

Correspondence.

Three Eras of Our National Growth.

To the Editor of the SCIENTIFIC AMERICAN :

I renew my subscription again for the SCIENTIFIC AMERICAN. Since I became acquainted with the SCIENTIFIC AMERICAN in its childhood of 1845, we have passed three marked eras national in character, two of which have made an indelible impression upon our people and country.

First—The great gold discoveries in California which gave the first impetus to our railroad building and settling of the great West. (I am an "old forty-niner," and helped to do it.)

Second—The war of 1861-65, which set free 4,000,000 of slaves, and brought about an entirely new order of things in the Southern States.

Third—Last and greatest of all, our almost bloodless war with Spain. Greatest, because it brings the new tenet of humanity, added to the old creeds of Christendom, and will be the brightest jewel in the diadem of American liberty. The two first-mentioned eras have marked unprecedented success in the arts, science, agriculture, and business; but the third, with its world-wide expansion of love and humanity, will excel them all.

When I read of some of our prominent men, political leaders, talking of "imperialism," I hang my head in shame. The word imperialism ought to be eliminated from our American language.

"Then let us pray, that come it may,  
As come it will, for a' that,  
That man to man the world o'er  
Shall brothers be for a' that."

Bedford Springs, Va.

J. R. M.

Type of Coast Steamboats.

To the Editor of the SCIENTIFIC AMERICAN :

The loss of the steamer "Portland" still interests and excites the people of the Eastern States. It also brings up the question of the best type of vessel for the short coast routes. The "Portland" may be taken as a typical ship. She was heavily built, diagonally fastened with iron, and was considered a strong boat. The freeboard was greater than usual. This feature, together with the fact that she had a vertical beam engine and paddlewheels, made her a very easy sea boat. The guards, which are usually dangerous in river boats when they go outside, were in this case sponsoned out and tightly planked, so that they were not a serious disadvantage to her. They tapered out very quickly forward, so that for a long distance they presented no obstruction to the bow in entering a wave. The houses on the main deck went all the way forward, so that when the gangways were closed the whole vessel was closed to the upper deck.

This type, with slight modifications, has been used on the Eastern coast for fifty years. The fundamental reasons are found in the following facts: These are the easiest sea boats that ever floated. They resist both rolling and pitching in a remarkable way: This is partly due to the position of the machinery and partly to the paddlewheels. The latter greatly steady a vessel, stopping a regular roll even more effectually than a bilge keel. In the second place, carrying the freight on the main deck makes them easy in a heavy sea, while it also makes loading and unloading rapid and inexpensive.

Boats of this class have been exceedingly safe. The loss of one by foundering is almost unheard of. The last case that the writer calls to mind was that of the "Governor." She went down off Cape Hatteras in 1862 or 1863. The gale on that occasion was of phenomenal severity. Such boats make far better weather in a heavy sea than any propeller.

Having just returned from Boston, and having had good facilities for judging of the storm and the wreck, the following facts may prove of interest in forming a conclusion in regard to boats of this class. It will, of course, be borne in mind that they are river boats only in appearance.

The storm itself appears to have been more severe than any which has visited the coast since the first settlers landed. One example of the power of the sea was shown at one place when the keel of a wrecked coal barge was left 50 feet above high water mark and 200 feet inland. Destruction of property along shore was almost beyond account and quite beyond imagination.

What happened to the "Portland" seems to me to have been this: Finding that he could not run away from the gale, i. e., keep ahead of it, the captain put her nose straight into the wind and worked off shore. The boat made as easy weather of it as possible under low steam, barely keeping steerage way. She probably crawled off in this way till well to windward of the cape. Then she got the weight of the sea, and her upper works began to be smashed by the waves. Then commenced the fight for life. As the light houses which form the hurricane deck began to go, the water would go down on the main deck, breaking the freight loose and probably knocking out the sides of the main

house or main deck sides. In a word, the sea battered the vessel to pieces above the main deck and sent such volumes of water below that the pumps could not handle it. In this way, with upper works broken in or washed away, but still "head on," she probably went down, having been gradually drifting to leeward for some hours.

This hypothesis is confirmed by the condition of the wreckage, of the bodies found, and of the freight. The whole cape seems to be covered with the debris of the steamer. But there is nothing except the light upper works and the freight.

The lesson seems to be directed against the very light superstructure which is usually placed above very sturdy hulls. The seagoing qualities cannot be much improved. I mean the behavior in seaway. As freight boats or passenger steamers, they are satisfactory. But to surmount a diagonally fastened wooden hull, or one of iron, with two stories of bandboxes, with only inch siding to keep out the sea, is not quite consistent. The upper works of many of these vessels are also structurally weak. They are not properly supported and tied to the hull itself.

The remedy is simple: Carry the hull to the upper deck; make the upper or saloon deck a structural portion of the hull; build the sponsons and guards in as a part of the framing of the hull. Had the "Portland's" hull been thus carried up, she might have lost her pilot house and officers' rooms, and even the saloon and staterooms, but she would have come into port with her cargo and probably all her passengers.

Philadelphia, Pa., January 2, 1899.

E. F. C.

A New Plan of Education.

To the Editor of the SCIENTIFIC AMERICAN :

Few people, if any, have not experienced the trouble of receiving correct and speedy information, when the business or pleasures of their everyday life demanded a knowledge of some fact or other not connected with their immediate surroundings.

What is the price of such or such an article in Paris? Where can I get the latest statistics of the American lumber trade? What is the cost of life in Cairo or Norway? How many days do I need for a trip to Moscow? Which is the cheapest technical school in Germany, and where can I get all the particulars about it? Hundreds of such questions must have occurred in every one's life, and when it was indispensable to get an answer, we all know what a bother and often what an expense it was to get it. If such troubles often beset an inhabitant of such great centers of intelligence as London, Paris, or New York, how vastly are they multiplied in the case of a resident in the country or in some far-off colonial settlement! The difficulties are then usually so great as to be quite insuperable, and the seeker for information has to put up with this unpleasant discovery.

We think the time has come to put an end to this state of things, and also that there is a simple and easy way of doing so.

Suppose you were offered the privilege of having your own "special correspondents" in all parts of the world, who would undertake to give you correct information on every possible topic, at the cost of a prepaid postal card, on the sole condition that you would also consent to answer such questions on subjects indicated by yourself, and costing you neither trouble nor expense—would you refuse that privilege? The question seems hardly worth putting!

Let us now try and explain how that can be done. Imagine to yourself a central committee or bureau, situated in one of the central cities of Europe, say Geneva. This bureau elaborates and circulates in all the cities of Europe, America, and the colonies a systematically arranged programme of useful information and a general invitation to all who would like to become members of the "International Association for Mutual Information" to send their names and address to the central bureau, stating the language (preferably English, French, or German) in which they could correspond and the topics (general or special, universal or local) on which they were ready to give useful information. On receipt of the answers to its circular, the bureau would then compile a series of lists, one for each department of its programme, containing the names and addresses of all the correspondents willing to reply to questions on the subjects of such a department, together with the necessary indications as to the scope of their information, the languages they used, etc. These lists printed, the bureau would then forward them to all its correspondents, in accordance with their demands. (We presume that nobody would demand the lists of correspondents on subjects of no possible interest to him; the more so, that in case of an unforeseen necessity for such information, a simple note to the bureau would immediately bring the required supplementary list.)

From the day that the members of such an association received their lists, they could enter into direct relations with their correspondents all over the world, taking care only to prepay the expected answers. It is self-evident that no sense of personal obligation would trammel such a correspondence, for every one would

remember his readiness to render the same service to other correspondents.

Henceforward, the business of the central bureau would consist in the annual or semi-annual revision and correction of the lists, in attending to the wants of members, in managing the general business of the association, and in organizing local offices and agencies in all countries. These local agencies would assist the central bureau in its general work, serve as interpreter between members writing different languages, publish periodical papers of general information for the benefit of the association etc.

Wishing to state our plan as briefly as possible, we shall not pause to describe in detail our ideas of the way in which these offices should be organized, of the rules which members of the society should observe; neither shall we consider here the probable developments of this scheme, should it meet with general acceptance; many of these developments will easily suggest themselves to the majority of our readers.

We cannot refrain, however, from indicating one of the immediate consequences of such an association, because of its extraordinary practical value. Consider the case of travelers for business, health, or pleasure: in every town all over the world they can expect advice and assistance from resident members of their own association; nowhere will they feel themselves complete strangers; a card, signed by the central bureau and bearing the owner's name and number, would thus become an introduction to friends all over the world. The inestimable value of such a result should alone suffice to induce all thoughtful men to join the proposed association, letting alone the loftier consideration of international peace and good-will that nothing can promote to such a degree as mutual assistance and friendliness.

A few words now about the means necessary to meet the working expenses. We believe that all the expenses of printing and distributing the programmes, circulars and lists of the association can be easily covered by fixing a certain price on these lists. The price may be exceedingly moderate, considering the vast number of copies, and yet be quite sufficient. A small sum—say one shilling—might also be demanded as an entrance fee to the association, in exchange for a card of membership under the sign and seal of the central bureau. A very considerable fund for working expenses can be collected by issuing special post cards with prepaid blanks for answers, at a price barely exceeding the value of postage. Advertisements in the society's periodicals would surely also become an important source of revenue.

The programme of information that we mentioned as the first work of the central office should embrace all the departments of human knowledge and business. Perhaps the following headings may serve to illustrate our meaning more clearly, not that we ourselves consider such a plan even approximately sufficient. 1. Religion, philosophy, ethics. 2. Education—physical, mental, and moral. 3. Science: (a) Sociology, ethnology, philology; (b) Biology, physiology, psychology; (c) History, archeology, paleontology; (d) Geology, paleontology, etc., etc. 4. Art and artistic industries. 5. Literature, books, and the periodical press. 6. Government and its branches. 7. Law and the courts of justice. 8. Finance. 9. Agriculture and its branches. 10. Technology. 11. Manufacture. 12. Mining. 13. Engineering and machinery. 14. Commerce. 15. Traffic. 16. Travel. 17. Colonization. 18. Correspondence (post, telegraph, etc.) 19. Housekeeping. 20. Hunting, fishing, and sports generally. 21. General information for subjects not otherwise specified.

To conclude. If the readers of this new proposal have anything to say against the desirability or practical possibility of the scheme, we shall be glad to give their opinions our most earnest attention. We think the plan too interesting to wreck it at the outset by any haste or mismanagement.

If, on the contrary, the scheme, as here outlined, should meet with a general approval, we shall apply all our energies to promote its universal acceptance and speedy practical fulfillment. Every one will perceive that this is a matter of public interest, and that its future depends entirely on public opinion. All remarks and letters can be addressed to the undersigned.

N. A. SHISHKOV.

Simbirsk, Russia.

An interesting German invention provides for instantaneous soda water in siphons. The device is called "sodor." It consists of a siphon provided with a wicker covering. The top is of peculiar construction and admits of the insertion of a pear-shaped, thin iron capsule, filled with liquid carbon dioxide gas. The top of the siphon is hinged, and after it is swung into place a lever is pushed down which forces a piercing pin through the "sodor" capsule. The gas then forces its way out through special channels into the top of the siphon and impregnates the water in the siphon. The thick walls of the bottle are not readily broken by the pressure of the gas. This device will undoubtedly prove of considerable interest to those who live at a distance from bottling establishments.