

SCIENCE :

A WEEKLY RECORD OF SCIENTIFIC PROGRESS.

JOHN MICHELS, Editor.

TERMS :

PER YEAR,	-	-	-	-	FOUR DOLLARS.
6 MONTHS,	-	-	-	-	TWO "
3 "	-	-	-	-	ONE "
SINGLE COPIES,	-	-	-	-	TEN CENTS.

PUBLISHED AT

TRIBUNE BUILDING, NEW YORK.

P. O. Box 8838.

SATURDAY, AUGUST 13, 1881.

THE Proceedings for the past year of the American Association for the Advancement of Science have been distributed to the members; they do honor to the Society by whom they are issued, and hold forth the brightest hopes for its future.

The friends of the Association will learn with satisfaction that the number of members steadily increase, and that the roll of honor now comprises one thousand five hundred and fifty-five names, a glance at the list showing that it represents the intelligence of the United States.

The very laudable objects of the Association are the advancement of Science, which it endeavors to carry into effect by arranging annual meetings of its members, "to promote intercourse between those who are cultivating Science in different parts of America, its Constitution expressing the desire to give a stronger and more general impulse and more systematic direction to scientific research, and to procure for the labors of scientific men increased facilities and a wider usefulness."

It will thus be seen that the leading feature of the Association is *co-operation*, the secret of all success and the keystone of human progress. Perhaps in no country in the world does this necessity for co-operation exist to a greater degree than in the United States, with its vast amount of territory and great area.

Men of education, with minds specially adapted for the highest scientific work, are often isolated from their fellow workers, and thousands who are "cultivating" Science are spread over the States and Territories, silently plodding over problems of vital interest or investigating the great scheme of Creation.

Surely an Association which is a bond of union between such a widely dispersed class should be recognized on its merits by those for whose benefit it is established, and we may add, that the only practical sign of appreciation of the advantages offered, is active membership.

The Association at present numbers fifteen hundred members, and has an income of less than six thousand dollars, a sum which is well husbanded and turned to the best advantage by the executive officers of the Association, who are enabled this year to present two handsome volumes to each member, which are alone equivalent in value to the subscription paid.

We desire, however, to see the list of members largely increased, and considering the Association has existed over thirty years, the number should not be less than five thousand, an income would then be at the disposal of the Executive Committee which would enable it to encourage scientific research in a manner worthy of the Association and the cause of human progress which it represents.

We desire also to see the permanent fund of the Association placed on a more substantial footing, and supported by those who can strengthen it from their superabundant wealth, without a financial effort on their part.

We speak within bounds when we assert, that it is a standing scandal and reproach on the *men* of intelligence of the United States, to find that the *single patron* of the "American Association for the Advancement of Science" is a *woman*. Is there no American gentlemen with sufficient chivalry to follow so bright an example? We trust that the meeting of the Association, which will open next week, will not close without at least one response, to the challenge we now make.

ASTRONOMICAL OBSERVATORIES.

BY SIMON NEWCOMB.

Among the contributions of public and private munificence to the advance of knowledge, none are more worthy of praise than those which have been devoted to astronomy. Among all the sciences, this is the one which is most completely dependent upon such contributions, because it has the least immediate application to the welfare of the individual. Happily, it is also the science of which the results are best adapted to strike the mind, and it has thus kept a position in public estimation which it could hardly have gained if it had depended for success solely upon its application to the practical problems of life. That the means which have been devoted to its prosecution have not always been expended in a manner which we now see would have been the best, is to be expected from the very nature of the case. Indeed, a large portion of the labor spent in any kind of scientific research is, in a certain sense, wasted, because the very knowledge which shows us how we might have done better has been gained through a long series of fruitless trials. But it is due both to ourselves and the patrons of astronomy that as soon as any knowledge bearing upon the question of