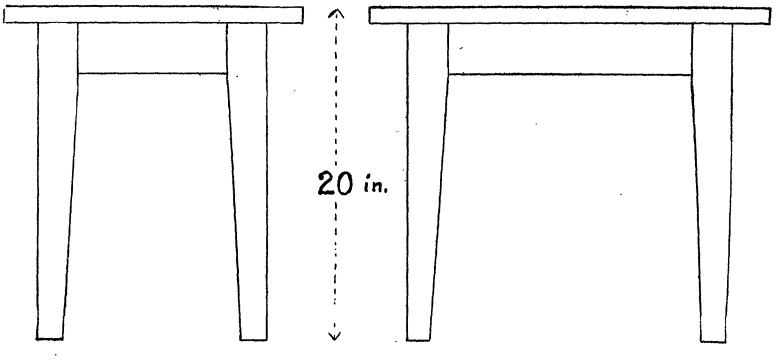
novelty is not one of design, but one of application. This, together with the fact that the decided advantages possessed by the tables are so obvious, makes one doubt if the utilization of such tables for an electrical laboratory is new.

The accompanying diagram will show the actual dimensions of the tables. They are built of hardwood and made heavy in order to withstand any usage. Upon the tables can be fastened any permanent equipment such as reversing keys, switches, etc. Inasmuch as these tables seem to satisfy the needs of a laboratory for electrical measurements so perfectly, I venture to call attention to some of their most marked advantages.



1. If the apparatus of the student, such as resistance boxes, condensers, etc., be arranged before him on a table of the ordinary height, it will be very inconvenient for him to make any adjustments, or to make any examination of his connections without rising from his seat; both because of the distance he has to reach, and because he can not see sufficiently well. If tables only twenty inches in height are used, everything is in clear view and also within easy reach. It matters not whether the student is using a galvanometer and telescope and scale, or whether he is reading ammeters and voltmeters, the advantage is the same.

2. The greater convenience of the student means a greater accuracy in his work.

3. Some experiments require comparative isolation from magnetic disturbances, but, on account of the perfection of the D'Arsonval galvanometer, this is usually not necessary. It therefore often happens that economy of space is a very important factor in the consideration of laboratory plans. With such small tables (top 18 in. by 24 in.) the observer occupies just that floor space which he needs. Not only can he make up a table of the proper area by combining two or more of the small tables, but he also can group them to suit the conditions. It is an application of the 'unit system.'

4. A laboratory would find the tables useful not only in work in electricity, but as general utility tables. They can be easily lifted and carried about. They are convenient in the research laboratory, in the lecture room, and no doubt in many places about a laboratory.

G. W. STEWART.
UNIVERSITY OF NORTH DAKOTA,
February, 1905.

QUOTATIONS.

THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

A MAJORITY decision by the full bench of the Supreme Court, to the effect that the Massachusetts Institute of Technology can not sell its present property under the grant of 1861 and can not build over more than one third of the area bounded by Berkeley, Newbury, Clarendon and Boylston streets, seems to be the final word in a matter that has attracted much more than local attention for several years. This result will produce somewhat mingled public emotions. The rapid development of this institution in considerably less than half a century was unforeseen by most of

those who were interested in its founding. Perhaps it did not escape the faith or the vision of President Rogers, but he was unable to make those through whom he had to work see the future from his point of view, and had to be content with concessions that fell somewhat short of what he would have desired.

It is not strange that those who in this later day are responsible for the welfare of the institute should chafe under the restrictions of the original conditions and make an effort to secure greater freedom. The public has doubtless sympathized with them in that undertaking. It likes to see a service that is so broad and vital have a free field for its development. But the court decision makes all further discussion of this feature of the case unprofitable and we do not see that anything remains for the institute to do but to remain where it is and make the best of it. That 'best' can be very fruitful. The desire to obtain a more expansive location was based more on social considerations than on those which make for its main service. Doubtless the enlargement of social opportunities between students and classes would be a desirable feature of the life of the institution, but its fame and its usefulness can continue with unabated growth even with such expansion as is possible under existing conditions.

It certainly ought to be easy to reconcile the Boston public to this final judgment. It assures us the continuance of dignified and noble buildings and open spaces in a vicinity that we have been careful to guard against the invasions of commercialism. It will stand as a temple of science that is in harmony with its surroundings. It will continue to show to our own people and to the stranger within our gates that provision has been made for higher prizes than those of mere worldly gain. While Boston would prefer to keep its distinguished features by some other tie than that of duress, she can not be altogether inconsolable over the prospect that the Institute of Technology is likely to remain, in location, at least, a Boston institution.

It appears to be assumed in some quarters that this decision makes of no effect the tentative steps that have been taken toward a merger with the university beyond the Charles. This conclusion may be somewhat hasty, but should negotiations to that end still continue they will have to undergo a very radical change in terms. The plan which has been under consideration was based upon conditions that no longer exist, and that fact may or may not be fatal to the entire project. Should the decision have the effect of ending it, there is at least a very large proportion of the alumni who would not greatly mourn over the compulsion that seems to confine the institute to its present location. That it must expand is inevitable, and, while that may be more difficult than would be the case in some other section, it is by no means impossible, and the situation ought to awaken among its friends fresh zeal in its behalf.—*The Boston Transcript.*

NOTES ON INORGANIC CHEMISTRY.

TANTALUM AND ITS ALLOYS.

Patents have recently been taken out by Messrs. Siemens, Halske and Company, of Berlin, for tantalum alloys, which promise to be of much interest. The engineering supplement of the London *Times* gives quite a full description of the properties of the metal taken from the patent specifications, from which we note the following.

The metal is exceedingly strong and has great elasticity, and like steel is easily worked and hardened. Great hardness is imparted to it by small quantities of carbon, but other elements such as oxygen, hydrogen, silicon, boron, aluminum, titanium and tin can also be used. Very small traces of these elements are necessary to give hardness, and if larger quantities are used, the metal becomes very brittle and unworkable. In some cases the hardness attained is almost equal to that of the diamond. Like iron, tantalum, after being worked into shape, can be 'case hardened' by heating to redness in carbon. At ordinary temperatures tantalum is wholly unaffected by the atmosphere and resists the action of most acids. After being melted or highly heated the metal is comparatively soft and