FEBRUARY 13, 1914]

SCIENCE

Foreign Affairs	12,000.00
Jones, H. C	1,400.00
Jones, H. C	1,500.00
MacDowell, E. C., and W. E. Castle	600.00
MacDougal, D. T., et al.	4,200.00
Osgood, C. G	9,000.00
Papers from the Tortugas Laboratory	3,800.00
Reichert, E. T	1,094.68
Shreve, Edith B	700.00
Smith, E. F	4,800.00
Sommer, H. O	6,500.00
Walcott, C. D.	272.40
Weed, L. H	1,600.00
Wright, Albert Hazen	1,400.00
	\$66,693.30

The sources and amounts of the revertments from November 1, 1912, to October 31, 1913, inclusive, are shown in the following list:

Large grants:

Transferred			
grants	••••	6	\$3,287.75
Revertment,	Divisio	n of	
Publications			3,000.00
Revertment, L			
Meridian .	Astrome	try	15,000.00

\$21,287.75

		φ21,201.10
Minor grants:		
Cooke, Elizabeth, Grant No.		
878	550.00	
Drew, G. Harold, Grant No.		
854	2,000.00	
Fitting, Hans, Grant No. 816.		
Historical Research, De-		٤,
partment of, Grant No.		
794	90.00	
Osborne, T. B., Grant No.		4
692	83.32	
Reception, National Academy		
of Sciences, Grant No. 879.	381.16	
Terrestrial Magnetism, De-		
partment of, Grant No.		
798	25.00	
Vaughan, T. Wayland,		
Grant No. 855	3.300.00	
		8,229.48
Dublication		0,220.40
Publication:		
Down Conl Grant No. 879	252 50	

Barus, Carl, Grant No. 872.	353.50
Benedict and Jones, Grant No. 820	284.00
Bergen, Henry, Grant No.	
826	7.13

Burnham, S. W., Grant No.		
803	884.15	
Callaway, Morgan, Jr., Grant		
No. 802	11.00	
Cannon, W. A., Grant No.		
824	531.70	
Carnegie Institution of		
Washington, Grant No.		
667	218.73	
Churchill, William, Grant		
No. 801	851.08	
Farlow, W. G., Grant No. 63.	365.00	
Jones, Harry C., Grant No.		
819	33.05	
Lancaster, H. C., Grant No.		
814	309.70	
Loeb, Leo, Grant No. 821	323,06	
Researches of the Depart-		
ment of Terrestrial Mag-		
netism, Grant No. 818	1,143.23	
-	-	5,315.33
Administration:		-,- 20100

Revertment	from	allotted		
balance				5,000.00
				\$39,832.56
		R.	S.	WOODWARD

EDUCATIONAL INTERESTS AT WASHINGTON

Ι

ONE of my first impressions when I joined the Federal Bureau of Education at Washington, in the summer of 1906, was that of the cooperative friendliness of the various executive offices with which I had to do. Every door was open. My newfound colleagues in the Department of the Interior and its other bureaus, the higher officials of three or four other departments, with whom the business of my office soon brought me into contact, the public printer, the civil-service commissioners, the director of the census, officials of the Smithsonian Institution, the librarian of Congress, the White House staff, and the President himself-all were not only easy of access. but were prompt to welcome the newcomer and to lend him a helping hand.

On the day that I entered upon my new I r duties, the thermometer in my office registered 95°. The rest of the summer was steaming hot. It rained on St. Swithin's He h day and—more or less—for forty days thereafter, and the sticky heat was well-

day and—more or less—for forty days thereafter, and the sticky heat was wellnigh unbearable. But the warmth of welcome which I experienced at the hands of members of the administration who were still on duty at the Capital did much to make that external heat and humidity endurable.

I began, indeed, to wonder whether the difficulties of which I had been warned were not imaginary. Here was none of that immobility of the great governmental machine of which I had heard so much. It was not until the eve of the assembling of Congress that the other side of the picture was fairly On Thanksgiving Day I was exposed. summoned before the House Committee's sub-committee on the "legislative" appropriation bill, for my first annual hearing on the estimates for the bureau for the next ensuing fiscal year. Then I knew. No great advance could be made in the usefulness of the education office without increase of appropriations; and there was evidently in Congress an intrenched tradition that the federal government should not go deeply into expenditures for public education.

In order to be quite fair, some qualifications must, of course, be made. The contrast in attitude between the executive and the legislative branch of the government was not that between white and black but that between light gray and a misty dimness.

Not everything was easy on the administrative side. There were some difficulties that were internal to the bureau. Such were, of course, inevitable. They were, however, made good in part by the loyal support of competent men and women on the staff of the office.

I may go out of my way just here to pay tribute to my venerated predecessor in the commissionership, Dr. William T. Harris. He had presided over the Bureau of Education so long, and with so dominating a personality, that in a sense it had become his own. He continued his residence in the city of Washington. He was a veritable mine of information and judgment regarding the bureau in all of its relationships. Yet from the moment that he laid down his official responsibility, he did not seek in any particular to direct or even to influence the administration of his successor, while giving at all times a friendly sympathy and support that was, to the younger man, of immeasurable value.

Secretary Ethan Allen Hitchcock was at the head of the Department of the Interior. I soon found some justification for the saying that he counted every man guilty till he should have proved himself innocent. The delicate question here was the management by the bureau of the reindeer annex to its provision for the education of the Alaskan natives. This branch of the service was in a peculiarly perplexing situation just then. When President Roosevelt had called me to Washington, to offer me the post of commissioner, his talk had hardly touched upon any other side of the bureau's activity. While the secretary's attitude on this subject for a time increased the difficulty of the situation, and a solution was not reached until he had been succeeded in the portfolio by Mr. Garfield, I entertained, nevertheless, and still retain, something like historic veneration for the really Roman personality and service of Secretary Hitchcock.

One of my earliest attempts to widen the service rendered by the education office brought me into interesting relations with an assistant secretary. He was the acting head of the department during the temporary absence of his chief. What I sought to do was to publish a bulletin of miscellaneous educational information, to be put forth in occasional issues, as matter of practical value should become available. When I broached this plan to my associates in the bureau, one of them, having a long memory, called my attention to an obscure clause in an Act of Congress already ten years old, which expressly provided for such a publication. This was encouraging. But there was no appropriation to cover the cost of printing. As in the case of other miscellaneous printing for this office, an allotment must be secured from a general appropriation for printing in the Department of the Interior, and that was under the secretary's immediate control.

I laid the case before the acting secretary, calling his attention to the fact that the proposed publication had already been authorized by Congress, and also that it would enable the bureau to discharge more effectively one of the chief functions assigned to it in the Act for its establishment, namely, that of distributing educational information. He had himself been a member of Congress. He listened to my statement most courteously, and then replied that the thing could not be done. The money was needed for other uses.

There was, fortunately, present at the interview one of the indispensable men of the department. A fair number of such men are to be found distributed through the several branches of the government men of sane judgment, possessed of unlimited and accurate information, devoted to the interests which their several offices serve, and free from that form of ambition which would prompt them to intrigue for their own advancement. There is no reason why I should not make individual mention of Mr. W. B. Acker, to whom I have referred. I doubt not he is still serving the public from that piled-up desk of his; and I hope the public will long enjoy and appreciate his services.

I had already consulted him with reference to my little publication plan. The acting secretary glanced toward his subordinate when pronouncing his adverse decision. Most tactfully then the under official reminded the high official that the very modest sum required could be spared without appreciable detriment to any other interest, and that the legality of such use of the fund was beyond question. With only two or three sentences, the scale was The expenditure was approved, turned. and the preparation of the first issue of the bulletin was immediately begun.

I believe the publication has been a useful one from the start, and it is now having a great development at the hands of Commissioner Claxton.

A few such experiences as that described above led me to the all-too-hasty generalization that if a public official desired to do anything new in Washington, he would either find that it is already in the law of the land, or that it is impossible—and sometimes both at once.

With other assistant secretaries, and indeed with the one referred to above, I had other relations in plenty which I can recall only with warm appreciation and gratitude.

But to come back to the legislative side of the matter. Here, again, I must avoid too sweeping a statement. In the matter of appropriations, I fared as well as my predecessors or perhaps a little better. Including the provision for the Alaska work, the appropriations were increased in those five years by about 68 per cent. This would not be so bad a showing, were it not that the total amount was pitifully small as compared with the magnitude of the interests and needs involved. For the year 1911-1912, the appropriation for the Alaska work was \$212,000, and for all of the rest of the activities of the bureau only \$79,800, to which there should be added an allotment from the secretary's fund for printing amounting to \$50,000.

I was early impressed with the fact that it was easier to get appropriations for the education of the natives of Alaska than for the bureau's ordinary work of collecting and diffusing information. At the first session of Congress after I had entered the bureau, through the active interest of Mr. Tawney, then chairman of the House Committee on Appropriations, there was procured an addition of \$100,000 to the annual appropriation for the Alaska work. On the other hand, even small additions to the provision for collecting educational information, for the employment of competent experts in different branches of education, and so on, were secured only with the greatest difficulty.

\mathbf{II}

It would seem, indeed, to be a fixed tradition in both Houses of Congress that the expansion of the education office shall be only gradual and comparatively insignificant. It has been shown, on the other hand, that at some time or other a rapid and considerable expansion will have to take place in order to bring up arrears, as it were, and enable the office to "start even" with its responsibilities. But that time is not yet in sight.

When one secretary of the interior made an active effort to secure increased appropriations, he was turned aside with the intimation that further legislation was necessary as a basis for such appropriations; and when this suggestion had been followed up and existing statutes had been found to cover the case completely, the session was too far advanced to secure the desired additions to the appropriation bill of that year. President Roosevelt in his last annual message recommended a substantial increase, but without result. The National Education Association passed its resolutions, and made its personal representations through a strong committee, headed by President John W. Cook, of Illinois. Some three or four years ago a wide campaign, in which the Russell Sage Foundation bore an important part, was carried on with the purpose of arousing public interest and awakening in Congress a more serious attention to the needs of the bureau. Mr. Herbert Parsons seconded this effort with an able address on the floor of the House. The result was that there was granted about one tenth of what had been sought.

There are doubtless reasons for this comparative inaction on the part of the Congress. I shall not undertake to canvass them here. But a word may besaid concerning one objection frequently heard, namely, that education belongs to the states, and lies outside of the proper sphere of the federal government. It does not appear that any such objection lies against the main activity of the Bureau of Education. which is not that of educational administration at all, but that of disseminating useful information. The objection, moreover, can hardly be taken seriously as against activities which have been maintained by Congress for nearly fifty years. Each renewal of its appropriations for such activities has been a fresh assertion of the right to carry them on, and each small increase of those appropriations has laid new emphasis upon that assertion.

A comparison of the history of the Department of Agriculture with that of the Bureau of Education is instructive. Both of these offices have to do with interests which some would regard as falling within the range of the state governments, rather than within that of the federal government. Both of them are concerned chiefly with the spread of information rather than with administrative control. Both came into being with the great advance of nationalism in the decade of the Civil War. The Department of Agriculture was established as an independent department in 1862, with a commissioner at its head, and without representation in the cabinet. After making its way against great difficulties for many years, it became a fully organized department of the government in 1889, its head becoming a member of the President's cabi-The Bureau of Education, on the net. other hand, first organized as an independent department, without cabinet representation, in the year 1867, was transformed into a bureau of the Department of the Interior in 1869, and that has been its status down to the present time. The movement of congressional appropriations for these two offices is shown side by side, at ten-year intervals, in the following table:

	Department of Agriculture	Bureau of Education (Including after 1880 the Alaska Service)
1870	. 156,440	5,400
1880	. 201,000	26,995
1890	. 1,669,770	104,920
1900	. 3,726,022	116,270
1910	$.12,\!995,\!274$	284,200

Three years later the annual appropriation for the Department of Agriculture had advanced to \$22,894,590.

It may not be altogether fanciful to suggest that one reason why Congress is reluctant to enter upon any considerable increase of appropriations for the education office is a fear of the breaking loose of another avalanche of expenditure like that for the agricultural department. However, when one looks upon the great contribution which that department has made to our national prestige and prosperity, it will be seen that this is a consideration which may cut both ways.

For my own part, I have no doubt that when we get any clear vision of the meaning of science and education and the arts in our national life, we shall have liberal appropriations for these objects from the federal government; and that any interpretation of the limitations upon the federal government which would stand in the way of such appropriations, will then be regarded as fanciful and "academic."

No one can foretell how that vision will come to the American people. It is, in fact, slowly dawning at the present time. But its coming must be accelerated, or we shall have long to wait. One thing that may be expected to quicken our national insight in this regard is the growing pressure of international competition, especially in the field of commerce and industry. The opening of the Panama Canal will open the eyes of the American people in unexpected Then, too, the political movement ways. toward democracy and more democracy, as represented by direct primaries and other new forms of governmental apparatus, is making a nation-wide demand for heightened efficiency in our educational systems. Not long ago, this last-mentioned view was presented with great clearness by Senator Burnham, of New Hampshire. There are other tendencies of our time which are carrying us surely in the same direction. Our country simply can not make itself what it would be, both at home and abroad. without more of national emphasis upon the education of the whole people, and upon that advance of science and the arts on which both modern education and modern government depend.

\mathbf{III}

In this paper I have drawn freely upon my own recollections, simply as straws indicating the way the wind has blown in recent years at Washington. And I have ventured to forecast a change of weather which must sooner or later affect our national education. Sooner rather than later, I think, but I am not a prophet, to foretell the day and the hour. Now, in the space which I may still use, I should like to offer a few brief suggestions regarding the form which our new national education may be expected to take.

The question is much larger than that as to the future of the Bureau of Education. Its principal elements are those relating to a national university, to federal aid for elementary schools, to the promotion of agricultural and other technical education in secondary and higher institutions; and finally those relating to the Bureau of Education, which must, after all, have an important place of its own in the general scheme. We pass over the military and naval academies, the schools for Indians, and other special educational undertakings in which our government is engaged; and this paper must be limited to the problem. as old as our federal government itself, of a national university. Here we shall try only to get some glimpse of the bare framework of a vast design.

There is one side of our whole national life and national government which is neither economic nor political but scientific, and must be scientifically discerned. The problem of a national university is the problem of the organization of this scientific side. In some few of the states it has been measurably recognized and organized in state universities. In our federal system it has been recognized fragmentarily, and as a result various special commissions and scientific bureaus have come into existence. What is lacking is a unitary organization. And that unitary organization is requisite in order that every piece of scientific work done for the government may have back of it the whole force of established scientific method, standards, and processes, of scientific atmosphere and the ethics of science, which is realized only where many scientific departments work together long and continuously.

A special tariff commission or any other sudden and temporary scientific commission is a makeshift at the best. It will be found at length that what is needed, in place of these, is a continuous and manysided study of wages, industrial conditions, and cost of production, the world over, carried on under conditions favorable to scientific progress, and in close connection with countless other inquiries with which these are interwoven.

We shall find, indeed, that a scientific branch of government, complete in itself, with its own traditions and its own methods, is as essential to the health of a modern nation as is a judicial branch, complete and sufficient in itself, and with its own juridical forms and procedure. It is necessary that this scientific side of our federal life be made a national entity, and given a fair opportunity of acquiring impressiveness and influence suited to its nature; and that is an opportunity of becoming a really commanding force in our national affairs in proportion to the service it is capable of rendering.

In concrete terms, this would involve a separation of those existing offices of the government which are chiefly investigational in their character from those which are chiefly administrative; the grouping together of those of the former class, under some convenient working system; and the organization of new divisions, somewhat similar in character to the scientific bureaus already in existence, in order to deal with new needs as these shall become apparent and urgent. The process may very likely be a slow one; but it is a building for the centuries, and the movement toward a comprehensible end is the principal thing at the present time.

Among the offices and institutions to be brought together in this unique university would naturally be the Library of Congress, the permanent organization of the Census Office, the Geological Survey, the Bureau of Standards, the Naval Observatory, and possibly the more strictly scientific offices of the Department of Agriculture. The Bureau of Education should be included, so far as its typical activities are concerned, provision being made elsewhere for the discharge of its administrative functions. It does not appear that the special form of organization of the Smithsonian Institution would prevent it from being made a member of this central group, in which its membership, with that of the National Museum, would be of the utmost importance. If not incorporated in the new organization, it should at least be related to it through some close affiliation.

A very fair beginning might be made with such a group. It should be reasonably clear that a university so constituted at the outset would be different from any that the world has hitherto seen. It would indeed be an institution of national dimensions, as well as of national functions.

It is not to be supposed that the mere putting together on paper of these great government offices would make such a national university as is here proposed. The federal legislation which should bring them into one interlocking group would be but the bare beginning. The adjustment of their mutual relationships, the rounding out of the organization by the addition of needed departments and activities, the settlement of the relations of the university to other branches of the federal government and to educational systems and institutions throughout the country—all of these things will call for imagination and foresight and administrative ability of the highest order. Under the authority and with the support of the Congress of the United States, the offices and governing boards of the new institution will have the responsibility of shaping a real organ of enlightenment, which shall not only be for all of the sciences and for all of the people, but shall be an effective working instrument as a whole and in its several divisions.

The relations of such a national university to other scientific foundations and institutions of learning, at home and abroad, will be of the utmost consequence. So far as American universities are concerned, its relations with them may have something of the "federal" character. It will not supplant them; it will not merely supplement them; to some extent, I think, it will have its existence in them, and they will be participants in its life.

As I conceive it, the national university will be a teaching body as well as an investigating body, but it will not confer any academic degrees. As a teaching body, it will escape the reproach of abstractness and lack of system which lies against some laboratories and bureaus of pure research. Its teaching courses, which must necessarily be of an advanced grade only, may be brought into very fruitful relations with a reorganized office for the federal civil service. On the other hand, to withhold from it the power to confer the traditional degrees, will be to emphasize its unique character, and in the end will add to its strength and influence. Let universities such as we now have, continue to celebrate their commencement occasions and bestow their beribboned diplomas, undisturbed by any federal competition. These things are not unimportant, but the institution that is here proposed will have other and rather

more weighty business. Nevertheless, it is inevitable that if its work be well done it will eventually become the foremost factor in determining the standard and the standing of American scholarship and American degrees before the nations of the world, and consequently before our own people here at home.

The investigation of a network of problems of labor, the costs of production, customs duties, commercial relations, and the regulation of corporations, will be one of the earliest undertakings which a national university may be expected to place upon **a** scientific basis. Its studies in this field will of necessity extend over decades and even generations. But within a few years there should be assembled and made available for use a greater body of digested information on these subjects than any Congress or administration in this country or any parliament or ministry abroad has ever had, on which to base its industrial legislation.

To amass information, however, is not of itself scientific. What is to be chiefly hoped is that from such researches, in which closely related sciences shall be cultivated together and all upon the largest scale, there shall emerge new and enlightening theories, embodied in new and wellgrounded principles of social development.

Finally, if I have spoken thus far of the sciences only, it is not meant to the exclusion of the arts. Quite the contrary. In a more profound sense than is commonly believed, the arts are bound up with the sciences in the making of our civilization. Music, sculpture, and painting are, generally speaking, mere hangers-on in our scheme of higher education to-day. This is one of the defects in our university life which the nineteenth century has handed on to the twentieth. It is one of the defects which a national university should help us to correct. If we are to have anything like national standards in our drama, in our fiction and our verse, in the aggregate architecture of our cities, in the fine arts generally—still more, if we are to make a disciplined sense of beauty sustain, correct, and supplement the scientific trend of our life—our national university must help us in this great work. At best, it is a slow work and a mighty. We shall do well if another century shall find us far advanced upon it.

What has been offered here is only the barest outline of a great hope and dream for our national life. It will seem far removed from those briefly jotted experiences with which this article began. It is a hope and dream which those experiences, however petty by comparison, did not in any measure dampen or abate. Indeed. while I had at Washington a keen sense of the disproportion between the work in which I was engaged and the work of that kind which this country imperatively needs, I went on in that work with a growing conviction that no greater or lesser perfomance of my own or of any other commissioner, no favoring or adverse attitude of successive secretaries, congresses, or presidents, can in the long run prevent this country from erecting its great national institution of education, science, and the arts, at least coordinate with the traditional branches of government, in which all systems and institutions of science, art, and education throughout the land shall be participants, and shall find therein a new realization of their best ideals.

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LOCAL BRANCHES OF THE AMERICAN ASSOCIATION FOR THE ADVANCE-MENT OF SCIENCE

At the Atlanta meeting of the American Association for the Advancement of Science the following resolutions were unanimously adopted: