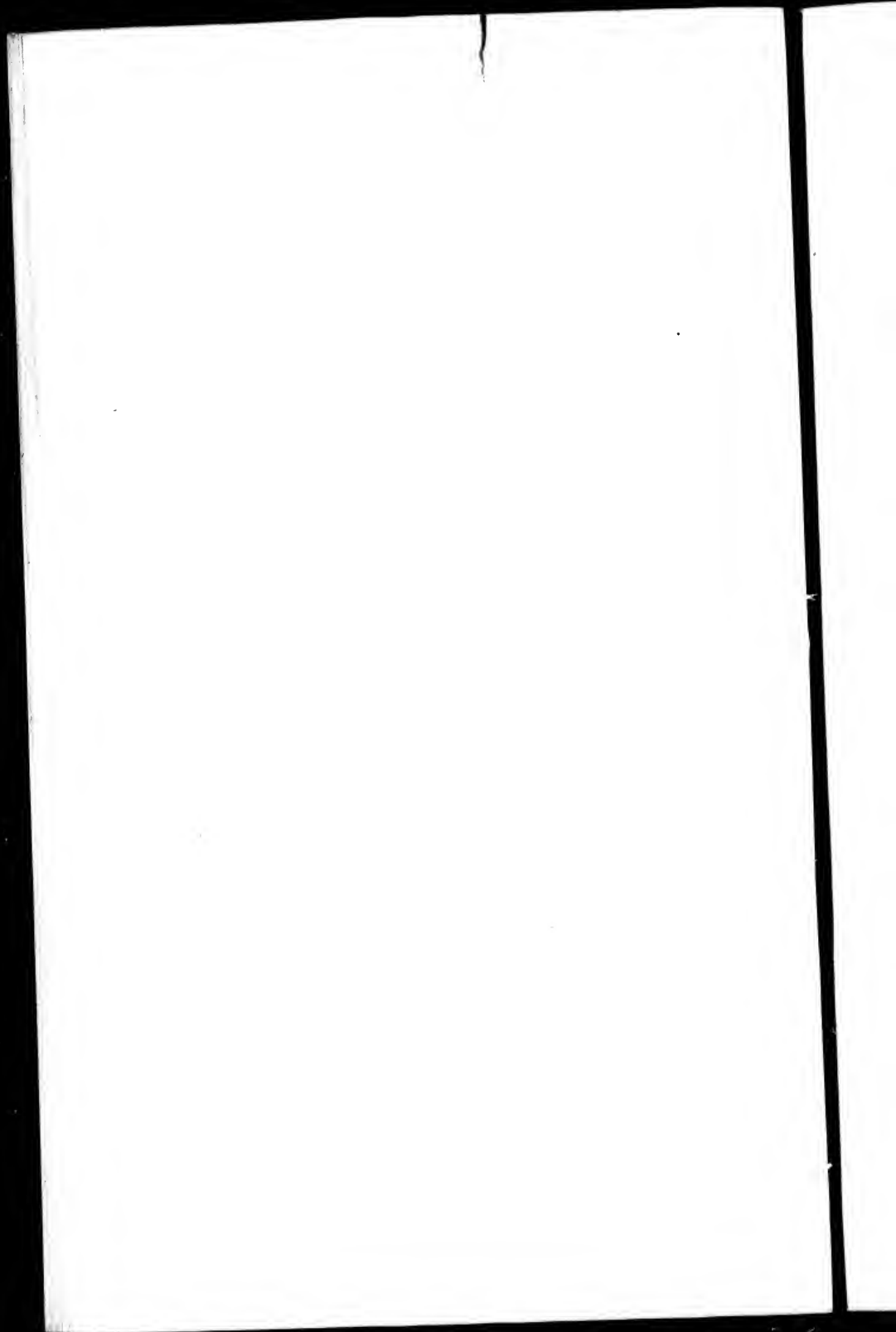
## No. 8.

Infant School for 100 Infants, with a Gallery capable of accommodating 72 Infants, and a group of benches and desks capable of accommodating 15 Infants. With section of Gallery.

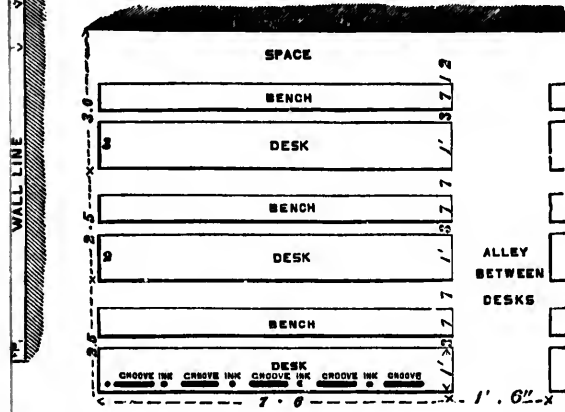


Section of Infants' Gallery.





Plan of Benches and Desks.



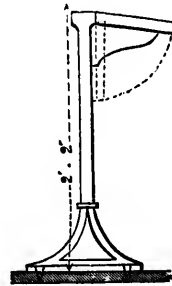
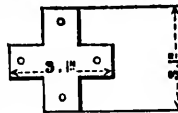
No. 9.

	Ft.	In.		Children.
Desks	7	6	in length to accommodate	5
"	9	0	" "	6
"	10	6	" "	7
"	12	0	" "	8

Alleys between groups of Desks, from 1 foot 6 inches to 2 feet.

An inkstand of earthenware glazed, with sliding covers of slate or earthenware, to be placed at the extreme right of each space of 18 inches on desk. The grooves are to prevent the falling of pencils, &c.

Plan of iron standards to Desks and Benches.

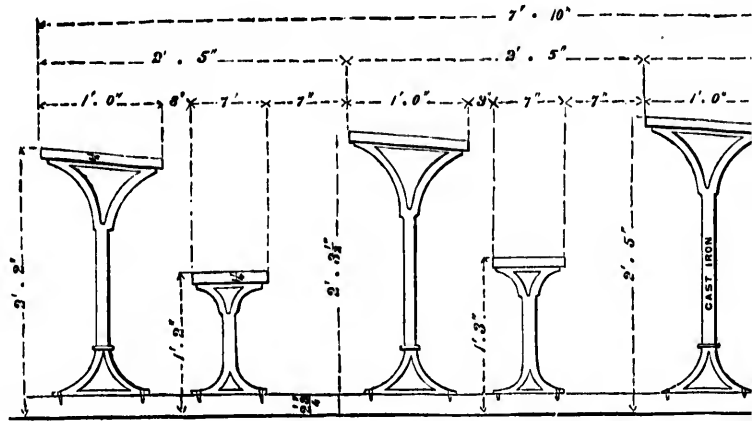


The flap of the Girls Desks made to fall down for needle-work.

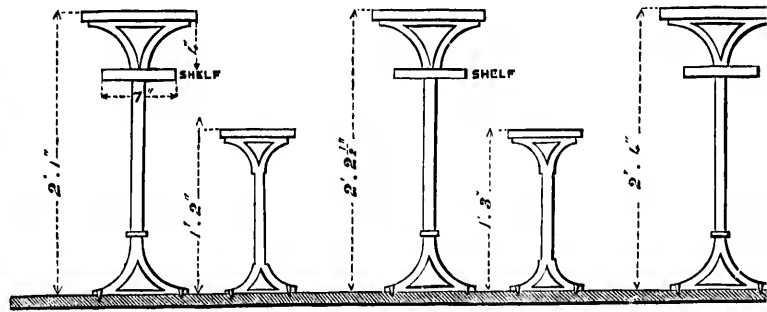


No. 9.

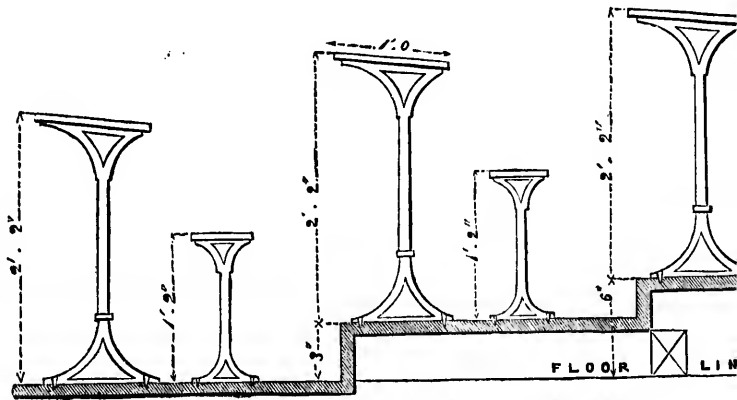
The dimensions in each of these three groups are calculated for children of the age of from 11 to 13. It is important that the dimensions should be varied to suit younger children.



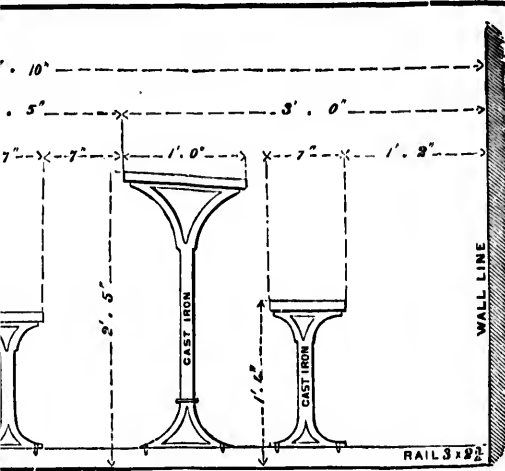
Benches and Desks screwed to a moveable sleeper.



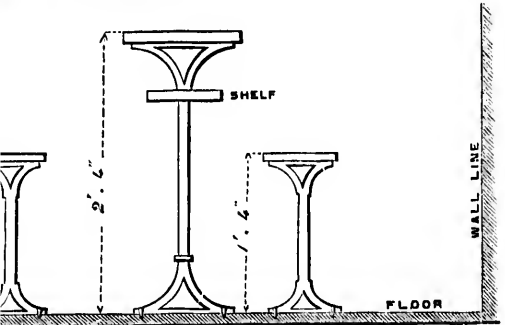
Benches and Desks screwed to floor. In this drawing the Desks are shown



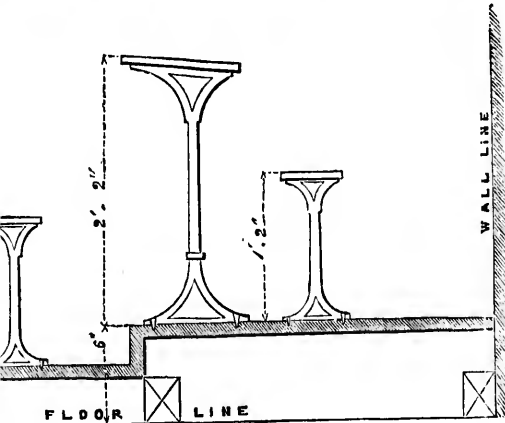
Benches and Desks fixed on a raised platform.



wed to a moveable sleeper.

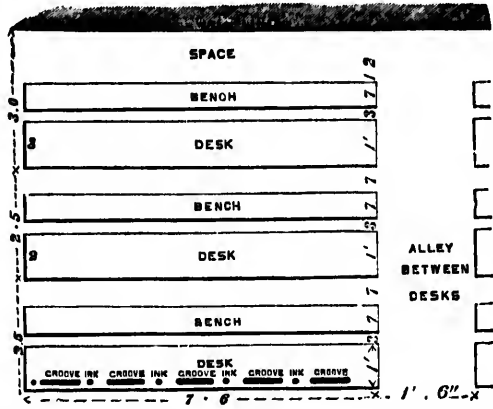


this drawing the Desks are shown without any slope.



on a raised platform.

Plan of Benches and Desks.

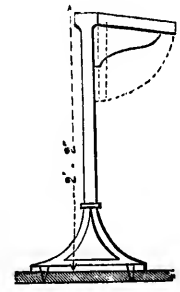
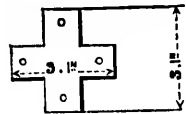


Desks	Ft.	In.	Children
	7	6	in length to accommodate 5
"	9	0	" " 6
"	10	6	" " 7
"	12	0	" " 8

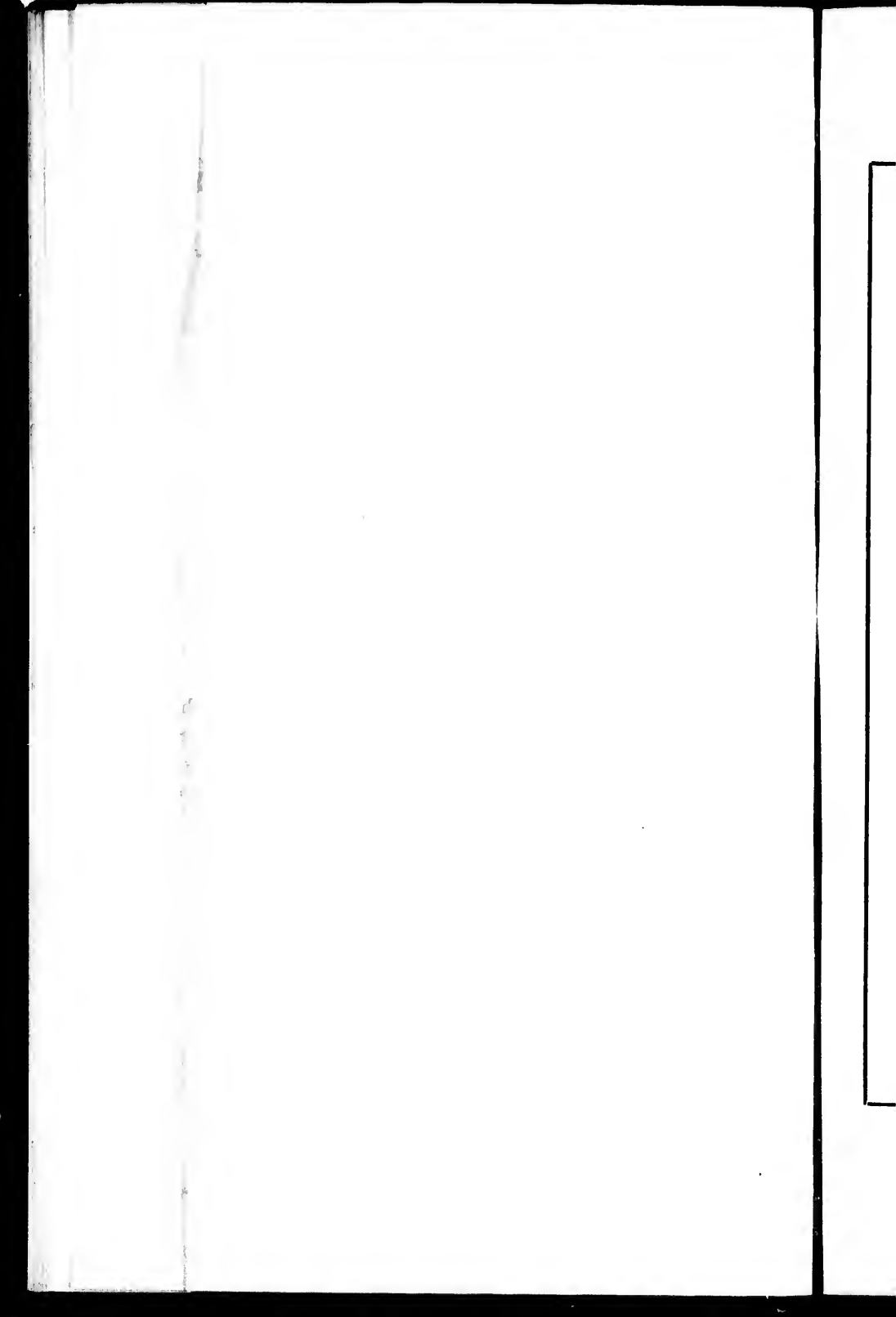
Alleys between groups of Desks, from 1 foot 6 inches to 2 feet.

An inkstand of earthenware glazed, with sliding covers of slate or earthenware, to be placed at the extreme right of each space of 18 inches on desk. The grooves are to prevent the falling of pencils, &c.

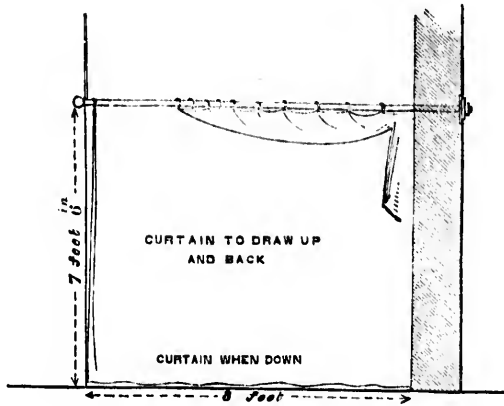
Plan of iron standards to Desks and Benches.



The flap of the Girls Desks made to fall down for needle-work.



No. 10.



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1851.

