

Office), Gen. A. W. Greely (chief signal-officer), Dr. C. Hart Merriam (Department of Agriculture), A. H. Thompson (United States Geological Survey); treasurer, C. J. Bell; secretaries, Henry Gannett (United States Geological Survey), George Kennan; managers, Dr. J. C. Welling (president of the Columbian University), W. B. Powell (superintendent of schools, Washington), Capt. Rogers Birnie, jun., U. S. A., W. D. Johnson (United States Geological Survey), Henry Mitchell (United States Coast and Geodetic Survey), Marcus Baker (United States Geological Survey), G. Brown Goode (National Museum), Cleveland Abbe (United States Signal Office).

— 'Little Poems for Little Children' and 'Stories for Little Readers' (Chicago, Interstate Publishing Company) are books of elementary reading for students in primary grades. They are considerably above the average of such books.

#### LETTERS TO THE EDITOR.

\* \* \* Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.

Twenty copies of the number containing his communication will be furnished free to any correspondent on request.

The editor will be glad to publish any queries consonant with the character of the journal.

#### A New Meteorite from Texas.

WE have this day received a new entire meteorite from Texas, weighing about two hundred and eighty pounds. It belongs to the class siderolites, although the nickeliferous iron apparent to the naked eye is scarcely more than in some of the aerolites. Olivine is present in great abundance, giving a yellowish-green appearance to the whole mass. A hasty examination also reveals anorthite and a few specks of a bronzy looking metal, which is doubtless noilite. The meteorite was brought to us by one of our assistants, who found it near the south-west bank of the Colorado River, about three miles south-west of La Grange, Fayette County, Tex.: we would therefore suggest the name of 'The La Grange Meteorite' for it. A fuller description, with complete analyses, will be published later.

WARD & HOWELL.

Rochester, N.Y., Jan. 31.

#### Jacobson's 'Higher Ground.'

YOUR notice of 'Higher Ground' in *Science* (x. No. 254) was so kindly, that I hesitate to impose upon your good nature by asking you to devote additional space to the subject. And whatever I may say will not be said in a spirit of controversy.

You approve of manual training in public schools, and you approve of the succession-tax as a means of enabling all children to get the benefit of the schools. Your only question is, Would the proposed succession-tax pay the bill? and your answer is, that it would not.

If a change so great as the one proposed could be made all at once, the proceeds of the succession-tax would not be sufficient to pay the bill. But it would take years and years to bring about so vast a change; and I believe that the proceeds of the succession-tax would be sufficient to pay the bill as fast as the change could be brought about, because wealth is increasing much faster than population. As an illustration of a change to which there is comparatively little opposition, see the length of time it takes for the high-license movement to make its way, — a movement full of good sense, to which, from pecuniary interest only, the liquor-dealers are opposed. What would not the opposition be to the succession-tax movement, and the apparent absurdity of paying people for keeping their children at school?

To say that there were in this country, in 1880, 8,347,731 children of the age in question; and that to pay, at the rates proposed, three-fourths of their number for going to school, would require \$919,502,737.50; and that this sum could not be raised by the proposed tax, — is not that very much as if some one had said in 1830, "To do the transportation business of this country, we shall need 140,000 miles of railroad, costing eight thousand millions of dollars, and such a sum could not be raised for such a purpose?"

The money for the railroads has been found, because it has been

found that railroads develop and enrich the country; that the money spent for railroads comes back, and comes back a hundred-fold.

The money for the education which I propose will be found when the people shall become convinced, that, invested in improving the brains of the people, — the motive power of all motive powers, — it will be more profitable than money invested in railroads or in any other enterprise whatever; that the money spent will come back, and come back a hundred-fold.

If in 1830 any one had predicted that in 1888 we should have our present mileage of railroads at its present cost to the country, he would have been laughed to scorn, because such an expenditure for highways must then have appeared absurd to the average man. But we spend all this money for highways, and thrive by it.

The figures in 'Higher Ground' are only tentative, re-adjustable at every point. Any public body into whose hands the practical working should fall would of course cut its garment according to the cloth on hand. My proposition is, that children shall be paid for going to school from twelve to twenty years of age, and that the amount to be paid for the eight years shall be \$1,200. But if only money enough could be raised to keep them at school till eighteen, then the pay must cease at eighteen. That would require, in all, only \$575 for each child. If at first only enough could be raised to keep the children at school till sixteen, then sixteen must be the limit. That would require, for the four years of each child, only \$250. Even then the gain of the people in intelligence and efficiency would be immense, and the expense for the four years would be \$250 only, instead of \$1,200 for the eight years.

My proposition is, that all children from twelve to twenty years of age shall be paid for going to school substantially what they could earn out of school: at the age of twelve to thirteen, \$50; thirteen to fourteen, \$75; fourteen to fifteen, \$100; fifteen to sixteen, \$125; sixteen to seventeen, \$150; seventeen to eighteen, \$175; eighteen to nineteen, \$225; nineteen to twenty, \$300.

This, I think, would keep the children at school, and we should have an intelligent and efficient population, such as the world has never yet seen. Perhaps a trifle less annually would keep the children at school. I should be in favor of the smallest amount possible that would accomplish the object. But of course this could not begin all at once all over the country. If the proposition shall ever be carried out anywhere, it would take years and years after the beginning before all parts of the country would adopt it. All the children would not go. Wealthy people would still prefer to send their children to private schools; perhaps some Catholics, not many, would persuade themselves that the supposed interests of their children in the next world demand their absence from the American public school; and there are perhaps people among us so shiftless or degraded that they would not send their children to school, no matter what the inducement.

It is not necessary that I should be able to show that we could to-day provide for a state of things which can only be brought about after years of agitation. The state of things which I advocate can only come about gradually. The people will have to be convinced. Schoolhouses will have to be multiplied, and these things can only be done slowly and gradually. That the tax would be sufficient to begin with in large cities, there can be no doubt; and, as wealth increases more rapidly than population, the proceeds of the tax would tend constantly to come nearer being sufficient than it would be to begin with. In discussing matters of taxation, the *Chicago Tribune* said a few days ago that there are five hundred millionaires in New York City: there were probably not fifty millionaires in New York twenty years ago. There are probably one hundred millionaires in Chicago to-day: twenty years ago there were not five. Smaller fortunes are increasing in proportion. Wealth is increasing much more rapidly than population.

No man can tell what the succession-tax would yield: it can only be found out by experiment. Did we not lower the tariff in 1883 to decrease the surplus, and then find that we had a steadily increasing surplus? I do not pretend to be able to calculate what the succession-tax would yield in the whole country, nor in any one state or city. On p. 44 of 'Higher Ground' I gave it as an estimate that the tax would yield annually from three to six millions in Chicago, and from twenty to fifty millions in New York. To this estimate I still adhere. The many large estates falling in from

time to time show it to be a moderate one. The tax would enable us to begin, and every year it would prove more nearly adequate: every few years we should be enabled to take in children of a more advanced age. The *New York Times* of Jan. 13 gives a summary of the comptroller's report of the State finances for 1887. The collateral inheritance law yielded for the year \$561,716.23. The comptroller says it might easily in some years produce a million, and yet under that law no lineal inheritance is taxable. The greater part of the money came from eight estates: estate of Henrietta A. Lenox, New York, \$76,534.27; estate of Mary J. Morgan, New York, \$64,201.64; estate of Cornelia M. Stewart, New York, \$61,232.03; estate of Calvin Burr, New York, \$39,711.46; estate of Hannah Enston, Kings County, \$40,068.20; estate of Sarah Marrow, New York, \$14,077.35; estate of Mary E. Miller, Orange County, \$15,796.65; estate of B. F. Bancroft, Washington, \$10,419.60. This tax, being on collateral inheritances only, reaches only a small number of successions.

I speak of the apparent absurdity of subsidizing parents to keep their children at school. Several of my friends are at the present time supporting boys in manual-training schools. These friends of mine are not doing any thing absurd, are they? No, they are doing an excellent thing for the boys. Many colleges give aid and assistance to students. To do what I propose would be only doing what the colleges have always done, and are now doing, to the best of their ability,—helping indigent students to get an education. There is nothing absurd about that, is there? Why should it be absurd to do for all what it is wise to do for the few? Besides, the education itself would immensely accelerate the acquisition of wealth, just as the small beginnings of railroad-building from the thirties to sixties helped to accelerate the increase of wealth sufficiently to give us the railroad mileage of 1888. What the world has acquired in the way of knowledge would be known to all, instead of being known only to the few: all, instead of only the few, would have access to, and would utilize, the world's stock of knowledge, and the difference this would make in the production of wealth cannot be estimated. Where there is now one millionaire, there would be a thousand of them under the new state of things, and all the people would be in comfortable circumstances. That increase of knowledge brings increase of wealth must be clear to every one. If, instead of our present population, we had a land full of Russian Moujiks, or of people born in Spain or in Arkansas, we should not be troubled with a surplus.

The education which I propose means that no child shall go through life in the raw state; that every child shall be a finished product; and that society shall get upon every human being born the profit of the finished product, instead of such profit as there is in letting humanity go through life in the raw state, as it were.

The world is wasting its knowledge by confining it to so few. It is as if a man were to leave his family a million, and provide that only a hundredth part of it should be put out at interest to produce income. We should call such a man foolish. Well, in like manner the world is stupid in confining knowledge to the few, and depriving itself of reaping the benefit of the service of the many in their best estate. Say that a man has five children and \$100,000. He can educate his children well, and leave them \$80,000; or he can let them go to school till they are twelve years old, and then leave them \$100,000. Can any sane person doubt which would be the better course for the children? Can any one doubt which course would be the more likely to preserve the estate? Can any one doubt which would be the more likely to increase it?

But the children whose education I advocate have not the money to enable them to be educated, and their parents have not the money wherewith to educate them. Must the rich educate the poor? I say yes; if the rich wish to live in comfort in a country governed by universal suffrage, they must do their share, and more than their share, to educate everybody. As I believe, the people who would pay the money would get a handsome return upon their investment, even those who should pay at the highest rate.

Years ago I said, and I quote it here from Prof. C. M. Woodward's recent book, 'The Manual Training School,' published by Heath & Co.,—

"The alternative before you is more and better education at greater expense; or a still greater amount of money wasted on

soldiers and policemen, destruction of property, and stoppage of social machinery. The money which the training would cost will be spent in any event. It would have been money in the pocket of Pittsburg if she could have caught her rioters of July, 1877, at an early period of their career, and trained them at any expense just a little beyond the point at which men are likely to burn things promiscuously. It is wiser and better and cheaper to spend our money in training good citizens than in shooting bad ones."

The first requisite is to convince the people that the thing itself is worth doing. That done, the means to accomplish it will be found. The thing proposed "is not a largess to the recipient, but a natural measure of self-defence on the part of the government which educates."

I propose it as a measure for the welfare of the community, and the welfare of the community is the supreme law.

Once established that it is the height of wisdom at all hazards and at any cost to bring the children into school and keep them there till the twentieth year, if necessary other means besides the succession-tax would be found to pay the expense. The \$500 license-tax on saloons yields annually in Chicago nearly two millions. It is a new revenue never before counted upon for municipal purposes. Before we had it we got along very well without it, and we could again do so. To what better use could the license money be put than to keep the children at school? And the tax might be doubled. Double our rate, and liquor-licenses would annually yield in New York City something like ten millions. Then there is the internal revenue derived from tobacco and whiskey, yielding annually over a hundred millions, which is every day in danger of being abolished because we have no use for the revenue. This tax, unless seized upon for education, is liable at any moment to be repealed. Its appeal would be a calamity. The tax bears heavily only upon vice and crime. No useful industry is hampered by it. There is not one single good reason why it should be repealed. To what better use could the proceeds of this tax be put than to be paid out for keeping the children at school? The whiskey and tobacco tax might be doubled, and nobody be the worse for it. It is low now in order that it may not produce too much revenue. If the revenue were needed for a good purpose, the tax might well be doubled and yield over two hundred millions.

In the sense in which I speak of the settling of the labor-troubles, they would be settled if we could get along without periodically employing soldiers to use force. The graduates of the manual-training school would be just that many people taken out of the labor-problem; and, if the number so taken out was sufficient, there would be no labor-problem left.

Each individual trained to a degree to find an independent way for himself instead of relying merely upon the work of his hands to be directed by the brains of some one else, is to the extent of that individual a settling of the labor-troubles. The settling would operate as things did in Germany in the time of the first Napoleon. So long as German soldiers fired their guns at his command upon his enemies, he maintained his supremacy in Germany; but when the Germans took to shooting at him and his, instead of for him and against his enemies, there was end of Napoleon's supremacy. Sufficient training, intelligence, and efficiency would make all our people for peace, and there would therefore be peace. The lawlessly disposed would be so few and lonesome that they would cease to riot. If I may be allowed an Irish bull, the lawless could be made to shoot the other way by being made so intelligent and efficient that they would refrain altogether from shooting.

AUGUSTUS JABOBSON.

Chicago, Jan. 24.

#### Weather-Predictions.

IF Professor Hazen is willing to admit, as I infer from his letter in *Science* of Jan. 27, p. 49, that the Blue Hill predictions for last October give a higher per cent of success than his own when verified by the unmodified original rules he sent me, it seems to me there is an end of the matter between us. I do not deny that better methods of verification of weather-predictions are wanted. All that I have ever claimed is, that the Blue Hill predictions, when verified by the Signal Service rules, in accordance with which they