

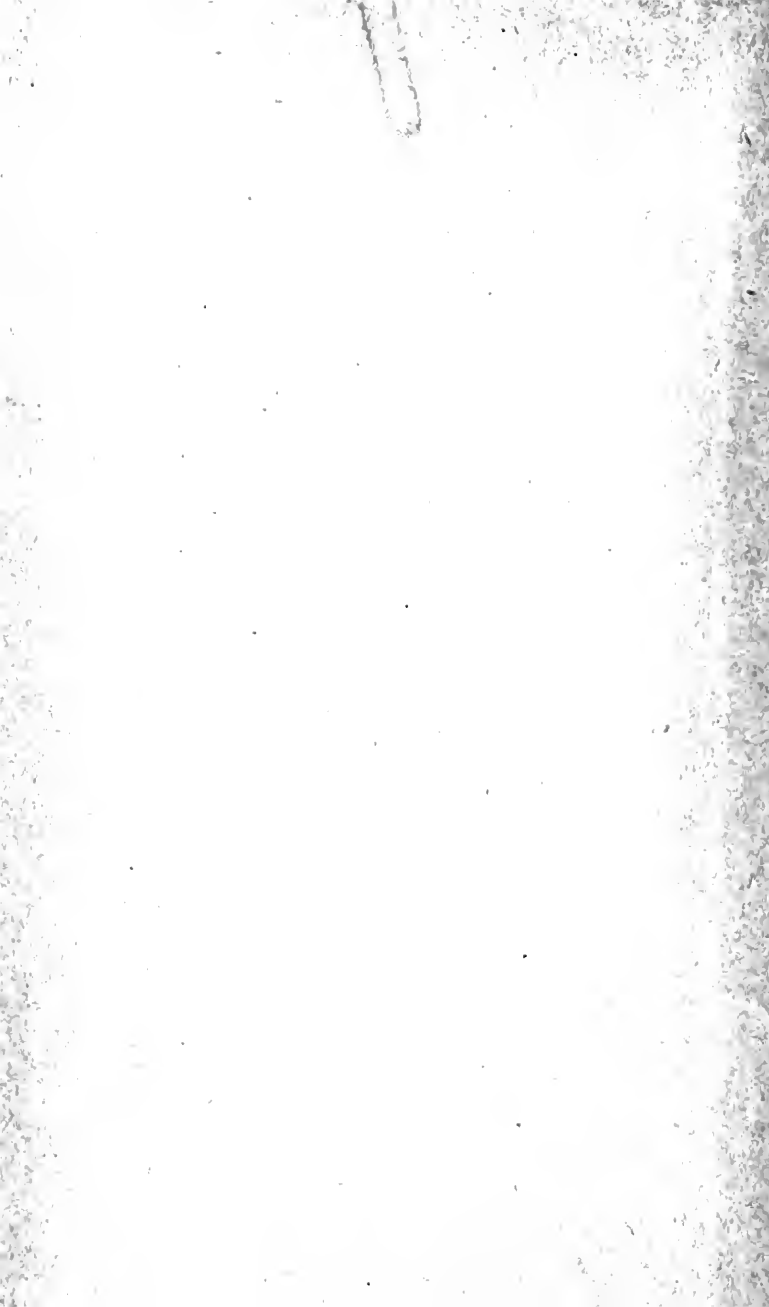
PUBLIC EDUCATION IN GERMANY
AND IN THE UNITED STATES

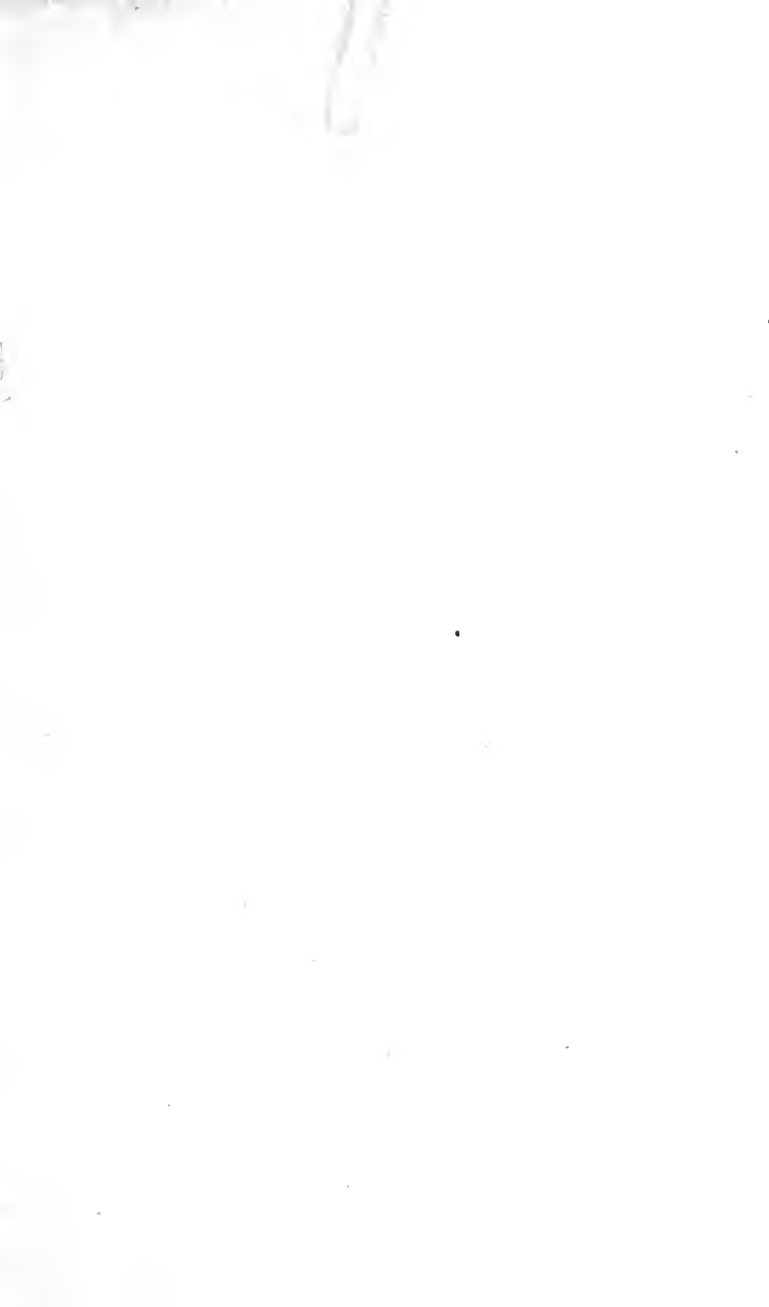
L. R. KLEMM



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PUBLIC EDUCATION IN GERMANY AND IN THE UNITED STATES

BY

L. R. KLEMM, PH.D.

*Author of "European Schools," "Chips
from a Teacher's Workshop,"
and other works*



RICHARD G. BADGER
THE GORHAM PRESS
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PREFACE.

THIS book is an attempt at contributing something toward a mutual understanding of two nations which, educationally considered, are at the head of the column of civilization. Having recently received an unmistakable warning, that human strength is not inexhaustible, I hasten to complete the book, which will preach my last sermon, unadorned but full of good will to mankind.

As I did twenty years ago, I recently went to Europe to inspect schools, especially, to see what the Germans accomplished in their rural schools, and incidentally to find some educational pearls. I do not care to fill the pages of my book with laws dealing with the organization or administration of German schools, for the laws of monarchies necessarily differ from those of a republic; principles and motives under the two kinds of government are dissimilar, hence also their dissimilar laws. Nor shall I fill the book with descriptions and pictures of school buildings, for neither the organization of schools nor their architecture make the schools. "What can it help us, if we have Windsor castles as school houses, when incompetency, ignorance and inexperience preside over the school rooms!" (Supt. A. J. Rickoff). The teacher is the school; nothing can change that. It is the German teacher's professional preparation which secures his success.

I am often asked: "Send me some courses of study of German schools, so that I may get a standard of comparison for our own efforts." Invariably I reply, the Germans rarely publish courses of study, because

they do not need them. See article "Text Books in German Elementary Schools." A German State government (there are 26 states in the Empire, of which Prussia is the largest, being about three-fifths of the whole area of the Empire, and having the same proportion of the population), lays down the principles according to which school instruction is to be given; it may at times define the limits to which a system of schools may go in any branch of study, or define the degree of efficiency a pupil must have, before he can be allowed to leave school, but it never cuts up the matter of instruction for grades, terms, months, and weeks, as is so frequently done in the United States. All the teachers being graduates of normal schools or universities, they know what is expected of them, and do the work expected. Local, county, or provincial supervisors are comparatively rare. School inspection, usually concluded with an examination on the part of the county inspector, takes place once a year, or once in two years.

Yet, I am able to offer my readers a course of study issued by the Royal Minister of Instruction which is known in Prussia only as "General Order." That document will be supplemented by an article of J. Tews of Berlin. It sheds light on modern ideals of public education and the need of the change in the course of study.

A most interesting contribution to the educational literature of recent years is the report made by Monsieur Huret on German methods of instruction and their results, first published as contributions to the Paris "Figaro." He lays his finger on the weak spot of French public education, and since the failings of the French teachers are to a large extent also the

failings of the American unprofessional teachers, this chapter may serve a purpose.

Some of the school room lessons this book contains were partly sketched, as they were being given in my hearing; two were taken from well-known books of methods, still others from normal school blanks filled out in senior classes in preparation of lessons to be given by themselves, and not a few are lessons of my own. Articles of more than passing interest have been gathered, and in part translated from the German, but if so it is so stated. The article "English a dead language," is inserted to demonstrate the difficulty of teaching children with a medium of instruction so little adapted to aid intellectual growth as the English language.

The work here presented is a collection of selected essays, lectures and articles prepared during the last twenty years. Some of them may cause discussion, even protest among teachers. If so, they will serve a good purpose.

L. R. KLEMM.

Washington, D. C., May, 1911.

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I.

WHY CANNOT THE AMERICAN SCHOOL ACCOMPLISH WHAT THE GERMAN SCHOOL DOES?

(This chapter was originally written in German and published in Germany by the author of this volume. Professor Rudolf Tombo, of Columbia University, translated the article and published it in the "Educational Review" of March, 1907. The author here adopts his own child, only slightly changed.)

An Apology for the United States and a Consolation for Germany.

THE fact that American schools are incapable of producing the excellent results secured by German schools has become so well established that we need concern ourselves here only with a discussion of the causes which have brought about this condition of things. There are quite a number of these causes; and they may be divided into two groups: those beyond the teacher's control, and those which would disappear if the teacher took the necessary pains.

I.

Causes beyond the teacher's control:

1. The composition of our mixed population, or rather the dissimilarity of the elements that constitute it, is, in many localities, an irremediable cause of the poor results attained by public education. Thousands of children are sent to school yearly, nay weekly, who differ essentially from the native element of the population. Such children have much to unlearn, or least to relearn. Aside altogether from their lack of famil-

ilarity with the vernacular, they are compelled to adapt themselves to certain customs which are unlike their former mode of life. This does not apply to children of German parentage, since the original stock of the American people is Germanic (Anglo-Saxon, Dutch, and German). But children of Slavic and Latin parentage, immigrants from Eastern and Southern Europe, as well as those from Asia, are much more difficult to assimilate. Italians, Spaniards, Frenchmen, Roumanians, Greeks, Armenians, Bohemians, Poles, Russians, Mexicans, Japanese, and Chinese, all differ essentially, either ethnographically or ethnologically, from the German stock which first settled in United States territory and laid the foundation of the national structure. As a matter of fact, the heterogeneous elements just mentioned are often distinctly recognizable as foreign elements in the American population even after the lapse of half a century.

The assimilation is a much more rapid process with the offspring of Germanic peoples like the Dutch, Germans, German-Austrians, German-Swiss, Danes, Norwegians, and Swedes, and also the English, Scotch, and Irish; the last mentioned, although Celts, having lived in intimate contact with their English conquerors for so many centuries, that they have absorbed a considerable share of Germanic culture, sentiment, and custom. They are, as it were, the immigrants of yesterday and today, while the so-called Anglo-Americans are the immigrants of the day before yesterday. Both possess many things in common; the difference, if any, is to be sought possibly only in the manner of utilization or application. In religion, in government, in language, in mode of life, and in manner of employment, in the search for contentment and happiness, in recreation,

and in work, the differences are of only minor importance. All distinctions of nationality are effaced in the second generation, and the children of immigrants participate in public affairs, as though they were descended from colonists of the sixteenth, seventeenth, and eighteenth centuries. The children of Germanic parents, therefore, present only slight difficulties for the teacher to contend with.

In the case of Slavic and South European parentage an entirely different condition confronts us. The mother-tongues of these people are not related to the English; their ways of living and their views are frequently incompatible with the customs and ideals of their new environment; their conceptions of home-rule, of local self-government, are frequently erroneous. Many come to this country only because they were starving at home, and they do not establish a permanent residence. The children of these elements offer great difficulties to the teacher,* at least if we assume that she realizes that the common school represents more than a mere place for free dispensary of elementary knowledge—that it is rather a training-school for the future citizens of the Republic.

The common school of the United States is a crucible in which the heterogeneous elements that land on our shores are to be fused into a homogeneous mass, into a people the component elements of which are no longer engaged in constant strife over love of country and aims of life, over language and mode of thought, but rather are striving in friendly emulation towards a common goal under conditions that are, to all intents and purposes, similar. This process of amalgamation

*In the United States people in referring to the teacher no longer speak of "him," but always of "her." The large majority of teachers are women, or rather girls.

retards the progress of school instruction. If the teacher had nothing to do but to teach, it would be a simpler matter to make progress and accomplish what the German teacher accomplishes with ease. Our teachers, however, have to deal with a much more difficult problem. German teachers in German Poland and in Alsace will readily comprehend this point, for they also are obliged continually to feed the fire under the crucible.

In view of these conditions it is at once apparent why our evening schools are not designed for progressive instruction, but are rather "repair shops," in which the attempt is made to remedy numerous defects of the common school curriculum. In the larger cities the evening schools are attended by large numbers of immigrants, so that we find here also the process of amalgamation present to a conspicuous degree.

The reader must not smile with the feeling of superiority at this process of amalgamation. The American regards it as a serious, an extremely serious matter. No nation can resist the destructive attacks of hostile powers, unless it be homogeneous, if not inherently so, at least so through the inculcation of common ideals and the resultant striving toward common ends. It is, therefore, the distinct mission of the school to render possible and to develop, among these different national elements, similarity in language and customs, in knowledge and principles. Germany has become great and strong because its children no longer regard themselves first of all as Swabians or Bavarians, Saxons or Prussians, but rather as Germans; the only thing that held Germany together in the days when it was nothing more than a geographical conception, was the homogeneity of its population. The same holds true for

France and Great Britain, although no modern nation possesses a population which, from the ethnological standpoint, is purely homogeneous. There is, however, a similarity in the national consciousness, in the national will, in the national aspiration—in a word, in the national egotism—and that is the very thing which the American school must awaken in the children of the immigrant. And this is a great and momentous task, worthy of the highest endeavors of the noblest minds, demanding much time and incalculable effort. At first the Anglo-American was not conscious of his mission, and for two centuries the colonists neglected their schools. Indeed, not until the tremendous waves of Irish and German immigration swept over the land in the middle of the nineteenth century, did the school recognize that its task was to serve as a crucible, and with characteristic clear-sightedness it was made a common school. Tuition-fees were abolished; instruction in German was used as an inducement wherever necessary; the press aroused the interest of the people in education; the social equality of all pupils, rich and poor, especially recommended itself to the immigrant who had been compelled to suffer at the hands of European class-prejudice. In short, the school gained and retained the confidence of all classes.

But new waves of humanity are constantly coming to our shores, and new efforts must be made to Americanize them, and thus the school of the nation remains the organ of assimilation, stomach, alimentary canal and lymphatic ducts. Formerly, when the immigrants hailed from Great Britain and Ireland, as well as from Germany and Scandinavia, the task was a comparatively simple one; it has become much more difficult, however, since the great majority of the immigrants

are of Slavic and Romanic stock, so much so that the educational results in many places are bound to suffer. As the immigrants generally spend several years in the city, before they settle in the country, it is for the most part the city-school which has to undertake the process of assimilation. We must remember, however, that the development in the culture of a nation is measured largely by the results attained in the city-schools.

2. The work of the American school is retarded also by the inclination of our people to change their abode. In no other country in the world are means of transportation, both by rail and by water, so well developed as in the United States. In no other country do the inhabitants change their homes as frequently as they do here. In no other country do families move as frequently from one part of a city to another or from one state to another, as they do in this country. It is scarcely necessary to dilate upon the effects of this condition upon the regular healthy progress in school. A fifteen-year-old girl attending a high school in my neighborhood has had twenty-three teachers since she entered school as a child of six. Again, a teacher in my neighborhood was asked seven months after the opening of school, how many of her pupils had been with her from the beginning of the school year; upon examining her register she discovered that, of the forty-three pupils who had entered in the fall, seventeen had moved away, and fourteen new pupils had been transferred from other schools to her class. These two examples are by no means exceptional. Whoever duly appreciates the difficulties that are presented by the admission of a single new pupil in the middle of a term, can imagine the result of interrupting the progress of instruction fourteen or seventeen times in the course of the school-year.

This state of affairs is not only reflected in school-attendance, but it is characteristic of the whole nation. Residents of the eastern states are continually moving to the Middle West; inhabitants of the Middle West move still further west or further north. Then again many cross the Rocky Mountains and the Sierras and settle in the states along the Pacific Coast. The newly opened territory of Oklahoma was settled in the incredibly short space of a single week, as was the Rosebud Reservation purchased from the Indians in South Dakota. In order to form a proper conception of what this means, the reader must remember that the territory of Oklahoma comprises forty thousand square miles, that is, it is eleven thousand square miles larger than the kingdom of Bavaria. The composition of the population of certain districts often undergoes a change in a single week, in a month, or in a year. Thousands of laborers move with their families from state to state. In the block in which I have resided for twenty years, only three of the thirty-seven families who occupied private or rented houses there in the year 1889 still remain. There is nowhere a stable point in the population; indeed, the changes are kaleidoscopic. In comparison with other countries we are moving rapidly, but I doubt whether this roving spirit is an advantage. It certainly drives the teacher to despair.

3. Our form of government, which in all other respects may be regarded as a blessing, is nevertheless an almost insurmountable obstacle in the way of rapid and safe progress in school instruction. Local self-government excludes national concentration in school organization, as well as in school administration and supervision, and this results in a slow and difficult

development. Teachers, principals, and superintendents must go from one member of the school board to another, in order to have the most needed matters attended to; the city schools are governed by a composite administrative board, a board which, however, is quite in keeping with the character of the people. Such a school board is an accurate mirror of the people; it is composed of essentially different minds, which find it difficult to act as a body or to reach quick decisions. Every act of a democratic body pre-supposes tedious debates, while a single individual, especially in the person of a responsible minister of education, can accomplish with a mere signature matters, for which in this country years of serious agitation are needed. Endless debates precede every alteration in the program of study. It takes a long time before the school board of a city or district decides to add a year to the course of the high school. Any one who has been actively engaged and interested in American education for almost forty-six years, as I have, will remember the efforts that had to be made to establish public high schools and normal schools. Even at the present day such influential newspapers as the *Washington Post* oppose the establishment and maintenance of public high schools, although the American people have long since solved the problem to their own satisfaction by the establishment of over six thousand institutions of this kind.

When Horace Mann, secretary of the Massachusetts Board of Education, returned from Germany, where he had made a thorough and exhaustive study of the Prussian normal schools, in which he recognized the ideal training schools for teachers, he was compelled to engage for years in a heated controversy with the Bos-

ton school principals, before the first normal school could be established in the New England States—and to do that he had to raise ten thousand dollars among his friends.

I remember vividly the long and tedious struggle that preceded the introduction into the common schools of Pestalozzian object lessons, of kindergartens and manual training departments. Incalculable efforts, numerous meetings, and long discussions in the press were required to make even the slightest impression. Many a vacation week have I spent as an itinerant, preaching the gospel of Pestalozzi; in the course of my mission I traveled from South Carolina to Canada, and from Boston to the Rocky Mountains, but my efforts were seldom rewarded with success.

A democratic form of government does not countenance autocratic decisions or official regulations from above. Appeals to the press, to the masses, and, as a last resort, to the ballot-box, are required to bring about such important changes in the organization and administration of the schools as will aid teachers and pupils in their work and render more rapid progress possible. The fact that in spite of all this, manual training, for example, is much more extended here than it is in Germany, is intimately connected with the character of the people and with the most peculiar and complicated labor conditions, and can not, therefore, be used for the purpose of counter-argument. Again, kindergartens have found a very warm welcome in this country (there are over twenty thousand public and private kindergartens in the United States), while the teaching profession in Germany as a whole is still opposed to this institution, the fondness for which in this country may, however easily be explained by the

circumstance that the American school is so strongly influenced by women. Women find their educational ideal in the methods and theories of Froebel and introduce the games and occupations of the kindergarten into school, so that "kindergarten methods" are not seldom recommended even for high schools, and the entire school system becomes imbued with the spirit of Froebel.

4. The man who believes in republican institutions does not fancy bowing to a law that presupposes or prescribes compulsion. In a republic a law actually becomes law only in so far as the executive officers are willing to enforce it. When a law, like that providing for compulsory attendance at school, is enacted for the express purpose of looking after the welfare of the rising generation, many citizens seek to evade it in every possible way.* Inasmuch as the local school boards seldom, if ever, make the necessary provision for possible new pupils by the erection of new buildings and

*In a recent discussion of a bill regarding compulsory school attendance in the City of Washington, the Washington Post says: "And still another important fact must be mentioned which affects compulsory attendance. There is, particularly at this time, scarcely a single city in the United States which has sufficient school buildings to provide for all the children seeking admission. That for years has been a pressing need everywhere, and in spite of the great efforts that are being made to improve the situation by means of the erection of numerous buildings, only slight progress is noticeable. Race-suicide (the word coined by President Roosevelt to define the disinclination to assume the duties of parenthood) has not prevented the increase in the number of school children from exceeding the provision made for them by the erection of new buildings. No matter how proud we may be of our free public school system and its success, no matter how much we may think of our liberality, we can not meet even the most pressing demands of the situation. Not only is the number of buildings and sittings absolutely insufficient, but in other respects, too, the buildings do not satisfy modern requirements. . . . And it is a national disgrace that thousands of teachers are being treated with truly deplorable niggardliness in the matter of salaries. That applies to all the states of the Union, to city schools as well as to country schools. The absence of a law for compulsory school attendance in various states is only one of the many defects of our public school system. On the whole, we have more reason as a nation to reproach ourselves with neglect, than to boast of what we have accomplished in this highly important matter."

the employment of teachers,* parents are at once prepared to inquire, "Why don't you provide us with a building, so that we may send our children to school?" seizing upon the lack of provision as an excuse for keeping their children at home.

In general we may say that laws like those regarding compulsory school attendance, which are not directly concerned with money or its equivalent, or with crimes or misdemeanors committed against an individual, have little hope of being enforced in a democratic community. The American citizen is always primarily an individual who helps himself; and he regards himself in that light. One day an immigrant shortly after his arrival in New York walked up Broadway and threw about his arms with joy at finding himself in a free country. His fist happened to come into too familiar contact with the nose of a passer-by, and the latter objected to this exhibition of freedom by pushing the immigrant unceremoniously into the gutter. When the immigrant inquired in astonishment, "Am I not in a free country?" the other replied, "Quite right, but your freedom ends where my nose begins."

This answer throws some light on the many laws for compulsory school attendance that exist in various states of the Union. So long as a person is not directly affected by the question whether his neighbor's children attend school or not, he does not worry about the problem. In Germany a few hundred children at the most, out of about ten million, are kept out of school, and as a result the percentage of illiterates is infinitesimal. In this country there are hundreds of thou-

*For the very simple reason that the annual accession of new families is in many places absolutely incalculable in advance. In St. Louis movable wooden school-buildings, which can be transferred from one district to another, have therefore been provided.

sands of children who do not attend school at all, or only for a few weeks at a time, and consequently the percentage of illiterates among white voters is still almost seven per cent., while that of the colored voters is 47½ per cent.; this in spite of the fact that in the year 1903 the munificent sum of \$251,475,625, or about a thousand million marks, was spent in the United States for educational purposes.

Child-labor, that is, the wage earning by children, either in factories, by selling newspapers, or in gardening and field work, is a widespread evil in the United States. Tremendous efforts have been made by well-meaning people to remedy this evil, but those who are acquainted with the average American citizen will admit that it is a Sisyphus task to attempt to improve school attendance by means of compulsory laws. Lessons assigned for home study are seldom prepared by pupils who earn money outside of school hours, while other children display much diligence along this line, and, as a result, several weeks after the opening of the term the inequality in the progress of the class is so apparent, that the teachers, as well as the pupils, lose courage.

5. Another disturbing factor is the grievous discrepancy between the number of pupils enrolled and the number actually in regular attendance. Whenever the percentage of absentees in an American school is not more than 30 per cent., it is regarded as a healthy condition. In certain cities and states of the Union the percentage of absentees runs as high as fifty. In other words, there are thousands of class rooms in which only half of the enrolled pupils are present, where the composition of the class on any given day is not identical with that of the day before or the day

after. Nor is sickness the only excuse offered. All manner of trivial causes, among which disinclination is by no means the least common, exercise a deleterious influence upon satisfactory progress in school. No one but a person who has come into contact with this condition for years can arrive at a true appreciation of the many gaps in the knowledge of his pupils, which the American teacher is continually forced to stop. In many cities the boards of education anticipate the absence of a large percentage of pupils, and assign to a given room a larger number of pupils than it will hold. It is an almost universal custom to assign fifty pupils to a classroom with a seating capacity of forty.*

6. Many gaps in the knowledge of neglected pupils might be filled, if provision were made for special classes for backward or defective children in connection with large city school systems, as is done in Germany, or a similar result might be secured through the employment of the Mannheim method. This has actu-

*The Saturday Evening Post of Philadelphia, a weekly founded by Benjamin Franklin, which to-day has almost 800,000 subscribers and exercises great influence upon public opinion on account of its fearlessness, says in its issue of February 18, 1905:

"We have about 27,000,000 youthful persons who belong to the school age. (In many states the school age is from five to twenty-one.) The number of registered pupils is 16,000,000; the average daily attendance, however, is scarcely 12,000,000, inclusive of the high schools; and the number of students enrolled in colleges and academies is less than 300,000. While we thus have 11,000,000 youthful persons who should be in attendance on higher institutions of learning, we find less than 175,000 in colleges and universities. Of course the attendance would assume greater proportions if the instruction in these institutions, in subject-matter as well as in method, were not calculated to render it an open question whether young men and women in attendance on such institutions do not waste much precious time in acquiring accomplishments that are of little service. The fact remains that we are not even approximately doing what we should do to enable the rising generation to accomplish successfully what we in our ignorance have done imperfectly or left undone altogether. Less than half of the children of the legal age for attending school actually in attendance! Less than three per cent. of the rising generation attending high schools! What is the matter with our parents? What is the trouble with our elementary schools and secondary schools and colleges and universities?"

ally been done in a few cities—in Cleveland, Ohio, for instance—but the idea is frequently repudiated as undemocratic. The parents of pupils assigned to a special class are apt to object strenuously, claiming that their children are as good as other people's children and "a good deal better." And so the teacher struggles on with her incongruous assemblage, assists one student and spurs on another, sighs in secret and ruins herself physically and mentally in this conflict with stupidity and meanness, or else opens a private school with a single adult pupil, in order to escape the Sisyphus task. This also explains the frequent change of teachers. The average term of service of the American teacher seldom exceeds five years, and as a result we observe in America a grievous lack of pedagogical experience, without which no school can do effective work.*

*In the city of New York, where hundreds of thousands of Europeans land and unfortunately remain, there are comparatively more children who are too old for the grade in which they are placed than in any other city of the country. Dr. Maxwell, the city superintendent of schools, reports that between twenty-eight (in certain of the schools of the city) and fifty per cent. (in others) of the pupils are from two to six years older than they should be for their grade. In other words, between twenty-eight and fifty per cent. of all the pupils (the total number exceeds 600,000) must attend school between two and six years longer in case they wish to complete the full course of eight years (between six and fourteen), than if they should enter at the age of six and be advanced a grade each year. When I visited the St. Louis Exposition a few years ago, I discovered the following *testimonium paupertatis* among the American educational statistics published by the National Bureau of Education: "Number of enrolled pupils in the various classes of the Common School:"

"Elementary school:		
First grade, sixth year	. . . . .	5,149,296
Second " seventh "	. . . . .	2,912,462
Third " eighth "	. . . . .	2,426,263
Fourth " ninth "	. . . . .	2,168,956
Fifth " tenth "	. . . . .	1,288,114
Sixth " eleventh "	. . . . .	700,885
Seventh " twelfth "	. . . . .	405,693
Eighth " thirteenth "	. . . . .	323,607
Total in elementary school	. . . . .	15,375,276
"High school:		
First grade, fourteenth year	. . . . .	243,433
Second " fifteenth "	. . . . .	147,192
Third " sixteenth "	. . . . .	101,903
Fourth " seventeenth "	. . . . .	73,596
Total in high school	. . . . .	566,124

7. In addition to all of the points discussed above we have also to consider the very important question of the length of the school year. The German school year consists of between forty-five and forty-six weeks; the German school week is made up of six days, of which four contain at least six hours, while two have between three and four hours, that is, there are from thirty-two to thirty-three hours a week. Our longest school year seldom comprises more than forty weeks, for the most part not more than thirty-five; the school week is composed of five days and the school day of only five hours. We may take it for granted that, *pari passu*, more can be accomplished in $46 \times 33 = 1500$ hours (approximately), than in 40×25 or 1000 hours. The German child spends half again as much time in school as the American child under the most favorable educational conditions. If we bear in mind the fact that in Germany the school year extends, with brief vacation interruptions, over the entire calendar year, while in the United States, especially in the South and in many places in the North and West, the school year often comprises only twelve weeks in winter, the discrepancy becomes even greater. This is a great evil from which we are bound to suffer considerably in the future.

In the long run no nation can compete with Germany, because the Germans regard a good education as a *conditio sine qua non*, and this attitude extends down to the lowest social classes. A larger measure of individual freedom, greater elbow-room in human activity often replaces many an educational deficiency. But even comparatively greater individual freedom in England and America can not be compared with the wide diffusion of education to be found in Germany. In

addition we must remember that there are innumerable technical schools in the Empire, for which we have no equivalent. The fact that industry is making such giant strides in America at the present time can not be ascribed to any wide spread of a thorough education, but it is progressing rather in spite of educational deficiencies, simply because brainwork is being constantly strengthened by experts from Germany, Austria, Switzerland, France, and Great Britain. Andrew Carnegie and others frankly admit this. Numerous factories, commercial houses, mines, mills, and foundries are superintended by German technologists.

The question might be raised, whether it would not be possible to lengthen the time of the school day or school year, and I should be inclined to answer in the negative. Our climate, the nervousness of our pupils, the restlessness of life, really preclude a school year of 1500 hours. The high pressure of exertion, which in Germany is taken for granted—and which, it must be remembered, rarely becomes evident to the pupil—would fill our insane-asylums with both teachers and pupils. I only mention this problem of time, in order to set the existing facts in the proper light. One thing is certain: a proposal to decrease the length of the school day to five hours in German secondary schools would be greeted with a smile of derision by the schoolmasters of that country.

All of the reasons thus far enumerated for the slow progress in school instruction are beyond the teacher's control. In the first place, the heterogeneity of the population can not be changed. Decades and several generations are required to amalgamate such a motley population, just as it took a long time to bring about an element of unity in the patriotic aspiration of

Britons, Anglo-Saxons, and Normans.—(2) The restless migratory spirit of the American people will not cease to exist, until the wide regions west and just east of the Rocky Mountains and the endless prairies in the Mississippi valley have been settled and nature has been conquered from ocean to ocean. When the general conditions of life, which are still constantly changing with startling rapidity, have become stable, the school will reap the benefit; but just at present it is still the shuttlecock of ever changing phenomena.—

(3) We have no desire whatsoever to change our form of government, which allows each individual to seek happiness in his own way, and does not keep him in a condition of dependence by means of petty tutelage. It strikes me that everything is permitted here which is not expressly and for good reasons prohibited by law, while in Europe everything is forbidden, which is not expressly permitted by the authorities. The American citizen, whether he may trace his ancestry back to the first settlers, or whether he be a recent immigrant, deprecates any form of paternalism in government. In this country every man wishes to help himself; every one prefers to have not only his own opinion, but also the right of self-help. To be sure, a chaotic condition frequently results, and it often takes a long time to bring a majority under one hat. Many improvements in the state and the community are forced to bide their time until opinions have become settled. It is rather characteristic of American life that reforms are brought about very slowly; but that is the unalterable consequence of local self-government. As is the custom with everything else, the school of the people is governed by the people and for the people.—(4) Inasmuch as we are com-

pelled to accept the disagreeable features of freedom together with the agreeable ones, it is evident that the disinclination to attend school can not be eradicated by main force. Hunger and thirst, cold and moisture appeal to the senses, but there are no sense-organs that call attention to ignorance. Fools learn only through experience. Persuasion and good example are the means employed to remedy this evil, while force is rejected.—(5) What has been cited under the preceding heading applies also to the question of irregular attendance. Time, our good angel, will no doubt work a change in this direction.—(6) The regular and consequently more rapid progress of classes might be advanced by means of the establishment of special classes, but even in this case it is necessary to combat the self-conceit and prejudice of parents, for the majority of the people interpret equality before the law as social and intellectual equality.—(7) So far as I can judge, the discrepency in time can not be removed, and our school year of 1000 hours, at the most, is not likely to be increased before the millennium begins.

In addition to all of the above causes, a number of others may be named for which there is likewise no remedy.

8. English is the language of this country and the vehicle of instruction in the United States, and that means a great deal, for of all the languages spoken by civilized nations English is least suited for elementary mental training. It is really not a single language, but a combination of several tongues. It is not a homogeneous language like the German, which by means of its own roots undergoes a continual process of rejuvenation, and rejects foreign elements, but it is

a language of which the roots have died off and which now enriches itself by borrowing and even by open theft of foreign language elements. The English language has no organic growth; it resembles a pudding-stone in its composition. The effect of the acquirement of this language upon school children is not encouraging, to say the least.

Only a few illustrations are needed to prove the truth of this assertion. Concrete conceptions are generally expressed in English by an Anglo-Saxon word, as for example, *man*, *friend*, whereas words of French, Latin, or Greek origin are employed to express abstract ideas—corresponding to the German *Menschenfreundlichkeit* we therefore have not *manfriendliness* but humanity. The child is familiar with the words *dog* and *cat*, but when it begins to classify, recourse must be had to Latin terms like *canine* and *feline*. Abstract ideas and, as a general rule, derivatives can not be traced back to their roots. A few examples will make this clear:

German *ziehen*=draw or pull, *anziehen*=attract.

“ *blühen*=bloom, *Blüte*=blossom, but *Blütezeit*=floreseence.

“ *gehen* =go or walk, but *Lehrgang*=course of study.

“ *rot* =red, *die Röte*=rouge, *erröten*=blush.

“ *Huf* =hoof, but *der Hufschmied*=blacksmith.

“ *Sturm* =storm, but *Wirbelsturm*=cyclone.

“ *zwei* =two, but *zweitens*=second.

“ *finden* =find, but *Erfindung*=invention.

“ *rufen* =call, but *der Ruf*=reputation.

“ *spielen*=play, but *Vorspiel*=prelude.

“ *denken*=think, but *Gedanke*=idea.

“ *stellen*=place, but *Nachstellung*=persecution.

And so on, *ad infinitum*. It is easy for the German teacher to awaken ideas in the mind of the child. In botany, for example, he speaks of the edges of leaves at *gesägt* (*Säge*=saw), *gezähnt* (*Zahn*=tooth), *gekerbt* (*Kerbe*=nick, etymologically=*kerf*), *gebuchtet* (*Bucht*

=notch, etymologically=bight), *gefranz* (*Franze*=fringe), that is, he employs designations which are readily understood, because the child is familiar with the roots. English-speaking children, on the other hand, must make use of a foreign language and learn new designations, like serrate, dentate, crenate, repand, sinuate, ciliate. It is scarcely necessary to emphasize the point of how superficial and hopeless elementary instruction in natural history is in this country in consequence of this fact.*

Even during the first school year the German language offers fewer difficulties than English. German is unusually well adapted for beginners in reading, for the German pronounces as he writes and writes as he pronounces, whereas English spelling teems with snares and pitfalls. In German, pronunciation and orthography, with few unimportant exceptions, are identical. The sounding of children in trying to make out words becomes a slow reading, just as the reading of adults constitutes a rapid sounding. While German children at the age of six easily learn to read and write in a few months' time, it takes English-speaking chil-

*The late Judge J. B. Stallo of Cincinnati, a prominent German-American, sometime American minister to Italy, describes the German language in the following words: "It is substantially pure and unadulterated, original and compact, like the content of its thoughts. It is distinguished not only by purity of form, but even more by its abundance of inherent creative force. It is not a magnificent plagiarism like the English language. The German word sounds as natural and original as the first living cry of a newborn truth. The German people did not gather its rich language from all the corners of the world, but produced it from the depth of its own spirit. There is nothing mummy-like, nothing torpid, nothing ossified about the German language; everywhere, through roots and branches, through trunk and leaves there courses the fresh sap of life, unceasingly putting forth sprouts and blossoms. German is therefore not mechanical, as English is. There is no accretion as in a crystal, but it possesses an organic cell-growth. German expressions are fervent and thoughtful like the German spirit, and the subjectivity of our language stands out in bright contrast to the realistic objectivity of the English tongue. The accent or emphasis is not slavishly associated with a single position, but in a changing rhythm falls upon the syllable that contains the meaning of the word or the chief idea."

All of these advantages are wanting in the English language.

dren at least two years to learn to read, and it is impossible even for the most thorough English scholar to spell with absolute correctness without the aid of a dictionary. English orthography is so confusing, so irregular, so stupefying, that the student is compelled to spend his entire youth learning how to spell, and consequently but little time remains for scientific and historical studies and accomplishments. In Germany, elementary school pupils acquire considerable history and geography and many an important and useful chapter of botany, zoology, physics, and physiology. Frequently geometry and algebra are also taught in these schools. In many city schools, as in Saxony, for example, the pupils also receive elementary instruction in foreign languages. These are all subjects which in the United States are not taken up, until the high school course is begun, that is, after the fourteenth year of life.

To be sure, the English language, being almost without grammatical rules, also possesses certain distinct advantages, but when we remember that grammar awakens logical conceptions in the elementary pupil, it is a source of regret that American children lose this training.

9. An entire year of our eight-year elementary course is wasted in memorizing and learning to apply the arbitrary system of weights and measures, which the English-speaking peoples evidently do not wish to replace with the metric system. The variety in weights—there are three kinds, troy, apothecary, and avoirdupois,—in square and lineal measures, and in dry measure—of which there are two kinds,—all of which are based on different arithmetical units and in no wise related to one another, is distressing for both

teachers and pupils. German children pick up the metric system while they are learning arithmetical notation. Only a few days are required to teach a child the divisions into deka-, hekto-, and kilo-, as well as into deci-, centi-, and milli-meters, or liters or grams. Older teachers in Germany will remember the confused system of weights and measures with which they had to "spice" the arithmetic lesson, before Bismarck brought about the much needed change. The Americans are still floundering in this miserable state of affairs, and as a result we have to devote so much time to decimal fractions. In every direction we observe a waste of time; and that seems rather strange in a country where time is said to be money.

10. I desire finally to present one more reason in addition to those above cited for the slow progress in school instruction we observe in our country, a reason that will not sound strange to the German teacher of the twentieth century. It is to be found in the tendency to regard school as a hospital for all the failings of society, for all the defects and deficiencies in the state, as well as for all ailments of the community. The church claims time and attention for religious purposes, the state for legal and ethical purposes. The laborer wishes to have his children receive instruction in the use of tools; the merchant prefers a knowledge of bookkeeping and shorthand; physicians insist upon the inculcation of hygienic regulations; temperance advocates call for instruction on the effects of alcohol. Mothers are inclined to saddle instruction in cooking and dressmaking upon the school; fathers show considerable magnanimity in relinquishing to the same patient institution the punishment of their unruly offspring.

The school board, which, as I have already mentioned, is elected by the people and represents innumerable interests, endeavors to satisfy all of these demands. It appoints a staff of spécial teachers, with an inspector at their head, for a variety of subjects. As a result we find in addition to the school superintendent a number of assistant inspectors for penmanship, drawing, singing, manual training—for boys and girls separately, cooking, dressmaking, gymnastics, temperance instruction, and all sorts of other things. All of these make inroads on the school day, while the time that remains for the regular school work shrinks noticeably, the results in reading, writing, and arithmetic diminish, and the school suffers a loss of prestige. In many places the conditions in this respect at the present time are lamentable. People forget that the elementary school should represent only what its name implies, that it should be an institution in which the elements of knowledge are taught. Whatever goes beyond these elements is evil.*

II.

Evils which are remediable at least in part:

1. In the first place reference must be made to the sad waste of time in American schools. In many instances instruction has deteriorated from real work into a kind of play. Kindergarten games, occupations,

*The New York Evening Post writes as follows on this subject: "The special teacher is at the present time causing much disturbance in school, because he agitates his specialty at the expense of general progress and pays no consideration to the healthy relations between his subject and all the other subjects in the course of study. The special teacher has run a little wild; he has been given too much elbow-room. And so we have courses of study that are too ambitious, and special teachers who are too boastful and unmanageable. But the evil has been recognized and efforts are being made to bring about a better coördination of subjects. The public should have patience. Important changes in the curriculum are not made easily; they presuppose slow experimental steps. We should never forget that we have to deal with living material."

and infant school methods run through the entire school course, and the real school work is bound to suffer. Esthetic inclinations on the part of the teacher lead to constantly renewed decorations in the classroom in the form of flowers, colored leaves, garlands, and flags. The blackboard is covered with drawings, and so becomes useless for legitimate school work. Much time is expended in insistence upon painstaking order in marching, standing, and sitting. The teachers, well-meaning and endowed with motherly instincts, too often remove the pupil's difficulties instead of arousing his personal activity. The absorbing desire of the weaker sex to sacrifice itself for others, is a weighty obstacle in the path of a thorough and successful school instruction. Although it is true that work without interruption by play is fatiguing, it is no less true that play, when practiced to the exclusion or neglect of everything else, destroys the power to work.

The fondness our youth show for play and the mistake of overloading the course of study with trash have not escaped the notice of the humorist, and "poets" write about the boy who is taught to hem, embroider, and cook, who has lessons in singing and dancing, and learns how to weave baskets of colored straws; who is taught to fold paper so as not to injure his thumb, but who does not learn the four elementary rules of arithmetic; the boy who learns to model the head of Hercules in clay, and can not distinguish a sparrow from a pigeon; who knows how to draw a pony on his slate without forgetting the tail, but does not learn to write his name.

In Chicago there is a school in which the little pupils are not taught their letters, until they themselves express a desire to receive instruction in reading. That

seems to be putting the cart before the horse with a vengeance.

2. Another reason for slow progress is to be found in the antediluvian methods still employed in many of our schools. Learning by heart and reciting are confused with teaching and learning. An hour of instruction is called a recitation. Children generally learn how to spell by means of mechanical oral repetition. Grammatical training is neglected. In many schools arithmetic is taught in such a way that the rule must be committed to memory before it is explained by examples. In geography we have text-books that devote more space to description than to maps. If I were to make this chapter exhaustive, it would take altogether too much space. Many improvements could be introduced if teachers would only adopt better methods. But then the question arises, where shall they learn them? Certainly not in the educational magazines of the country, since these for the most part furnish only puerile material and describe all manner of petty methods, plans, and fads, but rarely contain a word about pedagogical and educational principles, and methods that result from the application of these principles. May common sense bring about an improvement!

3. Foolish and sentimental school discipline, as it is practiced in this country, also exercises a retarding influence upon instruction. The feminine teacher with all her charms, amiability and sympathy, with her strongly developed spiritual nature and her weak body, is the autocrat of the schoolroom. Boys and girls bend beneath her scepter—frequently they don't. The strict discipline of the schoolmaster has been forced to retreat before the eternal feminine. The rod of the nineteenth

century teacher has had to give way to the principle of moral suasion. As a result we get more polish, but also more ignorance. This satisfies the American people, however, and matters will probably remain as they are. I have my own opinion on the subject, which I shall state in the following words: Most people proceed on the assumption that a child will not commit a reprehensible act, so long as it understands the culpability of that act. This is, however, a fatal error. Understanding alone will not deter a child from doing wrong, for strength of will and moral force to resist evil are also necessary. Children learn the difference between good and evil, between *meum* and *tuum*—mine and thine—early in life, but the law nevertheless does not punish the youthful offender, until he has acquired a certain moral maturity. This maturity or moral force comes at a much later stage than mere comprehension. It is for that reason that the laws in almost all civilized countries provide corrective or educational punishments for youthful culprits, while legal punishments are not meted out, until the child has reached the age of fourteen or sixteen. This fact also explains the presence of reformatories, of children's courts, etc. If we follow out the suggestions of those who assert that children should not be punished while they still lack the intellectual and moral force that enables them to resist evil, we shall reap a rich harvest of crimes which will make the coming generation shudder. I believe that the total absence of corrective punishment at home and in school is really responsible for the many mob excesses, for the destruction of property, riots, and lynchings, for the gangs of robbers and brutal attacks of ruffians, with accounts of which the daily papers are filled these days. Out-

breaks of all sorts, among all classes of society, in public and in private life, may be traced back to the absence of proper discipline in youth, more especially to the preponderance of the feminine and effeminate elements in our early education.

Many other instructive phases of this question might be discussed, but I shall call attention to only one additional point: A short time ago President Roosevelt in a message to Congress suggested that corporal punishment be instituted for wife-beaters. It strikes me that the whipping-post for husbands comes too late. If any whipping is to be administered, we should begin with the youthful culprit. It seems somewhat illogical to prohibit corporal punishment in the case of children for sentimental reasons, and then to introduce it for adults, for the adult is never reformed thereby, but develops into a human tiger, whereas experience has shown that corporal punishment applied during the plastic age leads to reform, or at least may do so.

4. I now come to a point which is perhaps the sorest of all, namely, the insufficient professional training possessed by American teachers. The educational statistics of the United States, which are prepared with much greater detail than similar figures in European countries, reveal the distressing fact that in the very portion of the country where we find the best provision made for elementary education, *i. e.*, in the northeastern section, scarcely fifty per cent. of the teachers have attended a normal school. In the southern states the percentage is as low as eight. We must admit that this is a weakness that is undermining the foundations of the entire educational system. The German teacher will inquire with astonishment: "How can the schools

be supplied with teachers, when there are not enough normal school graduates?" What innocence! In the United States many people believe in the principle that to whom God gives an office He also gives requisite knowledge and understanding.

To be sure, the educational laws of most of the states provide that no teacher shall be appointed who does not possess a license issued by a local board of examiners. These boards, which frequently do not deserve the name, examine candidates in a few subjects, that is, they see to it, that the candidate himself is familiar with what he teaches, but these boards seldom inquire, whether he knows anything about the history of education, and of related sciences like logic, ethics, psychology, etc. Since the boards are often composed of persons of local prominence merely, for example, of village elders, we may take it for granted, that the members themselves know nothing of education. In a large western city I was asked by an examiner to recite the sixteenth amendment to the United States Constitution. When I said to him: "But, my dear sir, there are only fifteen," he quickly consulted a text-book, and when he discovered that I was right, he begged me not to betray him. Then he gave me a mark of "excellent" in history and escorted me out of the room. I could easily write a book on this subject. My experience has been extensive and instructive, for I served as an examiner for fifteen years. The German teacher, however, should on no account imagine that with his thorough professional training he can easily get along here. There are a sufficient number of women in each school district who will assume charge of a class for the paltry sum of from \$250 to \$375; and "home talent" is always preferred.

The thoroughly trained teaching force of Germany is the most powerful weapon of defense and attack of which the Empire can boast. Among all the public institutions of the Empire I do not know of a single one, which can be compared in importance to the German teaching profession. In this country, on the other hand, the people are by no means convinced of the importance of possessing a thoroughly trained corps of teachers.

5. The low salaries paid to teachers also contribute to the impairment of the quality of instruction. It is no excuse to maintain that women must accept the terms offered by the school boards. The least we can expect of the teacher is to have her do what every servant-girl does in this country,* namely, refuse to work longer for starvation wages. The German teacher is apt to inquire to what the enormous sum of \$350,000,000 annually expended for schools is applied if not to teachers' salaries. The answer is not far to seek: It is used to erect magnificent school buildings, to provide free text-books, to maintain libraries, to pay the high salaries of city school superintendents and principals, as well as those of numerous special teachers—for anything but the salaries of the regular teachers. In wealthy states like Pennsylvania, Illinois, and Wisconsin, but especially in the South, we still find country schools in which the salaries fall below \$250. In large cities the initial salary is \$400, and we must not forget that this is in a country in which the five-cent piece is practically the smallest coin.

A teacher whose salary is inadequate, just like a laborer who is underpaid, furnishes only a minimum amount of his power in return, and I should be the last to blame him for it. A movement appealing to the

conscience of the people, which may succeed in bringing about an improvement in the matter of salaries, was recently organized in Chicago, and it has affected the entire teaching profession of the country. I was once asked at a State Teachers' Convention in New England, when I insisted upon the fact, that the exclusive employment of women teachers severely injured education, what means I had to suggest to bring about a change. I answered, "Nothing is simpler; just increase the salaries of the women." For a moment there was silence, but then the audience began to laugh, having grasped the point. As soon as men discover that they can not support a family on such a small salary, they leave the profession, and their places are taken by women, or rather young ladies—only unmarried women are employed as teachers—who are satisfied with a small remuneration; at any rate, they are offered less than the men receive. But if you increase the women's salaries liberally, the men will come and offer their services. The teaching profession should be made remunerative. Adequate compensation is the secret of all professional progress. If you heap contempt upon the teacher's calling by paying lower wages to its representatives than are paid to domestics, the schools will inevitably sink to the level of pauper schools. The history of education furnishes numerous examples of such a short-sighted policy. It is indeed a pity that attention must still be called to this question.

6. Teachers should also insist upon changing the method of increasing salaries. Age of service should be taken into consideration, and not merely the grade. In Germany it has long been acknowledged that teaching experience should be recognized instead of ignored.

In this country the teacher of a higher grade receives a higher salary; she is not advanced with her class, however, and may reel off the identical circumscribed material for years, instead of rising from the lowest to the highest class and then beginning again at the bottom, at the same salary that she receives in the highest grade. Good teachers are necessary in all grades, and it is therefore entirely fitting that experienced teachers should serve in the lower and middle grades as well as in the upper classes. When the pupils are compelled to change their teacher with every grade and sometimes even more frequently, much loss of time is occasioned, since it takes some time for the teacher to become acquainted with her new pupils. We thus notice that there are but few encouraging features to be encountered in connection with the questions of training and of salary, and matters will remain in this condition, until the nation has come to realize that the school is its most effective fountain of youth, and until we have, like Prussia and France, passed through a period of national humiliation. Thus far fortune has smiled upon us; as a result we have become somewhat overbearing, we look upon ourselves as invincible, without ever having measured our strength with a first-class foe. Pride goeth before a fall,—as was recently demonstrated in the case of Russia.

7. The last defect in our educational system that deserves mention is so destructive, so blighting in its effect, that Germans will marvel at its very existence. I refer to the educational fallacy that children may be intrusted with the selection of their own subjects of study. The reader should not laugh at this; it is actually the case in the secondary schools of our country. The university student may be mature enough to

know what he wants; he may be trusted to select his vocation and choose his professors and studies, consulting his own talents and inclinations. Just imagine what would happen if the elective system were introduced in the *Quarta* of the *Gymnasium* or the *Realschule*. The proposal would be received in Germany with scorn and ridicule. As a matter of fact things are not as bad in this respect as they seem to be, for certain absolutely necessary subjects are prescribed in the course of study in spite of all the freedom in the choice of studies. We should never forget in judging American conditions, that the recognition of the citizen's individual rights has become a shibboleth from which the recognition of the rights of the child as an individual is deduced as a matter of course. President Garfield was fond of saying: "I take off my hat to the small boy in the gutter, for I always bear in mind the possibilities which he represents in his person." That also explains the system of elective studies in school.

In the university, freedom in the selection of studies is perfectly proper, but children of fourteen do not possess the necessary insight into cause and effect, they do not know what is important and what is not, and in making a choice they consequently consult their convenience, their inclinations, and their dislikes. They are apt to inquire: "Which are the easiest studies?" As the rage for play penetrates the entire school system from the bottom up, so the elective freedom of the university trickles down from above. The school itself becomes the shuttlecock of mere whim and caprice. Whenever I think of this phase of the subject, I am reminded of my little daughter, who said on one occasion, when eight years of age: "Papa, when I am grown up, I shall have every meal in my house begin with the dessert."

But I have already taxed the patience of my readers too severely, and must bring these remarks to an end, although much more might be said on the subject. One thing is certain: the statements here made will prove a source of consolation to the German, while we are accustomed to regard them as an excuse. Just a word in conclusion:

An Anglo-American recently remarked: "There must be a secret in the German educational system, especially in industrial, commercial, and technical instruction, which the German government will not surrender by publishing it. For how could the Germans make such astonishing advances in technology, commerce, and industry, in fact, in all fields of human activity, unless they possessed a secret that educational experts transmit from one to the other, and that is not contained in printed school catalogs and reports?"

There is, however, no secret at all at the root of the matter. Indeed, the causes of German successes are so evident that only the blind, or those who do not wish to see, do not understand them. In the first place, the whole German nation is compelled to exercise tremendous diligence on account of its geographical position, its lack of natural resources, and also because of the foes that hem it in on every side, and the intolerable poverty that results from these conditions. This diligence, coupled with the intellectuality and the characteristic aspirations of the German, has again and again driven the nation to regeneration, while other nations were enriching themselves through the inexhaustible resources of nature, and were taking life easy. The Germans had to work in order to save themselves from starvation: they had to think, and think deeply, they had to struggle with adversity, and at

the same time defend their lives and homes. Necessity teaches us to pray; it is the mother of invention; it also leads to work and progress. A people, on the other hand, which has simply to open its mouth to have bread fruit fall into it, which is threatened by no foes from without, which makes the entire world tributary by reason of the products of its soil and other raw products, is very apt to adopt for its motto, *dolce far niente*.

A second open secret lies in the circumstance that the Germans always provide the requisite preliminary courses at every stage of their educational system. The secondary school, no matter what its nature may be, rests upon a concentrated, thorough system of elementary instruction. And similarly the university and the technological school rest on a thorough preparation—from eight to ten years in length—secured in the secondary schools, which may have a classical or a technological trend. The same is true of all the various technical schools. This progressive preparation from the first stages, this careful, official, paternal foresight, which looks into the future with an ever watchful eye, prepares for commercial success of the nation, just as the Prussian general-staff prepared for the war with France. And that is something the American does not understand. We secure our intellectual work from without. Our secondary schools scarcely provide the instruction of a German advanced elementary school, and consequently do not prepare the university student sufficiently for a comprehensive professional training. May common sense mend matters!

II.

COURSE OF STUDY IN GERMAN ELEMENTARY SCHOOLS.

THE fact that in this country the courses of study for common schools generally embrace three stages—four years' primary school work, four years' grammar school work and four years' high school work—makes it imperative to explain first that the schools of the States of the German Empire do not form a single system such as ours, but rather a series of systems, a system of blind alleys. The one of these separate systems which comes nearest to our common school system is the public elementary (or people's) school system, which accommodates a little over 90 per cent. of all school children of the States of Germany. The compulsory-attendance law, in force for nearly two hundred years, affects every child between 6 and 14 years of age, but it does not prescribe the kind of school the child is to attend. Hence many children of that age attend private elementary schools, advanced city (or burgher) schools, middle schools, girls' superior schools, and a variety of secondary schools for boys. Many of such schools begin their course with the child's tenth year of age; some reach further down, to the sixth year of age, having special preparatory classes. But the fact that a little over 90 per cent. of all school-going children attend the people's schools, makes these institutions the most important factors in the educational activity of the state.

In the smaller States of the Empire and in the large cities the object of the authorities is to gradually change this system of people's schools, so that it may serve as the common foundation for all secondary education. This plan is carried out consistently in the southern German States. The tendency is sufficiently strong for that purpose in many places in Germany. As yet, however, Germany has no common school as we understand the term. This fact should never be forgotten by the reader in comparing the course of study quoted later on with those found in American schools. Hence, in studying some leading German courses it is in each case necessary to know for what condition of life or stratum of society the schools are intended that follow the specific course prescribed.

However, a few general principles and historic facts may be stated which have guided the authorities of all the various school systems in Germany, particularly of the elementary schools:

1. The matter of instruction for any kind of school depends wholly upon the aim of the school, and must be not only in intimate relation with it, but its various branches must be in some sort of correlation to each other to make the education which is its result, complete.

2. German school education, since Luther, has always considered that *religion*, and in connection with it *reading* (including grammar and literature) and *writing* (including orthography and composition) in the mother tongue are the foremost branches in all schools of the Empire, regardless of the character of the institution in which they are taught. The only difference is in the character and amount of what is taught in these branches in elementary and advanced schools.

3. A nation like the German, which has inherited an alien civilization and literature, and which is surrounded by numerous peoples speaking other tongues. lays much stress upon instruction in foreign languages simultaneously with that in the mother tongue; and in the schools of alien populations (such as are found near the Polish, Danish, and French boundaries) instruction in the *foreign language* even at times precedes that of German, because it is the mother tongue. But for more than a thousand years a knowledge of foreign tongues on the part of persons of German descent has been considered evidence of a secondary education, i. e., an education beyond the elementary stage. Hence classical and modern languages are taught in secondary schools, and often in advanced, city schools, which minister to local needs or the demands of a cultured society.

4. Side by side with these matters stands the group of *mathematical studies*, which up to the first century of the modern epoch was a pre-requisite to the study of philosophy. This group has always been represented by arithmetic and geometry (or mensuration) in elementary schools. Where the higher mathematical studies are taught, the school belongs to the secondary category.

5. With religion and bible stories, *history* entered the schools as a regular study and claimed a generous share of time. This elementary history is not confined to that of the fatherland, but makes side excursions into neighboring countries' history. The children get a wider historic view, for instruction in history of the native country only engenders that detestable self-sufficiency and self-satisfaction, which does not promote, but retard progress. The ability to see

what relations his country's history has to others, and to compare the achievements of his own country with those of other countries, has a wonderfully elevating effect upon the individual and the nation. The German child learns to "see himself as others see him;" the American child only as he sees himself.

6. Realistic knowledge, not offered in the lower schools of former ages, has found an abiding place in the course of study of every elementary school in the forms of *geography*, *natural history*, and *natural science*, since the great epoch of discoveries, and in consequence of it, and especially since the time of Pestalozzi. All three branches, however, are taught in elementary schools in their elements only and without text books, except that for geography an atlas is used. The term under which the sciences are introduced is nature study (knowledge of nature—"Naturkunde.") The lessons are based on objects, and the teacher furnishes orally all new matter, as well as the terminology, if it is not discoverable by the pupil himself through the senses or by inference.

7. Of the so-called technical branches, *penmanship* is developed in connection with language studies. Special copy books are not often found in use, since the principle is followed that calligraphy is best developed by good example on the part of the teacher and by habit, i. e., not allowing bad writing at any time. *Singing* has always been in the service of religion. *Drawing* has for a long time been geometrical. Its development into an artistic study does not date further back than the second half of the nineteenth century. It is never an art study, but it serves also literature, history, patriotism and ethics by the use of free-hand sketching. *Gymnastics* is a branch which owes

its existence to the philanthropinists (the teachers of educational institutions in Germany who followed Rousseau's principles), but more especially to the noted national upheaval during the Napoleonic era. *Female handiwork* is a branch which the school took over from the home in the earliest times after the Reformation. Recently other forms of *domestic science* for girls claim admission to the elementary school, while *manual training* for boys, wherever it is adopted into the course, is always an optional branch.

Thus it seems that the course is one historically developed; not prescribed by the whim of this or that authority. Nature study, for instance, never assumes a predominating influence over the linguistic and the mathematical groups of branches, but merely aids them. Since the child must have something to talk about in order to develop linguistic talent and rational thinking, observation of natural objects forms an important part of the child's work. Its senses are sharpened, its stock of ideas augmented, and its thinking power so increased that it instinctively seeks expression of its thoughts. The division of nature study into a number of separate studies (geology, geography, meteorology, botany, zoology, physics, physiology, and chemistry), as is done in some places in this country, can not be found in the course of study of any German elementary school. In the nature of the case, and owing to the capacity of its pupils, nothing but the elements can and should be taught in elementary schools; these schools are so-called because they offer only the elements of learning.

The course of the German elementary school having been historically developed, it is reasonable to think that it will in course of time adapt itself to changed

conditions of intellectual life—i. e., embrace some new branch or group of branches, or drop some. The one aim is at all times steadily kept in view—that the inner connection of all matters of instruction must be preserved, for he to whom these matters are offered is a human being, a mental unit, not a series of compartments to be filled with labeled fragments of knowledge.

The course in the following pages is not offered with the view of showing something better than is found in this country, but simply and solely for the purpose of stating facts. Whether it suits our civilization; whether it fits our schools; whether it is adapted for our copying, is not the question here. It gives us, however, the key to German elementary education. With this fact in view one will understand the course, and judge American courses of study the better.

III.

GENERAL REGULATIONS FOR PRUSSIAN ELEMENTARY SCHOOLS.

THE elementary schools of Prussia follow the regulations laid down by Doctör Falk, Minister of Education (October, 1872).

Aim and Purposes of Instruction in People's Schools.—The object of the Prussian people's school has always been to educate the growing generation to become good, patriotic men and women, who are able, by means of the general education and training they receive, to fill an honorable position in civil society. In whatever way the relation of church to the State has been conceived, and whatever theological tendency was paramount at any period, the religiously moral education of youth has at all times been considered the foremost purpose of the school; and never have the administrative authorities of the State wavered in aiming at the high ideal—"to sow the seeds of patriotic, religiously moral sentiment in children, so that they will become citizens whose inner worth can secure the welfare and preservation of the State." But side by side with this exalted ideal, the requirements of practical life have not been left out of sight. In school, children are to learn how to perform duties, they are to be habituated to work, gain pleasure in work, and thus become efficient for future industrial pursuits. This has been the aim from the earliest times of popular education in Prussia; and to this day it is plainly understood by all State and local administrative officers, as well as by all teachers and the majority of the

parents, that the school has more to do than merely teach the vehicles of culture—reading, writing, and arithmetic—namely, the preparation of citizens who can, and cheerfully will, serve their God and their native country as well as themselves. These are the leading ideas followed by the subjoined course.

(1) *Subjects of study in people's school.*—The subjects to be taught are: Religion, German language (speaking, reading, and writing), arithmetic and the elements of geometry, drawing, history, geography, nature study, gymnastics for the boys, female handiwork for the girls.

The hours of instruction in ungraded schools for the separate subjects are as follows:

	Lower Section	Middle Section	Upper Section
	HOURS	HOURS	HOURS
Religion	4	5	5
German Language*.....	11	10	8
Arithmetic; geometry	4	4	5
Drawing,		1	2
Realistic studies†.....		6	6
Singing.....	1	2	2
Gymnastics; female handiwork..		2	2
Total hours per week.....	20	30	30

*German language includes reading, writing, orthography, grammar, composition and literature.

†Realistic studies include geography, history, elements of natural history, and natural science.

In graded schools the distribution is as follows:

	Lower Section	Middle Section	Upper Section
	HOURS	HOURS	HOURS
Religion	4	4	4
German language.....	11	8	8
Arithmetic.....	4	4	4
Geometry.....			2
Drawing		2	2
Realistic studies.....		6	6 (8)
Singin	1	2	2
Gymnastics; female handiwork...	2	2	2
Total hours per week.....	22	28	30 (32)

In half-day schools and in schools of two teachers with three grades changes in the foregoing time-table may be made in accordance with local circumstances.

(NOTE.—Paragraphs 2, 3, 4, 5, 6, 7, 8 and 9 refer to matter and method of religious instruction. The subject is subdivided into sacred history, Bible reading, church calendar, catechism, hymns, and prayers. I omit the course in religion as not germane to the American school. Then follow the rules governing the other branches of study.)

10. *German language*.—Instruction in German includes all exercises in speaking, reading, and writing. The latter includes penmanship, orthography, grammar, composition, and literature. These subjects must in all grades remain in organic connection (i. e., be correlated) and as far as is possible progress in uniform steps.

11. *Practice in oral expression*.—Practice in oral expression requires no separate instruction. It prepares the way for instruction in writing and reading and accompanies it in its further development. The simplest and best-known objects form the material in the lower division, the pictures in the middle, and the pieces in the reading book in the upper division.

Its formal aim is, in gradual progression, to enable the pupil to pronounce correctly and clearly each single word and to give free expression to his thoughts in simple sentences, the power of sure and correct expression in connected sentences, avoiding the most common mistakes in forms of words and formation of sentences and, lastly, the ability to reproduce freely and correctly imparted knowledge and to arrange and clearly state his own thoughts.

12. *Instruction in writing and reading*.—Instruction in writing and reading is to be according to the method in use in the normal college of the district. The spelling method of learning the letters and to read is for-

bidden (that is to say, the phonetic method is prescribed).

The aim is, in the lower division, to enable the children to read correctly connected reading pieces, and not only to copy but also to write for themselves short sentences; in the middle division, to read whole reading pieces, in prose and verse, in Latin and German characters, without stumbling and intelligently; to write correctly a simple dictation, and to reproduce unaided a reading piece of simple form and content. In the upper division the pupils are to be led to read at sight easily and with expression more difficult reading pieces, of which the content is not too remote from the circle of their ideas, to write dictations of this kind without a mistake, and to reproduce correctly longer reading pieces.

Special hours are to be assigned for penmanship in the middle and upper divisions of a school with one or two teachers and in the middle classes of larger schools; in the upper classes of such schools it can take the form of home work. The aim of the instruction is the acquirement of a neat, clear, graceful handwriting in all work, even in that quickly written. The results of a good instruction should be plainly visible in the pupil's note-books. To be recommended as context of the copies are popular proverbs and good and appropriate samples of business letters and forms.

13. *Instruction in German grammar.*—In the upper classes of schools with several classes special hours are assigned to instruction and practice in German grammar; in the schools with one or two teachers it is combined with the rest of the language instruction. The aim of the instruction for the middle grades is a knowledge of the simple sentence and the simplest rules of

etymology; for the upper division, the compound sentence and more thorough instruction in accidence and formation of words.

14. *The reading book.*—The groundwork of all instruction in German is the reading book. Where possible, the whole book is to be worked through. The reading book is not only to further the attainment of skill in reading, but also to lead to the understanding of the contents of the pieces. The pieces are so to be selected that about thirty are treated in a year.

Suitable poetical pieces (in small schools particularly the texts of songs) are to be committed to memory in all three divisions, after they have been commented on. In the upper classes of larger schools the reading book is to be used to give the children examples of the chief works of patriotic (popular) poetry, and some information about the national poets, but only those since the Reformation.

The selection of the reading book to be introduced is to be made from those which have a popular character, and which by the whole of their contents promote the educative purpose of the school. And among these those deserve the preference which are correct in form, and in the historical and scientific selections are not the original productions of the editors, but specimens from the best popular works of great writers in those branches, and which are free from all political and religious bias. For schools attended by children of different denominations, as far as possible, only those reading books are to be chosen which have really no denominational character. In books already in use the pieces denominational in character are to be assigned to the religious lessons.

15. *Language instruction in schools attended by*

children of different nationalities.—With regard to the schools in which the children, or some of them, speak another language than German, the special regulations issued in the past or to be issued in the future are to be put in force.

16. *Instruction in arithmetic.*—In the lower divisions operations with concrete and abstract numbers between 1 and 100 are to be learned and practiced; in the middle division, the same operations with unlimited numbers, also problems in averages, reduction, and simple rule of three; the arithmetic for the upper division includes fractions (for which suitable preparation must be made in the other divisions), their application to calculations of every day life, and a thorough treatment of decimal fractions. In the larger schools this amount is extended in these every day calculations to problems of a more difficult kind, in decimals to the extraction of square root.

In the lower division, in schools with only one or two teachers as far as possible, in other schools regularly, all calculations are to be done mentally. At the beginning of a new rule in all divisions mental calculations must precede those on the board. In practical applications the relation to every day life is always to be kept in view; consequently examples with large and many-figured numbers are to be avoided, and the problems made to correspond to the actual condition of things. By means of these problems the pupils are to be made acquainted with the existing system of weights, measures, and coinage.

Arithmetic is to be regarded in all divisions as practice in clear thinking and correct speaking. Still, the ultimate aim is to enable the pupils to solve unaided, surely, and quickly, the problems set them. In all

schools the instruction is to be based on a collection of examples for the pupil, to which the teacher has the key.

17. *Instruction in geometry.*—The set portion of geometry includes the line (straight, equal, unequal, parallel), the angle and its kinds, the triangle, quadrilateral, regular figures, the circle and its aiding lines, and regular solids. In larger schools lines and angles are more fully treated, and, in addition, the equality and similarity of figures in elementary treatment.

Instruction in geometry is to be connected with both arithmetic and drawing. While in the latter the pupils learn to correctly observe and represent the forms of lines, surfaces, and solids, in the former they learn to operate certainly and intelligently with their measurements, to calculate the length of lines, the extent of surfaces, and the volume of solids.

18. *Drawing.*—In instruction in drawing all children are to be occupied simultaneously and similarly, and by constant practice of hand and eye are to be so trained that they are able, with the help of ruler, scale, and compasses, to copy pattern figures on a given reduced or magnified scale, and to represent geometrical views of objects of simple shape on a given scale—e. g., the furniture of the room, garden surfaces, houses, churches, and other solids which present straight edges and large surfaces.

Where this end is attained, specially gifted children may be set to draw from copies. A special regulation is issued as to drawing in larger schools.

19. *Instruction in Realien.**—In the instruction in

*By Realien are meant the branches which convey knowledge of real things—actual knowledge, not merely the forms of knowledge, like language, or mathematics; hence natural history and science, geography and history.

Realien the reading book is to be used to give life, completeness, and repetition to the material which the teacher, after careful preparation, presents orally and through direct observation. In larger schools special text-books may be used as well. No use is to be made of dictations; forbidden, too, is the purely mechanical committal to memory of dates, lists of kings and queens, names of countries and towns, numbers of inhabitants, names and characteristics of plants, numbers of size and relations in natural science. In geography and nature study the instruction begins with observations, which in geography is attained by means of the globe and map; in the descriptive sciences, by samples of the objects to be discussed or by good illustrations; in natural science (physics), at least in the larger schools, by experiment. Throughout, even in larger schools, the material is to be gradually extended, proceeding from the easier to the more difficult, from the nearer to the remote.

20. *History*.—From the earlier German history, and from the earlier history of Brandenburg, certain biographies are to be selected; from the time of the Thirty Years' war and the Great Elector the chain of such biographies is to be continued unbroken. So far as the children are able to grasp it, the chief features of the progress in civilization are also to be dealt with. The fullness and the number of the biographies is determined by the character of the school and the amount of time devoted to this branch of instruction.

21. *Geography*.—Geographical instruction is to begin with the surroundings of the home and school; it then deals with Germany, and with the outlines of general geography; shape and motion of the earth, causes of day and night and of the seasons, the zones, the five

oceans, the five continents, the chief states and cities of the world, the greatest mountains and rivers. The quantity of the matter will be determined by the character of the school; but in working out a detailed course of study it is better to limit the extent than to sacrifice the clearness of the instruction and to allow it to degenerate into a mere list of names.

22. *Object lessons in natural history, botany, etc.*—This branch of the instruction includes, besides a description of the structure and life of the human body, that of the native rocks, plants, and animals, and of some foreign ones, the chief beasts of prey, animals and plants of the East, those cultivated plants of which the products are in daily use in our country (cotton plant, tea plant, coffee tree, sugar cane). Of native objects, those are to be made particularly prominent which arouse special interest (1) through the services which they render to men (e. g., domestic animals, birds, silkworm, corn, fibre plants, fruit trees, salt, coal); (2) through the harm which they do to men (poisonous plants); (3) through the peculiarity of their life or way of living (e. g., butterflies, trichinæ, tapeworm, bee, ant). In larger schools such objects may not only be increased in number, but also systematically arranged and more exhaustively treated as to their use in industry. Everywhere the aim of the instruction should be to accustom children to an attentive observation and to bring them up to a thoughtful consideration of nature.

23. *Natural science.*—In this instruction in a school with only one or two teachers the children are to be led to an approximate understanding of those phenomena which daily surround them. In larger schools this instruction is to be extended to include the most

important principles of the equilibrium and movement of bodies, of sound, light, heat, magnetism, and electricity, so that the children are able to explain the common natural phenomena and the most frequently used machinery.

24. *Singing*.—Hymns are to be practiced alternately with popular songs. The aim should be to secure to each child the ability to sing not only in chorus, but also alone correctly and with confidence, so that when he leaves the school he takes with him into life a sufficient number of hymns and folk songs (the words of the latter to be perfectly known by heart) as a lasting possession.

25. *Gymnastics*.—This instruction is given in the middle and upper divisions two hours a week, according to the regulation of October 8, 1868. It is desirable that a preliminary course should be instituted in the lower division.

26. *Needlework*.—Needlework should be practiced, where possible, from the middle division upward two hours a week.

It is likely that American teachers, especially in cities where the matter of instruction is minutely prescribed and divided into annual and term courses, will think that the foregoing course is not sufficiently precise, stating really only the ultimate aim in view. Yet there is deep wisdom in thus leaving the teacher "to work out his own salvation;" that is, arrange the prescribed matter in such a way as to adapt it to local circumstances, to the comprehension of his pupils, and to his own, the teacher's, convenience. All teachers being normal school or university graduates in Germany, they may be relied upon to have studied the course during a period of preparation lasting from

three to six years, and hence may be safely granted sufficient latitude. What is here said of the teachers in Germany is to a large degree applicable to those of Switzerland and Austria proper.

IV.

THE SPIRIT OF OUR TIME AND ITS INFLUENCE UPON EDUCATION.*

*From "Moderne Erziehung" by J. Tews, Berlin.
(Translation.)*

THE problem of education occupies today more bright and mediocre minds than ever before, yet despite innumerable discussions, the views in no province of human life are so lacking in clearness, and are so varying, as in that of education. Education is commonly considered an occupation, a kind of "labor," and hence a system of arbitrary measures for which every one is suited who has acquired the requisite knowledge in schools for that purpose, and who has perfected himself, or herself, through pedagogical practice. Education, however, is something quite different. Goethe said: "Educated children might be born, if the parents had been educated;" and the proverb has it, "As the old birds sing, so will the young ones twitter." In these two expressions the true essence of education is stated more clearly than in many a learned dissertation.

Education in the widest sense of the term is nothing else than the transmission of the qualities of the older to the growing generation. Education takes place for the most part without our knowledge, even without our will. Youth is educated less by means of conscious, arbitrary, well-calculated measures, than by

*This article is inserted here to show that modern conditions of life demand a change in the course of study in German schools.

what the educators are, feel, think, say and do. As the budding tree takes in the sunbeams, as the parched soil of the field absorbs the rain-drops, so the child absorbs everything radiating from men and things surrounding him. Upon his way through life, there enter into his mind great things and small, good and bad, acting as motives propelling him forward or holding him back, and all are transformed according to the individuality of his being. If a boy crossing a street sees a watchman stop a runaway horse, this one act may become an inexhaustible source of courage and resolution in the boy. Thus many good things, but also bad ones, sink into the young soul merely by intercourse with others through their example. Where actual examples are wanting, where intercourse is circumscribed and meager, thoughts and actions contained in books may replace them. Thus the heroes of long-passed ages may awaken in the boy of to-day courage and willingness to sacrifice, and the lives of great men may kindle inclinations and powers latent in the child. Likewise the worst may take possession of the child in the same manner. It depends upon the child's individuality, whether his actual environment be the stronger, or the world he has built up in his imagination according to impressions gained from books. In both cases, however, it is the same procedure: The influence of examples and of intercourse with other people, be they real or fancy creatures, involuntarily draws the child forward. Compared with these influences, formal educational measures do not count for much. A child who is blamed for want of promptness, cleanliness or diligence, will permit these corrections to influence him only in so far, as the living example of the reproofing or punishing person

is congruent with his educational measures. Otherwise the latter remain without effect, or may have an effect contrary to their intention.

Now what is it that distinguishes the present time with reference to education from former epochs of civilization? Wherein consists its characteristic features, and in what respect is it more favorable or unfavorable to youth than former periods?

May I be permitted to begin with exterior, that is, economic conditions of life. These form the basis of the intellectual and ethical life. The most noted characteristic of business life consists in the fact, that machine-labor, the factory, has replaced the shop; mass production has replaced that of small workshops; the tradesman who worked with his hands, and knew all the bearings of his trade, had to give way to the factory-hands who know only a few grips at a machine. This has separated the work-room from the living-room. Labor has been removed from the horizon of the vision of growing youth. It hides itself behind high walls; it is a world itself, into which the child rarely, if ever, can peep. Mayhap, he sees the raw materials, and perchance the finished products of labor. Man at work he no longer sees, and hence one of the strongest educational factors is excluded. But are we not all, laborers with head or hand, greatest when at work? Do we not while at work exercise the greatest educational influence upon others? Hence the most lamentable educational loss of our time is the removal of labor from the child's horizon of vision. A child seeing adults at work is always in a good school, even though he do not learn to read or write. With his weak hands he begins to imitate the one he sees creating, regardless whether he be a helper in the process of labor or in

the world of play. A child who looks into the work-place of an adult, and there finds material for his own impulse to work, can not remain idle, and through imitation and co-operation his strength increases. Through imitative play he becomes a creative, efficient workman.

Viewed from this point our time is a period pedagogically poverty-stricken, and whatever palliative measures may be devised in school and shop as substitutes for the full, many-shaped, flowing life, which always offers the child something enticing in the line of productive energy, the substitutes will remain inadequate. A child who does not see his father at work, does not know the life-value of his dearest guardian and natural educator. Hours of rest at home, festive days, or the life on the street may develop other sides of human life, but never the qualities and powers upon which human culture depends. Hence it comes about, that the youth of our days acquires the softer portions of our civilization, but not its supporting bony structure.

To this contribute also the city conditions so hostile to youth. First of all, the freedom of motion is lacking which is so eminently necessary for the child's growth; muscles and the five senses are deprived of opportunities for development. The child is forced to live a one-sided life of imagination; his thoughts become colorless; physical strength lessens; the will lacks opportunities for action. In a metropolis a race of easily governable individuals grows up, incapable of great resolutions, lacking the capacity for self-sacrifice as much as the determination to sacrifice life and property for a great idea. The inhabitants of large cities are good herding animals. I admit that therein

lie enclosed great virtues, and a great healthy nation may perhaps tolerate a large percentage of such individuals, but when the cities grow in area and population to such an extent, as they do at present in Germany, one is prompted to ask, whether a sound balance is maintained between active and passive, commanding and subordinate individuals.

To the superficial observer, however, our time appears to contradict this: it is to him an era of educational triumphs. In home and school apparently better facilities are offered for the education of the growing generation, than a generation ago. Our German nation has become wealthy since 1870. Even from laborers' cottages want has disappeared. The poor child is sufficiently fed, nay not infrequently overfed and well dressed. The former unsatisfactory housing has been remarkably improved everywhere in the Empire. Through protective labor-laws and increased industrial development the labor-day has been shortened. Even the laborer has time now to concern himself about his children's education, and he does it, too. Attendance at school is regular; schoolrooms are more airy and brighter than formerly; appliances for learning and teaching are provided more lavishly; and the teachers are all adequately prepared for their profession. School education is now generally appreciated in strata of the population, in which, a few generations ago, knowledge was considered a mere luxury.

Looking at all these things, one is apt to come to the conclusion that there is no reason for complaint; one even notices fresh, active life and aspiration in the schools. But this is only on the surface, modern school equipments and institutions are mere outer forms within which organized education is taking place.

Whatever is offered in these forms, or has found room in them, is much less satisfactory than the forms. It is true, we teach more, perhaps also better than in former times; we have better teachers, more technical methods and better appliances for teaching, but in the matter of real education these count for little. Our conception of education and instruction destroys to a large extent our own success.

Our century has been called the century of the child. But adults cannot create a paradise for the child. They do much, if with all their pedagogy and care they do not destroy it. The child does not want as much as we give him. He is unassuming; he likes to be himself. In this regard there never was a time harder for the child than the present. The care for children has increased immensely; to nourishment, clothing and other things we attend plentifully. All productive labor is taken away from the child, and in place of it he is burdened with a much more difficult and oppressing labor, which he cannot as yet understand. According to the views of our age the child is to have only one duty: To prepare himself for life. But this duty is to the child unnatural and impossible. The parents of to-day think only of the future of their child, of his provision or maintenance, of offices to prepare for, and of the positions which he is to fill in the future, not of his present time. During the most entrancing time of his existence he is not allowed to live his own life.

From this standpoint the entire school education is now generally viewed. The parents do not consider that the child must in free movement use his powers and follow his inclinations, so that he may live like a human being in whom inborn talents can freely

develop, but they have in view a certain 'social position to which education is to lead. That is the reason why our entire education has become materialistic, narrow-minded, bureaucratic. Every step aside from the prescribed scholastic pathway, every day of non-attendance at school, is considered an irreparable loss.

Our schools are not elementary schools, not children's schools any longer, they have become vocational schools from the first school day on. The future calling or profession and little else holds the sceptre. And that is the reason why we patiently disregard everything we do not like about the schools. If a school had no other duty, save to nurse the child, to nourish and exercise his intellectual and emotional powers, and if it were permitted to disregard the consideration of the kind, direction and height of the child's development, so long as it were purely individual, the parents would at once discover any improper treatment of their offspring.

It cannot be said, that the teachers should be held responsible for what is being done in our schools. A teacher who would not be willing to follow the expressed will of the parents: To give preparation for life as they see it, that is, to prepare industrial machines, candidates for offices, etc., though such a teacher be equipped with the talents and animated with the love of a Pestalozzi, he would be considered a useless and incapable educator. The power of coercion of the present conditions of life is so great, that the most independent and self-willed personalities in school are crushed, and forced to educate and teach, as the spirit of the age (this materialistic industrial spirit) demands.

Looking at modern life with critical eye, we cannot

doubt, that strong pillars which supported the education of the young have broken down, that the young generation grows up breathing an atmosphere different from that which surrounded the retiring generation. Being aware of that, we ask: Will this new generation be our heirs and continue our work? Will our cultured race be able to maintain itself against those races which were enabled to develop in a less artificial manner and more in harmony with nature's own unhurried growth? Every cultural development which causes a weakening of natural strength, indicates a heavy loss which is offset by no gain whatever. Everything which oppresses man's individuality, which decreases the ability of his organs to perform work, which diminishes his energy, his resolution, his vital courage, and which shortens his life, is an injurious influence, even though it may appear to the superficial eye as a step forward in civilization.

V.

TEXT BOOKS IN GERMAN ELEMENTARY SCHOOLS.

IN reply to numerous requests asking for lists of German text books it is desirable to state publicly why it is impossible to comply with such a request. In the first place, the Germans do not use text books as such, books containing the text of that which the pupils have to learn by heart. Their school books are not text books, but manuals, exercise books, guides, example books, or whatever they may be called. It is the teacher who furnishes the body of the matter to be learned in the German schools. The difference between the Germans and us lies in their radically different mode of teaching. A German child can carry daily to and from school all the school books it uses without being weighed down by a heavy load. An arithmetic contains only examples, a book of natural history consists of scarcely more than 120 pages, and so we might go through the list and specify. Suffice it to say: the Germans have neither text books nor recitations (*vide* Webster: "Recitations are oral repetitions of something committed to memory.") The German child is not made to recite grammatical or arithmetical rules, or any other kind of knowledge, except Bible extracts and poetry; it discovers rules under the skilful guidance of the teacher, and applies them. Having done that, it does not need to charge its memory with them; the knowledge has become part of its inner self, it is experience; experience does not need to be memorized.

Of course, this kind of instruction necessitates professional teachers who are in the hopeless minority with us as yet. Most of our teachers, especially in rural communities, are young men and women of simple common or, at best, high school education. Having few professional teachers (in the South about 8% of the teachers have some normal training, in New England about 50%), we need a substitute in good text books. And there is no manner of doubt, that we have them; they are perfect mines of information, splendidly printed and illustrated, brilliantly edited, strongly bound, and all that. Our text books offer the children a chance to be their own teachers.

The various State governments (26 in number) of the German Empire do not prescribe or select text or school books, though they not unfrequently recommend some. A German government lays down the principles according to which school instruction is to be given; its subordinate organs, provincial, county and township supervisors (called councilors) see to it that the principles prescribed are lived up to, but they do not interfere with local authorities in determining what books are to be used. The local boards select the books, usually upon recommendation of teachers, principals and inspector of the locality. If there be no objection, that is, if the books be in harmony with the principles laid down by higher authority, the selection of the books is not interfered with. If at any time a book, chart or other appliance should be chosen which contains objectional matter, or is faulty, or otherwise unsuitable, it may be rejected by the councilor of the county or province. Rarely, if ever, does the question of approval or rejection of a school book come before the central government of

the State, unless the State be so small that it is equal to a city or a small county, and there are about a dozen of that size in Germany.

The provincial school council examines school books submitted to it by publishers or authors, and if they be found in harmony with the principles of the government, the council approves them. The publishers sometimes find it profitable to publish this approval on the title page. The consequence of this liberty in the choice of school books is a bewildering number of such books in the market. Many teachers of literary ability attempt to crystallize their experience in a school book, but few find it remunerable, because the competition is too great, but that does not seem to lessen the number. Hinrich's semi-annual catalogue contains something like 40,000 new publications, about one-eighth of which are school books, or books of methods, or pamphlets and extensive works on educational questions.

Now the reasons for this liberty of local authorities in the choice of school books, and hence for the absence of uniformity in books, are numerous and are set forth in official works as follows:

- (1) Freedom from State interference and absence of uniformity secures a greater possibility for variety of methods of instruction and liberty of action in school.

- (2) It animates competition between the schools of the same as well as different parts of the country, and thereby secures good results.

- (3) It opens up to teachers and authors a possibility to crystallize in print the experience of long years of service in school, and to offer the fruit of that experience to future generations.

(4) It gives teachers and authors opportunities to contribute the proceeds from royalties to the teachers' pension funds. (Many such funds were maintained in this way, until the State undertook the payment of all civil pensions.)

(5) It necessitates the existence of a corps of professional teachers in the schools.

German teachers are always graduates of three, four, or six years' normal courses, or graduates of universities. We Americans do not for obvious reasons seem ready to grant our teachers that range of liberty which the German teachers enjoy. We hedge them in with rules and regulations, chop the matter of instruction into bits, prescribe the methods to be followed, and by means of a host of supervisory officers, regular and special, watch over it, that all teachers of a grade in an entire city school system do the same thing, give the same lessons, hear the same recitations at a given hour, day, week, or term. And that is what we are forced to do in absence of professional teachers. We need the good text books we have, for without them aspiring pupils could not pull themselves out of the mire "by their own queues."

The variety of school books on the German market is wonderful; there are guides, hand books, exercise and example books, atlases, song books, and drawing books, but there is not a German spelling book in existence, simply because there is no need for it, where the people have the wisdom to pronounce what they write, and to write what they pronounce. Very few German school books are generally adopted throughout the State, because that would violate the principle of individual liberty and local government. Some, by virtue of their intrinsic merit, have found adoption in

an entire province. Most of them, however, are not known or used beyond the confines of the county. The fact that the Germans are not so much given to nomadic change of habitation as we are, makes uniformity in school books less desirable than with us. The Germans may leave the country and settle across the sea, but there is little change of habitation within the fatherland, except a slow but irresistible migration from the farms to the cities.

But the absence of uniformity in school books (the reader will please notice that the term text book is avoided) is not the only praiseworthy feature of the question; there is another: It is the fact that whatever books or appliances the child uses are his own. If his parents are able to buy them, well and good; if not, the authorities provide them and present them to the indigent child "to have and to hold forever." Notice the effect:—The child accumulates a small school book library at home, an atlas, a grammar, a history, a book of natural history, containing also elementary physics and physiology, an arithmetic—in other words, it has something to refer to. Parents reading some news from foreign countries in their daily or weekly paper, can and do look up the places in the school atlas. If a question come up as to what is correct or incorrect in the use of the language, the child's grammar is at hand to consult. If a historic date or fact be in dispute, the child's history will decide the matter. Compare this with the conditions in homes where the child's text books rarely appear, and where they are to be given up at the end of the term, being the property of the school. The American home of the artizan, the day laborer, etc., is as a rule bookless, save for a stray magazine with very scrappy

and ephemeral information, or for a book of fiction borrowed from the town library.

The way German children are taught makes them thoughtful students, while the text book method makes our children surfeited with book lore, and when they leave school, they drop their books like hot irons. Hereafter they derive their intellectual food from yellow journals, and the result has made the American people frightfully gullible. Our libraries are not used as frequently as the German libraries either, save in the fiction department. Recently the *Dial* (Chicago), a periodical devoted to literary criticism, made a comparison between the American public library and the Krupp library in Essen, Germany. The comparison was anything but flattering to us. It is no venture to say, that the text book method of teaching in our country has weakened generations of Americans instead of producing intellectual vigor. However, it is worth hearing the other side on this question:—

Mr. H. R. Rathbone, member of the Mosley Commission, says in his report: “Of the teaching methods in American schools it is, I believe, very easy to come to an unfavorable conclusion somewhat unjustly. In order to judge them fairly one must, I think, first realize the objects American educators have in view and the difficulties with which they have to contend. The essential feature of the system is the mastering of the contents of certain well selected text books, which, as a rule, are very well written, and before being used are submitted to a severe criticism from a host of critics, who are very often able teachers. No doubt, this system was first adopted, because it was the easiest and most suitable for use by the partially educated and almost untrained teachers, but in the

hands of well-educated and skilful teachers I am not yet satisfied it does not afford opportunities for excellent work. With a few teachers it is simply a system of memorizing the contents of the text book, but with the majority this is not the case. Questions are carefully considered beforehand by the teacher, and are designed so as to probe the knowledge and stimulate the thought of the children. Children, when well taught by this method, seem to catch something of the spirit of research, and feel that through books one of the avenues of knowledge has been opened to their unaided efforts. Librarians in charge of the children's departments in many of the public libraries I visited assured me, that children of all ages frequently came to them for advice as to books which would give them additional insight into some subject they were studying."

VI.

DRILLS AND FRILLS IN AMERICAN SCHOOLS.

A RETROSPECTIVE view over more than 45 years of educational work in Europe and this country leads me to the conviction, that the poet's wise word: "Nothing is as constant as change," is applicable to education. School education has changed imperceptibly, not by leaps and bounds, but gradually. The times in which the old schoolmaster and mistress wielded the cane and the birch rod, are gone, never to return. During those times, it was drills all day long. Drills in the morning, drills at noon and drills in the afternoon. Whatever was learned was drilled into the pupils. When you inquire into the results of that period, you cannot but be amazed, for they were great. The students of one, two or three generations ago, if they got any schooling at all, spoke well, spelled even better, and figured remarkably well; they were well up in geography and history, and knew Nature from actual contact with her.

To the drills, our generation has added frills. The elements of beauty, of culture, of refinement, of finish, of mere varnish at times, have entered the schools, and the fundamental branches have suffered in time and space. The bones and sinews of education are now looked upon with less favor than in times gone by. This is very natural, if we consider the composition of the teaching body of the land. The great majority of teachers are women, and since to a woman the appearance of things is valued as highly as the inner work, it stands to reason, that the course of the education of

the nation is changed to express the woman's preference. I do not mean to say that the frills and furbelows are not pretty to look at, but they are not as necessary to keep warm. I certainly like a handsome gown designed to bring out all the beautiful points of a woman, better than the simple Quaker dress, hence I am the last to complain on that score. I do not depreciate woman's influence in the shaping of the course of study and in the management of schools, but I desire to point out to my readers that there is danger ahead, which will threaten the teachers' own existence, and thus defeat their own purpose.

When my daughter May was still very young, she once confided to me in a whisper: "When I am grown up, and have my own home, I shall change the bill of fare for dinner hindside foremost. Every dinner is to begin with dessert." I am sorry to say, that in many schools of this country, the children are fed with dessert, till they have no appetite for the substantial parts of an education. It was only a little while ago that a young lady, a dear young friend of mine, whom I would not hurt for the world, proved to me, that the so-called finishing schools such as she attended are delusions and snares. She plays the piano tolerably well, but she can only play pieces which she has practiced, she cannot read music readily. She can scarcely measure a room to find how many yards of carpet it takes to cover the floor. She paints and draws prettily, but it is all copying. However, she dresses stylishly, and dances divinely. Yet there is no more individuality and originality in her than in the pebbles on the beach.

I know that I am not picturing conditions in any particular private school, nor those in any public

school, but I deem it my duty as an observer, who watches what is going on in education all over the country, to state what the tendencies are. As I look over the educational press, read what teachers do, and advise others to do, I come to the conclusion that public education is not improving in the direction of necessities, but only in that of appearances. The courses of study are beginning to be top-heavy; their complexity is amazing. They still contain reading, writing and reckoning, but the ornamental and supplementary branches are increasing to an alarming extent. The frills and furbelows are increasing at the expense of the durability of the garment. The garment itself is getting to be more and more flimsy.

A miserly man once bought a piece of cloth and took it to a tailor. He asked him to measure him for a suit of clothes. Then he asked him to use the odds and ends to make his son Georgie a jacket. When the tailor protested, he made him measure again, and finally demanded that the tailor also make a nice pair of trousers for the little boy; and the trifling clippings and cuttings he might utilize to make the boy a cap. The tailor stopped protesting, and promised to have it all done on a given day. When he delivered the garments, they were all complete; coat, vest, and trousers for the father; jacket, vest, trousers, and cap for Georgie; but, of course, all were made approximately too small. In order to get the cloth for the boy's garments, the tailor had to infringe upon the father's clothes. Now that is precisely what happens to the course in the schools of the United States. The ornamental branches are cutting into time and energy needed for the fundamental branches. In a Chicago school, I am happy to say it is a private school, the

teacher has already abandoned reading, writing, and arithmetic, until the children express a desire to learn them. When I read it, I could not help remembering my little daughter's wish to change the bill of fare.

Any attempt to let children decide what they would learn, and what not; in other words, to bring the freedom of a university student down to the primary school, is certainly wrong.

It was my intention to repeat merely in outlines, by quoting the headings of what an average American course of study contains, but in glancing over some of these documents, I saw that it would take many pages to exhibit one of them in its pristine youth and beauty, in all its inimitable grace and charm, and hence refrain from doing so.

I admit that a modern American course of study is a thing of beauty, but not of strength. And that our elementary schools all over the land fail in the fundamentals, however successful they may be in the frills, is seen from the complaints of high school teachers, college and academy professors, and business men everywhere, who say that the students of higher branches are not sufficiently grounded in the fundamentals. The examination for admission to West Point and Annapolis proves, that the candidates cannot spell correctly, that they cannot think in numbers, or handle figures satisfactorily, and that they cannot express their thoughts in correct English. My own experience as an examiner in the state of Ohio and for the Civil Service Commission in Washington, D. C., has convinced me that many of the candidates for office are lacking in all the fundamentals; that their language is either coarsely faulty in grammar and orthography, that their knowledge of simple, but important arithmetical processes is woefully weak,

that the power to think and logically express thoughts has had no practice, and hence has not been developed. The force of this remark becomes apparent, when we consider that both Civil Service and the military and naval academies draw their candidates from all over the country.

These being facts which I have observed, facts which the press all over the country begins to perceive, facts which will influence the schools, not to say the nation, I have resolved to emphasize the necessity of drills above frills. I used to like frills myself, used to think the fundamentals would take care of themselves, used to advocate the cultural side of education more than the bones and sinews of education; but it is the inalienable right of an American citizen to change his mind, when he is brought face to face with facts which demonstrate to him that he has been in the wrong.

There are a few extenuating circumstances which will explain why the ornamental branches often press the essentials into the corner. One is the innate desire of teachers and pupil to shine. They would not be human, if they did not do so. Reading, writing and arithmetic do not lend themselves to exhibition purposes as well as drawing, modeling, singing, shop work, sewing, cooking, dancing, playing, and gymnastics do. Hence the undue importance bestowed upon the ornamental branches. Another reason is, that at the introduction of any additional branch, the authorities, presuming that the teachers are deficient in it, appoint special supervisors. I have a city in mind, in the Middle West, where there is a supervisor for nearly every branch of study, but none for arithmetic and grammar. There is one for vocal music, one for draw-

ing, one for penmanship, one for physical culture, one for manual training, one for kindergarten methods in the primary school, one for nature study, one for cooking, one for sewing, one for gardening, one for hygienic inspection, one for elocution, one for building inspection, and, I believe, one or two more.

Every one of these supervisors thinks his department more important than others, if not all others, and it is right that he should. Every specialist does it. When I was supervisor of schools in the West, it was my constant endeavor to curb the zeal of these special teachers, lest they completely buried the essential branches.

I remember that I once set them to fighting each other in meeting. The physical culture supervisor would say to the music teacher: "What's the use of teaching the children to sing, when they are dying for want of muscular movement?"—The cooking teacher would say: "The best draftsman will be a dyspeptic, unless he eats good wholesome food."—And so, ad infinitum; each maintained the superiority of his branch; but no one spoke of arithmetic or grammar as deserving attention.

This recalls very vividly in my mind a scene I witnessed in Washington, D. C. I was a visitor in a cooking school. The teacher asked me to propose a question to the girls. I asked for the ingredients of a French soup. All students raised their hands, and it was delightful to hear them mention readily all the vegetables and condiments, the kind of meat, etc., necessary; but when they got through, I coolly told them that I should have to decline to eat the soup, because they had forgotten the *water*. You see, the essential thing was forgotten over the importance of subordinate things.

Now, among the three essentials, the most essential, the very meat of the educational dinner, is arithmetic. That is the branch which will develop logical thought, brush out the cobwebs of superstition and error of almost any kind. It will place a person in proper relation as regards time and space; it will improve his condition in life; will enable him to estimate his own and his nation's strength, capacity and resources; will give him power to determine his own and his nation's future. Without thorough knowledge of arithmetic, a man is rudderless on the ocean of life. Moreover, arithmetic lies at the basis of all other manifestations of human exertions. Even man's joys are arithmetically defined, music and dancing for instance. There is no field of exertion, no province of activity, no kind of labor, in which you can do without arithmetic.

Concerning the present conditions of American schools, as the result of fads, State Superintendent C. P. Cary of Wisconsin says in the *School Journal* of April 6, 1907: "It really seems that we have lost both the art of and the desire for thoroughness in what we do in our schools,—barring, of course, numerous worthy exceptions. Pupils are coming up to and, for that matter, passing through our higher institutions of learning who are not possessed of organized, related, usable knowledge in any subject. Their minds, however are crowded to overflowing with chaotic ideas upon many subjects. Question such students in history, question them in literature, question them in mathematics, or in science, and it is always the same story.

" 'Knowledge is power,' ran the line in our old copy books. Knowledge is power, when it is so completely at command as to be readily usable, but it is not

power but lumber, rather, if it is vague, hazy, and chaotic. We have been passing through a period of reaction against the narrow, pedantic, self-sufficiency and the dreary grind of the three R's of your school days and mine. We have gone to extremes in this reaction. We have followed fads of various kinds. Is it not time to return to that middle ground, where we may avail ourselves of much of the benefit of the typical thoroughness of the older days in a few things and, at the same time, hold fast some, at least, of the richer, more inspiring things that have found their way into the curriculum in recent years? It would seem that the time is ripe for the return swing of the pendulum of educational reform to the extent that the word 'mastery' may, with propriety, come into the educational vocabulary here and there before the student reaches a Ph. D. degree.

"No plea is here made for the uninteresting teacher, but the teacher who thinks that to be interesting she must relieve her pupils from strenuous effort, makes an egregious and fatal blunder. The light intellectual calisthenics of the modern school room as compared with the heavy gymnastics of the best schools of a quarter of a century ago, is a form of degeneration, from which reaction should speedily come.—Work is eternally a condition of success. This should be burned into every fiber of our young people who are undergoing the educational process. A smattering of general information, more or less accurate, is not education. It may do very well for the fringe or the trimming of the garment, but not for its body. The key to interest, that much abused but useful word, is not the variety and kaleidoscopic change, but *concentration* upon, and mastery of, the strategic points and the

general principles of the solid subjects of the curriculum.”

Dr. R. A. White, vice-president of the Board of Education in Chicago, was quoted in a recent issue of the Chicago Tribune: “I am as much a faddist in education as any practical man dare be, but I can’t see the wisdom in sacrificing the attainment of useful elementary knowledge for a splashing of water-coloring, and a little of this and a little of that, which will never be of any use to ninety-nine hundredths of the pupils after they leave school.” George W. Woodruff of the same city, in advocating more of the old ethical training which was called “application of unburnt wood ashes,” but which he called “ethics of the bedslat,” despairs of a change to the ‘better, saying: “So long as female influence predominates in the schools, so called ethics daubed with water-color splashes, will form a large percentage of the mental nutriment daily dished out to children.”

VII.

THE RURAL SCHOOLS IN GERMANY.

IT seems desirable to state how the rural school-problem has been solved in Germany, and to answer a few questions relative to the work done in them. It would not be right to compare our rural schools with those of Germany, not because the latter are superior to ours, but because the conditions of life, society, legislation, and the organization and management of schools are so different, that a comparison would be manifestly unjust. Each has its excellencies.

A plain statement of facts must suffice, the reader will discover the contrast himself. The paternal government in Germany stamps the village school-master an officer of the State and clothes him with paternal and almost with patriarchal authority. Behind him stands the ponderous majesty of the State with its numerous ascending degrees of legal and administrative authority. He is not at the mercy of local boards and bad or mischievous boys. The form of government of the country is reflected, as it were, in the village school. Like the parson or priest, the teacher is provided with a home and some land. He may not be paid much, but his moral and social position and influence are very great. While in America the school is everywhere the creation of local effort, and is rarely better than the people of the locality want it to be, the rural school in Germany is an establishment of the State aided by local taxes.

Above all, the teacher is a professional man. The

government would refuse to confirm his appointment if he were not a normal school graduate, or had not proved to the satisfaction of the authorities that his preparation for the position is fully up to the standard the State has raised, namely that of a four years' course in a normal school. He has a limited knowledge of the history of education, of psychology and logic, of didactics and methodology, of school organization and management, of legislation and sources of school-support. And this has been the case for many generations. The State makes no differences between the requirements of city and country teachers, but the cities attract successful rural teachers by offering higher salaries, and they have therefore the pick from among the best and brightest talents.

Ever since the year 1806, the State, particularly in Prussia, has recognized the truism that "the teacher is the school." Palatial school buildings and the most approved school organization, the most artistic equipment and furniture, the most lavish expenditure and generous payment of salaries, will not make schools, so long as ignorance and inexperience play the rôle of teacher. Hence the greatest source of strength of the rural, or any other school in Germany is its teacher. When Prussia was humbled to the dust by Napoleon, and a rejuvenation of the State was necessary, it was begun by opening teachers' seminaries, and thus providing for good teachers.

Another characteristic feature of the rural school in Germany is the fact, that it is not regarded a mere knowledge-shop, in which children can acquire the means of an education: Reading, Writing and Reckoning; but it is a place of training, and religious, moral, mental and physical education. Now if this be so,

one may say, and I should consider the readers poor logicians, if they failed to ask it, How it is, that the many peasants who come to our shores from Germany are so poorly prepared, so inferior to the average American farmers? I doubt the fact assumed in the question, but for argument's sake I will let this pass and reply by saying: Because the great agency of enlightenment, the press, does not reach them; because their active participation in the affairs of the State has, until recently, been wanting; because they did not, and do not, move about as much as our nomadic population; and lastly, owing to the great poverty prevailing in Germany since the Thirty Years war. When the school course is completed, the child's education is completed, the life with its drudgery consumes all his mental stamina. But take the German farmer as he comes to us, place him under American influences, and we see that he is by no means the stupid boor he is represented to be on the stage and in the press. That he cannot express his thoughts glibly in English, on the stump, or at a love-feast, does not prove that he has no thoughts. If the Anglo-American were placed in Germany under like conditions, he would suffer badly in the comparison, because he would be incapable of learning the German language. When the hour of decision comes, the German-American expresses his thoughts by means of his ballot. If it had not been for the Americans of German descent, this country would have been cursed with paper, or depreciated silver money. He has learned to think for himself, and the village school master at home deserves a small part of the credit.

This brings us to the question: How does the rural teacher in Germany secure sufficient time for each

lesson, to probe the subject under discussion to the bottom? The answer is, that more time is given daily than here, that the dates of admission and graduation are as well fixed for rural schools as for city schools; that the population is not a nomadic one; hence, that the simple conditions of grading are fulfilled. The average attendance is reported to be not less than 90 per cent. of the enrollment. Every German school, even the one-room school, is required to arrange for three grades: a lower, middle, and upper grade. By skilful discrimination in his questioning, the teacher helps the pupils further advanced, as well as those who are still beginners. You may see rural schools in Germany with 80 pupils in regular attendance, and never observe more than four divisions in arithmetic and reading.

Again it is asked: How does the rural teacher succeed in probing the subject of a lesson in such a manner as to get behind the words and down to the things and essential phases of the subject? Simply by beginning with the things, and naming them afterwards. It never occurs to him to begin with symbols. But even when the language claims consideration, he has an advantage, the want of which makes us work against heavy odds in this country. The German language being a consistent language, its abstract derivatives betraying the meaning of the root-word, and conveying their own definitions, make unnecessary a great deal of defining which we, whose medium of instruction is English, must indulge in. For example, the German says: Wohlthuen—doing good; Wohlthat—benefit, blessing; Wohlthäter—benefactor, donor; Wohlthätig—charitable; Wohlthätigkeit—charity, etc.

The English-speaking child has to hop from one

compartment of his language to another, to find the proper expressions, and is thus obliged to spend much time in defining the meaning of words. Here is another example: The German has the verb *Gehen*, *ging*, *gegangen*—to go, went, gone. From the root in the participle he makes *Gang*—the walk; *Ein*—and *Ausgang*—entrance and exit; *Hausgang*—corridor; *Säulengang*—portico and veranda; and so forth a great number of words, all of which are derivatives and combinations that betray their own meaning without further definitions.* A simple English school dictionary gives fifty-three different English words in lieu of these; all, or nearly all, of different origin, from the Latin, the Greek, the Norman-French, and Anglo-Saxon. It stands to reason, that the German teacher is confronted with comparatively small difficulties. While he can bestow his attention upon facts, we have to think of the garb in which to clothe the facts.

How are the pupils made to study at home? is another question. If by study we mean obtaining new knowledge, digging it out from the printed page for tomorrow's lesson, I may say, they do not study, but they do exercises at home. They write out what has been learned in school, practice penmanship and drawing, do additional examples in arithmetic similar to those gone over in school; they are told to read and review; but it would not occur to a German teacher to set his pupils to learn new lessons at home. In short, the pupils merely digest and assimilate what they have acquired and experienced in school.

Most of the foregoing statements tend to show that the rural schools in Germany are very different from

*See also chapter: Why can not the American school accomplish what the German school does? also the chapter: English a dead language.

ours. But it does not follow that we should in every particular imitate the Germans. Aside of the pedagogical considerations, that the teachers be better prepared, and that, as a natural consequence, better teaching may prevail, we may safely adhere to our American way; there is little to imitate. The rural school problem is not so much a pedagogical problem, as a social one. Our form of government, our social or political equality, our mode of life, our view of the world, our methods of action, our ideals, all tend to confirm us in our present practice, which is to leave the individual to work out his own salvation, to develop his own characteristics, not to mold him into a being that conforms to fixed types prescribed by a State that stands above him.

The rural school problem in this country is much less of a problem than it would be in a monarchical state, simply because, like all institutions in a republic, it has its corrective in itself. The people apparently do not want any other schools than they have, and where they do, they get them in the only way possible under heaven—by obtaining the teacher who will make the school better. Prof. Myron T. Scudder, Principal of the State Normal School at Newpaltz, N. Y., said at a dinner of the Y. M. C. A., November, 1907, in an address referring to the dangers of country life:

Fifty per cent. of the children of our nation are in the country districts, and 95 per cent. of that 50 per cent. are in one-room country schools, where they are being taught by immature girls who are not much more than giggling children.

F. W. Pearsall, of the Y. M. C. A., said:

Name me any vice of the city and I will match it in the country. The forces for evil are strong in the country, and the forces for good are largely impotent.

VIII.

A FRENCH VIEW OF GERMAN INSTRUCTION.

DURING the winter of 1906-7, Monsieur Jules Huret published a number of letters from Germany in the "Figaro" (Paris), in which he proved to be actuated by a singularly just appreciation of German conditions and institutions. Speaking as a Frenchman to Frenchmen he is at times uncomfortably truthful, and makes the Germans wince. One of his letters is devoted to the schools of several German states. His views, which necessarily, within the circumscribed limits of a newspaper article, can touch upon a few chief points only, so fit the conditions as he observed them, and they so exactly coincide with those of many foreign observers that it may be well to quote them in English. The Cologne Gazette sums up his judgment in this way:—

The young Frenchman is drilled in such a manner that he seems to know a great deal, or rather a great many things. The young German does not make such an impression, but whatever he has learned he knows thoroughly and mostly with bearings upon related spheres of knowledge. With the former, the façade of his house of knowledge is more ornamented, but the foundation is wretchedly unsafe. The German boy's house of knowledge is less beautiful in appearance, but its foundation and walls are firm, as though built upon rock. Huret says:—

"The fundamental difference between the German and the French methods of teaching consists in the importance which we give to written and textbook

work, and in the extraordinary importance given by the Germans to oral and memory exercises independent of textbooks. The German pupil rarely takes pencil or pen in hand during a lesson; his manual, for he has no textbooks as the Frenchmen understand the term, is opened when the teacher calls upon him to look up a point, to verify a statement. The efforts of the German teacher are directed at keeping alive the child's attention through incessant and ever changing questions. This causes frequently an exhausting strain on the teacher, which can be borne only by zeal and love for his profession, or deep affection for his pupils. All the subjects of the course are treated in this way. Language, arithmetic, history, geography, as well as the natural sciences. One never hears the teacher call for a verbal repetition of something memorized from the printed page, except poetry and religious matters. He questions the children concerning the subject on the tapis, changes his queries in form and order, turns them around and inside out, refers back to things answered before, so as to aid the weak, and to assure himself that the whole class understands the ideas developed and can easily recall them in logical order, especially the newly discovered rules and definitions. And in order to be quite sure that every scholar keeps his ears open and his intelligence awake during the entire lesson hour, the teacher, instead of first calling upon an individual pupil and then stating the question, proceeds contrariwise. After the question is stated by him, each pupil who can answer, or thinks he can, raises his hand, and the teacher selects from among them the one who is to answer. If his falcon eye notices any one who frequently hesitates in showing his readiness to answer, the teacher asks him oftener.

and tries to lead him by some supplementary questions to see the thing, which the brighter pupils had seen before. He devotes much patience to such a weaker pupil and makes him see, by means of recapitulations and by requisite hints, what must be understood, before he can proceed with his demonstration. This method ripens one result: the attention of the class is kept alive, and all pupils are interested. I have listened to many such lessons, and have never for a second seen the inquisitiveness flag of a single pupil of the class.

“Our education,” says M. Huret, “is a parrotlike education. True, it causes less trouble, and offers the pupil, and consequently also the teacher, opportunities to shine brilliantly, but it matures the least actual and lasting results. With us in France the teachers have long supposed that their task consisted in making the pupils learn by heart, and then recite sentences, paragraphs and facts gleaned from textbooks. The German teacher properly despises that kind of easy work.”

At another place M. Huret says: “In a superficial examination our pupils come out with flying colors, they seem to know more than they say; and I am convinced that they actually are more intelligent than the boys of Germanic and Anglo-Saxon countries.” (Huret, the Frenchman, here cannot suppress his chauvinism.) “But I am equally convinced that the young German children know better and more profitably what they have learned. Our pharisaical methods do not promote to any appreciable degree the natural talents of the race, they tie them up, or overwhelm them like a beautiful plant, which an idiotic gardener surrounds with rocks instead of feeding it with nourishing soil and giving it light and air.”

M. Huret gives some examples to illustrate the results of the French methods. "A French school inspector found boys in the highest elementary grade, who could answer all questions put to them concerning the measures of length and area; could solve, pencil in hand, the most complicated arithmetical problems in which measures of length were used, but when he gave into their hands a wooden meter-staff, and asked them to find the dimensions of the school room, there was not one among them who could do it. Another pupil who was asked concerning the policy of Cardinal Mazarin, arose and recited a pretty, memorized account of the political actions of that statesman, and showed that his chief object had been to lower (abattre) the House of Austria. The inspector asked:—"Was the House of Austria really so very high!"—Answer:—"Oh, yes!"—"How many stories do you think it had?"—"It was at least three stories high," was the confident reply.

Such anecdotes sound as though gleaned from the funny corner of a newspaper, but he who has some acquaintance with the French school system will not doubt the truth of the account for a moment. M. Huret mentions another case:—"A little girl, scarcely emerging from the jungles of the A B C, proudly recited to her father, a magazine writer of note, the memorized grammatical definition of an 'article.' The sceptically-wise father asked her: 'Now tell me what *you* understand by the word article?'—The child having been trained to rattle off a clearly defined reply to a definite textbook question was puzzled at first, but then its face lit up and she said: 'Why, an article—that's what you write for the papers.'

"Even the school books are nearly all 'cut to fit'

this system of teaching. Thus a geography for beginners opens with 'What is geography?'—'Geography is the description of the surface of the Earth.'—'What form has the Earth?'—'The Earth is round like a ball.'—'What does the Earth rest on?'—'The Earth rests on nothing, it rolls along in the Universe.'—In this way many questions and answers follow. The children, who have no astronomical conception of space relations, to whom a simple plan of a house, of a street, or of a village, is incomprehensible, rattle down the answers in a monotonous manner in reply to questions read by the teacher from the printed page. If the teacher changes the order of the question, or if he words them differently, the youngsters fail wretchedly. It would not be astonishing at all to hear a child answer to the differently modeled question 'What supports the Earth?'—'The wooden leg under the globe.'

'Many teachers are satisfied, if the children have memorized a column of such questions and answers, and then recite them glibly. If they can do so, they receive 10 merit marks, and at the close of the week, they may exchange their marks for a cross of honor. Any hesitation in reciting such memorized stuff, which would be only natural, and give evidence of deeper thoughts, is considered a sign of indolence, or a lack of scholarship, and is punished by demerits. Before the children have a geographical idea of their town and its surroundings, they are tortured by memorizing the names of the departments of France and their principal cities. They rattle them down like a phonograph. If you take a city out of order, they have not the least idea of its location. In order to determine that, they have to recite the whole 'litany,' till they

come to it. They learn by heart arithmetical definitions, before they can add and subtract correctly. They calculate with decimal fractions, and cannot tell what the troublesome decimal point between the digits means. In the history lessons they recite idiotic anecdotes in the same monotonous pitch of voice in which they tell of important events. No suggestion to self-thinking, no animation to independent judgment.

“A little improvement is shown in this regard among our French teachers; signs are multiplying that the idiotic methods used for generations are being gradually abandoned. French visitors to Germany have discovered the cunning art of questioning in German schools. All there is needed is, to adopt the German teachers' appropriate selection of lesson-hours, their economy in physical strength and mental vigor, their general care of the health of the pupils, their anxiety to make the child's attendance at school profitable in acquiring truly useful knowledge at no expense of moral, intellectual and physical health. The present wonderful industrial and economical progress of Germany is unquestionably owing to the realism of the school instruction, which produces able engineers who beat the French and English in every branch of machine work, and enter into lively competition with the American. The skilled laborers in Germany who can supervise a labor-center with all its machinery, are more numerous by far than in any other country. I have found the most complicated machine tools that are invented in the United States in use in Germany, managed by German skilled laborers who had carefully studied their construction and mode of working, and then applied them. German pedagogy is at the bottom of German thoroughness in every field of human

exertion, from the highest theoretical science to the laborer's handiwork."

About a year ago an educator of some importance in Natal, Africa, submitted by courtesy of the school authorities of London, Berlin and Paris, a number of questions to the pupils in certain grades of schools to test them in the chief branches of an elementary course, and he found, as he reports, that the Parisian children on the whole passed the examination best. The questions submitted were made out according to the well-known textbook style ("Razor-back" questions as teachers call them) that admit of only one answer and allow the most talented or the best-taught children to fail. Monsieur Jules Huret in the *Figaro* (Paris) protests against the praise French teachers read out of that decision, and says, "If the Natal examiner had known the German methods of teaching, and had formulated his questions so as to permit the pupils latitude enough to unpack and exhibit their knowledge, they would have easily beaten the pupils of London and Paris. Otherwise the music-loving children of the classical land of music would not have fallen behind the children of London in the examination in music." This one item alone shows the absurdity of the examination. In Germany the teachers recognize that music is an art, and teach children the art of singing. In England, many teachers do, as in this country, treat music as a science, teach notation, etc., and neglect the musical ear.

Recently, however, a more searching examination was held in Prussia by commissioners of the Minister of Commerce and Industry, to determine once for all, whether the complaints of high and continuation school teachers were well founded, to wit, that the work of

the seventh and eighth grades of the elementary school was not quite satisfactory. The results of a reasonable and fair written examination of nearly 5,000 fourteen years old boys were quite fair in the western and central, that is, the industrial provinces, reaching about 69 to 70 per cent, but not satisfactory in the eastern or agricultural provinces, where many children of alien eastern races have to be assimilated. The results marked in percents in the twelve provinces of the Kingdom are as follows:

Brandenburg	82%	Silesia	67%
Hesse-Nassau	75%	East Prussia	61%
Saxony	75%	Hanover	57%
Rhineland	71%	West Prussia.....	47%
Westfalia	70%	Posen	46%
Schleswig-Holstein ..	68%	Pomerania	43%

If we consider, that the examination was for boys who had left school some time before to enter upon wage-earning work, and whom the compulsory attendance act now roped into the night schools, we think the results are not to be deplored. If we further remember the disinclination of European agriculturists to regular school attendance, because *every fair* day has to be used for farm labor by all who can perform it; if we lastly consider that the German school children in consequence of the almost exclusive use of the oral method of their teachers are not so skilful in the use of the pen as the French, English and American children, the final decision of an impartial judge seems to be: The German teachers should teach their pupils to use the books and writing utensils more, the French, English and American teachers should more frequently apply the oral method of their German colleagues.

We here in the United States have some experience in wholesale test examinations of school systems. Old white-haired veterans in the service of public education remember the onslaught made upon the Cleveland city school system during the administration of that lovable Superintendent, Dr. A. J. Riekoff. Similar attacks have been made in almost every large city in the land. Teachers of the present will remember the West Point and Annapolis complaints, and the many local examinations following that wholesale accusation. One result of all these more or less intemperate attacks has been that the textbook method has rooted deeper and deeper into the foundation of our national education, simply because it is the best means to produce temporary examination results. It stuffs the memory with volatile matter, which produces little intellectual growth in the majority of children. The whole business of the national, and of some state governments, is suffering from the civil service examination, not because the applicants for positions under government are examined, but because the mode of examinations is wrong. The applicants are all examined in writing and that precludes all possibility for the examinee to show his individuality. Every written examination should be accompanied by an oral examination, as is done in Germany. However, there are two sides to that question,—and this is not the place to discuss the point.

IX.

CONTINUATION AND INDUSTRIAL SCHOOLS IN GERMANY.

THE demand for better knowledge and greater skill is one which is common to all trades and professions. The poorly equipped physician or lawyer is less and less in request. In conducting large enterprises, the capable manager finds his services more and more in demand and commanding higher rewards. In this compulsory advance toward greater excellence, education plays an important part. The Pennsylvania Railroad has long held to the policy of requiring the young men entering its mechanical department to have some technical training, both in theory and practice. The technical colleges supply a part of this requirement, while not a few men, particularly in the newer sciences like applied electricity, are pioneer discoverers by right of research and study. Everywhere it is the same; the professional or business man, as well as the employe, to succeed in modern commercial strife must have all the resources which knowledge and training can give him. * * * The dearth of qualified experts and the scarcity of skilful workmen in the iron and steel trades are indications at once of the new demand for more efficient laborers and of the opportunities thus offered to the deserving." (N. Y. Evening Post.)

Considerations like the foregoing make it appear desirable to see how in Germany this question was faced. Authorities agreed that the excellent results of the French textile industries, and the great value of the

products of French art industry, were not owing to the great innate talents of French laborers, but to their thorough and very appropriate schooling in labor. This special education "ad hoc," not in schools, but in factories, has been going on in France from the time of Colbert, the minister of finance during the reign of Louis XIV. Indisputable proofs of this were furnished by the various world's expositions, which opened the eyes of intelligent men to the great inadequacy of the institutions for industrial education prior to 1870, and it may be said that German industry thereupon took an upward start most gratifying in its results, since it was consistently planned and aided by the establishment of a large number of institutions for technical and industrial pursuits.

In Germany it is well understood that a limited education, such as the elementary school offers, barely suffices to prepare the children of the poorer strata of society for the duties of life. The time between the fourteenth and, say, eighteenth years of life is a period during which the children are apt to forget what they learned in school, not having immediate application of their knowledge in daily pursuits. The various state and communal governments of Germany, Austria, Switzerland, and some other States in Europe, having recognized the necessity of bridging over that period, established what is known as "continuation of supplementary schools." These schools are either day, evening, or Sunday schools. In most cases they offer reviews of elementary branches, and in addition to these a number of generally useful branches of practical knowledge, such as drawing and manual labor. When they offer this manual instruction, which is sometimes also called instruction in trades, these schools are

classed among the industrial schools. If they have no such addition, and confine themselves to the common school branches, they are called continuation schools only.

In industrial centers, such as Saxony, Thuringia, and Rhenish Prussia, as well as in other large cities with extensive industries, these continuation schools are most generally industrial schools also, and are especially designed to give opportunities to apprentices in workshops and factories to prepare themselves better for their pursuits than they could otherwise, and the parental governments in central Europe are very much concerned about apprentices and the thorough preparation of skilled labor. They even prescribe for the boys a compulsory attendance in these evening or Sunday schools. The State law gives communities the right to insist upon a compulsory attendance where ample provision is made, and where the State gives a subsidy for the maintenance of such schools. It is the rule, generally accepted in all German speaking countries, that the community establishes the school—that is to say, furnishes the house and equipment, light and fuel, as well as furniture and tools, and the State pays the salary of the teacher. Thus communities and state government join hands in maintaining a vast system of supplementary schools chiefly designed to prevent the deterioration of the elementary common school work, and secondly to facilitate and aid industries in the city and in the country, for these schools are not industrial schools only, but also agricultural, many of them being situated in agricultural districts.

Now, it must be understood that these supplementary or continuation schools, industrial or agricultural schools, as they are called, are nothing more than ele-

mentary. The real and actual trade or industrial schools are of a higher order. These latter schools presuppose a thorough common school education, and build upon that by introducing higher arithmetic, business methods, a great deal of industrial drawing, and the elements of certain trades. These trades are not chosen by the State authority, but they are invariably the choice of authorities of the community, or of certain societies, the aim of which is to encourage trade and industry represented by factories and shops in the locality. Many of such schools are therefore established by trades unions. Afterwards they are adopted, as it were, by the city or communal government, and as such come under the State law which provides for State aid or subsidies.

Though these schools are primarily established and maintained for boys, it must be stated that during the last twenty years the fact that women are employed in various industries, in factory and shop work, makes it necessary to extend the benefit of continuation and industrial schools to girls also. But the Germans recognize the fact that woman's smaller physical strength, but greater manual dexterity lead in different directions from that of man's powers and skill, and they therefore aim to meet the several necessities of boy's and girl's skill in school work by carefully discriminating between shop work for boys and for girls. In the models used in drawing, for instance, it is plainly seen that a thoughtful discrimination is made. The same is done with reference to the work in arithmetic and in commercial branches.

In some portions of the Empire the continuation schools are very old, having begun shortly after the general revival following in the wake of the dethrone-

ment of Napoleon I. In other parts of the Empire, as well as in Austria and Switzerland, and notably in agricultural districts, the continuation schools are of more recent origin. Their attendance is not at all uniformly regular, owing to the fact that attendance is not everywhere compulsory, and owing also to the fact that the skill and popularity of the teacher has much to do with the attendance at a school for boys and girls in the critical age between 14 and 18. It is well understood that this period is a time of storm and stress, and subjugation under strict rules and discipline in that age is more difficult with children of the lower strata of society than it is found in higher schools and colleges, where a higher culture and a more refined atmosphere aid the discipline and the general habitus of the students.

Viewing the many thousands of schools for the uplift of the submerged and the technical preparation of skilled labor, one cannot help but see that Germany is a vast field of pedagogical labor. The whole Empire is a school, and the conviction rules that preparation is necessary for every occupation, calling, profession, and office, from the street sweeper and constable to the bearer of imperial dignity.

Prof. Paul H. Hanus of Harvard University sketches the German policy in regard to continuation schools in an article in the *Atlantic Monthly* under the caption "Industrial Education," by saying:—

"Germany is the classical example of a nation that has not neglected the development of all its resources, men included. For example, in one city—Munich—there are 40 different kinds of industrial continuation schools—schools for chimney-sweeps, coachmen, hotel and restaurant waiters, jewelers, shoemakers,

carpenters, machinists, blacksmiths, tinsmiths, printers and bookbinders, and the rest. The name continuation school (*Fortbildungsschule*) is chosen advisedly, for every youth who graduates only from an elementary school is obliged by law to continue his education in some continuation school during the period of his apprenticeship to his trade; and each youth finds a continuation school appropriate to his calling. Employers are by law required to give their employes the time to attend these schools—from 8 to 12 hours a week, depending on the trade, for from three to five years. These continuation schools are not all evening schools; because it is well known, that boys 14 to 15 years of age after a hard day's work in a shop or factory, or on a building, are unable to profit by evening instruction to the extent to which they could profit by the same instruction if it were given in the day time. Moreover, it is clear that forced school work at the end of an arduous day is unhygienic.

“In these continuation schools one of the most suggestive arrangements is the close correlation of the theoretical foundations of each trade with the instruction in the processes of the trade. That is to say, the mathematics of the school is the mathematics of the shop, whether it is jewelry or shoemaking or carpentry. The same is true of the machinist's mathematics. Similarly the drawing of the school is the drawing of the shop. The problems which the boy finds in the shop today are dwelt upon in the school tomorrow. In the same way the closest possible relation to the sciences, physical or biological, to the trade concerned are maintained. The youth learns also the history of his trade, and civics, and the proper use of his mother tongue in relation to his trade.

“From the continuation school the youth at 18 or 19 enters the army, where for at least two years more he is under systematic educational influence. That is to say, the German nation has been unwilling, for more than a generation, that a youth, after he leaves the elementary school, should be without systematic educational influence, until he reaches the age of citizenship; while in the United States we are just beginning to realize our responsibilities in this respect.”

X.

VOCATIONAL TRAINING IN ELEMENTARY SCHOOLS.

IT is not difficult to agree with persons who advocate training of the hand more than has been done hitherto in the common schools of our country; even for lower schools it is advisedly urged, so long as it is not intended for direct vocational preparation. Such a training pointedly aiming at certain utilitarian ends, is right for secondary schools, for higher institutions, and other schools which build upon the substructure of elementary education. I go even further: It is advisable and most desirable for children who have left the elementary school to get a chance at preparing for wage-earning labor, as the Germans do in their trade and apprentice schools.

To prepare skilled labor will not only aid the individual for better conditions of existence, but it will also build up strong supports for family-life, society and community. But while all this and more should be done, it is, to my mind, unwise to confuse the present aims of elementary education (ages 6 to 14) with utilitarian projects, such as may be recognized in direct preparation for wage-earning. A sense of responsibility, it is true, should be early awakened in the child, but to couple it with wage-earning, usually monotonous, mind-killing labor, is robbing the child of its childhood.

The child grows in concentric circles, irregular as the latter be in most cases; its horizon widens from year to year. All educational classics agree, that

whatever science or accomplishment be taught, whatever knowledge or art be acquired after childhood, will draw its nourishment from the first or earliest impressions. Hence we see in the earliest object lessons the beginnings of natural science; in the equal divisions of a pie into halves, quarters, etc., the beginnings of higher mathematics; in lines drawn to a scale the beginnings of art-work; in the mechanical virtue of cleanliness moral purity in later life, and so forth.

In short, whatever be done in the elementary school should be done only for the acquisition of fundamental ideas, or that dexterity which will act as a support of school work, not as a specific preparation for future cobblers, carpenters, cooks, farmers, miners, merchants, or what not. The decision of future choice of life-work should be left open till the close of childhood. It is perfect human beings who know much, and also know how and where to acquire more knowledge; who can do much, and know how to apply their skill in a variety of ways; children who are healthy, happy and good, that the elementary school is to produce—not future wage-earners.

We utilize manual training and tool-handling in school merely as a method, precisely as we use object lessons as an aid or beginning of all branches of study, which are based on observation. Only in so far as manual training aids to complete the general education of the child as a perfect human being, has it any right to be in school at all. The course of the elementary school deals with elements, not with ultimate objects. It should not be burdened with aims such as wage-earning. We make the mistake in this country of loading upon the shoulders of the common schools many duties of family, workshop, community, church,

and state, and wonder that the results are so unsatisfactory.

Any advocacy of instruction in labor should confine itself to lessons in labor as a school study, not with a view toward wage-earning, for that should be the business of educational institutions that build upon the results of elementary schools. By means of correlation of studies we may do much toward making the children's elementary education more practical. As for instance, by dealing with the prices of commodities in arithmetic, we may bring school into relation with life. But school is holy land, and sordid life should take off its shoes when it approaches school.

To all this comes the consideration of the limitations of the human brain. As the course, "enriched" as it is at present, is still further burdened with preparation for wage-earning labor, the pupils will get less and less of an education. There should be a cleanly division between that which is generally necessary for every boy and girl, and that which sets him or her apart as a worker in a special field of labor, a field fitting for him or her, but not for all. Moreover, there can be no general tool-handling information for trades, for the tools of the tailor are different from those of the carpenter and other tradesmen. Trade instruction must remain a special instruction, hence cannot be applicable to all general schools.

Lastly comes the consideration: Who is to teach the labor branches? Already the man-teacher has been eliminated from the city schools.—The outlook is too dismal to prolong the discussion of the subject.

State Commissioner of Education of New York Dr. Andrew S. Draper, in a recent publication, said: "The child must be allowed his free election of vocation,

after he has acquired the simpler work of the elementary schools. But he must know that he is not to drop out, and not be allowed to waste his time, at least, until he reaches an age, or a situation, where the case is apparently helpless and hopeless.”

XI.

SCHOOL-ROOM DECORATION IN GERMANY.

THE following is gathered from the German educational press and translated for the benefit of American teachers. It is an account of what is done in the little town of Lauscha, in Thuringia. It is instructive to note the intense interest the people there have in the aesthetic education of their children and may induce us to go and do likewise.

The object of the mural decorations of school-rooms is threefold: (1) to do away with tedious blankness of the walls, so that the school-room may resemble refined homes; (2) to serve the lessons given, and (3) to awaken and promote aesthetic education. The means employed are many, to wit: suspending mottoes and classic verses in artistic type on the walls, corridors, and stairways; coloring the walls with pleasing though neutral tints; providing them with rich friezes (animal figures); large stag horns (reminding of the proud inhabitants of Thuringian forests); stained glass windows, and a fine collection of framed pictures. The rooms are made prettier also by providing better furniture than is customary, and by placing plaster casts at safe places. Flowering plants in pots are on the window sills.

Among the pictures there are three kinds: (a) those exclusively serving decorative purposes; (b) those which are used as appliances for teaching, and (c) those which serve aesthetic purposes. Many pictures serve all three purposes, but many are suspended for

decoration only. Walking through these rooms one feels pleased everywhere, because the former aspect of empty barracks is gone. The rooms are by no means alike; on the contrary, each has characteristic features of its own. Thus for instance, there is one room devoted to Thuringian fairy stories; another to mythological history (St. Elizabeth and her seven acts of charity); in this room a picture of the famous Wartburg (Luther's refuge) adorns the walls. Quite in harmony with this is the collection of Ludwig Richter's popular pictures and the old castle of Ravenstein. Since in Thuringian stories the mother of Christ is often mentioned, a madonna by Bellini is added. The stained glass windows exhibit two knightly coats-of-arms in luminous colors. In one room the chief characters of fairy stories greet the pupils from the walls (Snowwhite, Cinderella, the Sleeping Beauty, Red Riding Hood, etc.), all in large sized frames, six by four feet. There may be seen enlarged the famous Munich masterpieces, madonnas by Raphael, etchings by Overbeck. In the primer class, where biblical stories are taught, a series of religious pictures are seen, such as the Birth of Christ, the Three Wise Men, Jesus in the Temple, etc.

In other rooms occupied by older pupils, ages and sex are considered, and the pictures are selected with relation to the subject of instruction. Thus, for instance, in the upper girls' classes we see Richter's Queen Luise, Liotard's Chocolate Girl, Thumann's Spinning Girl, Madame Lebrun and her daughter, Madonna della Sedia, Johanna Seymour by Holbein, and other pictures of value. Within the horizon of the boys belong St Peter's Cathedral in Rome, Schlüter's Great Elector, Delaroche's Napoleon, and similar paintings in reproductions.

In the room occupied by the pupils who study the Gospels, Steinhausen's beautiful cut "Jesus and the Sinners," serves very well. By means of such pictures a rallying point is offered in the lessons, and connection is established with lessons in language and history. Some pictures cannot thus serve, but they are none the less welcome through their decorative value. Thus, for instance, a series of Braun's photographs of Lucca della Robbia and lithographs of Italian churches. Some pictures, especially Seemann's mural paintings, are well adapted to aid instruction in history, aside from their value as masterpieces of art, inasmuch as they represent entire epochs. The whole collection of art-objects gives a comprehensive view of the various modes of presenting or reproducing art, oil paintings, etchings, lithographs, steel cuts, wood cuts, photographs, color prints, etc.

Plastic art, painting and architecture are equally well represented in this school. Naturally, Greek sculpture is not found in abundance, if at all. The present German schools are intensely national, and decidedly German at that. Hence, we find Michelangelo's Prita, Schlüter's Warriors' Masks, the Madonna by Andrea della Robbia, Vischer's Sebaldus' tomb, Schadow's Luise, and Fredericke of Mecklenburg, the Princes in the Cathedral of Nuremburg. Of famous painters we find busts of Dürer, Retchel, Fr. Hals, Cornelius, Rubens, Rembrandt, Fechner, Titian, Raphael, Bellini, Reni, Schrandolph, Lochner, Schwind, Overbeck, Leonardo da Vinci, Menzel, Thumann, Laseh, Ravenstein, Biese, Thoma, Steinhausen, Clause, Gelee, and others, some only in portraits.

Lastly, a large number of architectural pictures is apt to open the pupils' eyes to the wealth of architec-

tural beauty designed by human minds, serving both church and secular purposes. A child of the town of Lauscha, having passed through all the eight grades of his school, will have made acquaintance with the following buildings: the Elizabeth church at Marburg, the Michaelis church at Hildesheim, the Palazzo Riccordi at Florence, the Cathedral at Limburg, the Barromaeus church at Vienna, the Abbey at Maria-Laach, the Cathedral at Cologne, the court of the Royal Castle at Berlin, the Pantheon, the Castle of St. Angelo, the Neptune Temple in Paestum, the Palazzo Vecchio at Florence, the St. Peter's Church at Rome, the Erechtheion, the Parthenon, the Colosseum, the Cathedral at Strassburg, the ruins of the Castle at Heidelberg, the City Hall at Bremen, the Golden Gate at Freiburg, and many others. It is impossible to treat each of these monuments of human skill during lessons, nor is this necessary, for the simple contemplation on the part of the pupils will awaken thoughts and create ideals. Much can be seen and learned during eight years.

The Duke of Meiningen aided the efforts of the school authorities and teachers by presenting the school with 131 etchings, lithographs, and photographs. Dramatic performances by the school children, and other entertainments arranged by the teachers, brought in enough money to decorate the school to the extent explained in the foregoing. This is not an isolated case in Germany. Everywhere, throughout the Empire, schools are being decorated, some in a more modest way than in Lauscha, but a beginning is made, and it is by no means in large cities alone where it is done, as the excellent example of Lauscha proves.

XII.

SUMMER COLONIES FOR CITY PEOPLE.

THE people of Berlin have the reputation of being prone to boasting of their city. They share this tendency, however, with the denizens of all large cities. Local patriotism is not at all a reprehensible quality, for it is apt to engender a desire for improvements which will be of benefit to strangers as well as to residents. Still, it cannot be said that Berlin has been boastful of a new feature it has developed within the last few years, a feature so revolutionary in its bearing upon education and upon the general health of the future generation, that it is worthy of being made known to the world. It may not be the innate modesty of the citizens of Berlin, which accounts for the circumstance that as yet little has been said about the new dispensation; rather the fact, that it is not a governmental institution but the result of self-help, of recognition of a plain necessity, of the spirit of local self government found as a rule only in the Germanic races, and of a socialistic tendency, or co-operative spirit, noticeable more often in Germany than in any other country of the civilized world. It may be assumed that if the new plan of summer colonies for the great majority of the poor had been instituted by the government, it would not have succeeded as well as it has, for the average Berliner is prone to criticize rudely all governmental efforts and, in doing so, to use terms which bite like concentrated lye, and awaken governmental opposition. Berlin is entitled to the credit of having

produced several original ideas in public education. Compulsory school attendance became a state institution in Prussia, only after it had been thoroughly tested in the Prussian capital; Realschulen became popular, after Berlin had set the example by the establishment of such schools; Pestalozzian principles and practices, introduced through the agency of Queen Luise, were first applied in Berlin; Prussian normal school reorganization became possible only through Diesterweg's work in Berlin; trade schools and similar institutions for the technical advancement of laborers in Germany, have their prototypes in Berlin. And if it is not original educational ideas which are there brought out, ideas from outside are welcomed in a most cordial manner, particularly in the public schools, the schools of the great majority of the people. Thus, for instance, the teachers of the public schools maintain, aided by the city government, a splendid school museum, which provides the schools every week with appliances for teaching.

Before the new method of caring for children in large numbers during the summer is explained, it will be well to refer to an incident of more than thirty-five years ago. It had been the common observation of primary teachers in Berlin, that young children just entering schools were lacking conceptions of common natural phenomena, such as the rising sun, the moon, thunderstorms, etc., hence that the work in school in laying a firm foundation of sense perception became increasingly difficult, as the city grew larger, and the children of the tenements were farther and farther removed from Mother Nature. To determine the extent of this poverty of conceptions or ideas, an original investigation of the contents of the children's minds

on entering school was instituted by the public school teachers of the city. The results of this investigation, carefully tabulated, were published in the *Berliner Jahrbuch* of 1870.

A few items of that report may here be inserted to give force to the teachers' complaints: Of 10,000 children entering school at 6 years of age only 1,640 had seen a huckleberry bush; only 2,078 had seen a lake; only 2,364 knew what dew is; only 2,466 could recognize a rabbit; only 2,636 had seen ploughing; only 3,052 had seen the sun rise; only 3,646 had seen the woods; only 4,750 recognized a snail; only 5,085 knew a frog when they saw it; only 6,028 had seen a butterfly; only 7,770 had seen a rainbow. This proved a poverty of ideas which seriously hampered the instruction of the primary teachers, who must naturally rely upon a certain stock of early impressions and concepts on which to base their language and object lessons.

This comprehensive investigation has been frequently quoted in urging the necessity of nature study. During the course of pedagogical and psychological discussions in many countries, arguments have been based upon the results of the Berlin investigation and upon those of many similar ones undertaken since then in Germany and in this country. The teachers, seeing that the horizon of their pupils was limited by brick and mortar (for open park spaces are rare in Berlin), came to the conclusion that only by giving their pupils opportunity to live in the open air, could they succeed in laying a sound substratum of sense-perception, that is, fundamental knowledge of natural objects and phenomena as a basis for subsequent school studies. The teachers alone, however, could succeed only in applying palliative remedies, such as having sent them, on

application to the botanical gardens, thousands of specimens of plants, twigs, flowers, fruit, etc., for nature study in the school room; planting flower-beds around the schoolhouses, also, brief excursions into parks, zoological gardens, and hanging up before the class, colored pictures of landscapes and rural scenery.

While in many cases, especially in large cities, the necessity is recognized of getting the children out of the great desert of brick and mortar into the open air and into intimate companionship with life in the field, the garden, the woods, and the brook, it has nowhere resulted in any systematic effort to aid the children of an entire city in that way, until it was tried in Berlin. Of course it is well understood not only abroad, but in New York and in other large cities of this country, that something must be done to alleviate the stultifying influence of want of fresh air and space, and so recreation piers and roof-gardens are provided, excursions of schools into parks are undertaken, open air playgrounds are instituted, and similar efforts are made tending to alleviate the evil effects of life in a city; but all these efforts are merely sporadic, temporary or unsystematic, they do not cure the evil at the roots, moreover they are only drops in the desert of misery when compared with what seems necessary.

Now if we consider that there are hundreds of thousands of children in Berlin, it would seem an impossibility to take them all, or even a majority of them, into the open air, outside the city, be it only for a few hours a day—yet the Berlin people succeeded in doing this. Naturally, the teachers' influence alone was inadequate to convince the public and the authorities of the necessity of decisive measures. Stronger inducements were needed to bring about appropriate action. First, the

school physicians (of whom there are 36 in Berlin), followed by others of the profession, added their influence to that of the teachers in the press and in the deliberations of the city council, but instead of the intellectual, they emphasized the physical deterioration of children. When the decrease of the birth rate, and the lamentably high death rate of children became marked, the health authorities began to move in the direction suggested by the teachers. But when finally it was shown by unmistakable evidence from the statistics of crime, that juvenile criminality in Berlin increased out of all proportion to the increase of criminality in general, the appeal for relief became irresistible: Let us go back to Mother Nature!

Perhaps it is not generally known, that the city of Berlin has in its governmental relations a tendency to adopt socialistic measures, but certainly, compared with our American cities, it may be said to be a notable example of ownership of "public utilities by the people and for the people." This tendency to co-operation and collective action has resulted in this particular case in so brilliant a result, that the most determined anti-socialist will take off his hat in the face of the children's thousands of *arbor-gardens* round about the city. It is an experiment "en gros" which we see in Berlin, one of such dimensions, that cavil ceases and admiration rises supreme.

Parents were induced to rent, at a nominal price of 4 marks (\$1.00), or about 20 to 25 cents a month for the whole summer season, a patch of land in the surroundings of Berlin available for the purpose in view, but unfit for farming, because cut up by railroad tracks and newly laid out streets. On one of these patches a family may erect an arbor, or a small structure of

lattice work or boards and a corrugated iron roof with a wide veranda, for housing themselves and children during the summer months. Fences are built of wire, so as to keep the different plots apart. On these patches the children, under guidance of teachers, parents and appointed guardians, began a few years ago to sow seeds, plant shrubs, vines, and trees, or raise kitchen vegetables, each group or family according to its own desires and needs. Since the "arbors" are small they do not decrease the arable land of the allotment much, and there is still room enough left for swings, gymnastic apparatus, and similar contrivances, as well as bare sandy spots for little tots to play in. The various allotments are mostly uniform in size, and can be reached by narrow 3 or 4-foot lanes, on which occasionally are seen probationary officers or guardians, who keep the peace and settle cases of disturbance.

The "arbor-gardens" are established on every square rod of unused land round about the city, between railroads, on vacant lots, far out to the borders of the well-trained woods and royal forests. Small tradesmen, laboring men, and civil officials of low degree, etc., have found it profitable to forsake their tenements in the city and move with kith and kin into these "arbor-colonies." The dwellings they erect are of the most primitive kind and rather flimsy; no permanent structure can be allowed to the tenant, for at any time the owner of the land may give notice to vacate for the purpose of erecting a row of houses, railroad buildings, factories or other permanent structures. Not all of these arbor gardens are occupied by families during the night. Many thousands return to their city home for the night. Some parents, especially where the father

cannot free himself from duties in town, merely send their children into an arbor garden, and come to see how they enjoy themselves on Sundays and holidays.

The people, especially the children, getting some information concerning the treatment of the crops from competent advisors in school and out in the "arbor-colonies," derive a great deal of good from their horticultural and floricultural work. Families who are aesthetically inclined devote their space to flowers and trailing vines exclusively; others, utilitarians from necessity, plant potatoes, carrots, turnips, beets, beans, strawberries, and the like. The feeling of ownership being strongly developed in the children in witnessing the results of their own labor, the crops are respected by the neighbors, and pilfering rarely occurs, except perhaps in a case of great hunger. Her majesty, the Empress, visited some of the "arbor-colonies" recently and was so delighted with what she saw, with the thrift, the happiness and the health of the "colonists," young and old, that she ordered the gardeners of the royal and imperial gardens to send thirty healthy strawberry plants and a variety of flower seeds to each of the little colonists who signified his or her willingness to accept the gift. This may be the reason for the abundance of strawberries that year in the "arbor-colonies."

Several hundreds or a thousand of such patches of land or gardens situated in close proximity to each other, separated only by wire fences and narrow lanes, form an *arbor-colony* which has a governor, or mayor, who is an unpaid city official. He arranges the leasing of the grounds, collects the rents and hands them over to the owners of the land. There is always a retired merchant or civil officer who is public-spirited

enough to accept the office, to which is attached neither special honor, title, nor emolument. He is assisted by "a colonial committee of trustees" selected from the colonists who act as judges of the peace, in case disturbances should arise. Colonists who prove frequent disturbers of the peace, or are found incapable of living quietly, are stricken from the list of that particular community or colony, and their leases are not renewed. Of course there are such cases, but they are rare.

Since the size of an "arbor garden" is about 20 to 30 square rods, several hundreds or a thousand of them forming a colony collectively make a considerable community, in which the authority of the committee, or board of trustees, is absolute, and the very few cases they have had to adjudicate have almost invariably been caused by a few women of nagging disposition. Such persons are gradually weeded out. It is publicly claimed in the press that these "colonies" are literally without scandals; and that the life led by young and old is a most delightfully peaceful and happy one. This is easily explained:—People who are hard at work are not likely to be quarrelsome; good wholesome food, much exercise in the form of play and labor; and an abundance of fresh air and sunshine, are conducive to happiness, especially as the clothing may be of a primitive kind, or need not conform to the dictates of fashion.

A Berlin teacher remarked:—"It is noticeable, that since these school children are engaged in lucrative work which does not go beyond their strength, and since they perceive with their own eyes the results of their labor beneficial to themselves, a sense of responsibility is engendered which has a beneficial influence upon school-work also. Respect for all kinds of labor,

and a perceptible decrease in the destructiveness so often found among boys, are unmistakable effects of the labor in 'arbor-gardens.' It is not easy work which the children are performing, for spade and rake require muscular effort, but it is ennobling work, for it leads to self-respect, self-dependence and self-reliance, also respect for others, as well as willingness to aid others. The most beautiful sight is afforded when on a certain date agreed on by all the members of a colony, a harvest-festival is held. Then flag raisings and illuminations and, as a matter of course, singing and music make the day a memorable one."

It was well understood that many thousands of families had not the means to buy the lumber and hardware to erect an "arbor," and yet they were the very ones to whom the life in the open would be of greatest benefit. Hence philanthropy stepped in and erected the structures. The Patriotic Women's League of the Red Cross built half of all the "arbors" of the colony found on the "Jungfernheide." Many colonies reach into the woods, and naturally are of a different character from those in the open, for there tents are used instead of wooden structures. Everywhere the colonist must fence in his allotted land himself, which is done in the simplest manner by means of a few posts and a few lengths of wire; some plant living hedges. For protection during the night a number of watchmen pace up and down the lanes; this entails a cost of 7½ cents a month to each family. The season lasts five months, from May 1 to October 1.

The school-going population meanwhile attend their schools, which can be reached by means of the elevated cars or in surface tramways for 2½ cents, and much cheaper if they have commuters' tickets. Many schools

are near enough to be reached on foot. The children do not loiter on the way, but when school is out they hurry "home" to begin work in the garden, or to sit down to a meal on the veranda, which under the benign influence of sunshine and fresh air is relished more than a meal taken in a city tenement-house filled with fetid air and wanting in light. Nearly every one of these gardens has a flag pole, at the head of which flutters a small German national flag, and at night a Japanese paper lantern with a tallow dip in it illuminates the veranda. Flags by day and lanterns at night give the colony a festive appearance. The teachers find that city children who spend five months in the open air are splendidly equipped with primary ideas in physical geography and astronomy, botany, zoology, and meteorology. Their mental equipment is better, indeed, in all fields of thought, their physical health is improved, and their ethical motives and conduct are purer than they were in former years.

To realize fully the extent of these wholesale efforts in behalf of the physical, intellectual, and moral health of youth (for put children into close contact with nature, and they will improve in all directions), it is well to take a ride on the North belt line (elevated steam railroad), the trains of which start from the Friedrich's street depot and bring one back to it after a ride of an hour and a half. Then one may do the same on the South belt line. On these two trips one will see, not hundreds, but tens of thousands of such "arbor-gardens" as have been described, full of happy children and women at work or play. The men come out on the belt line, when their work in town is done. The writer was riding through the city in an open cab, and seeing scarcely any children on the streets and in

the parks, he asked, "How is it, that we see no children out?"—"Ah, sir," was the reply, "If you wish to see the children of Berlin, you must go out to the arbor colonies outside of the city. There it is where our children are." Subsequent visits to these colony gardens showed that Berlin is by no means a childless city. To judge from the immense number of arbors to be seen from the windows of the belt-line cars, there must be about 50,000 of them. As far as the eye reaches the flag poles and the orderly fences and the little structures can be seen, and a simple calculation will reveal the fact, that since the city has two millions of inhabitants, it is very likely that an estimate of some hundred thousands of children thus living in the open air, an estimate made by a city official, is not excessive. The most beautiful and best arranged colonies are not found in the vicinity of railroads, but several miles out towards the north and the south of the city. Here, where the soil is better, fine crops are raised.

If we turn our eyes homeward, and contemplate the many thousands of small efforts made in this country toward the alleviation of city children's misery, we can say truthfully, that we in America are perhaps fully alive to the necessity which has prompted the people of Berlin to action; we only need to be reminded of Mayor Pingree of Detroit and his potato patches on empty city lots, our children's outing camps, our occasional children's excursions, our open air play grounds, and the like. Still, there is nothing in this country to compare with the thousands of Berlin arbor-gardens and their singularly convincing force, which challenge admiration for the socialistic "esprit de corps" of the inhabitants of Berlin.

The "arbor-gardens" of Berlin should not be mis-

taken with the numerous "forest schools" (Waldschulen) in Germany respecting which the press has contained accounts lately. These schools "in the woods" are for sickly children, both physically crippled and mentally weak. The pupils have their lessons in the open, and the teachers live, play and work with them. Long recesses separate the various lessons, and a two-hours' nap in the middle of the day out in the open is on the time-table of every one of these forest schools. These special open-air schools for weaklings and defectives are now found in many parts of Germany, notably in Charlottenburg, Strassburg, and the industrial regions of Rhineland.

The example of Berlin has found imitation in other German cities, notably in Düsseldorf on the Rhine, where the arbor-gardens are called "Schreber-gardens" in honor of the Socialist who instigated their establishment. There is a large colony of such gardens along the Hans-Sachs street, where lima beans, peas, lettuce, cucumbers, potatoes, and many other garden vegetables are raised; even strawberries, raspberries and fruit trees are found here. But the city being more lavishly provided with parks and open spaces than others of its size, the necessity for open air life has not made itself felt, as forcibly as in Berlin.

XIII.

OBJECTIONS TO COEDUCATION.

MR. A. Watson Bain, a member of the delegation of English teachers sent by Mr. Moseley, in 1907, to inspect American schools, is said to have remarked in his report:—

“Wherever I went I found teachers in coeducational schools in every instance whole-heartedly in favor of the system of coeducation.”

This is easily explained: He visited cities only, and in American cities the man teacher, as a rule, has been eliminated, except as a supervising officer. Women are apt to see in coeducation the much desired equality of the sexes; and any such equality, be it before the law, in politics, church affairs, or educational administration, is viewed by them as a promotion of their own cause. Since the boy in comparison with the girl appears a poor scholar, at any rate during the period of adolescence, women firmly believe in coeducation. That does not sound very logical on the surface, yet it is very logical, if one supplies the required link of the syllogism:

Women are, as a rule, not aware that the sexes need different intellectual and physical, as well as different emotional and volitional training. American women, moreover, are by habit and tradition imbued with the idea that “What is good for a boy in school should be good for a girl, too,” and with a sort of legerdemain they turn the maxim around and say, “What is good

enough for a girl is amply sufficient for a boy.''* And before we know how it is done, all schools are made into girls' schools, in which the boy finds no application for his peculiar talents and bents. Not finding the chances he so much needs, and which a boys' school alone can give him, he quits school. The few high school boys who are left appear to be merely tolerated; the school, nominally a coeducational institution, is in truth only a girls' school, one that is easily managed—hence the teachers' enthusiasm for coeducation.

Let us remember that the course of study, the methods of teaching, and the mode of training in the higher grades of the grammar schools, as well as in the high schools, are designed for, and shaped according to the needs and wants of the girls, not of the boys. While I grant readily and cheerfully that the girls have the right to the same amount of education that the boys claim, and which it is our solemn duty to grant to them, I claim most emphatically that the two sexes, from twelve years of age and upward, need a different training. We measure the steps in our instruction and the method of our procedure by the peculiar combination of faculties in the girls, just as a father measures his steps by those of his child whom he takes out walking.

There is during the time of adolescence a strong desire in the average boy for exertion and application of his powers, which is not complied with at this age in the schools as they now are. He is repressed and made to progress as the girls do. He sits side by side

*The women in America have queer ways of reforming the world. An advocate of woman's rights (whatever that may mean), when asked, what law she would propose first, if she had the right to legislate, said:—"I should fine every man who expectorated on the sidewalk." That was before the rainy-day skirt was in vogue. Another proposed corsets and long stockings for men. (See Washington Post of February 27, 1908.)

with them; they are held up to him as examples, whose frailty he in his physically robust nature despises. Moreover, in many cases he has not even a male example in his teacher. If he is a weak character, he becomes effeminate. If he is a strong character, he is soon filled with disgust, and quits school to find better opportunities for the exertion of those powers which find no satisfaction in a girls' school.

I am not deceived by the flimsy argument that the girls are making more rapid progress than the boys. They are merely passive recipients of knowledge, while the boy can actively argue himself into knowledge, when he has a teacher who is ready to indulge him in that. The very presence of girls, however, debars him from such a course in a girls' school, for that is what all of our nominally coeducational high schools are. Where boys and girls are separated in different buildings, usually a greater number of boys graduate annually. This confirms the position just taken. Boys at the critical age between 12 and 18 must have examples of manliness, of man's thoughts, of man's ways of acting, of man's motives, of man's will-power and general conduct; and instinctively feeling this, they seek these qualities outside of school.

Again we hear Bain say: "Women, to my surprise, were stronger advocates of coeducation than men." If Mr. Bain was not himself prejudiced in favor of coeducation (witness his failing to see the true motive of coeducation,) he would not be surprised. It is one of woman's dearest accomplishments to make the man her slave, and to see boys in a school that has lost all characteristics of a boys' school, fall behind the girls, and thus give the woman teacher an opportunity to triumphantly point to the inferiority of the male sex.

is her delight. This is psychologically viewed so plain, that it should not be a puzzle to a man like Bain.

Yet, the truth seems to dawn upon him, for he says further on: "Women generally realize that through coeducation their sex may hope to achieve political equality with men, and that where the system prevails, women seem to get fairer treatment." That is precisely the woman's motive for advocating coeducation, but thanks to Nature's instinct, implanted in the boy, he frees himself from the female influence of the girls' school, alias coeducational school, and strikes out into different directions, where he can find opportunities for his exertions and the application of energies in a masculine way.

A German professor who had come to America to study our system of education, discussed coeducation with me. He claimed that, as far as scholastic learning was concerned, the girls outbid the boys even in colleges in this country. Yet, he admitted he had every reason to believe that in politics, in statesmanship, in executive or administrative offices, in the professor's chair, in the pulpit, in clinics, in the courtroom, in fact, wherever original thought, virile action, bold enterprise, far-reaching plans, surprising invention, administrative leadership, and other manifestations of a fertile brain were shown, the American men far surpassed the woman. He admitted, after some sparring, that it is not book-learning which has made American men so much superior to women. It is the American boy's contact with life, his early participation in public manifestations of energy, which trains the American man, not book-learning.

A German authoress, in a book on "Higher Education for Women," plainly showed that a different train-

ing is necessary for the two sexes during the period of adolescence and after. She is as emphatic as any woman can be in demanding the highest possible education for women, but she readily admits that it would be unwise to a great degree to expect and demand of the girls to take the same course prescribed for boys. She is quite eloquent in showing that the masculine mind is able to grasp scientific truth in a way unfit for the feminine mind, and again, that there are studies and activities in the course of girls' schools unsuited for boys, hence that it is a necessity to separate the sexes in the high schools; hence, also, that coeducation is not to be recommended for such schools.

In the nursery, in the kindergarten, in the primary school, in the lower grades of the grammar school, that is, before sex individuality is awakened, coeducation is proper, but not after the age of adolescence has begun. I have seen the evil influence of coeducation (which, by the way, I do not see in sexual immorality, for that is not under discussion) in the falling off of attendance in the upper grades of the grammar and in the high schools; I have noticed it in the breaking down of masculine ways of conduct, of masculine manner of action, in the decadence of logical thought, in the weakening of masculine initiative, in the prevalence of hysterics in the treatment of public questions, and therefore do not only not believe that coeducation is advisable for children after the twelfth year of life, but that it is dangerous to the nation as a whole.

Bain further says: "Of Professor Armstrong's charge that coeducation is tending to stop the virility of American boys, I could discover no confirmation. They are just as keen on games as English boys. If there is any foundation for the charge, it is to be found in the predominance of women teachers."

It is a poor argument of Professor Bain, to say a thing cannot be so, because he cannot see it; others may see it all the better. But aside from that, the boy's keenness in sport only proves the evils of coeducation. Not finding opportunities for masculine exertion in school, the boy seeks it in athletics and sports outside. If the schools were so organized that the boys' innate talents were taken into consideration, if the schools were provided with men teachers who could conduct gymnastic exercises, train, and strengthen the body, and by work in laboratory, shop, and garden, would enlist the energies, the boy would not be so ready to forsake the school.

The difference between gymnastics and sport lies in this: The exercises of the former require the participation of all the pupils of the class; they consist of methodical practices which are prescribed for certain ages, and adapted to certain degrees of strength of all the pupils, while sport consists of competitive exercises performed by a picked few, before thousands of idle ones who are merely looking on; these thousands exercise nothing save their throats in shouting and using execrable language. Eliminate competition from sports and the interest in them will vanish.

If the games Bain speaks of were social games, in which all participated, they might be considered right in their places; but they are only sport games in which competition plays the leading role, and brutality and ruffianism are the results. They are not intended for the general harmonious physical development of the majority. Gymnastics or methodical physical exercises are to the child's general health what his meals are for his bodily growth, and lessons are for his mental growth. Has it ever occurred to any one to suggest

that a picked nine eat the breakfast for the whole school, and the others sit on the grand stand and look on? Or that a picked nine learn the lessons for the majority? Self-eating and self-learning is preached, why not self-exercising?

No, no, coeducation is simply the result of economy. It costs too much to maintain separate institutions for the sexes, during and after the period of adolescence, hence all schools are made into girls' schools and erroneously termed coeducational schools.

It has often been said that the progress this nation has made is owing to the general spread of education and especially to the schools, and coeducation being the general policy in all public schools, it stands to reason that coeducation must have been one of the moving forces in the nation's progress. This is a fallacy. The nation has not become great in consequence of its schools, but in spite of its schools. The great extension of civilization clear across a continent, the immense progress industry has made in this country are to a large extent owing to millions of immigrants. They are the real manual workers, the natives, as President Roosevelt said, have been educated away from the shops and the farms. The children of several generations have been educated in girls' schools for a broad-cloth existence, that is, for occupations in which they need not take off their coats to exert themselves bodily. The high school graduates are made unfit for work; they preferably lead the life of bosses, clerks, supervisors, agents, students, professional men, in short, they pursue occupations that require no manual labor. It was not until technical high schools, or manual training schools, were established, that respect for labor was again taught, and that was possible only

because men teachers were employed to give training in manual arts in such schools.

The Washington Post discussing an essay of Prof. A. G. Webster says (Feb. 28, 1908): "He brings a strong indictment against American institutions of learning for their huge expenditures for athletics and their niggardly attitude toward original research. He shows how the tendency of education in this country is to run to superficiality, leaving the graduate poorly equipped for doing any really constructive or original work. The effect of the superficial American training is shown in inferior engineering and mechanical work. Prof. Webster makes the generalization that American talent has been more conspicuously successful in business organization and in invention that did not require great learning than in those lines that require deep thinking and solid study. * * * * In short, the point is made that Americans are by no means the masters of the material world that they imagine themselves to be. They can learn from other nations which they are inclined to regard as backward. * * * * Conscientious Americans can but confess that superficiality is so prevalent as to be almost a national trait. The inclination to skim lightly over tasks that require deep, hard study is so common in colleges that professors have practically abandoned the attempt to compete with athletics. Some of the colleges, in fact, are notorious for the lightness and frivolity of the professors themselves. The intellectual output of certain colleges, if read abroad, would justify any foreigner in suspecting that the institutions of learning in this country are kindergartens for the stage and circus.

"The roaring days of prodigality are passing. The United States within a generation or two will be up against the rest of the world in the struggle for exist-

ence. The country then will depend upon the efficiency of its individuals. When that time comes, no mere surplus of natural wealth will gloss over shiftlessness and superficiality."

While the Post, as well as the professor whom it quotes, attributes this superficiality and intellectual poverty to the lack of original research in our higher seats of learning, I desire to add, that the lack of men teachers, and the system of coeducation in high schools and colleges, are causes of even greater force, than the lack of original research.

A German teacher who spent some time as exchange teacher of languages in the Dorchester (Mass.) high school, says in his report to his home authorities:—

"The work of instruction is made very difficult by coeducation. In modern languages it causes a loss of time amounting to one-third of the whole, by having the two sexes together in the classroom. I had the impression of having two different grades before me; it was like ploughing with uneven teams. This became most obvious during exercises in conversation, though both sides showed equal willingness in the matter. When such subjects as constitution, law, military affairs, inventions, science, aeronautics and others were touched, the boys were lively in attention and participation. Most of the girls appeared to lack the organ of comprehension for such subjects. On the other hand, in treating questions touching social life, family festivals, folklore, and belles-lettres, the girls were full of animated interest, while the boys were reserved. The consequence of such experiences is that in co-educational classes a large number of subjects must be eliminated as only awakening interest in part of the class; yet these very subjects are essential parts of specifically masculine or feminine culture."

XIV.

OBSERVATIONS OF MEN AND WOMEN TEACHERS IN GERMANY.

DURING my recent sojourn in Germany, chiefly in Rhenish Prussia, I had many occasions to notice school-excursions through parks and into the suburbs or adjoining woods. They were each conducted by a single teacher, who took his or her class out and gave lessons in the open air, lessons in topography, mineralogy, botany, zoology, and history. Being an invalid at the time and obliged to walk slowly, I followed several such "peripatetic schools of philosophy," and learned a few lessons myself, which I deem valuable enough to share with my American colleagues.

The most valuable fact I noticed in observing men and women teachers was the obvious difference between the two sexes in the treatment of their pupils. I watched ten women and twelve men teachers on their tours through the magnificent parks and gardens of Düsseldorf on the Rhine, a large city which has fine and extensive parks. The women invariably acted like anxious hens whose brood had turned out to be ducklings. They were intolerably fussy, insisted upon a line of procession being formed by the children, every time they moved from one point of observation to another, and generally treated the children as absolutely irresponsible. On the other hand, the men erred a little by going to the other extreme, that is, by giving their pupils too much liberty, and not watching them as closely as seemed necessary.

But while the women appeared to take everything as very important, the class before them, their natural surroundings, their chance visitors, and not least of all, themselves, they wasted much time and a large amount of attention in trying to get the pupils into some semblance of order, before they would enter upon the subject of discussion, whatever it may have been at the time. The men usually were surrounded by the boys in loose order. The boys seemed to understand, though, that when the teacher stopped, it meant attention to what he said. The men had a fatherly way about them, which had a pleasant effect upon all their pupils. When the class moved to a new point of observation, some of the pupils would link arms in his, and when information was given, it was done in such an informal way that the boys did not consider it as an irksome lesson. Once when the teacher made a remark about a disappearing stream of water, saying, that from this point, till it reached the Rhine river, it served to flush the sewers of the inner part of the city, a boy said: "What a horrid thought, that the water of this beautiful lake should be used to cleanse sewers!" The teacher was wise, took the occasion by the forelock, and said: "Yes, it is not a pleasant thought, but think how serviceable the water is; think how poisonous gases would arise from the drains, and how soon diseases might spread, if the sewers were not copiously flushed."—I saw the boys nod, and give their approval to the good argument.

Generally the men teachers said little and addressed the whole class only when a bit of information could be presented, which would lead the pupils to wider ranges of thought. For instance, one man teacher stopped at the banks of the pond, as though merely

intending to take in the superb view before them. The class stopped too. One boy shouted: "What makes these bushes hang over the water so and hug the banks? We never see them on the hills, or far away from the water."—"Let us first see the condition of their wood." Cutting a twig, he showed that it was hollow and full of sap, the teacher said: "Notice that it requires much water to grow, and therefore we only find it near the water. It is nightshade (*solanum nigrum*). Look at the blossoms and tell me what other plants resemble these. The replies were: "The potato blossom."—"The blossom of the egg plant."—"Right; now remember, that this is a poisonous plant, just as the potato plant is. I shall have to wash my hands, having touched the sap of this plant." He stepped down to the water, rinsed his fingers and drying them said: "See, boys, it is well to know poisonous plants." There was no attempt at showing off, no air of "knowing it all," no teacher's pomposity, nothing but the pleasantest conversational intercourse; the teacher was the elder brother among the boys; yet the faces of the latter showed, that they had implicit confidence in their teacher, and that they liked him.

One day I met a troupe of boys with their teacher, whom I heard saying: "Boys, I know the older and stronger ones among you are not tired, neither am I, but we must remember the little ones. Let us sit down here, and rest." He then called the attention of the class to a historic spot, telling them of Prince Ferdinand, the brother of Frederick the Great, who had chased the Frenchmen across the Rhine, near this point after the disastrous battle of Rossbach. Far in the distance could be seen the church steeples of Neuss, a former Roman camp, the spot where Caesar had pro-

posed to bridge the Rhine to break into Germany. Here, he told them, was the spot where Varus, the Roman general, nine years after Christ, had crossed the Rhine to march into Germany, and in the Teutoburger Forest he with all his legions had been slain by Arminius (Hermann). How the boys' eyes shone with patriotic emotion!

One thing particularly impressed me. The men teachers applied the educational question Why, and thus made the pupils think. The women did not once use it in my presence. Here is an example. The class was halted at a beautiful pond, and the lady after much fuss in establishing order (an order which appeared to me utterly unnecessary), said: "Now look at this water, this is called the 'Landskrone' (the land's crown). Now you say it after me, Willie." Willie did so. "Now you, Hugo." Hugo did so. "Now all together; Class:"—"This is the 'Land's Crown.'" Teacher: "Now, let us go to the bridge and look at the swans." There was no explanation, why this sheet of water was called the Land's Crown, nothing but the bare fact, the name, which doubtless was soon forgotten after the children reached home. Another time, I met a girls' class with a lady teacher on the top of a hill in the park, and I heard her say: "This is Napoleon's hill." She had the class, as well as separate pupils, repeat it, but she failed to explain, why it was so called. Yet in both cases an explanation would have nailed the facts in the minds of the children, and the memory would forever have retained them. Namely, that the sheet of water was called "Land's Crown," because seen from the main boulevard, its surroundings, the graceful bridge in the middle, the stately trees in the background, and the luminous

flower beds near the water's edge formed the picture of a crown. It was the crown of the land full of majestic beauty. The hill was called "Napoleon's hill" because Napoleon on his way into the heart of Germany, was taken to this elevation to view the city of Düsseldorf which he was gracious enough to call "Une petite Paris." This tickled local patriotism, so that the city council named the place after him.

Another class was told by a lady teacher: "This is the Düssel, a tributary of the Rhine, after which Düsseldorf (Düssel village) is named." When an inquisitive girl asked: "But where does it begin, and where does it empty into the Rhine?" the teacher seemed non-plussed; but after a while she said: "You have all of you seen the zoological garden, and must have seen the little river there. From there it flows through this park."—How unsatisfactory! What she should have said was: It rises in the Neander Valley behind Count's Hill, where the famous Neander Cave is seen, a cave in which, for the first time, bones of primitive man were found. This cave gave shelter to the famous preacher Neander, who during the Reformation was obliged to flee from persecution. From there it flows between the hills, till it reaches the village Gerresheim, where the large glass factories are situated. Then the Düssel flows along the Count's Hill, until it reaches Düsseltal (Düssel valley), where the big reform school is situated. There you can see the river flowing slowly through the meadows. After it has gone through the zoological garden, it enters the city parks, where formerly, during the reign of the Dukes of Berg, it formed the moat of the fortress, and then it disappears under the streets and houses, and comes to the light again much soiled, at the point where it enters

the Rhine, exactly under the old castle on the Burgplatz. Historical allusions, topographical information, and artistic impressions, could have been interwoven in her reply, but she knew nothing of all that, or if she did know, she failed to utilize her knowledge.

What a waste of opportunities! What a waste of time! What a disregard of children's inquisitiveness!

Here is another example of didactics and shrewd method of man:—A class of boys were seen flocking around a teacher near the right bank of the Rhine river, watching a steamship towing eight heavily laden freight ships against the strong current. The teacher asked: "How is it, that the one small steamer can drag all that weight up the stream? Thousands of children have seen this done, yet few have become aware of the cunning way it is done."—The boys watched the tug very closely and noticed, that by means of grappling wheels it took up a heavy cable or chain, passed it along the deck, and dropped it at the stern. Several boys were soon ready to explain it, but not one of them could do so satisfactorily, until the teacher said: "Suppose you were hitched to a heavy load and required to drag it up hill; would it not aid you, if you could lay hold of a rope fastened at the top of the hill, and could pull hard, hand over hand? You see, that is what the tug does, only the rope, or chain, lies at the bottom of the river."—Involuntarily the boys imitated the grasp of an imaginary rope, and all understood the ease with which those heavy loads were moved.

The same day I noticed a class of girls conducted through the art exposition grounds by a lady teacher. The landscape gardeners were preparing the soil for a row of young trees to be planted next fall. The teacher

explained that the gardeners dug deep holes, filled them with rich soil, and in the fall would transplant young trees from the nursery into these places prepared for them. This was quite satisfactory as information goes, but one of the pupils asked: "But why do the gardeners wait till fall, before they transplant the trees?"—"Oh!" said the teacher, "the gardeners may have too many other things to do now." One pupil modestly asked permission to go and inquire of the head gardener. This she did, and while the teacher with her class waited, I saw the child run to the head gardener and converse with him, then take him by the hand and lead him to the waiting group. "Here," she said, "I have asked Mr. Gardener to come and tell you himself. It is wonderful what he has to say. It's like a fairy story."—The gardener being requested to explain, said: "Madam and little girls, trees, like turtles and toads, sleep during winter. That is the time when their sap does not rise; roots, leaves and buds do not grow; hence in fall, say in November or December, when the young trees are asleep, we take them up from their rows in the nursery, and place them in these new places prepared for them; if the shovel cuts off some small roots or injures them slightly, the tree does not notice it while asleep. When in spring, the sun begins to shine warmer, the tree wakes up, its sap rises, its roots find new nourishment, leaves and buds appear, and the tree grows. If we took up the tree in summer and transplanted it, it would lose its leaves, the roots would get dry, before they found moisture in their new places, and the poor young tree would die a miserable death of starvation. So, if you wish to transplant woody plants, such as trees or shrubs, do it when their sap is not rising, when the plant is asleep."

The teacher thanked the man for his lucid explanation, but I could plainly see the signs of displeasure with herself for not having known such a simple thing as that.

A quotation from Dr. W. H. Maxwell, Superintendent of Schools in New York City, may close this to me unpleasant discussion. He says in his annual report of 1907 as follows:—

If Herbert Spencer's conclusions are correct:—If women respond more readily to appeals to pity and men to appeals of equity; if women are guided more by generosity and men by justice; if women's minds dwell more on what is concrete and proximate, and men's on what is abstract and remote; if women see more clearly the simple, direct consequences of an act, while men are prone to consider the complex and indirect consequences; if women realize public good that is immediate, and men more clearly realize public ends that are remote; if women stand more in awe of power and authority, while men are given to criticism; if women reverence power, while men respect freedom; *it follows*: that children, girls as well as boys, should in their school work, come under the influence of the mind of the man as well as of the mind of the woman. It is of the highest importance that each successive generation of men should, without losing the natural or acquired tendency to equity and justice, acquire more of the distinctively woman characteristics of pity and generosity; and that women, without losing their insight into what is immediately beneficial and their reverence for power and authority, should acquire more of the distinctively manly characteristics of respect for freedom and insight into what is complex and remote. From the standpoint, therefore, of the development of character in the pupil through that most powerful of all forces, imitation, it is necessary to have, both men teachers and women teachers in the schools.

XV.

SCHOOL BOARDS IN GERMANY.

IT may be interesting to Americans to learn what elements constitute a city school board in Germany. In Prussia a new school law has recently been adopted by Parliament which perpetuates the custom long in use of having the profession of teaching represented in the government of the schools. Paragraph 44 of the new law provides for school boards in cities as follows:

The board shall consist of

(1) From one to three members of the executive branch of the city government (mayor, vice-mayor, treasurer, secretary or clerk, magistrates, etc.). In place of one city officer a school inspector may be appointed, even though he be not an elected city officer; (2) from one to three members of the city council, and (3) at least the same number of educational experts, among whom there shall be at least one school principal and one class teacher; (4) the ranking parish pastor (either Protestant or Catholic); that is, the oldest in length of service.

If the city be large, it may be found desirable to increase the membership of the board, so as to enable it to appoint the necessary committees, but if more members are appointed on the board, they must be in exact proportion to that exemplified in 1, 2 and 3; that is to say, if one more city officer is appointed, an additional member of the city council, and an additional educational expert must also be appointed, so that the ratio of one-third to each of the three groups be maintained,

and in this case a lady teacher may be chosen to represent the teaching profession.

There seems to be much wisdom in the provision that one-third of the membership of the school board should consist of professional teachers, but it is a thoroughly un-American idea. In German school boards the professional members are not allowed to vote on questions of their own salaries or other emoluments. With us the idea prevails, that a teacher drawing pay in the service of the city cannot be a member of a board legislating for the schools. That is the reason why city school superintendents with us have the right (and the duty) to attend the meetings of the board, but while they have voice, they cannot have a vote in the proceedings.

As a bit of information of what the Germans do in managing their schools, it seems to me very interesting to know that the teachers of a community are represented in the school board; in other words, that the profession of teaching is recognized in the government of the schools. The following reply to a letter of inquiry concerning the size of school boards may be pertinent in connection with the foregoing:

Washington, D. C., Feb. 3, 1908.

Madam:—In reply to your inquiry, I beg leave to say that 45 years of experience in school work has convinced me of the utter absurdity of large city school boards, which are working in and through committees according to the maxim “*manus manum lavat*” (one hand washes the other). Such boards demonstrate the evil effects of divided responsibility which inevitably result in confusion, if not in graft. Moreover, a board elected by wards often consists of small intelligences, whose horizon of view is bounded by the streets or wards in which they live.

On the other hand, boards too small to cope with the multiplicity of duties required of them, will perform slipshod work, especially if the professional head of the school system is a poor advisor. Nine seems to me a number which will give opportunities for a convenient division of committee labor, and for a reasonable representation of the various professional interests in the community.

But the question as to the number of board-members is as nothing compared with another, i. e., professional and efficient directorship or superintendency. Everything, so far as the school administration is concerned, depends upon that. The board, whether large or small (preferably small, of course), should confine itself, or be confined by law, to duties external of real scholastic work. The 20th century cannot tolerate a state of affairs in which saloon-keepers, cobblers, preachers, store-clerks, contractors, shysters, merchants, barbers, grocers, and persons of similar interests, elected to represent city wards, or precincts, decide:—What is to be taught, where it is to be taught, by whom, at what time, in what manner, to whom, by means of what appliances, and similar questions. Professional directorship is a “*conditio sine qua non*” in the theological consistories, in medical or hygienic boards of administration, in fire departments, in banking and commercial affairs, in judicial matters, in fact in every field of human activity, hence, common prudence would demand the application of the same principle to school administration.

If the board is small, it will confine itself to external affairs of the school administration (I think it is not necessary to specify), and leave the educational phases of the work to a competent director, to a man who directs, not merely supervises and reports; a man who chooses his own competent assistants. Under such an organization the schools will progress favorably, otherwise not.

I note in your letter that you wave aside the suggestion that the board be appointed, but since you invite an open and frank reply, I may say that I shall always

advocate the appointment of the board members by the highest authority of the community, for it is likely then, that efficient men and women will be chosen; if the members are elected, it stands to reason that political influences will prevail.

I have lived long enough to see that persons for any kind of public activity should be adequately and properly prepared for their duties; and my great admiration for our democratic representative government does not blind me to the lessons to be derived from city administrations of other nations, notably those which have monarchical governments, such as Germany. The Prussian parliament recently passed a new school law, which confirms the custom, centuries old, that one-third of the local school board should consist of professional educators, in school service at the time of their appointment. This secures a foothold in the board for professional influence, especially, since the school inspector, or councilor, as he is called, is a professional man also.

The teaching profession of this country should insist upon proper representation in the school board, not for selfish purposes, but for the best interests of public education. The proverbially wretched governments in American cities have made us understand that our American local administrative principles and methods are sadly in need of a change. In view of such a brilliant example as that of Galveston (after the flood) no one of common sense can advocate large elective school boards, nor in fact any elective commission of large membership.

If we view the management of private concerns, we shall find the secret of their success in the fact, that whosoever is employed in such a concern, either in subordinate or superior capacity, is responsible for his actions to some one above him, until the president of the concern is reached. Picture to yourself the condition arising from a divided authority, such as an administration of a private concern (a railroad, for instance) would exhibit, if its highest authority were a board of 36 members, all co-ordinate, none subordinate.

An appointed school board of a few members will, in the nature of the case, stand so high in the confidence of the community, and especially if the board be obliged to keep its fingers out of professional matters (unless the members be themselves teachers), that many occasions for friction will disappear, and the school affairs of the city will run smoothly and progress rapidly. Large boards are apt to be debating societies whose committee reports show a brave front of names covering, not infrequently, questionable actions; while a report of a committee of one or two members is apt to be one with which the signer has identified himself.

Very respectfully,

L. R. K.

XVI.

SCHOOLS FOR BACKWARD CHILDREN.

THE idea of establishing separate classes in large schools, or special schools in an entire city school system, for backward or weak-minded children, is not new in America. The first school of this kind was established by Superintendent A. J. Rickoff in Cleveland, Ohio, in 1875. He accepted the idea from the Germans, who had begun to agitate this question as early as 1860. Today, a number of large cities of this country have special schools for the weak-minded, but in most cases these schools are used to accommodate also the truants and the vicious, that is, children who are unsafe companions for the majority. The authorities and teachers, though, have to wrestle with the parents who abhor the implied idea that their children are not as good as others. There seems to be an instinctive disinclination to such segregation, owing, perhaps, to our democratic form of government, one of the principles or truisms of which is "that all men are created equal."

The Germans, who entertain the idea of social segregation as a matter of course, who even acknowledge the existence of social classes, readily take to the plan of sifting out not quite hopelessly dull children and treating them individually with great care, so as to save them for a life of some usefulness, circumscribed as it may be. As yet, we in America have little consideration for the saving of such children, until they come into conflict with the law. Our juvenile courts might be saved much trouble, if our school authorities

could rise to the necessity of establishing hospital-wards in schools for mental and moral cripples. Judging from the enormous losses of life, which the press records daily, we seem to think, that a country to whom the outside world makes a present of over a million of human beings annually, can well afford to lose a paltry hundred thousand a year. This attitude of mind will be an obstacle in the way of establishing special schools which may serve as hospital wards, or in fact any movement toward preserving society from elements which are likely to injure it.

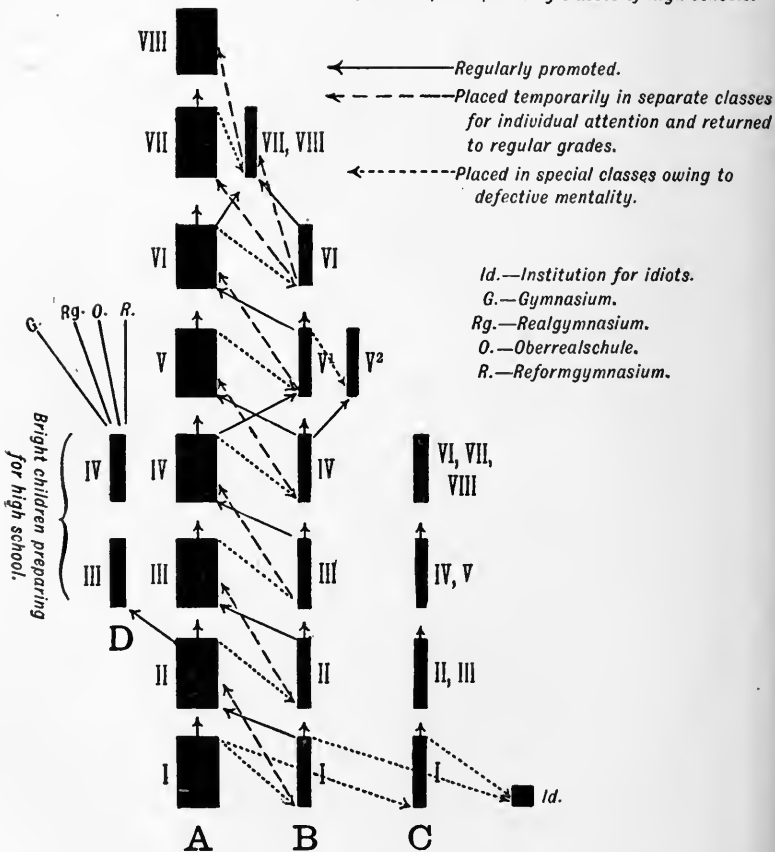
The foremost educational thinkers and managers have for years advocated semi-annual promotions in school*, so as to enable pupils who cannot be promoted to pick up the lost stitches of their school-course in four or five months, instead of losing an entire year. In many cities of the West this has been successfully carried into effect, and many a child, who had lost a grade through disease, truancy, or mental weakness, was saved from tediously marking time for an entire year. Still, this does not protect the majority of pupils from being retarded by the slow progress of the intellectual misfits. The Germans seem to be imbued with the idea, that saving a mentally weak child for a life of usefulness, will prevent a heavy drain upon the town poor-fund later on, hence that the outlay for special schools will result in a double saving for the individual as well as for the community.

In the city of Mannheim on the Rhine, a new system of grading the pupils of the public schools is introduced, which has some claims upon originality. It has three parallel courses, a regular one, which is followed

*They were arranged in St. Louis as early as 1875, and many speakers enlarged upon the subject in conventions and in the press.

by 90% of the pupils, another for temporary aid, and a special course for the dullards. The following diagram illustrates the organization.

Column A.—Regular grades containing more than 90% of the pupils.
 Column B,—Grades for temporary aid.
 Column C,—Auxiliary grades or special schools.
 Column D,—Preparatory classes of high schools.



The school superintendent of that city, Mr. A. Sieking, argues that the organization of any city school system should be adapted to the natural capacity of the children. In other words, as children should be clothed according to their size and be fed according to their appetites, they should be mentally nourished and exercised according to their capacities and strength. He points to the well-known fact that many children experience shipwreck during the course of the eight years' course, that is, fail to be promoted, some fail repeatedly. Such children in consequence of not completing the regular prescribed course remain educational torsos or cripples, as they never get the chance of rounding out their education. They fail to acquire the habit of intensive, diligent and conscientious work, the most delicious fruit of rational school training; they are left without confidence in their own powers, without willingness to work and joy in regular occupation.

He suggests three ways for saving these elements of the city's school population: (1) Decreasing the amount of matter to be learned by all the pupils, for it is not the extent or breadth, but the depth and definiteness of the knowledge gained which decide the value of school education. This method would, however, place all the schools on a lower plane of usefulness, for it would effectually check the aspirations of gifted children to rise above mediocrity. (2) Decreasing the number of pupils assigned to one teacher, so as to facilitate more individual treatment. This would necessitate a much greater outlay in maintaining the schools. (3) Sifting out the pupils unable to keep pace with the normally endowed, and giving them special courses adapted to (a) physically and intellec-

tually weak children, (b) to those who by reason of absence, or other unavoidable causes, have fallen behind their classes, though they be vigorous enough to keep pace with the majority if given temporary aid. Mr. Sickinger's chief object is to avoid a repetition of a whole year's studies, because that would be not only a great loss of time, but also a loss of self-respect, and a dissipation of youthful strength in keeping pace, which strength might be utilized after a few weeks of special attention.

The diagram is so easily understood, that it requires no further explanation. It may suffice to add the hygienic advantages accruing from this plan of school organization. The special classes (columns B and C) can offer children with defective senses, eyes and ears, a treatment which few, if any, regular schools could possibly give; they also can act as a sort of hospitals for poorly fed, anemic, and nervous children, that is, children who cannot keep their attention fixed upon one subject for a long period of time, but who get tired after a few minutes of concentrated attention. Readers who desire more information on what the Germans do in the way of teaching backward children may consult Maennel's book, "Das Hilfsschulwesen" (Leipzig, Teubner), a translation of which is published by the Bureau of Education. The "Nation" (New York) in its issue of October 17th, 1907, says on the subject of the Mannheim system:—

"The educators of Germany are deeply interested in the so-called Mannheimer System of reorganizing the public schools of the country for the special purpose of meeting the practical difficulty that from one-fifth to one-third of the pupils never succeed in finishing the course of eight years in the prescribed time. The

“Statistische Jahrbuch,” reports, for example, that in Bremen only 66.6 per cent. succeed; in Darmstadt, 63.8; in Freiburg-im-B., 66.2; in Leipzig, 73.2; in Mayence, 77.1; in Wiesbaden, 75.2; in Munich, 75. Seven years ago the city of Mannheim introduced the system of dividing the public school children, after the first year into three classes: the Hauptklassen, for all normal pupils capable of taking the full course; Förderklassen, for the less able; and for the weak-minded (Schwachsinnige) special classes, each with its own course of studies, and in case of improvement, the possibility of transfer to the higher grades. Thus, last year, 141 out of a total of 872 in the Förderklassen were promoted into the Hauptklassen. One of the important works on the subject is Dr. A. Sickinger’s “Unterrichtsbetrieb in grossen Volksschulkörpern” (Mannheim: J. Bensheimer). This new system has been vigorously discussed by educational conventions, and in educational journals, but generally has been commended, and in several instances been adopted elsewhere. Charlottenburg has done so, with an additional fourth class or grade; Leipzig has experimented since Easter of 1905 with Förderklassen; Vienna is trying the plan in some of its schools, and more recently Pforzheim, Zwickau, and Zürich have done the same. Munich reports special success with some twenty Hilfsklassen established there recently. The achievements of the movement are presented in full in a “prize” brochure of Oberlehrer Lutz of Mannheim, entitled “Welche Aufnahme die Mannheimer Schulorganisation gefunden hat.” The same problem, in so far as it affects the secondary schools from both a medical and pedagogical point of view, is discussed in two addresses on the subject, by Dr. Albert Uffenheimer, of the medical depart-

ment of the University of Munich, and Prof. Otto Stählin of the Royal Maximilian gymnasium, published together in a pamphlet "Warum kommen die Kinder in der Schule nicht vorwärts?"

In connection with the foregoing I insert here a reply given to inquiries in Washington:—

I was asked recently to give my opinion on the advisability of establishing in a large system of city schools certain special schools (or special classes in large school-houses) for dullards, truants, and morally deficient pupils. My reply seems to have given satisfaction and I was asked to publish it.

The object of the unclassified, ungraded, or special school is to relieve the schools of the city of the dullards, or intellectually backward, who retard the progress, and of the vicious elements who disturb the peace and morals of the classes. This points towards the establishment of two kinds of special schools, one for the weaklings and one for the vicious. However, it has been found by experience in two continents where such special schools have been maintained for over twenty-five years, that the misfits, both the intellectually and the morally weak or backward, are in many cases identical. The carrying out of the compulsory school attendance act brings into school pupils who are much too old for the majority of the pupils to fit the classes in which they must be placed, and who have spent much time in close proximity to the gutters, where they have acquired all sorts of bad habits so that they are unsafe companions for normally influenced children. My experience has taught me that one school may safely be used for both these elements, for in the majority of cases the vicious elements were only apparently so, having acquired bad habits owing

to the lack of disciplinary influence at home and in school. Since I am asked, I do not hesitate to say, one school may do for both elements; provided facilities be offered to those assigned to it to return to their school. This may be done by virtue of a certificate from the special teacher which reopens the portals of the regular school to such children. I reply to the questions submitted to me seriatim as follows:

(1) Number of pupils to be assigned to a special school or class?—Not more than twenty.

(2) Course of study and methods?—These should be left entirely to the teacher. He must work out his own plan of salvation. Any kind of restriction, prescription, or uniformity in regard to courses of study, methods of instruction and discipline which would hedge in the teacher in his work of reclaiming children will spoil the good work. Place the most ideal teacher you have, the best disciplinarian, in such a school; give him the highest salary possible, and let him have free elbow room, that is to say, the right to do what he thinks proper, both in occupation and conduct. Do not tie him down to a time table, to reports, to rules, nor to any course in teaching or in discipline. Rigidly exclude official meddling of supervisors or principals, and make him feel that he is trusted to work out a problem, the solution of which will redound to the glory and honor of himself and the school system.

(3) Separation of sexes?—My preference would be the separation of the pupils as to sex, but that is a question of detail which will depend upon several considerations, chiefly upon the number of pupils.

(4) Separate building?—Yes, the ungraded school to be an ideal institution should be in a separate building.

(5) Common recesses?—If an ungraded class be opened in a school-house which has from eight to twelve or more graded classes, the pupils of that special class should not feel that they are considered criminals, hence the recesses should be the same as for other classes, but it would be wise for the teacher of the special class to be on hand on the playground.

(6) Return to regular school?—Pupils of defective moral sense who have been temporarily separated from the flock and placed in a special school, may be returned to their regular classes with certificates of moral health from their teacher, precisely as hospital patients suffering from contagious or infectious diseases may return to their homes with clean bills of health from the hospital physicians. For such children, the special or ungraded school is a hospital; as a matter of self-evidence, they should stay there till cured.

(7) What pupils should attend?—Truants?—Yes, till they are fit to enter a regular class and have acquired a liking for school. School attendance is largely a matter of habit, but for some boys a taste for school has to be acquired, as gourmands acquire a taste for olives. When that taste or liking is sufficiently strong, the tendency for truancy disappears. Incurables?—Yes, unless over fourteen, when, if still incurable, they have to be assigned to the reform school, where hard work steps in and performs its subduing influence. Imbeciles and idiots?—No, they have no place in school and should be assigned to State asylums for imbeciles and the insane; but if intellectual weaklings are meant, I should say, Yes. (I refer to Klemm's "European Schools," pp. 77 to 92; also to "Zeitschrift für Kinderforschung," which gives information of German schools for dullards).

Depraved?—It depends upon the grade of depravity. If it is so that the children are beyond, or rather below, educational influence, they might be excluded from all the schools and handed over to the corrective agencies of the State. Society applies quarantine against the bubonic pest, leprosy, and other terrors, likewise it should quarantine moral lepers. Still, in our age of hyper-sentimentalism the idea of a child being unreclaimable is repulsive. The maimed?—If they are only physically crippled and not mental, their place is in the regular, not the ungraded school.

(8) Percentage?—It has been found at various places that less than one half a per cent. of the regular school attendance, in some not one-tenth of a per cent. belong to the “candidates” for special schools. More will be found in the schools of “the bloody fifth ward” or in schools adjacent to tenderloin districts, than in others. I should leave statistics alone, and take the intellectual and moral misfits wherever I found them, just as the Board of Health takes the smallpox patients regardless of location.

(9) What are the preferred studies?—That question is evidence of the querist’s intention of applying the Procrustean bed of prescribed courses of study, prescribed methods of instruction and set rules of discipline. That is a sad error. My answer to the question is found in reply to question 2.

(10) Manual training?—Leave it to the teacher of the special school to decide. If I had to teach such a school, I should, of course, introduce manual work of many kinds.

(11) Request for a time table, daily or weekly program, and a copy of the course of study again gives evidence that the querist intends to hedge his special

school in too much. Away with official supervision and meddling! A hospital cannot indulge in uniformity. If anywhere in a city school system absolute freedom is to be granted to the teacher, it is in the special school for backward pupils. However, the special teacher, coming, as he is supposed to do, out of some graded school in town, will know the requirements of each grade, and will attempt to fashion his work so as to enable his pupils to re-enter the classes from which they were temporarily excluded. Perhaps he succeeds in advancing his pupils so well that they may enter higher grades than the ones from which they had been excluded. At any rate, it is wise to leave him severely alone, and allow him to do the best he can do in each individual case. I am acquainted with the teacher of a special school who now and then invites an Italian organ grinder into the school, and gives his pupils a concert, or a dance. The boys go through fire and water for him. The official hands of the superintendent and supervisors are kept off his school, and it flourishes.

The "Zentralblatt für die gesamte Unterrichtsverwaltung in Preussen," the official organ of the Prussian minister of public instruction, gives in its September-October number of 1907 comprehensive statistics (for 1907) of auxiliary schools in the different provinces of Prussia. These are summarized as follows:

Auxiliary Schools of Prussia.

Schools	204
Pupils	12,734
Classes and teachers.....	690
Men teachers.....	544
Women teachers.....	146
Average number of pupils to a school.....	62.4
Average number of pupils to a teacher.....	18.5

XVII.

THE SCHOOL-CITY. SELF-GOVERNMENT IN SCHOOL.

Introduction.

THE idea which prevailed in this country for many years, namely, that to whom God gives an office he also gives the requisite understanding, has given way to the conviction that every occupation, every position of responsibility in business, every profession, and every public office requires a specific preparatory training. Even the church, before it confirms young people in their membership, requires them to go through a course of instruction adapted to prepare them for participation in the sacraments and exercises of the church. There is no kind of labor, no kind of life, which can do without special preparatory training. General education, with no special purpose in view other than that of developing the student's mind and ennobling his character, will make special training easier to acquire, but general education alone will neither make a tailor nor a legislator, neither a soldier nor a teacher, neither a gardener nor an engineer, neither a laundress nor a bishop. General education will develop the innate talents of man, will arouse ethical judgment, and build up character; it will lay the foundation to perfect men and women.

In our times of multiplicity of occupation and interests, division of labor and higher culture, which carries with it higher responsibility, more is required of men

and women than a cultivated mind, good moral character and strong will, as well as a healthy body. An additional requirement is preparation for a specific kind of application of energy. General education is likely to reveal special likings, strong trends and particular aptitudes in the young, and not only show them in what direction they may safely go to become self-supporting and successful, but also aid them, by means of the aptitude it has developed, to choose the directions in which success beckons. But that alone will not make success in life assured. There is always necessary a particular training in special lines. The artisan knows this, when he requires a period of apprenticeship in trade; the professional man knows it, because he requires special instruction for the candidates for admission to his profession; the farmer knows it, for he sends his sons to agricultural schools; the merchant knows it, for he particularly insists upon a specific commercial training; the teacher needs his normal school training; the soldier and sailor their theoretical as well as practical training; in short, there is required for every application of energy an amount of specific knowledge and skill without which "A person may be a good man but remain a poor musician," as the German proverb has it.

It is true, the required special training for one's vocation, its technique, may be gained, as it has been gained in most cases in the past, through experience; but if so, it is done at a large expense of energy and much waste of time and material, a thing which the conditions of modern life cannot tolerate.

The nations of Europe recognized this necessity for special preparation in all domains of human effort sooner than we did, because fierce competition in their

thickly populated centers brought them face to face with it, while the earlier primitive conditions of this country, and its apparently unlimited space for the application of human energy, seemed, for a long time, to render minute preparation for specific purposes unnecessary. These times have gone never to return. The sleepless instinct of gain, the rising waves of competition in a phenomenally increasing population, the untiring diligence of scientific exploration, the wonders of mechanical contrivances, and other agencies combine in demanding careful, painstaking and thorough preparation for all conditions of life, for every occupation and profession.

It is to the glory of our municipal, state and federal governments, as well as private initiative, that facilities have been offered to the young for acquiring such preparation. Scarcely a trade or occupation, and no profession now lacks adequate facilities for the preparation of its devotees, by handing over to them its past and present achievements, and laying a solid foundation for future progress.

In a republic, moreover, in which every male citizen participates in the affairs of the State, and where in no very distant day every female citizen will do also; in a country in which the man is first a citizen, and then a professional man, farmer, or officer, special training for citizenship seems more urgent than in countries with less or no self-government. In former centuries, when to be a citizen meant to be a sound churchman, it was considered that preparing for church duties was also preparing for citizenship. Morality was rooted in church tenets. Duty was derived from obligations to the church, and in monarchical countries, such as Germany, that idea is still the basis of instruction, since

the course of study prescribed for public schools in that country specifically mentions a "religious-moral education," that is, a morality derived from religion to be aimed at to produce good citizenship.

In this country, where State and Church were prudently separated, it took nevertheless some time to see, that a man may be pious and faithful in the performance of church observances, yet be a poor citizen. The conviction has been borne upon the nation, that the same policy which the church follows, namely to prepare the young for membership in the church, should be followed by the State for citizenship.

In many states of the Union, and in many communities, certain qualifications are required of the immigrant, before he can become a citizen after five years' sojourn. The courts having jurisdiction to grant citizenship require of the applicants knowledge of certain facts concerning the three branches of our government and the principles expressed in the constitution. And to ascertain, whether an applicant is in possession of that knowledge, the court submits him to an oral examination. No such examination is required of the native, it being presupposed, that the youth gains the requisite knowledge through observation and experience. But neither the adult immigrant within his five years' probation, nor the native youth twenty-one years of age, can be in possession of sufficient knowledge of civics to be a good citizen and an intelligent voter, without special instruction in civil rights and duties previous to his becoming a citizen.

In a characteristically American fashion this conviction has found expression in school textbooks for citizenship, or civics (as civil virtue was termed). A number of skilfully compiled text books made their

appearance, some fifteen or twenty years ago, all of which had the benevolent purpose of offering, in appropriate manner for children, knowledge needful for future citizenship. But partly owing to the rigidity of conservatism among school authorities frequently opposed to innovations; partly owing to the fact that most teachers are women lacking practice in, if not knowledge of, citizenship; partly also owing to the opposition of the clergy, who still adhere to the idea that civil virtue is only part of religious virtue; but chiefly owing to the fact, that the text book method is poorly adapted for training in citizenship, the movement towards special training for citizenship failed to make headway, or was narrowed down to mere spectacular patriotic exercises, such as flagdrills and flag-raising, which are outward signs of inward convictions often more or less lacking or undeveloped.

In France, religious instruction was abolished by law in the schools of the State, and appropriate lessons in morals and civics were introduced, but simultaneously with the publication of guides, manuals and texts for the study of morals and civics, the teachers were specially prepared for this new duty. The government, both, the legislative and executive branches, bestowed much attention to the vigorous promotion of the study, and the normal schools made it very prominent in their curricula. To-day the study is introduced into all the state elementary and secondary schools of France.

In Switzerland, also, special instruction is given in civics to pupils who have passed the eleventh year of life, but text books setting forth the rights and duties of citizenship, the constitutional construction of State and federation, the relations between the individual and his neighbor and the government, etc., are given into

the hands of all students in schools of secondary character and all elementary continuation schools having pupils over 14 years of age. The texts are brief and contain only essentials. The teachers are carefully prepared for the study of civics in normal schools.

It was left to teachers in the United States to find a novel way of teaching civics different from that tried in Europe, a way which exemplifies the maxim "We learn to do by doing." It is particularly gratifying to observe that the discovery of this new way was made in the pedagogical field, and that it was not proposed by lawyers and physicians, not superimposed by law upon the schools. The new American way, or method, of preparing for citizenship is based upon the educational principle, that self-activity, self-determination, self-command and self-government are not only the *results* of training, but may be used as powerful *means* in producing strong character. As self-acting makes the skilful artisan, self-command will make good citizens, and no self-government in local, state or national affairs is possible without it; but no art can be learned without practicing it.

Pedagogy has tested the principle before in various ways. The history of education records several attempts at self-government in school, for instance in the Philanthropine in Dessau, Germany, during the eighteenth century, in some of the Pestalozzian institutions, and in other places in Europe. But these efforts appear like mere germs in the light of subsequent events in educational history. They had little generative power in countries where authority in governmental departments organizes, directs and manages all educational efforts, where the weighty hand of the State government lays down the principles to be fol-

lowed and watches over their application. Moreover, self-government is distinctly hostile to the monarchical form of State government. The present writer remembers well his professor's tone of conviction with which in Germany some 48 years ago, he pronounced it a postulate of pedagogical science, to wit, "School can never be a republic. It must ever remain a monarchy, a government of authority; for as long as the young do not know how to govern themselves, or their own impulses, there can not be devised any successful mode of republican government for schools. Only those who have learned to obey authority can afterwards be placed in positions of command."

This idea holds sway in Europe, and has held sway in this country for a long while, but as our civilization progressed from somewhat primitive conditions, the educational machinery lost some of that rigidity it had in former times. Corporal punishment has almost disappeared from our American schools; self-reporting is frequently resorted to, which makes the pupils guardians of their own conduct; and other features of present school management indicate a loftier purpose, more refined methods of discipline, and a higher respect for the dignity of the child. Of course, these ideas are not generally accepted as yet, they are pronounced mooted questions by some, but an objective observer can not help seeing that the trend of our entire civilization is in the direction of less authoritative and more self-government, both in the adult's conduct as prescribed by law, and the child's training as conducted by teachers and parents.

Self-Government as a Means of Teaching Citizenship.

The American plan of applying the principles of

local self-government to the discipline of a school, sprang into existence almost simultaneously in several places. In some places the plan was applied as a pathological remedy for unruly elements in summer schools and in reformatory institutions. Of late years, much attention has been bestowed upon the subject, and a league or society for promoting the education of our future citizens in civic duty has been formed, which league promotes all efforts to introduce the new method into schools, by giving advice, preparing printed matter needed, and reporting from time to time what progress the movement has made. The president of this league is Prof. Wilson L. Gill, the author of the plan of organizing the schools into mimic municipalities.

. It has happened frequently in the practice of medicine, that a mode of diet, or a specifically prescribed mode of living for invalids, was also found beneficial if applied to healthy persons. In the body politic a remedy, i. e., a law designed to cure corrupt government, has often been found to act beneficially upon normal and well-conducted governments, acting as a safeguard and educational guide. so to speak. Hence, it is but natural that this new mode of conducting school discipline by self-government was first applied in institutions which needed corrective measures, and in such as stood under no direct influence of established school authorities, as private schools, summer schools, school colonies, reformatories, etc. The editor of the *British Review of Reviews* (Oct. 15, 1897), called attention to the new educational movement, saying:

“The New York project to which I wished to call attention was started at a vacation school. It was based upon the experience gained by a somewhat similar experiment tried the previous year at the West Farm school. This school had for some time been very

unruly and extremely hard to manage. Last year (1896) it was suggested by Mr. W. L. Gill to the vice-principal, that school discipline might be improved, if he evoked the principle of self-government, and a large part of the duty of maintaining order were turned over to the scholars themselves. His plan was to treat the scholars, as if they were a nation, and to throw upon them the duty of electing the house of congress, senate, and president. The plan worked extremely well. The president elected by the scholars, aided by his ministers and by congress, effected a magic change in the discipline of the school. From being turbulent and unmanageable, it became an orderly institution which gave the teacher hardly any trouble at all. The success of treating a school as if it were a microcosm of the nation, led Mr. Wilson L. Gill, founder and president of the Patriotic League, to hit upon the happy idea of developing the scheme, by substituting the organization of the city for the organization of the nation, as the conception before the scholars. * * *

* * * Vacation schools in America, the same writer continues, are held in the public-school buildings, but they are not under the control and rules of the board of education, and it was therefore decided to make the experiment in a vacation school instead of waiting for the assent of the board. It was also argued that consent would be more readily accorded if the experiment succeeded in a vacation school, than if it had to be tried for the first time in a public school. When the Patriotic League took hold of the Norfolk-street vacation school, the first step was to declare all the scholars, irrespective of age, citizens of the mimic city of Norfolk-street school. There was no distinction of sex or of age. Every scholar was a voter with one vote."

Principal Myron T. Seudder of the Normal School at New Paltz (N. Y.), describes the formation of a "School City" briefly as follows:

A school city is formed thus. A school organizes into wards, as many as are convenient, each ward holding its meetings, and appointing members to the nomi-

nating convention. The nominating convention nominates such officers as mayor, sheriff and judges of the city. An election is held in which the citizens elect their officers. The wards elect members to the common council. Thus equipped the school city proceeds with its functions very much along the lines of real city government. A charter is granted by the faculty in some such way as the legislature grants charters to cities. The mayor appoints heads of departments, fire chief (to help to prepare for fire drills in the school), chief of police and other officers. The common council formulates ordinances, violators of which are brought before the judges who fix penalties. The supreme penalty is deprivation of rights of citizenship which throws the offender into the hands of the faculty. The offender thereafter, is no longer under the jurisdiction of the School City.

In accordance with this scheme each department has its school city organization. The charters of the intermediate and primary cities are similar to the charter of the normal city but are briefer and simpler.

Now in order to understand the school city organization rightly, two facts in regard to it must be kept in mind. It does not deprive the teacher of governing power, yet it rests real power in the pupils. It thus cannot degenerate into anarchy, nor is it a mere make-believe, and valueless as any unreal thing must be. It exists as an organization by virtue of the delegation of power just as do all cities chartered by the state legislature; and its power is no less real than theirs for the fact that the teacher stands behind it as the state behind them, to prevent any abuse of that power. * * * * *

The principals and teachers are in fact officers of the state, and must maintain certain governmental authority over the children who are within their jurisdiction. They are responsible for the conduct of their pupils. This responsibility is not altered by the School City. The teacher cannot divest himself of his responsibility to the state. This fact, however, is not incompatible with his establishing among his pupils a government under

their own management, he is acting in this as he must in other matters as their guide and leader. This he can continue, unless interfered with by a higher authority, as long as he can lead the children to preserve by their own government, the necessary good order of the school.

The editor of the *British Review of Reviews* says:

“It is rather staggering to the slow-going conservative mind to know that the whole machinery of government in a school city is to be turned upside down every month when new elections will take place, so that everyone may have a chance of holding an office. Out of a school of 1,000 children, 150, it is estimated, will be needed as officers. There are about twenty-five classes in a New York City school, each of which will become an election district electing one member to the municipal council. Courts will be established and judges chosen and jurors impaneled in the ordinary way. The most elaborate provisions have been drawn up to enforce sanitation and teach the children the laws of health:

“There is to be a sanitary bureau and a bureau of records. The officials are: A president, a commissioner (a teacher, corresponding to the health officer of the port), the president of the police board, one secretary, a sanitary superintendent, five assistant sanitary superintendents, ten food inspectors, fifteen sanitary inspectors, five hygiene inspectors, and several medical inspectors, besides a squad of ten sanitary policemen commanded by a sergeant.

“The food inspectors,” says the sanitary code, “shall inspect all articles of food and drink brought into the city for consumption within its limits. They shall give information to citizens regarding proper food and drink; how prepared at small expense, etc., and shall assist citizens in properly preparing food for consumption (e. g., removal of the decayed parts of fruit, etc.).

“The hygiene inspectors shall examine the citizens with reference to cleanliness of the face and hands, condition of hair, condition of clothes in respect to cleanliness, neatness, repair, etc.

“The sanitary inspectors shall inspect the condition of desks, schoolbooks, clothes, closets, toilets, etc., as to neatness and cleanliness. They shall prevent spitting on the floors, staircases, etc., and shall warn citizens against spitting on the sidewalks elsewhere, except into proper receptacles, and then only when absolutely necessary.

“The medical inspectors shall examine the citizens daily, immediately after they enter the city, and shall report to the assistant sanitary superintendent the names of any who do not feel well.

“The sanitary police are to enforce the regulations, and reports are to be made. Verbal reports on the part of each assistant sanitary superintendent to the proper teachers each morning in regard to those citizens who do not feel well, and warnings and complaints are to be issued.”

Dangers of and Objections to the Plan.

It may be well to point out some of the objections raised in connection with the adoption of the schemes of self-government in school. A glance into the history of American public education reveals a tendency to accept new methods of teaching and managing schools without careful consideration of their bearing upon past and present conditions. New ideas and theories are often accepted thoughtlessly and propagated at the expense of established usages found successful. This is done in many places with a wasteful disregard of the real object of school: to train as well as to teach the pupils. A few instances of hasty actions of this kind may be mentioned to point out the danger in the path of the new movement.

When object teaching was first recommended in America by Horace Mann, thoughtful teachers saw the eminent truth of the principle that “observation is the basis of all cognition,” and presumably recommended

its application. But among teachers lacking professional preparation it led to over-application of objects in teaching. All learning with them was made concrete, and the aim of teaching arithmetic, for instance, which should be to enable the child to deal with abstract numbers, and to think in abstract terms, was lost sight of, so that little children did not dare to multiply or subtract, except when they had sticks, buttons, or other objects, with which to demonstrate the process. Pestalozzi's principle "Observation (Arschauung) is the basis of all cognition" was interpreted to mean that cognition without constant observation is impossible. The principle was ridden into the ground.

When the introduction of Froebel's Kindergarten was advocated, a like error was committed. The Kindergarten, it was claimed, was the panacea for all school evils, an error which, later on, school-gardens and manual training shared with it. Kindergarten methods, Kindergarten plays, Kindergarten songs and Kindergarten dances were introduced into the elementary school, and thus a method that was designed for the pre-scholastic age, was applied to a more mature age. People lacking a proper consideration of the fitness of things soberly advocated Kindergarten methods for high schools and colleges. Of course, this weakened the force of the Kindergarten as well as that of the school. An Art Museum at Cologne has a collection of paintings from the Middle Ages in which the artists' lack of perspective is forcibly illustrated. In a group of figures the farthest in the background is painted in the same dimensions in which those in the foreground are painted. This lack of perspective is often found in the advocacy of new educational movements.

When one day practical people warned against the too early use of technical grammar, teachers and superintendents who could not separate essentials from non-essentials, threw all grammar lessons overboard and substituted what has since become a well-understood catchword "language lessons." The child was poured out together with the bath, as the proverb has it. At present, grammar is again asserting its claim to a place in the curriculum.

A similar pendulum-swing was seen in the elimination of mental arithmetic. A very sensible demand to do away with special text books for mental arithmetic, because all arithmetic should be mental, resulted in making all arithmetic written work, so that children could not do simple examples except with the aid of the pencil. It needed much energy and time of teachers who had the sense of perspective sight to set this matter right.

Not long ago, geography as a study seemed to be an impossibility in the elementary schools, unless the pupils were allowed to work out continents in putty, clay and sand. The modeling board was installed in many schools, and the pupils had "a good time in creating worlds" at the expense of vital study, cleanliness and order.

Thus a new epoch dawned when the study of drawing was reformed. Art study soon supplanted the indispensable elementary work without which art work can not even be understood, much less performed. Singing was made a burden to children by requiring them at a very early age to learn the theory of music, and in the matter of penmanship like extremes are noticeable.

Nature study is another panacea which has shaken

the elementary school down to the foundations. The fact that the lower schools are called elementary schools, because they deal altogether and exclusively with the elements of knowledge, was disregarded, and nature study, a legitimate branch of study which should be confined to object lessons given for the purpose of awakening thought and developing language, was treated "scientifically." That is to say, geology, mineralogy, botany, zoology, physics, chemistry and meteorology found places in the curriculum, each as a study by itself, much to the detriment of absolutely necessary studies such as language and arithmetic.

But the lack of perspective, or philosophic balance, was never more forcibly displayed in school work than when child study was advocated. This, however, is a period of the educational history of our country, so recent, that a mere mention must suffice.

A common observation, then, is that many untrained teachers see panaceas in plans of improvement designed to correct errors in method or matter of instruction, in discipline or management, and not only expect them to cure all evils, but exploit them at the wasteful expense of real progress in all directions. The whole ponderous weight of the school machinery of a town, or an institution, is brought to bear to introduce the novel method or theory, and time and energy of pupils, teachers, principals and superintendent are expended in promoting it almost exclusively. A sad mistake, which can arise only among teachers without sound professional training, who cannot see the woods owing to the many trees they encounter.

This is the danger ahead of the new movement of making each school a little municipality and letting it govern itself. The attention of the pupils will be

withdrawn, at least for a time, from their legitimate schoolwork; drafts upon the teachers' and principals' time and strength will be made, which cannot possibly be met without detriment to the performance of duties for which they are primarily appointed. The whole working of the school will, for a time at least, be under the influence of the republic's, or the city's, election contests, and an unavoidable unrest, not to say disturbance, will be a serious obstacle to the lessons of the day.

Wise superintendents, principals and teachers will, however, not reject the idea of the "School City," but in applying it to their schools will not disarrange the established order of study, the necessarily required rate of progress in learning, nor be remiss in watchfulness of their black sheep. Certain school superintendents to whom the plan has been submitted for adoption approve it, but they are dubious as to whether it might not interfere with the regular work of the schools, keeping the pupils longer than the regular hours, or distracting their thoughts from their studies. The Patriotic League, however, is confident that none of these evils will result. Its president says:

"The teachers are required to be in their class rooms about twenty minutes before school begins every day, and a part of this time would be all that would be required for the running of the whole city government. On one morning the primaries could be held, and the next convention could sit, and the next morning the election be held. The counting of the votes, the canvassing, and the induction into office of the elected members could each be taken up in turn. On Mondays the commissioners could receive reports from their subordinates, make their own reports on Tuesdays, and on Friday afternoon the council could sit. Except for enforcing the rules there would be no work

or thought required of the pupils during any but the time now wasted in the mornings while waiting, or the half hour on Friday when a part of the pupils are now allowed to go home early."

From all the Patriotic League has published on the subject of the School City, all of which is most commendable, avoiding needless controversy and acrimonious discussion, one thought important enough to be emphasized in this place, may be quoted. Mr. Gill says:

"In organizing a School City, particularly in the lower grades, the wise guidance of a teacher is absolutely necessary. A School City will not succeed without. No teacher should feel, that when a School City is organized, he may withdraw into his office, or behind his desk, and let the City take care of itself."

The teacher, then, is and must needs remain the providential power in the case. All success of the School City depends upon him or her. Nothing can remove that fact. If the teacher be a born educator, he will succeed in making the class of boys and girls under his charge a self-governing body, and if he lacks prudence, tact and foresight, the attempt at organizing self-government will inevitably fail. But is not this the case with every educational reform movement? No one thinks of laying any reform work into the hands of inexperienced, unfit persons, nor into the hands of persons unsympathetic and indifferent to the cause, whatever it be. This should be borne in mind, if the cause is not to fail in consequence of choosing the wrong tools for execution. Discredit to any reform movement comes through its being supported by persons who fail to understand its purport and range.

Another danger to the movement under discussion is the fact that one cut and dried plan, say a sample charter or constitution and by-laws for a School City,

can be used for every school, every city and every section of the country. If that were expected, it would preclude all spontaneity and originality on the part of the teachers, and would soon develop a rigid uniformity, the death of any healthy improvement. Hence by adapting a plan exemplifying the School City, such as Mr. Gill has prepared, it must be understood, that it is a plan devised by him, and executed in a variety of manners at different places. Neither its author, nor those affiliated with him in the work, consider it authoritative, but they advise its careful study and adaptation to local circumstances. It will serve as an example, and as such will serve better than mere suggestions would.

Teachers to whom Mr. Gill's plan has been submitted raise the following objection. Young children's intelligence is not developed enough, and their impulses are still too little regulated and checked by judgment to (a) submit to republican discipline as exercised by their schoolmates, and (b) as officers to carry out rules with equal justice to all, themselves included. The plan, it is urged, may answer in high schools and colleges, but scarcely in primary and grammar schools. To this the reply is made, that for younger children an abridged plan may answer better, that is, a machinery of government with fewer wheels, cogs and cranks than the complete School City. For every part and branch of education there is a graded course developed in the course of time, a pedagogical technique, especially adapted to age and aptitude of the pupils. But it has taken much time to develop it. Experience will in due course of time also teach, what part of the School City plan, or government of the pupils, by the pupils and for the pupils, can stand the test and prove

successful. The idea is so eminently and characteristically an American idea, so logically grown out of our form and practice of government, that it seems to deserve the heartfelt sympathy and earnest study of American teachers.

XVIII.

TEACHING CIVICS.

[The following four questions were submitted to the author, who offers them with replies.]

1. *Should the public schools undertake to teach systematically the science of our government?*

IF by "public schools" are meant elementary schools (with pupils from 6 to 14 years), I should say: No, not systematically as one would teach arithmetic, but incidentally, until the study of United States history is taken up, when incidents become as plenty as blackberries. The term "science of government" is very objectionable in the foregoing question. Not 1,000 in a population of about 90,000,000 attempt to study the science of government systematically; in fact, but very few study anything systematically and thoroughly, unless as specialists. Science in this case is a big word for a small thing, and reminds one of such presumptuous expressions as the "geometry of dressmaking," "philosophy of horse-shoeing," or the "art of street-sweeping." If science in general is systematized knowledge, it would seem impossible to teach this one in elementary schools, the young mind being too immature for abstract reflections, such as are necessary in teaching a science which would be in its proper place in the high school, in college, and in the university. What should be done in the lower schools is this: To make the pupils acquainted with the important facts of self-government found in our Democratic-Rep-

sentative Republic; to do it in a practical way by starting from the known and going to the unknown. Leading principles, such as our threefold governmental institutions (executive, legislative, and judicial branches), can be exemplified by referring to the mayor, town council, and judge at home. The bare rudiments of national economy can be taught with reference to domestic economy, etc. Such a practical course of talks is what may be attempted below the high school in connection with geography. I readily grant that though this may not be science taught systematically, it is more than millions of pupils in our country now get. In order to more pointedly state what should be done, I may apply an analogy: Teach what properly is termed "Civics" in the same way, and to the same extent, in which morals are taught. Morals as a separate study is not advisable, and yet morals should permeate the entire school instruction. It is not necessary to give separate lessons on "Thou shalt not steal;" nor is it done, and yet what pupil ever leaves our common schools without being deeply impressed with that moral truth?

2. *What should be the scope of such teaching?*

Hence, the relation of such teaching to the science of government is the same which object lessons bear to physics, chemistry, botany, zoölogy, etc.

3. *At what point in the child's education should it be begun?*

Really, as soon as the child enters school, for with the first lesson in obedience to rules which affect others as well as himself; with the first demand for punctuality, with his first performance of duty and his dawning comprehension of equality of schoolmates, etc., etc., the child learns the rudiments of civil virtue (civics)

in a practical way. In connection with celebrations on national or state holidays instruction in civics can be intensified and emphasized. Incidental talks for the purpose of awakening patriotism should be given whenever occasion offers. But as soon as United States history is taken up the present state of our government is mirrored in its past and the events which molded it.

4. *What method would you approve?*

The wording of this question is as objectionable as the first, because it uses a term concerning which there is no unanimity of opinion in this country. What is method? Authority says: "Method is a way of reaching a given end by a series of acts which tend to secure it." If this definition is accepted, the foregoing three answers cover this fourth question. But I may add: We teach physiology and hygiene,—the science of government and law of the body,—in the lower schools. Now, law and political economy are simply physiology and hygiene of society or the state, hence treat these subjects accordingly.

XIX.

HAS EVERY ONE A NATURAL CALLING?

IT is not a rare occurrence to hear of a person, that he has "missed his calling." People mean that his natural faculties or endowments are better fitted for other kinds of work than the one in which he is engaged. Here, then, we meet with the presumption that the person in question is especially well qualified for a particular occupation. Upon this presumption is based the meaning of the word "calling." He who is called to perform a certain kind of work, or to fill an office, and is given credit for the qualifications it requires.

But may we ask: Is there any such thing as a natural calling for everyone? That is to say: Is there in man a combination of faculties, which qualifies him for a certain kind of activity, and for no other? Is he predestined, to use a popular term, to his calling by the peculiar mixture of natural gifts he possesses?

The Germans are apt to answer this affirmatively. They maintain that every one is particularly well equipped by Mother Nature for one kind of activity, but that it is difficult to discover for which one, and that many persons fail in discovering it, choosing a field of occupation for which nature has not intended them. In many cases their chosen profession or occupation is not the right one which is illustrated in numerous cases. In truth, the fact that many pursue a calling in which they are not successful, seems to indicate the strength of the argument. Yea, "to miss one's calling" was a proverb long before Bismarck characterized the journalists as men who missed theirs.

In America we are apt to answer the question in the negative, and just as emphatically. The American will grant only in rare cases, that a man may have a natural calling. Generally it is asserted that every one has the calling to earn his own livelihood; and as to the different kinds of human activity, our reverence for the self-made man prompts us to believe, that every one is capable to do anything, provided he takes hold of it with pleasure and good will.

Here, then, we have two opposite opinions: On the one side, the German idea, that every one is equipped, that is, called for a special kind of work, which idea has been developed in the most ideal manner, and defended by the ablest arguments. On the other side the American idea, that every one may be, or is, prepared for, or called to many, if not to all kinds of work.

Which of the two ideas is correct? Either or neither of them? If neither, which one comes nearer the truth?

In order to answer understandingly, it will be well to inquire into the origin of the two diametrically opposed ideas.

The Germans are an old nation with a history and culture of more than a thousand years. When first appearing upon the historic stage, they were divided into ranks: High and low nobility, free-born retainers, and serfs or servants, among whom were again distinguished body servants and servants of the estate. When through war and strife, particularly in consequence of hostile invasions, it was found necessary for many to leave their isolated abodes, crowd together in cities, and live securely side by side behind ramparts, palisades and town walls, the social status of former times could not be retained. It was hard to give up

privileges, for he who is in possession shuns the change, and it is proven in history that it is easier to yield an inborn right, than to relinquish a privilege (a private right). But necessity knows no laws. The privileges of the free-born were disregarded in towns, where all had to live together side by side, and the will of the majority became law. The cities were populated, and soon became the very backbone of resistance to oppression and transgression of princes and nobles. In due course of time inequalities vanished, and the citizens acquired equal rights, though not until after hard struggle and civil strife.

Even noblemen found it necessary to resort to some occupation, where everyone was obliged to make a living, and so we see families of great repute and noble name become merchants, armorers, etc. And just as among the Romans, some trades were highly esteemed, others despised, we see in the cities of Germany that some occupations become honored, others despised and detested. The patriarchal government of those times soon regulated everything, even the number of masters in each trade. Guilds sprang into existence, originally for the protection of their members, afterwards for the exclusion of outsiders. Soon the guilds were sharply defined and formed communities within the community. Even within the narrow confines of a guild numerous grades and subdivisions were established. There were tailor, carpenter, weaver, cobbler guilds, etc. Joiners and carpenters were not permitted to confound each others work, no more than could nail and hoofsmiths, bricklayers and stonemasons. The cobbler who made men's shoes and boots was prohibited from making ladies' shoes, for that was meddling with someone else's trade.

These guilds have a history of eight hundred years. Their pernicious influence upon culture and civilization is a matter of history, and need not be stated here; but it must be mentioned that they fostered the idea of seclusion and separation. They gave rise to the idea of a predestined calling for everyone. And this idea became so predominant that the accident of birth decided not only nationality and religion, but also the calling of the child. And to a very limited extent this is still the case in our times.

In this country we ridicule the idea. Here the newborn child is not placed face to face with such an idea. He breathes the free air of a country which enjoys political and social liberty, as well as liberty of trade. In Germany the child seems to inherit the germ of the idea, that his destiny is preconceived, and he inhales, figuratively speaking, an atmosphere which is fitted to develop this germ. A child of German parentage in America may inherit the same tendency, but the tendency dies away under the influence of the unfavorable circumstances surrounding the child. Everything here is opposed to it, the currents of American thoughts admit of no such presumption. The inherited tendency finds no nourishment whatever and dies out.

That the guilds should have fostered the idea of predestination is evident. That the son should adopt the business of the father, in which he had grown up, the peculiarities of which he had known from early childhood, was something so self-evident, that the custom became an established rule. The father's shop was ready for him to step into, material and goods were stored up, resources for this particular business and a market were found, custom was secured, in short, the father had warmed the nest so nicely, that the son

would have been a fool to fly away into insecure circumstances to fight the hard battle for subsistence.

To all this came another powerful motive: Liberty of trade, and the right to settle in any part of the country are of very recent origin in Germany. Not only the guilds proved obstacles to the freest development of the nation's resources, but also the great number of independent and often antagonistic states and principalities and their governments. Though through the Peace at Münster and Osnabrück at the close of the 'Thirty Years' War, two hundred of these petty state governments were wiped out of existence, there still remained more than three hundred and fifty of them up to the beginning of the nineteenth century. And every little fatherland had its own government, and boundary-posts. Not even the right to change one's domicile within these posts was readily granted. It was considered rank heresy and an outrage upon time-honored custom to speak of leaving. It was high treason to leave; and so the son stayed where his cradle had stood. Of course, he spent a few years in traveling as journeyman, plying his trade under renowned masters; but soon he returned to the old nest.

This exclusiveness was particularly strict within the walls of the cities. Since their inhabitants had by natural increase filled the towns to overflowing, the city government prohibited outsiders from settling in town. The elders of the guild determined upon a certain number of masters who could ply their trade, no others were permitted to open a shop, lest competition might play havoc with their bread and butter. Even the sons of masters had to wait for the death of their fathers before they could start in business or become masters. As the number of inhabitants was literally

limited by town walls, so was the number of tradesmen by harsh arbitrary rule. No wonder that hundreds, thousands, and hundred-thousands packed up and left, never to return.

To the nineteenth century it was reserved to remove the tyranny of guilds in Germany, and liberty of trade and settlement has been secured by law only during the last hundred years. This could never have happened if the cities had not first broken their choking neck-ring—the town wall, and had levelled their ramparts. It was a consequence of the marvellous change in warfare inaugurated by Napoleon I. Thus we see a beneficial consequence follow the terrible ravages of war. Such imposing armies as were massed together (1,300,000 soldiers went to Russia under command of Napoleon) made a mockery of town walls and ramparts, built and thrown up before gunpowder was invented; and they were soon torn down and leveled by the citizens. After the restless little man, Napoleon, was safely stowed away as a prisoner on the island of St. Helena, a time of peace of more than fifty years followed, and lo, all the buds broke open, and out of musty streets, and from behind moldy town walls sprang an exuberantly blooming life in every domain of human exertion. Now additions from outside were welcomed in town. The cities swelled. The band that had checked their growth was torn asunder.

However, a state of things, such as I have indicated, had existed for more than eight hundred years, and had developed a certain mode of thinking and acting; had ripened certain deep-rooted prejudices; had imprinted upon life in Germany an almost indelible stamp; in fact, it had nurtured the idea of a natural calling for everyone, and we need not wonder that

there is still a strong current of thought in Germany which directs, or misdirects, the destiny and future of many a child.

Now turn to the Union. Here the people began about two hundred years ago, where the Germans stand now. Here we never had town walls, never any guilds, no limitation as to number and grade of practitioners of trade. Here we had no hostile neighboring nations, lurking about to invade our territory, and take us unawares. Free and unmolested the people built their houses, towns and cities, built them upon the virgin soil under the free heavens, without fear of sieges and scaling-ladders. Everyone was permitted to come, and he was welcome to build; and if he thought he could earn his daily bread, he could do so without fearing any arbitrary limitations by guild regulations: Competition has ever been absolutely free in this country. The liberty of trade like political liberty has its own regulator. Trades and industry are governed by the steady force of the law of supply and demand, and the sleepless instinct of gain prompts us to heed that law. The American farmer boys of "ye olden time," and they were greatly in the majority, were raised in a most excellent school, that of necessity. The great distances between the farms and the centers of trade made them lend a hand at almost every trade. They learned to repair shoes, wagons and implements, to shoe horses, to ply the carpenter's and joiner's trade, etc. They were not exclusively farmers. The idea that a man is predestined for one kind of work, and no other, never occurred to them.

Peculiarly advantageous circumstances in the New World for gaining wealth, constant immigration of skilled laborers from all civilized nations, a restless-

ness which became permanent, caused by a constant westward movement of the people, the hope to enrich one's self still more quickly elsewhere—these motives stirred all the powers of the nation into a mad whirl. A constant shoving and pressing, an unceasing roaming about, and seeking luck, became the ruling passion of the people. The idea of taking root in a community rarely prompts any one here. Is he not the citizen of a country, the extent of which is so great, that it takes him six months to cross it on foot from East to West? Compare with such magnitude some small German principalities, through which one could pass on foot conveniently in a day.

Now if the American does not like one place, or if he fails to catch luck, or secure a fortune in one occupation, he simply turns to another; and so he changes readily from professions to trades or to farming, as circumstances seem to favor the one or the other. Since the people have never known town walls or guilds, they do not entertain the idea that a man should devote his life to one thing exclusively. It is not at all astonishing to see a man shift from book-keeping to cigar-making, from farming to practicing law or medicine, from working in a machine shop to doing this glorious country inestimable service as policeman or legislator.

We must not for a moment entertain the idea that this is conducive of great mischief. It is not: I rather think this freedom more beneficial than the humiliating bondage to which, according to the German usage, a man is condemned, who has "missed his calling," and has to abide by the consequences of his folly. Liberty always has a regulator in itself. Free choice of occupation follows laws which are as unerring as the law of

gravitation. No guild regulation could ever compete with them in effectiveness. Nature's law of the "Survival of the Fittest" though terribly cruel, is very effective.

And now we come back to our question: Is every person predestined for a calling? Approach the question regardless of preconceived ideas and we shall have to consider, that every one has his own peculiar face, his own form, each of his limbs or hands is peculiarly shaped, and cannot be duplicated by that of any other human being. His senses and faculties are in their combination so wonderfully and peculiarly arranged, that there may perhaps, be found a similarity, but never an exact duplicate. This proves, if anything, that not two men can be exactly alike in faculties, qualifications, tendencies, and accomplishments, so as to feel at any time, and under all circumstances, exactly the same impulse for action; everyone will move in a direction, differing from that of all other men. Evidently then, the peculiar mixture of which every individual consists tends toward confirming the belief, that every one *has* a calling, that is, every person must be especially well fitted for one kind of work, and for no other as well.

That would seem to settle the question, but it does so only apparently. The child is a "soft and yielding being;" plantlike he accommodates himself to influences which play upon him. His aptitudes grow exuberantly on the one side, and become crippled on the other, as friendly or hostile influences prevail. A symmetrically shaped plant will become twisted and distorted, if placed against a wall; it depends upon the treatment of the gardener, whether a tree will spend its energy in producing leaves or fruit. A boy of six

years may have a talent for art; his sense of form and color may be very pronounced; yet after a few years, he may be found to have apparently lost that faculty and developed into a direction, which makes the observer prophesy, that the boy will become a great lawyer. And again, after some years, he may be found to have developed great skill in manual occupation, having apparently pressed into the back-ground his liking for art and literature.

These are no hypothetic cases; every observant educator will have come to the conclusion ere this, that it is utterly unfruitful and perilous to fore-ordain a pupil's future. This being the case, it seems to me to be wise to follow the advice of eminent men, to wit: Develop harmoniously all the talents that manifest themselves in the child, and leave the choice of occupation or calling to the developed and ripe judgment of the youth.' Do not make this choice irrevocable. Give everyone the greatest possible freedom for changing his profession, or occupation, or calling (name it whatever you will), if he comes to the conclusion, that he missed it in his first choice. A human being who has had the chance and manifold opportunities for testing his natural gifts, and is permitted to exert himself in many directions, will certainly find his natural calling, and achieve great success. Let there be no arbitrary rules, no guild regulations nor tyranny of labor unions, but let us maintain that liberty of action, which has made this composite nation what it is, the greatest, noblest, most talented, most energetic, most successful, and therefore, happiest nation on the face of the earth.

XX.

ADDRESS ON COMMENCEMENT DAY IN HOWARD UNIVERSITY.

*Members of the Graduating Class, Teachers and Friends
of the Teachers' College:*

IT has been thought appropriate to summon a professional teacher to welcome the new members of the profession and to extend the glad hand to them. That the choice has fallen upon me, is an honor I deeply appreciate. To weary you at this hour with cheap advice would be useless, and to urge my experience upon you, who are eager to enter upon the pursuit of your own experience, would seem impertinent. I shall therefore refrain.

Today, with the diploma of maturity, you will be released from the care of your "alma mater." The portals of life are thrown wide open, and you pass out, hereafter to be your own masters. Shall it be said of you, when life is ended, that with sails spread, you joyfully and hopefully embarked upon the sea of life, yet shipwrecked, clutching frantically a broken plank, you floated exhausted into the harbor? That wholly depends upon you.

Human life resembles the ship. In days of yore, the ship was dependent upon the wind for locomotion. At times the wind failed. And with the uneducated, luck and chance in life are still the motive powers and the only sources of chance success. But since ocean vessels have become self-propelling, life's resemblance with them has become more striking. An educated person

has success at his command—the life of chance has changed to a life of choice.

Through eight weary years, in the elementary and grammar school, you laid in fuel for the voyage; through another four years of high school work you fitted out the vessel with scientific machinery, with electric plants of language and literature and arts. Not content with these twelve years, you stayed in the scholastic harbor of the teachers' college yet several years more, thoroughly drilling the crew, and testing the vessel on little trial excursions in the school room. At last, you are ready to start out, and the joy of anticipation is shining in your eyes, hope inspires you, and it would be base in me, to mar that joy with pictures of distress or failure.

But one question may enlist our attention: Is there a standard measure with which to measure life and its success? We measure distance, weight, and volume, with uniform measures agreed upon. Be the measure of distance the King's foot, the 1-10,000,000 part of the earth's quadrant, the meter, or our arbitrary yard stick—without a standard measure no exact statement of length is possible. But is there a standard measure for life's conduct, or for professional success? Equity demands a uniform measure in commercial affairs; ethics a uniform measure in human conduct.

Now I beg you to notice, that if you gauge men and women, not two will be found alike, but all are measured by the one unfailing standard: What have they done for others, for mankind and human progress? That is the test, not what they have done for themselves, not how many millions of dollars they have amassed. Men of average caliber, who love the good and the beautiful and help to further them, are worthy

of our respect, though they have but an obscure existence.

Men who are enabled by rare talents to accomplish extraordinary things, be it in the domain of art, science or industry, and who apply their natural gifts for the benefit of humanity, thereby becoming benefactors of their fellow beings and future generations, such men have an undying claim upon our gratitude, and we are not slow to esteem and value their merits. The rich man Fugger of Nuremberg, the Vanderbilt of the Middle Ages, is nearly forgotten, but Newton and Copernicus, Gutenberg and Columbus will never become mythical.

Men, however, who, elevated and supported by their god-like genius, have imprinted upon their people and their era their own signature; who have with the omnipotence of their words and deeds changed the time and entire realm of thought of their nation, and have given to their century a nobler idea of life and its purpose; dead men who speak from out their graves with greater eloquence than the living, such men are not only esteemed, but admired and worshipped. The ancients made gods of them, *we* measure ourselves by them. We refuse to regard them dead. Such lives as those of Homer, Dante, Shakespeare, Goethe, or Luther, Cromwell and Washington—to mention only a few of the brilliant many—suggest to every man to take stock of his own life, and measure it by the standard recognized from world's end to world's end.

We modest folk, the teachers, also have our heroes; men who devoted their lives like the candle which consumes itself in shedding light. We, too, have our standard, for side by side with the greatest heroes of history, set among the scintillating gems of the past,

there are the names and words of Confutse and Buddha; Moses, Zoroaster and Solomon; Socrates, Plato, Pythagoras and Aristotle; Augustine, Seneca and Quintilian; Melancton, Comenius, Sturm and Felbiger; Rousseau, Basedow, Pestalozzi and Fröbel; Arnold, Hamilton and Lancaster; Horace Mann and Mark Hopkins. We refuse to regard them dead. We listen to them as to living men, and these teachers will be known when many others have sunk into oblivion.

Yet, we cannot help seeing, that there are vital differences among great men of fame, even among educators. Rousseau, the author of "Emile," doubtless one of the most epoch-making educational books ever written, sent his children to the foundling asylum. We may admire his theories, but do we love or admire the man? On the other hand, what is it that makes Pestalozzi not only great and immortal, but beloved and revered to this day? Was he so great a scholar? Do his words convey such profound philosophy? Or were his institutions so complex that it took mankind time and effort to understand the man and his work? No. His reputation rests not on his scholarship, for like Shakespeare, he was slightly shaky in spelling, and like those institutions of men of lesser build, his, too, failed sometimes. But Christ-like he gave himself, his means, his health, his life, to the betterment of the young, and with his infinite love he gathered around himself the unfortunate, the orphaned and the weak. His love of children made him discover new ways of raising the young to an endurable condition of life. His wondrously sweet disposition tamed the wildest spirits. His practical mind, aided by self denying affection, found new means to lift the education of the young to a science and art, lofty and sacred beyond all

others. In him you find an ideal, a standard measure to apply to yourself and your work.

The secret of success in the school room is the teacher's love; love that knows no self-assertion; love that draws the child like a magnet into the right path; love that counteracts wild passion; love that inspires others to noble deeds and ever increasing exertion; love that wills nothing, save what is good for the child; love that pardons evil, but remembers it not; love that nourishes cheerfulness under whose benign influence everything grows, save poison and vice; love that holds the child's affection through life, and builds itself monuments in the hearts of the community.

Aim high, therefore, in choosing your ideal, and at times measure yourself by the standard of excellence found in such educators as Pestalozzi and Fröbel, and your tombstone may bear the distich found on the tomb of Euripides:

"This monument does not make thee famous, Oh Euripides, but thou makest this monument famous."

An occasion like this should not be allowed to pass without saying a few words regarding the mission of teachers' colleges. Look into history. We happy people at the beginning of the 20th century resemble a throng that is eagerly pressing onward and upward. Few of us look back at the road traversed, yet nothing is more instructive. Humanity, like an enormous caravan in the desert, is moving onward. From our point of view we may see it moving at various rates of speed. Dead issues and dead systems, shattered organizations and fallen institutions lie along the road like dry bones bleaching in sunlight. The caravan simply takes a turn and leaves the dead behind. They mark the way for future generations. They point out to us, what

road mankind has taken to reach the high altitude it now occupies. Laws have changed; customs have died out, or have been replaced by others; views have taken other directions; nations have come and gone, races have changed their abodes and conditions of living; states have been formed and governments upset, civilization is spreading and soon will span the globe. Institutions that have taken centuries to build up, church, society, and state, all have undergone a transformation. Where formerly the few ruled and directed, it is now the masses who rule and direct. And so in all we see, in all that exists, there is no more abiding thing than change.

Schools and education, like all other mundane affairs, have been subject to changes so vital, so great, so swift in late years, that some of us have to stop and catch our breath, in order to understand them. Universities are the oldest seats of learning; secondary and preparatory schools followed; then city schools for burghers came; but as the growing glory, came the common school with compulsory and gratuitous education. While in every other domain of human activity dead institutions mark the path of civilization, no form of school has decayed, unless it be the old dame school. But even for that we have a substitute: the new dame school, the common school, in which woman is queen. Every grade and organization of school is growing in extent and importance, and the last generation has added a number of new forms, technical, industrial, agricultural, commercial and other special schools. The whole civilized world is dotted with school buildings now-a-days.

The most important new scholastic institution of this century, aside from polytechnical schools, is the nor-

mal school or teachers' training college. Some of you may not be acquainted with the mission of this institution. Yet it is not difficult to understand. Time was, when people thought that to whom God gives office, he also gives the requisite understanding. That idea ruled supreme in this country for centuries, both during colonial times and since we gained independence, until by dire experience we have come to know that a special preparation for one's life work is absolute necessity. We do not trust the medical quacks any longer, but insist that our physicians have documentary evidence of a professional preparation. We do not allow a lawyer to plead for us, unless he has been called to the bar, after having given evidence of his professional fitness. We do not allow the clergyman to occupy the pulpit, unless he has been regularly ordained after a college preparation. We do not even allow the government clerk in any of the departments to perform routine duties, unless he has proved to the satisfaction of the Civil Service Commission, that he has the required knowledge or skill.

Every occupation, every position of responsibility in business, every profession and every public office requires a specific preparatory training. Even the church, before it confirms young people in their membership, requires them to go through a course of instruction adapted to prepare them for participation in the sacraments and exercises of the church. There is no kind of labor, no state of life, which can do without special preparatory training. General education, with no special purpose in view other than that of developing the student's mind and ennobling his character, will make special training easier to acquire, but general education alone will neither make a tailor nor

a legislator, neither a soldier nor a teacher, neither a gardener nor an engineer, neither a laundress nor a bishop.

Yet, the idea that a person may teach school without professional training, is not dead. There are still people who believe that to know a thing is equal to being able to teach it. They fail to see that a teacher must not only know *what* she is to teach, but must know the *child whom* she is to teach, and must learn the methods of preparing mental food, as well as *how* to induce the child to partake of it. All this is attempted in the normal schools and teachers' colleges. Here few new sciences are taught. Unlike the college and the university, which build upon what has been learned in the lower and the preparatory or high schools, and advance to higher studies, the normal school and college go back to the elements, and review them not as new studies, but with the aim how to teach them to children.

The Germans were the first to establish normal schools. The first one dates back to 1695. Their name was, and is, teachers' "seminaries". In connection with this, it may be of interest to you to know that the word seminary means seed-bed, or nursery, and is very old. Livy used the word in a figurative sense, when he called the Roman equites the seminary of the senate. Cicero called the forum the nursery of oratory. When the Frenchman, M. Cousin, investigated the German teachers' seminaries, he noticed that they all had an annex in the form of a practice school for young children, in which normal or standard methods were taught; and then he went home and established similar schools, but called them "écoles normale" (normal schools). Thus the lesser gave its name to the greater. The English speaking

nations, taking most of their terms of European continental institutions through the vehicle of the French language, adopted the term normal school. The practice school is what the hospital or clinic is to the medical student.

As the medical college teaches the secrets of "materia medica," the normal college teaches the secrets of the art of teaching and training. As the medical college teaches the anatomy and physiology of the body, the normal college teaches the activities of the mind. As the medical college teaches the methods of dieting for pathological purposes, the normal college teaches how to prepare mental food and administer it to healthy children. "To reach the untaught mind in the most effectual way, is a process most subtle, difficult and various. It requires to ascertain the positive errors and bad habits of the child's mind. This is one phase of the pathology of education," and the normal college trains its students in this subtle and difficult art of "genuine mind-cure."

It is now pretty well understood, that to learn by heart, or take on trust, any fact, is not learning. No knowledge is worth anything, unless it can be demonstrated by appeal to the senses or logic. How to do that, is taught in the normal college. But new knowledge must not only be perceived, but also apperceived; that is, linked to previous cognitions and assimilated. And when truth is recognized, it still needs practice and exercise to secure it. How to measure that exercise, so that it be not fatiguing but strengthening, is taught in the normal college.

Teaching, however, is not *all* of a teacher's work. The greater part of his or her work consists in training the pupil to be a moral agent; to repress the animal nature,

and to train him to self-government and self-activity. To equip a candidate of the profession for such work, is part of the mission of the normal college. This task grows every year. As parental influence recedes, the school's influence advances. But there is still another task in the education of children: It is to raise children to a realization of the eminent truth, that man is a *social being*, an integral part of an organized society, a future citizen of a state. To make him realize this, to fit him for his duties as well as for the enjoyments of his rights, the student in the normal college learns in actual work in the school room.

And thus, during several laborious years, the students are fitted out with secrets of their future occupation, so that when they accept positions as teachers, they can at once proceed to organize and manage a school, begin to teach rationally, and train the young children to rise to a higher level of existence. A college graduate need not gather experience at the expense of innocent childhood; he *has* experience when he begins to assume responsibility. To my mind, the mission of the normal college is far greater than that of the law school and the medical school. Yet, despite it all, in the most favored section of this country, educationally considered, only 50 teachers in every 100, and in some states South and West, not 10 in every 100, have any kind of normal training, "such as it is, and what there is of it." It is a sad commentary to many a spread-eagle speech.

It has been my privilege in former years to see the students of this college at work, and to speak to them. I have observed how, under the guidance of accomplished model teachers, they tenderly touched the young human plants; how they skilfully approached the mind; how they consistently trained the inborn talents

of the children; how they lovingly aided the weakling and sternly repressed the unruly; how they awakened ambition, nursed love of home and native land, and implanted the golden rule. I know, that when the little ones are dismissed, you students come up to your session rooms and study psychology and logic, history of education and didactics, methods of teaching and modes of training under teachers replete with learning and glowing with enthusiasm. And I have seen you students basking in the sunshine and genial influence of your teachers, and my admiration was newly kindled by every successive visit. Oh, that we had many more such schools as yours. If, perchance, any one of you should not get to teaching school, but should open a private institution for one pupil, your training will not be in vain either, never fear.

In welcoming you now, my young friends, to the profession as colleagues and co-workers in the field of education, I meet you with the assurance that my welcome comes from the depth of my heart. I wish you all the success you so richly deserve by your fidelity to hard work in the past; and I wish it for the good of future generations, as well as for that of the present society and state. May you never weary in the performance of your duty; never weary in loving children, so that in the hearts of the community an enduring monument of affection will be raised to you on which the simple words: "He, or she, was my teacher," will proclaim your fame.

AN EDUCATIONAL OUTLOOK.

IT may be supposed, that at this time the most obvious defects in teaching, as found nearly everywhere in this country, are known; hence, let me search for the redeeming features, if there be any. Spinoza once said, "Comprehending much means pardoning much." I believe that if we know the causes of the defects, they will lose much of their bad odor.

I may state with due candor that the per cent. system of grading pupils' work, daily competition, and dry, humdrum textbook cramming, are typical American methods. Nowhere among civilized nations can they be found in such an excellent state of perfection as in America, unless it be in France. And thereby hangs a tale.

There is in every individual, as in the life of every nation, a time of plasticity. Whatever is learned and acquired by experience during this time, becomes the inalienable property of the learner. During this time of plasticity the human being develops his individuality. Certain qualities in him become fixed and capable of being transmitted to his children. What is individuality in the person is type in the race or nation. The Anglo-Saxons, though of German origin, developed a type, different from the German, after they took possession of the British Isles. And again, the English settlers in America, cut loose, as they were, from the mother country and its culture, and dependent upon their own strength, ingenuity, and resources, soon

drifted away from old established customs, thoughts, modes of life and action, adapted themselves to the surrounding circumstances, and developed a type peculiarly American. This type became so pronounced during the 18th century, that it asserted itself in violent opposition to England. In habits, thoughts, social relations, mode of life, and manner of action, they were not colonial any longer,—they had become national.

In the same way the mode of teaching and learning had developed certain peculiar traits, they had become typical. We all know what caused the great abundance of *self-made men*; they were, and still are, typically American. Now the typical American *boy* gained his knowledge, as the man gained his fortune—namely, without assistance. What he is and has, he is and has by his own exertion, attended by much waste of time and energy. The self-made *student* acquires his knowledge from experience or books, not through instruction. He does not learn a thing for the sake of knowing it, or for the sake of the discipline it affords, but merely as a means toward securing other ends.

“The acquisition and retention of exact systematic, true, good and beautiful knowledge, as gained through instruction and systematic training, creates a clear mind, a pure heart, and a noble character.” It is one of the most powerful means towards that ideal of all educational efforts, the harmonious, well-balanced being. Now the self-made student, like the self-made man, is invariably lop-sided in his growth; his knowledge is seldom exact, never systematic, scarcely ever logically connected, full of inaccuracies, and it is good and beautiful only in so far as it is of use in assisting the growth and comfort of the learner.

Do not misunderstand me: I do not mean to say that the pupil's own exertion is superfluous. By no means. I cannot spare him the action of chewing, swallowing, digesting, and assimilating his mental food, but what should be done on the part of the teacher is the cooking and the serving. Life and books offer raw materials. If every person had to be his own cook, what a frightful mortality in consequence of disorder of the digestive organs would ensue! Now I maintain, that the self-made student is his own cook, and a most ignorant one at that in most cases. It is said: To learn to make intelligent use of books is one of the main objects of school education. Granted; but a more important object is to develop the child's inherent faculties, its organs of observation and others.

I have no fault to find with the modes of teaching of the typical American school of the last and earlier part of this century. They were legitimate. They were the exponents of *life* in America. That the typical American teacher of yore kept school, heard recitations, assigned lessons, examined and tested daily and hourly,—we can comprehend—and pardon. But life and the American people have changed. The old American type is fast receding, since untold millions of immigrants have arrived. "The American composite character now betrays its mixed origin," says a writer of note; "everything American is a fusion of distant and antagonistic elements. The currents of thought are both cosmopolitic and particularistic; active intellect, practical skill, world-wide enterprise meet dead conservatism in church, on the bench, and in school; the most liberal and revolutionary ideas meet and clash with devoted habits and meek creeds in home and family; aggressive freedom with con-

ceited narrowness. Nothing can be praised in our wide realm without an abundance of damning exceptions, and nothing denounced without a liberal share of cordial praise." The Union is a gigantic crucible within which representatives of the different nations are fused to a homogeneous whole. This cannot be done in a hurry, and not without violent contention, but the ultimate result is only a question of time. Each nation adds some of its virtues, and, alas! some of its vices to the composition.

That we are at present in a second era of plasticity is seen from the changes going on within reach of our own experience. Forty years ago this country was songless, having then but one singing bird, and that was only a mocking bird. Look upon the varieties in dress we enjoy, and then think of the typical get-up of Brother Jonathan, two or three generations ago. Look at the gratifying start we have made in art-designs and decorations, and then view with wonder and reverence the clumsy furniture and machinery of the good olden times. Look at the absolute styleless architecture of former years, and the infinite variety now displayed everywhere—even in Philadelphia.

And thus we are changing our mode of teaching and studying. When the great influx of foreign elements ceases, the mixture in the crucible will become clear, and the future type of the American school will have been developed. It will not be European, we may rest assured, neither will it be American, as that term is understood now.

The American type, as most distinctly represented by the New Englanders, is very strong, and has remarkable powers of assimilation; it has the proverbial ostrich's stomach, but it is nevertheless subject to the

laws of evolution. The changes it undergoes are not noticed in the East and South so much as in the great West. As the general habitus of the people in the West is already different from that of New England, so are the practices of the common school of the West different from those of the East, and their results are incomparably better, as was shown in the St. Louis Exposition to every unprejudiced observer.

It is devoutly to be hoped, that the pernicious percent. system of grading pupil's work, immoral competition, constant testing, and soulless memorizing of the printed page, will give way to rational methods based upon the well-defined laws of growth, methods that will lead us up to an intellectual culture such as the world has never witnessed before.

The editor of the "World's Work" recently said: "We Americans do not live by any philosopher's plan, or by any book-made scheme. A patch of anarchy on a cloth of orderliness; a piece of high wisdom here, and a piece of low folly there—we take what we *will*, or what we *must* for the instant *need*. The theorists of every sort must do the best they can to catalogue or to co-ordinate such political and social phenomena as exist at the same time in Massachusetts, South Carolina, Oklahoma and Colorado. This is hard on the theory-builders; but the people seem to thrive reasonably well by these unordered and unclassifiable zigzag-methods of working out a democracy. It is equally easy to praise and to blame, to fear and to trust, according to one's mood. The best of it all is, one's fear or trust, or blame or praise, does not in the least interfere with the orbic quality of our swing forward."

XXII.

HERE IS "TO THE AMERICAN SCHOOL! MAY IT LIVE LONG AND PROSPER."

AT a banquet held shortly before my departure from Germany, the toast "The Common School of the United States," was given to me to respond to. This in faithful translation is what the short-hand writer reports me to have said:—

Our American school is the school of the people; it is a common school in the true interpretation of the term. All the citizens of the Union are interested in its maintenance and progress: the statesman who wishes to represent a nation of robust intelligence, as well as the modest man who desires to raise his cabbage in perfect peace; the manufacturers and merchants who need skilled and intelligent labor, as well as the farmer who wants his sons to have as broad a horizon in thought as their physical horizon is. But whatever their pursuits and business may be, and to whatever their aspirations may fashion their desires and demands of the work in school, their capacity as taxpayers and parents give them cause for being interested.

I am not exaggerating when I say that the American people spend more than three hundred millions of dollars annually for the maintenance and extension of their common school system. That is more than the German Empire pays for the maintenance of its standing army. I cannot compare the cost of the common schools in America with that of Germany, because as

you are painfully aware, you have no common school. Your people's schools are doomed to be pauper schools, or at any rate the schools of lower strata. Your secondary schools with their preparatory elementary classes draw the life blood out of the people's schools by absorbing all the better situated classes and all especially talented children.

The development of the common school system in America is truly marvelous. Nowhere on the face of the globe is Diesterweg's maxim "Education of the people is liberation of the people" proven more conclusively than in America. Though our schools are far from being perfect, they have performed great deeds. After having seen the exquisite results of modern didactics in the German schools, I am more perfectly aware that a great deal more might be done in our schools than is done. But we know our weak points, and it is to be hoped that having made a correct diagnosis, we may apply the correct treatment to cure our malady.

Our common school is the last link in the grand chain of free institutions tending toward the elevation of the people. While we glory in this, we are not blind to the fact, that, whether it be the first or the last link, it must be equally strong with all the others, since a chain is only as strong as its weakest link.

True, the world had great leaders, profound thinkers, eminent artists and skilled inventors, before ever the plan of common school was conceived. But during less than a century of common school education, the leaders have become numerous, and the number of followers have dwindled down. The American people read more than any other nation of the civilized world. While the apex of the pyramid signifying education,

is less high in our country than in yours, the base is broader, and this in the course of time will be able to support a higher apex.

Our common school is the exponent of the universal spirit which sets up a government of the people, for the people and by the people. Its aim is high; its scope is world-wide; its purpose is benevolent; its means are illimitable; its methods are rational, and its personnel is progressive, though unfortunately only in part professionally prepared. The narrow-minded sentiment of former generations, calling for a trifling accomplishment in reading, writing and numbers, has given way to the firm conviction, that school should furnish a broad, liberal, thorough education, such as culminates in mental and ethical culture, as well as manual dexterity.

But this great stride forward in the estimation of the community, which the common school has gained within the last quarter of a century, is owing to the untiring zeal, infectious enthusiasm and heroic sacrifices of a small body of teachers. An organism which needs no outside pressure to reform, but has so much recuperative power in itself as the American common school, cannot be said to be subject to chronic disease. That small body of teachers, the leaders of which I might count on the fingers of my hands, has done wonders. It has created a public sentiment strong enough to demand the needed reform. The time of which the first U. S. Commissioner of Education said: "Nowhere among civilized nations is the business of education pursued with such utter lack of system, such complete, unsympathizing, self-dependent isolation of efforts as in America," that time is fast passing away.

Today we recognize the fact everywhere that the

teacher is the school. Be the principal or superintendent whoever he be, he cannot spoil much, if the teachers are conscientious and earnest in their work, though he can do a great deal of good. While I naturally assign a great responsibility to the executive officer, the local superintendent, I wish to state with candor, that he is not the most essential agent. And let the board of education be whoever they may, the school rises to lofty heights, or sinks into depravity only with the teachers.

And let the school houses be rickety sheds, or palatial edifices provided with all the modern improvements, the often quoted saying of President Garfield remains true; "Give me six months in a tent and Mark Hopkins for a teacher, and I shall prefer it to a four years' course in a grand university with a numerous faculty." An American educational leader said some years ago: "It should not be said of a community, that it builds school-houses of which it is proud, and has schools of which it ought to be ashamed. What would it profit them, if they had Windsor castles for school-houses, and ignorance, incompetency and inexperience sit at the teacher's desk. The greatest waste in the administration of the schools is incident to the employment of incompetent teachers."

That truth, I am profoundly sorry to say, is not recognized fully with us, as it is with you, and therein lies the weakness of the common schools of America. But, as I said before, we know our malady, and we know the cure. That reassures us of the indestructibility and improvement of our schools. The common schools! Bless them, they are inexhaustible sources of prosperity if conducted rightly. To see the rich and the poor, the gifted and the dull ones sit side by side, is a sight that would make a Perieles envious.

You, gentlemen of the teacher's profession, are striving with all your might to bring about a change in your school administration, which will convert the multiform organization of the schools of the German empire into the homogeneous organization of a common school; may, you succeed in your noble efforts and speed the day on which Germany has "One government, one language, one school for all within the confines of the empire!"

As every nation has that government which it deserves, so every commonwealth has the schools it deserves. This is a maxim which we constantly keep before our people. The two greatest nations on the face of the earth, the German and the American, the most generous, most cultured, most striving nations known in history, deserve the best schools, if they have them not as yet.

All is cause and effect in this world. A gradual improvement of the morals, manners and customs of the people will be followed by a better appreciation of culture and its sources. And again, in the same ratio in which the schools grow better will the intellectual, moral and economical habits of the community improve.

And now, gentlemen, I shall ask you to empty your glasses with me to the prosperity of the American Common Schools, this exponent of liberty!

The applause my words received was a proof of the popularity the idea of a common school (Einheitsschule) for Germany has among teachers there.

XXIII.

SUGGESTIONS FOR TEACHING GEOGRAPHY.

GEOGRAPHY is the branch of study which stands in the center between the material and intellectual world. It shows how all manifestations of intelligence, not only history, are localized in time and space. It focusses the life of mankind, shows how the actions of generations are influenced by material environments, in politics, commerce, industry, agriculture and art. Geography is a study which, if taught well, throws light on literature and art alike, on natural history and science alike, on mathematics and technics alike; in fact, there is no science, no accomplishment, no study and no action, that is not essentially aided by geography. It combines all knowledge of men to one beautiful harmonious symphony. This indicates the importance of teaching geography well, and the following suggestions may serve to show how that can be done.

I shall depart from the customary method of procedure, by starting from the general, and going down to the particular subject, by first directing attention to the fact, that in teaching young pupils we should, invariably start from sense-perception; from that, the next step to forming concept and idea is easily taken,—rarely *vice versa*. Show the child the particular, the concrete thing; show him several similar facts, and offer an opportunity to combine them, to rise from the object to the idea, and then abstract from them.

Every subject of instruction in the lower schools has a certain elementary basis of sense-perception. The primary ideas resulting from it will be easily understood by the child, because by means of his five senses he can take them in and retain them, and later thought action will assimilate them. If anything be taught lacking this sound basis,—that is, anything the elements of which cannot be perceived by the senses, it has no business to be included in the course of study of the primary schools; it would, in fact, be like the proverbial bladeless knife that had no handle. In a measure, this rule holds good in every branch of study, even in the most abstract philosophy.

A few simple examples can explain what is meant. (1) One may never see South America, yet may obtain a tolerably accurate knowledge of the topography of that continent. And it is sense-perception by means of which one gains this knowledge. We know what is signified by such terms as elevations and depressions, peaks and ridges, valleys and heights, plateaus and plains, coasts and banks, capes and inlets, rivers and lakes, bays and harbors, islands and peninsulas, llanos and pampas; they are names of things, the like of which have come under our own personal observation. And with the aid of illustrations our imaginative power may be fed sufficiently to obtain a tolerably accurate idea of South America. (2) The artist who modeled the Venus of Milo may not have seen the original in reality; but his power of imagination was so great, that, starting from what forms of beauty he had seen, he combined them, and thus created the graceful figure which to this day has remained the ideal of beauty. (3) No one ever saw the ideal, that is, the absolutely perfect human being, of whom we

all have a more or less definite idea. His eye must have the keenness of an eagle's eye; his forms must vie in beauty with those of Apollo di Belvidere; his strength must be super-human; he must be accomplished in all the arts, be a Mozart in music, a Raphael in painting, a Demosthenes in oratory, etc.; he must be a thinker far beyond any philosopher of ancient or modern times; in point of morals he must be as unblemished as the very stars above. Where is he to be found? Yet, he exists in our imagination; and he is a creation, every part of which has its origin in reality.

(4) Take history. We were not present at the downfall of the Roman republic; yet from what is told us, and from what we have experienced ourselves, we can form a vivid picture of the state of things at the time of the Caesars. And our knowledge of the events that happened two thousand years ago in Rome will be the more vivid, the clearer our ideas are of the political institutions of our own country.

Analogy and comparison are impossible, when there is nothing in our mind with which to compare. Not having a standard measure, how shall we measure a distance? Every iota of instruction, every idea, every rule, must be based upon, or lead back to, perceptions previously gained; and where these are wanting, they must be supplied. This is a condition of rational instruction *sine qua non*.

In the special subject under discussion the question arises: Have our pupils the necessary basis of sense-perception, when they take up the study of geography, say, in the third school-year? I think not; and in the way in which geography is taught commonly, we do not even offer facilities for gaining sense-perception. Though teachers now-a-days start from the schoolroom,

and gradually widen the horizon of observation, I repeat: The method in vogue is faulty, inasmuch as it fails to establish, first of all, a sound basis of sense-perception. The average teacher begins to build before she knows upon what foundations she builds. To prove this assertion is not difficult. A few facts may suffice.

Of ninety pupils in a grammar school in Hamburg, only thirty-eight had ever seen the sun rise; only eight had ever noticed the Milky Way. Of a thousand children, when entering the public schools in Berlin, only six hundred and thirty-eight had seen the evening red; only four hundred and sixty-two the setting sun. I know from experience in the school room many instances of ignorance of common daily occurrences and facts that seemed almost incredible. Of five hundred and two children who entered the schools of Plauen, Saxony, some years ago, only ninety-two had seen the sun rise, and only a hundred and fourteen had seen the sun set. One may be tempted to say, "These frightful examples of ignorance were found in Germany; they cannot be found in enlightened America." This is but poor consolation. I claim, these cases have been systematically enumerated in Germany, because in that country teaching is a profession, and there people are accustomed to treat educational questions with scientific thoroughness; while in this country, as Hon. Henry Barnard of Connecticut said, "The business of education is pursued with utter lack of system, with complete, unsympathizing, independent, self-dependent isolation of effort." I am confident that our American children, if examined, would be found to exhibit the same deplorable want of information. Dr. G. Stanley Hall has proved this satisfactorily to all who are not preju-

diced. My own experience, during twenty years in the schoolrooms of this country, is in substance the same.

The greatest error, then, which prevails in the teaching of geography, is the lack of preliminary steps. In all other branches of study, even the most inferior teacher proceeds somewhat rationally; but geography usually begins, I am sorry to say, with the introduction of the text-book.

Ritter, the father of modern geographical science, says, "The most natural method is the one, which makes the child familiar with reality first, which lays a sound foundation of geographical knowledge gained through actual observation of that part of nature which surrounds the child. Here he is to learn to *see* and observe. Whether he lives in the city or in the hamlet, on the mountain or in the valley, it is certainly not within the four walls, nor from maps, and not from the text-book, but in nature alone, that knowledge of nature will be gained by him. Nature ever remains the same; she knows no typographical errors, no blunders in drawing, no want of discretion. Nature's teaching is always perfect. This elementary method combines all the requirements of science; it furnishes the stratum of concrete knowledge, from which abstract ideas are drawn. Amid nature, the child learns to know the country in all its various conditions, and learns to recognize it even on the flat-surfaced representation—the map. If this genuine elementary instruction be given, all difficulties of subsequent instruction in geography are removed."

I am not saying anything new. Other people have spoken of the necessity of laying the foundation correctly, but what I desire to do, is to show you how

this can be done. During the summer, I frequently took my children into parks and out into the country. One morning we started out due East, which direction was fixed by the rising sun. We roamed about till we found the source of a brooklet. Here, I began my lesson on watersheds, river-systems, etc. Here the children saw the very beginning of a water-course. They noticed the water trickling from beneath the roots of large trees, till it increased enough in bulk and force to run along in the form of a creek. Here they learned by actual observation what a watershed is, seeing one spring descend on the one side of a ridge, another on the opposite side. We then followed the brook, saw it grow deeper and wider by the influx of other springs. In following it, we sometimes cut across the fields, where certain curves in its course would have prolonged the excursion unnecessarily. Every curve, hill, and valley was carefully sketched on a slate as we proceeded. When we reached the end of the brook, we saw where it emptied into the tributary of a large river. Ascending a hill, we could see the river meander through the country, could see that it was bridged over in the neighborhood of the city. And on this excursion we noticed hills, rocks, slopes, plateaus, woods, meadows, fields, plains, valleys, paths, high roads, farmhouses, and settlements. The observations were all carefully noted down on our slates, and the names were repeated, and thus fixed in the memory. The children learned to distinguish the different kinds of grain, many kinds of trees, certain minerals, birds, and insects; and thus we mingled a little natural history with our geographical lesson. At home we had a review lesson, which proved incontrovertibly, that this kind of instruction is the most successful of all.

We may call this an ideal lesson in geography. Circumstances, as they prevail in our schools, make it next to impossible to follow this example. All things considered, however, I dare say, if the teacher of a Third Reader grade would take her pupils out of town, and take a position on the top of a hill, if there be any within reach, and then and there point out the different things to be seen, I am sure the children would learn more real geography in one half-hour, than they could in a year from the printed page. Some cities are favorably situated for such instructive excursions; and if the school authorities were asked for permission, I believe they would not refuse it.

If, however, this ideal instruction in geography be considered impracticable, we might substitute something in place of nature, something imitative of nature, by which to form that primary basis of sense-perception, without which instruction in geography will never have lasting results; something better than the flat-surfaced representation, the map. We can *make* the hills and valleys, the capes and the ridges, the plains and plateaus, the water-courses and watersheds by procuring a large baker's pan of galvanized sheet-iron; and with clay, sand, gravel, a few sticks and twigs, and water, we can mould mountains, hills, and put in lakes, rivers, etc., and thus create a fancy representation which offers, in a measure, what nature herself offers. In this way, too, we can lay out a city or village, a whole state or continent in the rough. In short, by way of imitation, we can establish all the primary ideas desirable for a thorough comprehension of the subsequent instruction in geography. We must dismiss from our mind the erroneous idea, that we may take for granted the existence of certain ele-

mentary ideas in our pupils. Rather presume too little than too much.

A large pan for moulding geographical maps ought to be furnished by the school authorities, to every Second and Third Reader grade. Then, when the preliminary steps to the study of geography have been taken, we may introduce such relief maps as are now patented in this country. They show elevations and depressions and water-courses in superficial projection. They are made of papier-maché, and are covered with slating, or other cleansible substances, adapted to receive oblitative marks made with slate or lead pencil or crayon, and may be used as slates. These maps serve to bridge over the chasm between nature and the flat-surfaced representation,—the ordinary map.

I submit to the reader's earnest consideration these questions: Has not geographical knowledge, for ages, been wrested from overstocked maps? Had not the child to search painfully among a bewildering mass of data and facts, for those that were to be committed to memory? Now, a teacher would not give into the hands of a child a copy of Webster's Unabridged, when he is to begin the study of reading, neither can it be rational, in geography, to place before the child such a map. We must *grade* the matter of instruction in geography just as we grade the matter in reading, in arithmetic, and other branches. Relief maps of this kind would facilitate this grading, as well as present opportunities for the gradual upbuilding of a geographical knowledge, as gained item by item by the child.

They are cheaper than common maps, and will therefore meet the formidable objection of cost, raised against relief maps heretofore. Upon these maps may

be entered, as upon a slate, the data to be learned. And thus the child is made self-active: it learns by doing. When the lesson is completed, the marks and names entered upon it are carefully erased with moist sponge, and the class is ready for a new or a review lesson.

And now we ascend to the higher grades, the Fourth or Fifth Reader classes. Thus far, I understand, few teachers, if any, use a text-book in teaching geography. From this grade upward, the text-book is used everywhere. I am not in sympathy with this. I cannot recommend any text-book that contains more than maps and illustrations. It should contain no text; should, in fact, be no text-book, but an atlas pure and simple. I shall state farther on why not. And as to the wall-maps, we may entertain serious doubts as to their usefulness in their present condition. A wall-map to be used in the Fourth or Fifth Reader grade should have recorded upon it nothing but what belongs by right to a picture or representation of nature; and therefore it should contain no lettering, no names. Years ago I made a wall map myself. I procured a portable black-board, drew the map by means of the pentagraph, and colored the watercourses pale blue. In order to make it less destructible, I gave it a waterproof, cleansible surface. It contained only the outlines of the continent, exhibiting *terra firma* in black; oceans, lakes, and watercourses in blue; and no name whatever. This "practice map" is used as follows:

The teacher, pointer and colored crayon in hand, pointing to the source of two rivers that run in almost opposite directions, draws out by a few leading questions that here must be a water-shed. Children who have been taught, as I indicated at the beginning of

this article, are able to thus reason from effect back to cause. Knowing that water seeks its level, they will, with great decision and accuracy, fix upon the map all important water-sheds of the country. These are marked with crayon by the teacher himself, or by pupils under his direction. By degrees, the map is stocked with all the elevations to be learned. This takes very little time, and has the great advantage of concentrating the pupil's attention. Every name thus learned, both of mountains and rivers, is written on the board: the name of the main river in the middle; below it, on the left, its left tributaries; on the right, its right tributaries. These names are left on the board a few days. They are spelled and copied. The names of elevations thus learned are grouped and treated likewise. The coast-line, islands, capes, inlets, peninsulas, etc., are pointed out, marked with crayon, and named. Thus crayon and pointer are ever kept busy in bringing out new points. The coast line and general configuration of the continent may be taken for one lesson, the rivers for another, and so on. After the lesson is over, all marks are erased; and now the pupils are called upon to mark points themselves and thus learn by doing.

Thus we may suppose topographical facts of the most vital importance to have been learned. In a subsequent lesson, a little green-crayon dust, laid on with the fingertip, may indicate fertile valleys; white dots or lines, snow-covered mountain ranges or peaks; various depths of the sea, and other things, may be marked, and the topography is disposed of. Now political boundaries are marked. So, for instance, a State is "cut out" by white or colored crayon; canals and trunk-roads are entered upon the map; and of course the location of

cities forms a most valuable and entertaining lesson. The fact that whatever geographical data are spread upon the map, may be easily and safely removed without the least injury to body or surface of the map, gives an opportunity for the pupils to be self-active; and these "practice maps" are therefore a most welcome medium of instruction. They are also distinguished from others now in use, by containing no lettering, and therefore present a more perfect image of the country portrayed. The names on the map used by children are like ponies and keys in arithmetic, and only disfigure the map, and confuse the mental picture. These "practice maps" do not displace the ordinary printed maps, so long as our teachers are not omniscient. When the pupils have thus learned geography by degrees, it is well to permit them to consult liberally stocked maps. Primer and reading charts naturally precede the dictionary and complete works of authors.

To give due honor to truth, we all labor more or less under the delusion that a map is *good* when it contains *much*; that it is poor when it contains little. In the common sense of the term, the word "good" is not misapplied. The map of a military leader must contain every turnpike, path, hamlet, brook, creek, bridge, marsh, grove, hill, etc., if it is to be a good map. A commercial map, if it come up to the merchant's idea, must contain all the information of value to him. The surveyor, again, has a different standard of value. And so have we ours. A map for the schoolroom should contain what the children are to learn; certainly very little if aught more. To give into the hands of children, or hang up for use, an overstocked map, is like giving the children a lexicon instead of a reader. In teaching literature to beginners, we give

them selections, and object to complete works of authors. In history, we use mere skeletons of data and facts, and supply the remainder by word of mouth. In every branch of study, we leave the limits of the matter of instruction to the discretion of the teacher. Why not in geography? Why should we put up with overloaded maps?

I have asked the question elsewhere, and the timid answer came: "We have to take what the publishers offer us." I do not believe this need be the case. The publishers are merchants. The steady force of the law of supply and demand, and the sleepless instinct of gain, determine what they should offer for sale. If such maps as these "practice maps" were wanted by a great number of teachers, you may depend upon it, they would make their appearance in due season. No: the fault lies with the teachers, and with the unnatural and irrational method of teaching in vogue all over the country; it lies with the school authorities, who in many cases labor under the common error that the more a map contains, the more perfect it must be.

Sensible teachers have helped themselves by resorting to the blackboard. They sketched or drew the outlines of the map, traced the water-courses with blue crayon, and then proceeded as indicated before,—that is, spread upon the map by degrees all information of value, until the pupil's knowledge was extended enough, and their comprehension developed enough, to make sensible use of printed maps. But I have noticed in these cases a great waste of time and many unavoidable misconceptions on the part of the pupils.

I have little to say upon the subject, as far as it concerns the upper grades of the grammar school and the high school. Maps may be used there which are

liberally furnished with information, provided rational instruction has preceded in the lower schools. Teachers of higher grades have just cause for complaint. Their pupils have not acquired a knowledge of geography as they should have done. The memory (evidently the faculty upon which we have to rely most in teaching geography,) retains willingly only that which has gone through reason and understanding. Whatever the mind does not grasp is difficult to remember. Not everything to be learned can be understood, however; still we may make it palatable and digestible by connecting with it incidents of interest. So, for instance, a child who hears the laughable story which led to the naming of Cape Finisterra, and the trivial reason for the naming of Cape Cod, or Cape Farewell, or Cape Verde, etc., will not easily forget these names. All this is so self-evident, that I feel as though I paid small compliment to the reader by repeating it. But I do it to point out the utter absurdity of learning geography from the printed text. Here are a few tidbits of information as found in some geographies:

“Zenith and Nadir are two Arabic words imparting their own signification.” (How lucid.) “Land is either level or diversified by elevations or depressions.” (How wonderfully clear to children this must be.) “Commerce consists of the exchange of commodities.” (Is it possible?) “North America, lying in three zones, and traversed by lofty mountain ranges, is marked by astounding varieties of climate and productions.” (Will not this cause mental dyspepsia?) “Extensive forests of deciduous trees cover this section.” “Indian mounds of an unknown antiquity are found in Georgia.” Verily, we cannot thank kind Providence enough for having gifted the human mem-

ory with the happy faculty of throwing off what has not gone through the mill of reason and understanding. What a frightful waste of energy is there in schools where such unpalatable and indigestible matter is set before the pupils who are told to "study" their geography lesson.

I cannot refrain from quoting Goethe; the temptation is too great. We find in "Goetz von Berlichingen" the following conversation. Goetz, Lord of Jaxthausen, returns home, and meets his son Carl.

Carl. "Good morning, father."

Goetz (kisses him.) "Good morning, boy. How have you spent your time?"

Carl. "Well, good father. Auntie says I was right good."

Goetz. "Indeed?"

Carl. "I have learned a great deal."

Goetz. "Indeed?"

Carl. "Shall I tell you the story of the good boy?"

Goetz. "After dinner; not now."

Carl. "I know something else."

Goetz. "What may that be?"

Carl. "Jaxthausen is the name of a village and castle on the river Jaxt, belonging to the Lords of Berlichingen for the last two hundred years."

Goetz. "Do you know the Lord of Berlichingen?"

(Carl looks at him in mute astonishment.)

Goetz (aside). "The boy has become so learned that he does not know his own father." (To the boy.) "To whom does Jaxthausen belong?"

Carl (reciting). "Jaxthausen is the name of a village and castle on the river Jaxt"——

Goetz. "I did not ask for that." (Aside.) "I knew all the paths, roads, and fords, before I knew the name of river, castle, and village."

Now I do not mean to accuse the teachers of today of teaching with such results as Goethe here describes it to have been done in the Middle Ages. But I mean

to state, that we are constantly subjected to the temptation to thus teach geography, as long as we have text books. What can a teacher mean when assigning a lesson in such a book? What else than to commit verbally to memory such and such a page? That this is literally true, is seen the next day, when she "hears her classes." She conducts recitations. What is a recitation? Webster and Worcester say, "A recitation is a verbal repetition of something committed to memory."

Now, I certainly do not denounce recitations in geography, or in any other study, for I want my pupils to frequently repeat what they have learned; but I expect and require them to do it in their own words. A definition wrought out in the mind of the child by his own self-activity, even though it do not cover the entirety of the subject, is vastly better than one committed from the printed page.

To sum up. The ideal method in the lower grades, of course, is to let the children make the acquaintance of Mother Nature herself. That being out of the question in many schools in the city, we can imitate her, and mold those objects which will give the primary notions and ideas absolutely necessary for the subsequent abstract instruction. When these primary ideas are well established; when the child has become acquainted with the position of the schoolhouse, yard, and neighborhood, with the cardinal points, with the city and its vicinity, with the river, or the lake, as the case may be; when he has gained some definite ideas of distance, when he is able to comprehend the relation between reality and its representation, then such practice-maps as I have described, both relief and flat-surfaced maps, and, in the absence of these, the black-

board, may be used. We must remember that "a good teacher is known from the intensity of attention with which the pupils follow his instruction, and from the amount of crayon he uses." And, as to text books, let them be atlases, containing no text whatever. The maps should be elementary maps, not overstocked with data and lettering of all kinds, tending to blur the child's image of the respective country or section. Let these maps be accompanied by illustrations of cities, landscapes, vegetable productions, animals, modes of communication, occupations, buildings, etc. But do away with the terrible temptation to make the pupils thoughtless prattlers.*

*My daughter, who is at present in Japan, writes me, that Klemm's Relief Practice Maps are in general use in the schools of Japan, while few American schools use any kind of relief maps. A sad commentary on the progressiveness of the American teaching profession.

XXIV.

A GEOGRAPHY LESSON.

IT was in a continuation school for commercial apprentices (fifteen years old) in a city on the Rhine, where I heard a lesson in geography, which differed considerably from the customary geography lessons in American schools. The class was studying a topographical wall map of Germany. The teacher called attention to the broad valley of the Upper Rhine from Basel to Mayence, and made the boys see through the medium of skilful questions, that this valley must once have been a lake, until, at a place where now the city of Bingen is situated, the river broke through the mountain range, and formed a cañon from Bingen to Coblenz. He proved this by information gleaned from two of the students, who had been up the Rhine, and had noticed the Binger Loch, a place where, even to this day, rocks are blasted away to facilitate navigation. Allusions to the Niagara and Colorado rivers cleared the comprehension for this river's action in prehistoric times. But the interest of the boys increased when the teacher told them that this valley of the Upper Rhine must, in gray antiquity, have sunk in consequence of volcanic, or subterranean action.

The way he developed the idea was a most charming example of judging from cause to effect, and back again from effect to cause. Showing that the strata of rock in the Vosges and the Hardt mountains, on the left, and the Blackforest and Odenwald on the right, are essentially the same and at equal height.

The wasting of rocks through erosion by means of running water proved this. Lastly, he showed that digging in the ancient bed of the former lake revealed the same layers, hence the fact of the valley's sinking was established. Now indications of causes of this sinking were looked for, and volcanic action was established by the existence of extinct volcanoes (near Andernach, for instance); hot springs at Ems and Wiesbaden and other places; the finding of basalt and lava beds, with the exploitation of which every boy along the Rhine is familiar by seeing the dikes and embankments of the river from Mayence down to Rotterdam. Then the same truth was proved by the similarity of the vegetation on both sides of the valley.

One would think that this was hardly a subject for commercial students, but it soon became obvious what the teacher was driving at. In ever widening circles he drew into the horizon of the one lesson considerations which required just this physical basis alluded to. He gave an example of correlation of studies, such as would have warmed the cockles of the heart of the most rabid Herbartian. His conversational method made the boys discover the truth, and by hard reasoning, not by telling, he led the boys to see, that if the river had failed to find an outlet to the North at Bingen by breaking through the Taunus mountains, the river, and with it navigation would have followed the ancient prehistoric outlet to the Doubs river (a tributary of the Rhone) into Burgundy, and thence into the Mediterranean Sea. The effects of such action in historic times, asked for, came without hesitation. The boys saw the effect upon the North: The alluvial bottom would never have formed at the present delta; Holland would not have come into existence; the marvelous develop-

ment of the lower Rhine valley, historical, agricultural, industrial, commercial, etc., would not have taken place. Roman, Frankish and German history would have taken different turns.

Then the present conditions of life on both sides of the upper Rhine were discussed; how agriculture influenced industry, and in turn industry influenced agriculture and forestry; how industry and agriculture caused, as well as depended upon, commerce, river navigation chiefly. The boys in their imagination saw the slender pine logs of the Black Forest float down to the Hollandish ship yards; they saw the products of the textile factories on the Vosges, the products of the wood industries, of iron and nail factories, of slate, sandstone and basalt quarries in the mountains, on both sides of the river valley, carried down the majestic river to commercial emporiums along the Lower Rhine and to the Dutch harbors. They saw the results of the chemical industry near Frankfurt, and higher up the valley, take their conquering course round about the globe; saw the yield of the vineyards on the mountain sides sent out into the world; saw invalids from everywhere flock around the mineral springs at Ems, Wiesbaden, Apollinaris, etc.; saw in consequence wealth amassed, and luxury, art and culture result from all this.

The pupils, with eyes riveted on the map, perceived the ancient Roman colonies decay, during the period of the Great Migration, saw spring from the ruins of Roman civilization the famous cities of the Middle Ages: Basel, Freiburg, Mülhausen, Strassburg, Baden, Karlsruhe, Heidelberg, Speier, Worms, Mayence, Frankfurt, Bingen, Coblenz, Bonn, Cologne, Düsseldorf, Duisburg, Mühlheim, Crefeld, Wesel, Emmerich,

Arnheim, Rotterdam. They saw the imperial and princely power wrestle with the cities, which enriched by the proceeds of industry and commerce, dictated terms to the rulers. Wars were waged, political campaigns carried on; the social systems of the land changed from tribal to feudal, and finally to monarchical and civil governments. Every line of thought taken up showed cause and effect.

The boys did most of the talking; they seemed to see through a maze of facts and arrive at conclusions, by merely following the cunning questions of their teacher. He was a man of immense learning, intense feeling and considerate action; but I fear that if he keeps up this kind of teaching, he will lose his health.

It may occur to my American readers to ask: Why do you presume, that we cannot have such lessons in American schools, as you indicate in the opening sentence of this article? My reply is: Because from 90 to 98% of the teachers in American cities are women. Women rarely, if ever, possess the faculty of transferring themselves in their thoughts back into remote ages and into distant space. Women are essentially self-conscious, subjective, they deal with present situations and conditions, hence are scarcely able to teach history and geography. In history, the woman is apt to kill the wrong man, at the wrong date, in the wrong place, and for no valid reason whatever. History to her is biography, not a scene of antagonistic or friendly forces in action. In geography she makes her pupils memorize names, stuff their memory pockets, and thus prepare for an examination. Scientific chains of cause and effect play no part in her teaching. A few examples may show what I mean: I once asked a class of normal school students (all women): Why were not

the original articles of confederation (1776—1789) sufficient to keep the States together. In what lay their weakness? I received no reply. As school examiner I have asked that question many times, and rarely have I received a reply from lady candidates which showed that they judged the situation correctly.

The question "why" generally proves a stumbling block to women, which they try to evade. I asked women candidates several times: Why does the constitution provide for two houses of Congress? I never received a satisfactory reply from a lady teacher, while men replied lucidly and readily to the question. The Civil Service Commission, some years ago, asked a number of candidates: What are the chief functions of money? The men answered more or less correctly by referring to money as a measure of value, as a convenient medium of exchange, etc. A woman answered the question by saying: "To have and to hold."

A teacher of history in a normal school once asked his students to look up the condition of Great Britain at the time of the ascension to the throne of Queen Victoria. The young men of the class understood the purport of the question, and brought quotations from historical sources showing the conditions of agriculture, industry and commerce, the political status of the voters, the relation of the British colonies to the mother country, or giving accounts of the bread riots, the extension of franchise, the free-trade contest, and similar pertinent points. The young ladies of the class either failed to reply, or gave accounts of so puerile a nature, that they proved once again, how different it is for women to understand the meaning of history. One of them presented quite proudly a statement to

the effect, that Victoria in her youth had only a most scanty wardrobe, i. e., only so many petticoats, so many pairs of stockings, etc., etc.

In a historical society of the Middle West, a lady once read in my hearing a paper which she proudly termed a historical account of Ohio. In this paper she made puerile statements, such as: "Governor Campbell's mother had to carry her oats in a sack strapped to a mule's back to a grist mill ten miles distant from the farm." The authoress evidently did not know the difference between chronicles and historical facts of importance, any more than the student, who thought that the number of Queen Victoria's petticoats was a valuable contribution to history.

That characterizes the sexes. I repeat: Woman is self-conscious, subjective; watch her on the stage, on the lecture platform, before a class in school. She is conscious of every fold, pleat and wrinkle in her clothes. She is present, all of her. She is never outside of herself. On the other hand, watch a man teacher; he is forgetful of himself, is objective, can project his mind, his whole self into time and space, and carry his class with him. It is a well-known fact, that the Americans are not a nation with a historic background, for the great majority of them never study history, not even that of their own country, and the little of history they do learn is taught them by women. Hence I consider it a national calamity to see the instruction of generation after generation of American boys in women's hands. *Quo erat demonstrandum.*

ENGLISH, A DEAD LANGUAGE.

WHEN a new batch of freshmen entered an American college, the athletic trainer of the institution enlisted a young Adonis to participate in certain sports. The young man was more than willing. After the first day, he failed to show up on the campus for more than two weeks. When again he made his appearance among the boys, the trainer roughly asked him, what he meant by absenting himself from athletic drill. The boy said he had been conditioned and had to study hard. "Well," said the trainer, "why didn't you stew hard a few nights and be done with it?"—"Couldn't," was the reply, "it was a new study I never had before."—"What study was it?"—"English," said the student.

Humorous as it may sound to hear an American freshman acknowledge that he had never studied English before, there is more than a little truth in his answer. The English language is enormously difficult as a philological study, as I shall endeavor to prove, and is therefore rarely studied; chiefly because it is a language, which has ceased to grow from within, and can increase only by accumulation from without. It has ceased to derive nourishment from the roots. It is a partially dead language.

It will not be difficult to prove that English is a dead language; not in the sense in which we are accustomed to apply that term, that is, a language not in use any longer, not alive, for it is very much alive and kicking

over the traces. I mean the term in the sense in which Sam advised his young bride in a Washington boarding house, when he told her not to eat "them biscuits, 'cause there's something dead in 'm." They were cod-fish balls. I mean to say, the English of our day is not a homogeneous language. It consists of heterogeneous elements which are not fused, not originally combined, and hence are incomprehensible to most people. There is something dead in the language.

The invasions of conquering hordes and swarming masses of immigrants into the British Isles, each group bringing its own language or dialect with it, failed at first to amalgamate with the natives politically, culturally and socially. The result was tacit toleration of each other's habits, occupations, social circle and language. It took over 200 years, before the Norman-French and the Anglo-Saxon had sufficiently amalgamated to use a common tongue, which was a conglomerate, not an organic structure. How long it had taken the Anglo-Saxons, Danes and Norsemen to merge their language with the original Keltic tongues and dialects; how much of the Latin of the Romans still adhered to the language of the Kelts, all such inquiries are fruitless. Suffice it to say:—Each nationality added something to the conglomeration, but not one became superior to all others, so as to thoroughly assimilate them.

Persons who have studied geology will understand the term conglomerate or pudding-stone. The English language is a pudding-stone, for its words still bear the form and color of the language they are taken from, as Webster plainly shows; and this process of taking on new words is going on today, for modern English contains German words, such as *Ausgleich* (compromise),

Zollverein (customs-union), Hinterland (Inland), Kaiser (Emperor), Turnverein (gymnastic society), Hinterlader (breech loader), and a number of others, for which good old English words might be substituted. They show the mode of accumulation or agglutination.

We notice that the Anglo-Saxon conjugated his verbs (I eat, ate and have eaten) that he made adjectives of past participles (yclad, yclept), and had many rules of rection (between you and *me*, not I, because prepositions governed cases), and numerous similar grammatical distinctions. And so was the Norman-French originally a much more articulated tongue. But when the two languages merged, the conquerors disregarded the conjugations, declensions and rection rules of the Anglo-Saxons. The Anglo-Saxon, on the other hand, attached little meaning to his conquerors' words, and twisted them to suit his tongue. The natural consequence was, that both component parts of the combination yielded up those qualities, which were the source of inner growth. Henceforth the new language could not grow from within like a plant, but had to grow from without by accumulation or agglutination. Both tongues had rubbed elbows and knocked off their corners; the words became shorn of their grammatical fine points, they rounded out and became most serviceable for every day use. Modern English is an almost grammarless tongue, in which sentiment determines grammar rules.

The same process is going on all over the world, today. Only a little while ago, the white people learning Indian names, accepted them for rivers and places, and are using them now, sometimes twisted out of shape, without knowing what beautiful meaning lies at their base. Notice: O-hi-o = River fair to look

upon; Oklahoma = Beautiful land; Minnehaha = Laughing Water. And on the other hand, the Indians, not understanding our language, accepted contemptuous terms as terms of honor and esteem. Notice how proudly Indian chiefs, bearing names of distinction, such as eagle or chief, accepted such names as Billy Bowlegs, Searfaced Charley, Nasty Jim, and the like. Want of knowledge leads our American soldiers in Cuba, Porto Rico, Hawaii and the Philippines to make similar mistakes, and thus, we suspect, it will go on, till all the world speaks English, which will, however, not be the English of today, but of some future century, a sort of linguistic pudding-stone of many unrelated particles.

Now to come to the point: The lack of homogeneity may have its advantages, but it plays havoc with the child's mind. It takes English and American children on an average two or three years longer than French or German children to acquire the mere rudiments of an elementary education, as has been conclusively shown by President Eliot, Prof. Münsterberg, and by myself in "European Schools." The polyglot nature of the English language makes it very difficult for our pupils to learn the language, as it ought to be understood after eight or twelve years of study.

The want of consistency in the language is appalling; and many of its words, polysyllabic ones particularly, stand like erratic rocks of former glacial moraines in the midst of the prairie, without any organic foundation, such as a root. It is well known to the psychologist, that new cognitions are readily learned, and willingly retained, if linked to previous cognitions. How a child is to link the word *conflagration* with *fire*, *verisimilitude* with *truth*, *constitution* with *law*, *inundation* with *flood*,

illumination with *light*, etc., is difficult to perceive. In German it is Feuer and Feuersbrunst, Wahrheit and Wahrscheinlichkeit, Recht and Grundrecht, Flut and Ueberflutung, Licht and Erleuchtung. One word is grown out of the other, so to speak. Thousands of English words, like *prohibition*, *hypocritical*, *convalescence*, *magnanimity*, *metaphysical*, *incomprehensibility*, offer the same difficulty. In the old Dame-school it was the custom when a child in reading came to a big word which it could not spell out, to say "Jerusalem" and pass on. Frequently, grown-up newspaper readers are obliged to do the same now-a-days.

Some words, like *intimidation*, are more easily learned and understood. This word intimidation is first traced back to *intimidate*, and further back to the adjective *timid*. There the child has a root to go to, a fountain-head, so to speak. But how few are the words of Latin, Greek and French origin that can thus be traced back! See how many, many applications are necessary before the child can comprehend the word *humanity*. If the word had consistently grown out of the Anglo-Saxon words *man* and *friend*, and had been built up somewhat in this shape: "man-friendliness" (the very translation of *humanity*), even very young children could understand it instantly.

If we want a still better proof, let us paraphrase the 23d psalm:—"Jehova is my pastor. I shall not be indigent. He maketh me recline in verdant pastures. He conducteth me beside the unrippled liquidities. He restoreth my psyche," etc., etc. The good intent of showing the point, is all that saves such a paraphrase from blasphemy. Here is another sample of dead English:—

"In promulgating your esoteric cogitations, and in articulating your superficial sentimentalities, amicable or philosophical observation, beware of platitudinous

ponderosity. Let your conversational communications possess a clarified conciseness, a compact comprehensibility, a coalescent consistency, and a concatenating cogency. Eschew all conglomerations of flatulent garrulity, jejune bablement and assinine affectations."

As a sample of live English, homogeneous Anglo-Saxon, I'll insert two stanzas of a poem by John Elwood Paige:

"And the feeling comes, as we gather here, that breaks
in a smile and melts in a tear;
For a glance unbidden is backward east, and the now is
lost in the greater past.
But what if we look and look in vain for the faces we
may not see again?
Some things there are that the finger of time must fail
to touch with its frosty rime.

If the eye be dim and the locks be gray, what matters
it so the heart be gay!
And the gift more goodly than pearl or gold, is the art
of gracefully growing old.
Men may come and men may go, as the shuttle of life
flies to and fro,
But the sun climbs over the mountains still, and sets as
of old o'er yonder hill."

There are only two or three words in these lines not of Anglo-Saxon origin.

Jumping from one compartment of the language to another retards the progress the child makes, or ought to make; because the compartments are connected by no apertures, except such through which learned linguists can creep, who will trace back Latin, French, German and English to Sanscrit and more ancient Arian languages. The child learns the word *dog* early in life, and has a very clear idea of what it stands for. But when in school it is to express and classify anything as dog-like, or pertaining to dogs, it must reach into the

Latin compartment of the English language, and there find *canine*. And so we might go on all through Webster, much to the reader's displeasure.

Most English words needing definitions to be understood will have to be defined in Anglo-Saxon words:— Aphasia—the slow loss of the mind's strength. One never needs to define words belonging to the Anglo-Saxon stock of words, like fence, house, way, tree, etc. But a word like *method* is explained by saying: It is a way on which one reaches a given end by a series of acts which tend to secure it.

One of the reasons why school instruction in the natural sciences in England and America is so poor in results, is the fact that the technical terms are of Latin origin, such as the terms of botany: serratum, dentatum crenatum, repandum, sinuatum, ciliatum, instead of saw-like, tooth-edged, notched, bay-edged, fringed, etc. How easy it would be for our children to study science, if the latter were not surrounded by an unscalable wall of bad Latin. If instead of denominating a plant as *Diclytera Spectabilis*, we might say, the flower is called the Bleeding Heart; or if, instead of naming a certain tropical plant *Datura Brugmancia*, we might honestly confess that it is the cultivated cousin of the Jimson weed and the tobacco plant, and that the plant is called Angel's Trumpet in Brazil.

Lord Dunedin, in proposing the toast of "The Royal Society" at the annual banquet of that association, declared that the popularization of science was one of the functions of a society which existed for the promotion of natural knowledge, from which the obvious inference was drawn that the neglect of science in Great Britain was largely due to the indifference shown by scientific men to the average reader. Few men of

science, it was pointed out, made any attempt to describe their investigations in language which could be understood by the ordinarily well-educated reader who had no special scientific knowledge. Prof. M. E. Sadler thereupon suggested, that the neglect of the teaching of the mother tongue in English schools was a reason why so many Englishmen of learning and high scientific attainments were "unable to express themselves in a lucid and stimulating way."

On the edge of the desert of Arabia, an English traveler found a small Turkish school, over the entrance of which this description figured: "Here is the place where the young are taught the beginning and meaning of words." Over the doors of our American schools *this* inscription deserves a place: "Here is the place where the young are rarely, if ever, taught the meaning of words." The teachers themselves cannot know it, because they rarely know anything save their home-spun English. No one knows English, unless he has mastered the three principal languages, Latin, French and German, out of which modern English is made.

This, then, is what I call the dead elements in the English language:— Words that have no inherent meaning to the user, except such as he arbitrarily attaches to them. If the reader wish proofs of this, let him try himself and his friends by the fireside. Let him give out a number of English words, and have those present write out definitions. The diversity found will be so great, that it will make his hair stand on end. Hence the wide extent of misconception, misunderstanding and consequent trouble, hence, also, the utter absence of philosophical systems in English-speaking nations. But it is the language of puns and oratory: Two examples may show this: —

“This great country is bounded on the East by the turbulent waves of the Atlantic, on the West by the smooth waters of the Pacific, on the North by the Aurora Borealis and on the South by the Day of Judgment.”

“The United States are the great griddle of the world. On this griddle lies Texas the biggest waffle of them all; a waffle floating in the butter of prosperity, flavored by the honey of pure Democracy, and ready for the teeth of millions of inhabitants yet unborn.”

Look, on the other side, at the homogeneity of the German language. For instance, there are 520 words, all belonging to, derived from, or combined with the one root “fern” (far, or distant). In English that root has no more than 25 derivatives and compounds. Aside from etymological consideration, it is well to glance at another source of difficulty the English language presents, its orthography and pronunciation of the commonest words. The rhymes quoted here will show it:

“When the English tongue we speak
 Why is ‘break’ not rhymed with ‘freak?’
 Will you tell me why it’s true
 We say ‘sew,’ but likewise ‘few’;
 And the maker of a verse
 Cannot cap his ‘horse’ with ‘worse?’
 ‘Beard’ sounds not the same as ‘heard’;
 ‘Cord’ is different from ‘word’;
 ‘Cow’ is cow, but ‘low’ is low;
 ‘Shoe’ is never rhymed with ‘foe.’
 Think of ‘hose’ and ‘dose’ and ‘lose’;
 And of ‘goose’—and yet of ‘choose’.
 Think of ‘comb’ and ‘tomb’ and ‘bomb’;
 ‘Doll’ and ‘roll’ and ‘home’ and ‘some’.
 And since ‘pay’ is rhymed with ‘say’,
 Why not ‘paid’ with ‘said’, I pray?
 We have ‘blood’ and ‘food’ and ‘good’;
 ‘Mould’ is not pronounced like ‘could’.
 Wherefore ‘done’, but ‘gone’ and ‘lone’?
 Is there any reason known?

And, in short, it seems to me
 Sounds and letters disagree.”

(Bangaler's Magazine).

But the polyglot character of the English language is not the only thing that makes English a dead language. There is another equally important element. It is the utter absence of philological training of most of our writers, and the frightful ignorance of the uneducated. This is a terrible accusation, but I stand ready to prove my contention. The first indictment, want of philological training among modern writers, need hardly be proved, any more than the multiplication table needs proof. Compare the choice words and the immaculate grammar of the writings of Addison with those of Kipling, or any other two representative writers of the same periods, and the proof of the fact, that our modern writers rarely know any language save their home-spun English, reveals itself. Comparative philology is utterly impossible to a monolingual person. Oh, yes, our high school and college students learn a little Latin and less French, Greek has become a word of derision, and of German they know just enough to despise it. But they do not learn to master these languages so as to be able to think in them. In all the 45 years I spent in this country, I have found only two native Americans who could speak and write German fluently and correctly, Pres. Vickers of the Cincinnati University, and Prof. Whitney of Yale College. There may be more who know French perfectly, but there are fewer who can converse in Latin, Italian or Greek. Compare with this the erudition of the savants of other countries, and the fact that comparative philology is a book sealed with seven seals in our modern seats of learning becomes obvious. But here

comes the critic and says, "It is not necessary to think *about* a language, if one can think *in* a language. Look at Shakespeare." We need not take stock in the assertion that Shakespeare was a blockhead, or a linguistic tyro, and that not he but some one else had written the plays. Shakespeare betrays in every line that he was no mean linguist. His choice of words is truly marvelous.

The second indictment, frightful linguistic ignorance among the uneducated, is equally easy to prove. I do not seek that ignorance among the poor and in the slums alone, it is found among well-to-do people as well. A society lady is said to have exclaimed: "Oh, Mr. Paderewsky, do play us an opus, I dote on opuses." Another desired an artist to make a bust of her daughter's hand. And then listen to the girls saying: "That's awfully nice."—"Do tell!"—"You don't say so!"—"My eyes!"—"Well I declare!"—"I'd like to know!"—"Is it possible?"—"Land sakes!"—"You don't mean it."—Such expressions reveal an ignorance which makes a linguist shudder; they are dead elements that convey no meaning.

The miller following the blissful ways of his ignorance, has a stagbuck printed on the bags in which he sells his *buckwheat*. Now, buckwheat is so called from the Teutonic root "buckh" or beech wheat, because the grains of buckwheat look like small beechnuts. Buckwheat therefore means *beechwheat*.

The bakers and confectioners, a century ago, sold among other toothsome things *corolas*, those round doughnuts that look like floral corolas, but ignorance and careless pronunciation corrupted the word into *crullers*. *Biscuit* means twice-baked, yet today we have to eat biscuits that are only half baked.

The grocer sells *currants*, and you think you are eating currants in your pudding. Don't believe it; you are eating *corinths*, small dried grapes that grow in the Isthmus of Corinth. In other languages that little dried fruit is still called *corinths*.

The market-women sell *Kohlslaugh*, and the Germans know that to be a corruption of Kohlsalat. Kohl is the German for cabbage, salad pronounced *salát* soon found its death and no resurrection in slaugh. Kohlsalát is cabbage salad.

English speaking writers use the word *furbelows* like a sweet morsel under their tongues, and never know that the word is a corruption of the Spanish word *falbala*. In German, the word is still Falbel.

In English the word *rochet* (jacket) erroneously spelled *rotchet*, is the old Teutonic and Anglo-Saxon *rocch*, derived from the Latin *roccus* = the coat.

People speak of rainstorms, snowstorms, hailstorms, thunderstorms, when there is no storm at all connected with the rain, snow or hail, etc. Storm is a violent agitation of the air. Hence to use the term rainstorm, when the raindrops come straight down, is sheer nonsense.

Pantaloons are so called after Pantaleone, a comic figure in Italian plays. He was masked, and wore nether garments of different colors which were trousers and stockings all in one piece. Later on, the two garments were cut apart, and that was the birth of the socks.

During the Middle Ages, soldiers were called country-servants = Landsknechte. They had much time on their hands and played cards. One game was called after them; people played *Landsknecht*. This word the French corrupted into *Lanquenet*. And the English who derived most of their terms of Continental Euro-

pean places, conditions and things through the medium of the French language, play lansquenet without the faintest idea of its origin. The pick or lance soldiers of those and later times, also invented a game which was called *piquet* in French, and the English play it without any knowledge of its vile origin.

Many men and officers enter the *cavalry* branch of our army, without knowing that the word *caval* or *cabal* means horse. The Spanish word *cabaliero* means the gentleman, the man on horseback, the man in command, the man of power and good breeding. The French, whose word for horse is *cheval*, derive from it the word *chevalier*, and we derive *cavalier* from *cabaliero*. And how many ladies eye their new dresses in the *cheval glass*, utterly unaware of the fact that the French call it so, because it is a riding or swinging mirror!

The word *infantry* comes from *infant*, or the Latin *infans* = the child. *Infantry* are foot soldiers, followers of knights or riders, hence the little ones of the army. *Grenadiers* were soldiers who threw *grenades* from thunder boxes, or blunder busses, guns laid on tripods.

The knights of the Middle Ages had young squires with them, called *Knappen*, who performed menial service for them and their horses. *Knappe* softened into *Knabe* in German, which today stands for boy. The word crept through the Dutch into the English language, where it was still more softened into *knave* = scoundrel or scamp. This is a good example of the law of sound-shunting discovered by Grimm. See also, how geographical separation causes changes in the languages. This cause of diversity has happily disappeared, since rapid steam-transit has connected the uttermost ends of the habitable world.

A similar example is found in the word *rogue*. In

French it meant a proud, haughty, distinguished one. In English it is synonymous with knave and vagrant beggar.

Other dead elements of the English language are:—*Lackadaisical* a person is said to be, because in former years such a person would often use the expression of lament: “Alack-a-day!” *Crisscross* is a corruption of Christ’s cross. *Maulstick* is used by English maiden writers. It is a case of false spelling. It ought to be *Malstock*, *paintstiek*, a stick to rest the hand on in directing the brush.

Sabretasche is sabre-pocket. *Tasche* is the purely German word for pocket. *Bivouac* is *Beiwacht*, or by-watch, during the night. *Bishopric* is of German origin, meaning the realm or region over which the bishop rules. The German *ric* or *Deutsches Reich* is a similar expression, so is *Himmel-reich* = heavenly kingdom. *Spelling* means splitting. On the ancient hunting-grounds of the Anglo-Saxons in Northern Germany people still spell wood. In the far West careless use of language has developed an apparently new word *Buckeroo*. It is the Spanish *Vaquero* or cowboy, derived from *vacca* = the cow.

Causeway is derived from the French *chaussee*, and farther back from the Spanish *calzada*, and still farther back from the Latin *via calciado*, a road paved with lime stone.

The word *to teach* may also be classed among the dead words. In Anglo-Saxon it meant to show, prove, demonstrate. To set a child to memorizing the printed page is not teaching. Though the *dollar* seems very much alive, the word is a petrification. Martin Luther’s father was a miner, and in his time the coins struck from the silver in the mines of the Joachim’s Valley

(Joachim's Thal) were called Joachim's Thaler. For brevity's sake the adjective Joachim was dropped, and the coins were called Thaler. This word was universally used in Germany and in Holland, where it changed into Daler. This latter term was carried into England, where it changed its spelling and became dollar. Subsequently it was adopted by the American Congress as the name of the standard measure of money.

The pretty girl's name *Ursula* means Little She-Bear. *Loafer* is a corruption of the German *Läufer* = the runner. How unconsciously this process of corrupting is going on, can be seen from *asparagus*, which becomes Sparegrass in the market.

Mob is a petrified word, familiar as we may be with it. Originally it was *mobile vulgus*, the movement of the vulgar. *Vulgus* was left off first, the *mobile* dropped its tail, and there remained *mob* which is still the movement of the vulgar.

Mortgage is an indebtedness which even death cannot wipe out. *Mort* = death is engaged to pay it. That is to say, if you own a house and borrow money, giving a mortgage on the house to secure the return of the money, it is quite immaterial whether you live or die, all other loans on the property have to recede before the mortgage debt.

Backgammon is a well-known game. The name is of Welsh origin meaning back = little, and cammon = war; a little war.

The English article "*the*" is "*el*" in Spanish, hence: El Dorado is the gold land. Therefore it would not do to say "The Eldorado;" say "the Dorado," or better still say the gold land.

Our word *boor*, comes from the Dutch *boer*, and means tiller of the soil or farmer. Hence to pronounce

the word like boar is calling the South Africans wild swine. Only ignorance can excuse that.

Omnibus is a Latin word, which means "for all," being the Dative case of *omnis* = all. Hence an omnibus wagon is a public carriage for all. And an omnibus statehood bill is a bill which, if it passes Congress, admits *all* three territories to statehood, Oklahoma, New Mexico and Arizona.

Corn is a word many think they know. Maize is the proper word. In yesterday's news items, the statement comes from London that the corn supply of the world is limited, which means the grain supply, not the maize supply. But how does it come about that we use the word incorrectly? This way: When the English explorers came to America, they found maize cultivated by the Indians, and called it "Indian corn." Later on, the adjective limitation Indian was dropped and the remaining word corn stood alone misapplied. Corn comes from core or cornel, the heart, and is therefore well used for all grain fruit.

But even true Saxon words are not well understood: *Spellbinder* comes from spellbound. *Muleteer* in modern English is a mule-driver. How did the word come into being? In German the word *Thier* means animal, *Maulthier* means mule. *Maulthiertreiber* is muledriver. But the German word, which entered the English language through the Dutch, was too long, hence the last component part was dropped and muleteer remained with the erroneous meaning muledriver.

Miss Jane G. Austin, in her historical novel *Betty Alden*, uses the word *Snaphance* for gun. The word is purely German, only misspelled. *Hanns* is the abbreviation of *Johannes* or *John*; hence *snaphanns* or *snaphann* is what is meant. Even today we have similar expressions, such as dum-dum cartridges, long Toms, etc.

What is *Meerschaum*? A German word, the meaning of which is sea-foam. It is a peculiarly porous white clay well adapted to absorb the nicotine contained in tobacco, hence the fictitious name sea-foam = Meer-schaum.

Homage, paying homage is a word little understood. When during the Middle Ages serfs and squires swore fidelity to a new feudal baron, they used the word "I am thy man." The French word *homme* means *man*, and *homage* the act of declaring oneself somebody's man or adherent.

Newspaper reporters' English is wonderfully and fearfully made sometimes. Recently I read the word *anti-chamber* for *ante-chamber* three times in the same column; and this *data* for datum, and "*this one strata of society*" instead of stratum.

It was said a while ago: The meaning of the Anglo-Saxon word *to teach* is to show, prove and demonstrate. Picture to yourself my amazement when, not 10,000 miles away from Washington, I heard a teacher say:—"I like to teach Wentworth best." It must be a pleasant task to teach a corpse. What she meant was, that in teaching Arithmetic she preferably followed Wentworth's method, or course, or text-book.

Here are a few examples of how the dead elements are reflected in the uneducated mind:—

The other day they had the words "visit" and "visitation" in the reading lesson of the class, which a friend of mine teaches. Nearly every little girl in the class knew quite well what "visit" meant, but they were a little at sea when it came to "visitation."—"Now," said the teacher, "I want you to tell me what you think it means. It is something more serious than visit. I don't want to tell you what it means, till you have told

me what you think it means. What do you think, Anna?"—Anna looked a bit doubtful, but plucking up courage on the teacher's hint, she spoke:—"I know what 'visit' means." She said. "That's like when Cousin Jack comes to see us, and visitation is when Aunt Jane comes; I guess that's a visitation."

Here are a few pupils' definitions of words misunderstood:—

A *volcano* is a burning mountain that has a creator and throws out rocks.—A *triangle* is sometimes regarded as standing upon a select inside, which we then call the base.—The *apex* of the heart is placed downwards.—*Fiction* is something which is believed in, but which is nothing.—*Climate* is an imaginary belt of the globe parallel to the equator; it is so called by earlier geographers because the difference of these climes depends upon the proper inclination of the spheres.—Are not these samples shots at a mark beyond the intellectual vision?

"Oh, how cute!" cries the woman at the sight of a baby. What does she mean? *Cute* is an abbreviation of *acute*, and *acute* is sharp or pointed, and there is nothing sharp or pointed about the baby.—"That's awfully nice," says the young lady. *Awful* means full of awe, or awe-inspiring, and to think that candy is said to be awfully nice.

One of the men employed at Kauffman's brewery, was discharged; the reason assigned being "inefficiency." He accepted his dismissal quietly and went away, only to return a few days later with a troubled air.—"What's the matter, Schmidt?" the foreman asked him.—"Will you please tell me, vy I vas made loose, anyway?" he queried.—"Why, for inefficiency," was the reply.—"Cha-as, das vas him. Explain to me vonce, vot it is

this 'insufficiency' is. I haf asked every one in the eleventh ward, and they know him nit."

"You are charged," said the court reading the indictment, "with having wilfully, feloniously and with malice aforethought appropriated to your own use and behoof a certain article, to wit: a vehicle; said vehicle having been wrongfully and feloniously abstracted by you from the premises of one John Doe, on or about the fourteenth day of August, anno domini 1907, contrary to the statute in such cases made and provided, and against the peace and dignity of the State of Illinois. What say you? Are you guilty or not?"

"I am not guilty, jedge," protested the prisoner. "All I done was to steal a buggy."

In another court a defendant was informed that his case was "nolle prosequitur."—"What?" said he. "How many years do I get for that?"

"What are your views on the subject of corporal punishment? Do you approve of it?" asked the principal of the school.—New boy's mother: "No, indeed, sir. I thinks, when they're bad, ye should just give them a good thrashing."

A lady was looking for her husband and inquired anxiously of a housemaid: "Do you happen to know anything of my husband's whereabouts?"—"I am not sure, mum," replied the domestic, "but I think they're in the wash."

Asked to explain what a buttress is, one boy replied: "A woman who makes butter."

A well-known anecdote may show the practical use of dead words:—

One of our famous humorists had a conversation with his friends at the club, in the course of which it was said, that he would not be able to cope with the volu-

bility and vituperation of the fish wives at the market. They offered to bet that he would be unable to silence such a woman when once stirred up. He accepted the challenge and asked that his two friends accompany him to market. He went through the stalls, selected the most vicious-looking and violent-tempered woman selling fish, and posted himself in front of her stall. He took up a fish, poked at it, smelled it and made a wry face, indicating that he thought the fish before him were not fresh. His looks, his gestures, all his actions stirred the ire of the woman to boiling point. Finally she broke loose and submerged the humorist with such a flood of vile language, that any other person would have taken to his heels. Not so our man. He stared sober-faced at her, leaning on his cane, and waited. Presently the woman's breath gave out, and this moment was utilized by our humorist to say: "Ah bah, these fish are only *axioms*, *tangents*, *radii* and *secands*, and you know it."

The woman could not stand such an insult, with hands on her ample hips, she laid herself out to abuse the man with a vehemence that outshone her previous efforts. Again the man waited, till he could wedge in a word. "Do you know what *you* are, madam? You are only an *intercepted arc* and a *quadrilateral*. That's what you are!"

Again the woman opened her register and flooded him with unsavory epithets, but with much less force, and the man soon wedged in by saying: "How can such a *rhomboid*, *trapezoid*, *rectangle* and *parallelogram*, as you are, know any better?" That almost silenced her, but just at the moment, when she intended to give him another piece of her infuriated mind, he forestalled her and said, this time with raised voice: "Madam, you do

not seem to know that you are a *polygon* and an inverted one at that; or still better, you are a *polyedron* and a *parallelopipedon* to boot." The woman subsided as though struck by paralysis, and looked at him thoroughly cowed; saying: "Am I all that?"—

"Yes," he replied, "you are a thorough-going *parallelopipedon* and a *cyclopedian ignoramus*."—That settled it and her also. She sat down without saying another word. When the three men had turned to go (two of them holding their sides with laughter), she turned to another woman and said: "Did you ever hear such nasty words in all your born days?"

Thus we might go on for hours pointing out dead elements in the English language, but the few striking examples I offered may suffice to support the contention. If teachers in school would use Webster oftener, they would find all the information they need, to throw a flood of light on the words they are teaching. But still better: If they would teach the use of the dictionary to their pupils, the nation would be vastly more skilled in the use of the English language in the next generation.

GERMAN INSTRUCTION IN AMERICAN SCHOOLS.

UNDER this title there appeared, a few years ago, a collection of essays in English, which afterwards appeared in German under the title "Zwei Jahrhunderte deutschen Unterrichts in den Vereinigten Staaten." The essays were written by Prof. L. Viereck, who came to this country for the express purpose of studying the extent of German influence upon American civilization. At any rate, the work is apt to throw light on the introduction of German into the public schools, which would thereby be enabled to render homogeneous the composite elements of the population. But the work is not without serious flaws, and it is they which inspired this review.

The Germans across the ocean are constantly blaming those of their brethren who have become American citizens for being so easily assimilated, and for giving up their language. It does not occur to those people, that the process going on before our eyes, is not one of choice but the result of a natural force, so to speak. That Germans willingly became, during the century past, and are still willing to become, American citizens, may in part be attributed to the fact that they found and find here what they came for, political and social liberty, free elbow-room for their energy, appreciation of thrift, diligence and other virtues. Moreover, land could be had for the asking, and will still be cheap for some time to come; and America was sadly in need of human labor power; hence the new-comer found desirable employment quickly. Most of these things were notoriously lacking in Germany.

Germans are by nature liberty-loving, and that they should desire to identify themselves with a nation in which liberty is not "ein leerer Schall," is therefore no cause for condemnation. "Ubi bene, ibi patria" may not sound very patriotic to the Germans in Europe, but it has a ringing sound to the American citizen of German descent. But then, it is said, he should not have yielded up his language which was worth preserving, having been the vehicle of a culture a thousand years old, and still being the language of a highly civilized and powerful as well as a progressive nation. That would seem a serious indictment, if it were not for the fact that no human will-power can overcome a natural force so strong, as the one which brings about the gradual loss of the German language in English speaking countries or communities. The immigrants themselves do preserve their language, but their children and grandchildren are apt to prefer English despite all the parents may say and urge, because of the two languages English is by far the easier to learn, to speak and to write. Every energy in nature is, first of all, directed towards the point of least resistance, and the human being is but part and parcel of nature. Children, especially, choose that vehicle of thought which offers least difficulty in carrying it, and no argument, sentimental or coercive, is effective enough to overcome this natural law. If the German language were stripped of its cast-iron rules of declension, conjugation and rection, of its unruly gender, of its cumbersome construction, its inconvenient syntax; and if children could go on, as in English, using unhewn blocks with which to build their sentences; if, in short, German were an almost grammarless tongue like the English, it would not be difficult for the language to main-

tain its place in the family and workshop, in the market and in public life. But even then, it would have to struggle hopelessly against a language in which are clothed the postulates and principles of political liberty, the laws of the country and the tenets of social intercourse. That the two millions of German Saxons in Siebenbürgen have been able to preserve their language in the midst of Hungary is (1) owing to the fact that they speak a German dialect stripped of inconvenient grammar rules, which dialect is infinitely easier to learn and to use than the difficult Hungarian language; (2) owing to the fact that they remained a separate community, unmixed with other nationalities for hundreds of years.

It must be remembered that persons who have learned to speak German in their youth, by overcoming the many grammatical difficulties, have undergone a severe mental training, and have acquired a linguistic facility, which will enable them to master other languages, especially if they are easier than their mother-tongue. This explains why Germans acquire English so readily, also why educated Russians learn other languages so easily, that we find them frequently in possession of a half a dozen languages. On the other hand, it is plain, that a person whose mother tongue is the convenient English should find it so difficult to master German, that the Anglo-Americans and Englishmen who can speak German fluently and correctly may be counted on the fingers of one hand. American students in Germany flock together and continue to speak English; they even write their doctor-dissertation preferably in English. Early wrestling with philological obstacles engenders linguistic talent, while total absence of that training causes philological atrophy.

It is the inability of the Englishman to learn the languages of other peoples which makes him intolerant with foreigners. The great majority of English-speaking people will brook no other language in their presence, and hence, many persons of other nationalities are inclined to conceal the knowledge of their native tongue.

But Germans in this country are said to be deplorably weak in being assimilated. In one sense, as has been shown, that is true for good and all sufficient reasons, but it is not true, if viewed from the standpoint of patriotism. Their learning English so quickly is only proof of their outward assimilation, though this is a step toward complete assimilation, but it is no proof, that they have forgotten their native country. It may be emphatically denied that the Germans in America, though cut loose from their native soil as they are, are any the less ardent lovers of the German nation, a people that has been one of the moving forces in the history of civilization. Their speaking English is not an indication of contempt for Germany. Their sympathies are still enlisted in everything that concerns the weal and woe of the fatherland. The history of the last fifty years proves this amply, but it is America which has opened up to them the opportunities of social and political betterment which used to be closed to them in Europe. While Germany is the country of the German-American father, America is the country of his children. That means that the children, being born here, love America above Germany, very naturally so, and the same justifiable national egotism which makes the Germans in Europe regret the loss of their emigrants, makes the American-born rejoice in their coming.

That during the eighteenth and nineteenth centuries many Germans came to America, is chiefly owing to the historic fact that they were oppressed and persecuted, or if not that, that they failed to receive that protection in the pursuit of happiness which every citizen may reasonably require or expect of his government. Since that distressing time Germany has become a nation in which the citizen can find protection and opportunities for the exertion of his energies. Naturally therefore, emigration has diminished to a negligible quantity.

The German emigrant of the eighteenth and the early part of the nineteenth centuries had little cause for political and patriotic pride in his native country. His country had been the battleground for successive centuries. It had become a mere geographical idea, as Napoleon expressed it. In judging, therefore, the ardent love of our German-born citizens for their adopted country, one should not forget the conditions of Germany of generations gone by, conditions like those in the Palatinate which were even worse than those which drove the Puritans across the sea. Yet, despite all bitter feelings, it is well known, the Germans here loved their fatherland no less than those who stayed at home. That comparatively speaking no great lights in literature, art and philosophy have arisen among the Germans here in America, may be attributed to the fact that the intellectual soil upon which German genius could flourish was left behind. Social strata of intellectual fertility had no cause to emigrate from Germany; it was in most cases the lowly toiler, the artizan and the farmer who left Germany, people in whom no particularly profound comprehension for the greatness of German culture could be expected.

And yet, despite it all, there is not another of the component parts of this composite American nation which has furnished more elements contributing to the national culture and wealth than the German, excepting, of course, the Anglo-American. Despite the fact, that few of the favored strata of Germany emigrated to America, the average German-American is today a most desirable citizen, a man who commands respect in all parts of the country, enjoys the confidence of his fellow citizens, and is honored in all walks of life. From the lowly toiler has come a generation of American citizens of German parentage who are found wherever thinking labor is performed.

The author of the compilation mentioned lays much stress upon the influence of German as a study in the higher seats of learning. These institutions deserve all the appreciative attention bestowed upon them, but it is regrettable to notice how little he has to say, or seems to know, concerning the efforts of German teachers in lower schools. This is not astonishing. As a stranger he failed to see the many struggles the Germans had to go through, to introduce and foster their language in the schools, how they taxed themselves for the maintenance of German schools, how they fought in the press, in legislatures and on the stump. He knows little or nothing of the hard labor and pioneer work of Scheib in Baltimore, Feldner and Schneck in Detroit, Engelmann and Dörflinger in Milwaukee, Hailmann in Louisville, Soldan and Rosenstengel in St. Louis, Klemm in Cleveland, Straubenmüller and Klamroth in New York, Reffelt in Hoboken, Knapp in Philadelphia, Heinzen in Boston, Stallo and numerous others in Cincinnati, Metzger and Lieber in Indianapolis; not a word is said of Conrad Krez in Wisconsin. Of the many

memorable, sometimes hopeless, efforts in behalf of the German language as a study in public and private schools in St. Louis, Chicago, San Francisco, Buffalo, Pittsburg, Cleveland and other cities, the author has no knowledge, but the German departments of colleges are fully described. Yet the college student who nibbles at the German language and literature and at best gets only a dictionary acquaintance with German, may be one in a hundred thousand. Many, many others, especially teachers in lower schools, where they influence hundreds of thousands of children, have done and are doing their share in supporting the German language and struggle against odds in the press, in city councils, in school boards and state legislatures. A loving remembrance and an appreciative word for their truly memorable work in years gone by would have seemed eminently proper.

The memorable conflict between the two wings of advocates of the introduction of German as a study into the public schools might also have been sketched. There were those who intended to make German a veritable vehicle of thought by making it the medium of instruction and thus insure pedagogical success, and save the mother tongue to the children of German-born parents, as well as make it possible for English-born children to acquire a speaking acquaintance with German. For that reason they insisted upon giving from two hours to half a school-day to the German teacher, and the other part of the day to the English-speaking teacher, as is done in Ohio. The others were satisfied with introducing German as a foreign tongue, give it a modicum of twenty minutes or less a day, and use it merely as a social lever to bring together heterogeneous elements and fuse them to one homogeneous mass, that

is, hang up the German language in the schools like a bait in a mousetrap. Both methods commend themselves according to the standpoint from which they are viewed. Of this most interesting contest an instructive paragraph might have been inserted.

Of the early attempts at establishing a German normal school, the convention of Germans at Pittsburg; nothing is said of the work Dr. W. N. Hailmann performed for the National German American Normal School at Milwaukee, before and after its establishment; a sad oversight! There are other inaccuracies and omissions in the work which must be attributed to limited acquaintance with facts and persons. All through the work there is noticeable a want of balance, to wit, between the influence of colleges and the lower schools, between historical facts of great weight and others of vanishing importance, between persons who performed great work, and mere imitators who reap the benefit derived from the pioneer work of others.

The weakest part of the work is the collection of biographies in which names are omitted that should have been inserted. No mention is made of Feldner, Engelmann, Hailmann, Reffelt, Schneck, Kraus, Knapp, Soldan and a host of others who devoted their energy and means to the preservation of German in this country. Instead we find obscure college professors, whose biographies are inserted, because they are alive and could furnish copy to the compiler. The inadequacy of this biographical supplement can, perhaps, not be better shown than by pointing out the biography of Horace Mann. The epoch-making work of this American educational classic has entirely escaped the compiler's attention.

XXVII.

THE ART OF DRAWING AND SKETCHING.

A FRESH, strong breeze is going through most of the old institutions of learning. Though not through all of them, yet the demands of modern life are finding expression on the lips of parents who are brought face to face with that fierce competition that drives many a graduate to the wall, because he is a mere knowledge-box. The dust of ages on venerable methods and the mold on deep-rooted prejudices is being removed in secondary schools in America and central and western Europe. We are in an age that derives its character from the marvelous progress made in natural sciences. People have come to the conclusion that it will not suffice for the student of the high school and college to be well provided with knowledge of powers and mathematical formulæ according to which the powers act. It is no longer considered important for the student to know the names of plants and be able to classify them according to arbitrary systems. The laboratory method has won the day. Observation of experiments, of parts of plants, of organs, even of cells, physiological and anatomical investigation from a biological standpoint of view,—these are the modes of procedure in the modern schools. Hand in hand with this goes the requirement, that all that is learned, observed, gathered, deduced, be expressed and represented orally or in writing, or in outline drawings. That is the other part of modern education. First, the acquisition of knowl-

edge, then the ability to use and apply as well as to convey it. To know is one thing; to be able to do is another.

The art of drawing and sketching is valued higher now than ever before. Witness the efforts of American and European periodicals in pictorial presentation. Knowledge, not to speak of science, the elements of which a student can present in outline drawings, is better understood and of a more abiding nature than knowledge stuffed into the memory by means of words only. Sketching as now taught in Europe is a supplementary study to instruction in the sciences. In the primary and grammar schools the pupil learns the technical tricks of drawing; then when he enters upon more advanced studies he learns to draw apparatus used in physical studies; he learns to fix in lines the habits of plants and animals; he reproduces in outlines their organs and sketches their actions; whatever he observes microscopically, or through the microscope, he presents verbally, in writing, and in delineation. Drawing aids geometry, stereometry, analytical and descriptive geometry, by awakening imagination necessary for the conception of bodies and their perspective representation. But all this is only a small part of what the study of drawing does.

When we come to the humanities, what a valuable aid is the ability to delineate! Antique and modern culture, political and commercial geography, history of wars and art, in every department the ability to give a vivid outline picture is invaluable. The ethical part of art is really conceived only by the student who can do, perform, represent in lines and colors.

The ability to sketch readily gives a man another mouth,—aye, and a new pair of eyes! It awakens the

sense of beauty and gives new enjoyment. It is not intended to make artists of our pupils any more than we aim at producing composers when we teach the elements of music and singing. It is urged that through scientific investigation and close observation the student may become absorbed in it and lose his usefulness as a member of society; it is said the perfection of industrial teaching and commercial development is apt to cripple the heart, to deaden the feeling for that which is good, noble, and beautiful. If that be so, the occupation with art, drawing, and music will awaken the spark and fan it into a beneficent flame. Let the boys and girls draw and ennoble their own sensibilities by habituating themselves to noble forms and beautiful colors.

Not all teachers can sing and teach music, but there is always some teacher in a schoolhouse with several departments who is a good musician. The dictates of simple economy suggest that to her be assigned the duties of a music teacher in that schoolhouse. Not every teacher can draw and sketch, but there is always some one among the teachers of a schoolhouse who can. May she not be made a special teacher of drawing for the entire schoolhouse? This is the secret of that marvellous success in drawing and sketching found in the schools of Paris. Many teachers there have been made specialists; they are drawing, music, or gymnastic teachers, and their skill is acknowledged in better pay. We cannot possibly expect every teacher to be specially well prepared for every branch of study. In Austria, the "Bezirks Schulräthe" (the county school inspectors) divide the course of study and assign to each member of that board of supervision one or two branches. When the inspector of language instruction

calls at a school, he looks after the languages, the inspector of mathematics and natural sciences looks after his branches, and so does the inspector of "accomplishments," penmanship, drawing, music, etc. Division of labor may have been carried too far in Austria, but it had great success. Is our system of class teachers and superintendents for all work able to stand a comparison with that of Paris and Vienna or Berlin?

XXVIII.

CLASS WORK IN THE SHOP.

DURING my sojourn in Europe, I visited about thirty technical, or manual training schools, most of which were public schools. Usually the classes were larger than was desirable for instruction in manual training, twenty being about the number of pupils that can be supervised with profit. Classes of forty and fifty are too large. Still, there are such cases in Paris, and other cities, and it was a source of great satisfaction to me to notice how well these classes kept together, being "handled," as it were, by men of great ability in discipline. One consideration returned to me as often as I saw a class in manual occupation,—that knowledge and skill have widely different paces of development. That is to say, children may be kept together in larger classes in mental study, but not in manual work, where skill is developed. The grade of efficiency in drawing and the use of tools are so widely different in children of the same age, that class instruction becomes more difficult than at first appears, and therefore much attention is to be bestowed on each individual pupil.

The manner in which the demands of specially skilful pupils are met with in some schools in Europe, is worth mentioning. That certain *class* work is to be accomplished is a self-evident thing. So the teacher employs his class during a part of the lesson with work prescribed in the course. After that, he permits each pupil to apply his ingenuity and skill in more difficult

work, chiefly in elaborating the work under hand. Thus, for instance, I found in the drawing classes of Professor Flinzer in Leipzig a perspective view of the cylinder the subject of class work. While the pupils of mediocre skill were still wrestling with the free-hand execution of the simple form, others, having finished it to the satisfaction of the teacher, applied the form of the cylinder by drawing an object of cylindric form, such as a stove, a drum, etc.

While some pupils were still working at the figure of a solid cross, others changed the form to the building of a church. Thus the original design of the course was not violated, yet each pupil "was permitted to go to the end of his capacities."

Here is an example of a lesson in a school of Vienna:

The subject of the drawing lesson (preparatory to work in wire-bending) was the spiral. This was done as class work, as Figures 1 and 2 show. The forms were simple, and correctness and neatness was all that was required.

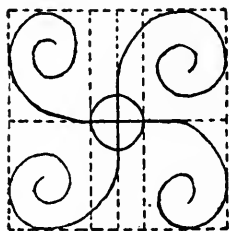


Fig. 1

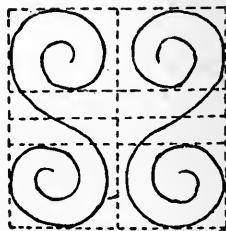


Fig. 2

These figures being completed by about half the class, the teacher *suggested* an application of the spiral in an equilateral triangle. Here is the result in two

instances. It being purely original work, it struck me as quite acceptable.



Fig. 3

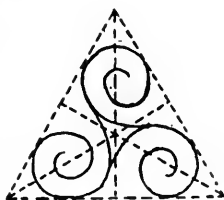


Fig. 4

Again, about ten pupils left the others behind, and a new task was given them: To apply the spiral around a hexagon. It was no easy task, and several of these ten boys needed further hints as to how to proceed. The two figures I select (5 and 6) may give evidence of the fertility of the sense of form developed in these boys. Both Figure 4 and Figure 5 are singularly felicitous conceptions, inasmuch as they preserve the original form (see Fig. 1) almost intact; while Figs. 3 and 6 are departures from the original, and strike out independently.

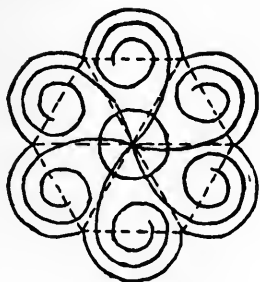


Fig. 5

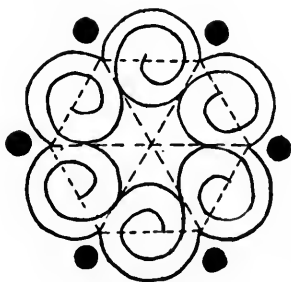


Fig. 6

That this mode of teaching, which may have resulted from a desire "to keep the boys busy," is very fruitful in awakening original conceptions and stimulating the

creative activity, need not be emphasized strongly. It goes without saying.

One of the pupils, evidently an artist in embryo, was still further charged with a task. He was told to devise a design for a fence, in which the spiral was the dominant form. I append a copy of his work, of which he had completed about one-half, when the bell announced the close of the lesson, which had lasted one hour and a half. See Fig. 7.

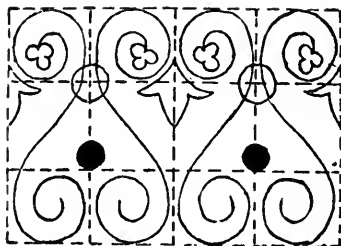


Fig. 7

No compasses or ruler were used; all was freehand drawing. It was done rapidly, but with extraordinary accuracy. The copies I present are my own, greatly reduced in size.

The same wise course was pursued in shop work. Thus I noticed a class working away at learning "dove-tailing." Skilful pupils finished their class exercise, and were then set to work at making a box with dove-tail joints. One boy in this class worked so rapidly and accurately that he could begin a third task before others had barely finished the first. But I noticed that this third task involved dove-tailing also.

When I observe so great a variety in progress, I can not help thinking that many boys, and girls also, in

mental work may, by too severe grading, be kept back from doing work suitable to their natural endowments, and in consequence sink back into that dangerous indifference which is anything but conducive to great efforts. A child who is kept back on account of his low "average" in arithmetic, may perhaps become intellectually stunted or dwarfed for want of suitable employment of those faculties, which are more pronounced in him than his faculty for mathematics. This reminds me of a Swiss teacher whom I asked for the number of classes he had to teach. With a twinkle in his eyes he gravely said, "Forty-eight." I understood him instantly; he meant to have said, "As many classes as I have pupils, for each pupil is a class in himself, and deserves special treatment, apart from that given to others." Of course that was Rousseau-like, metaphorically spoken, but there was a book-full of wisdom in his answer.

XXIX.

OBJECT TEACHING AND SKETCHING.

HERE are the results of a lesson on circulation of the blood. The comparison between the circulatory organs of mammals, reptiles, and fishes was brought out very clearly, and the pupils enjoyed sketching the different systems. The lesson proved that even high school pupils are more likely to remember facts when object teaching is resorted to, than by appealing to the imagination and memory alone.

Though the organs of circulation had all been *seen*, some *in natura*, most of them in *papier mache* preparations, and all on colored charts, it was nevertheless deemed advisable to again bring these means of object instruction into the class to afford a comprehensive comparison between the circulatory organs of *mammals*, *reptiles*, and *fishes*.

But not satisfied with the "inner consciousness" of having succeeded, the teacher thought it advisable to test the retentive power of the pupils' memory by asking them to write a composition on what they had learned, and to sketch the three systems in schematic form to prove the knowledge acquired to be well digested and assimilated. About 88% of the class made a correct verbal statement, but nearly all the pupils (96%) made correct sketches, one set of which is inserted below.

This proves that the senses had honestly done their duty, had conveyed sensations to the mind, and there caused correct perceptions, and that the creative power of the mind had formed them in correct concepts. But it

also proved that the want of literary skill, or poverty in language, had caused, in a few cases, incorrect verbal statements. Hence the conclusion that sketching and "talking in outline forms" is even a better form of expression than language, and that the art of sketching rapidly is to be practiced whenever an opportunity is offered to do so.

I have no theory to defend, but wish to record an experience which may serve to illustrate the value of object teaching. Though 96% of correct sketches and 88% of correct verbal statements are not a flattering result, yet I venture to assert, relying upon my experience, that the result would have been far less satisfactory, had not objects and illustrations been employed in the lesson. I copy one of the compositions and accompany it by the sketches furnished by the writer of the composition.

The Circulation of the Blood.

"The organs (heart, veins, and arteries) are supposed to be well known from inspection of objects and charts. I therefore proceed to explain the circulation of the blood. The circulatory system may be compared with a tree, the smallest and last twigs of which are so bent down that they touch and join with the smallest and last fibrous roots of the tree. The large branches may be considered the arteries; the large roots the veins, and the intricate anastomosis of branches and roots the capillary vessels, while the trunk may be likened unto the heart.

"The circulation of the blood is caused by the heart and the elasticity of the arteries. The heart, by contracting, drives the bright-red arterial blood from the left ventricle into the aorta and through the branches

of that vessel into every part of the body till the blood reaches the capillary vessels, within which it changes into venous, or dark-colored blood; is then taken up by the many branches of the veins and carried back to the heart, which it enters at the right auricle. This is called the *systematic or greater circulation*. (See Fig. 1, B.)

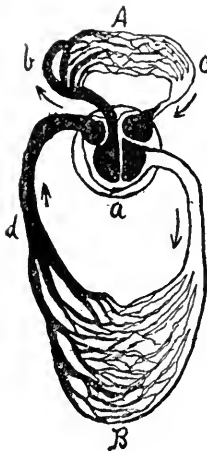


Fig. 1



Fig. 2

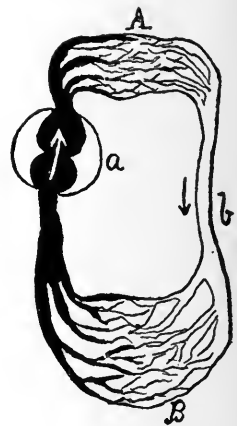


Fig. 3

“From the right auricle the blood flows into the right ventricle, which contracts and sends the blood into the pulmonary artery, till it reaches the lungs, where it is changed to light-colored blood by exchanging the carbon-dioxide (a waste product which it has gathered in its flow through the body) for oxygen. Being thus purified it returns through the pulmonary veins to the heart, which it enters at the left auricle. This is called the *pulmonary or lesser circulation*. (See Fig. 1, A.)

“Really, however, there are no two circulations, for the blood does not return to the place it started from, until it has again gone through the body. Hence we

may call this apparently double circulation a single one. But for the sake of comparison further on let us bear in mind this double circulation. The greater one gives nutrition to all parts of the body; the lesser only serves to take up new nourishment. A full grown human being has about twenty-eight to thirty pounds of blood, which circulates through the body about twenty times every hour.

“All that has been said so far has reference to the circulation of the blood in man, mammals, and birds, and we are now prepared to compare this with the circulation of other beings, such as reptiles and fishes, and in doing so we shall find a singular adaptation of the circulatory organs to the circumstances in which the animals live.

“*Mammals and birds* all have the so-called double or complete circulation. (Fig. 1.) Warm-blooded animals, which stay under water for some time, have an enlargement of the blood vessels in the vicinity of the heart, some even special receptacles in which the blood is stored, or retained for some moments. The peculiarity is found well developed in fish-mammals, and also in diving birds. (The circle *a* in these sketches 1, 2, and 3 represents the heart.)

“*Reptiles* have hearts with but one ventricle. (Fig. 2.) Their respiration is less complete, because a portion of the venous blood is mixed with arterial blood before it enters the lungs. This is done in the only ventricle, and this mixture prevents a thorough rejuvenation of the blood in the lungs.

“*Fishes* have hearts with only one ventricle and one auricle. (Fig. 3.) Their heart is situated near the thorax, between the gills. It receives the blood in the auricle; then the ventricle sends it into the organs of

respiration, from whence it is at once sent through the aorta and its branches into all parts of the body, without first going back to the heart. The blood of fishes passes the heart only once on its course through the body and organs of respiration. Hence the blood circulation of fishes is simple, and in contradistinction to it that of mammals is said to be double."

Now the patient reader, better versed in physiological facts than the writer of this composition, may find several flaws in the statements. Though it was marked correct by the teacher, it is not quite correct, but the accompanying sketches obviate the necessity of a more minute explanation. The whole production proves the truth of venerable Ben Pitman's recent saying: "Every one knows what deluge of words may be saved by a few well-drawn illustrations. Facts and forms that before were mysteries, are rendered intelligible and interesting when an appeal is made to the eye, instead of through the unsatisfactory medium of words." All of which is respectfully submitted to the consideration of thoughtful teachers.

"AUDI ALTERAM PARTEM."

MUCH has been said recently in the American educational press about the new manner of teaching drawing, and it has been well said; more even has been done in the matter. Witness the calls of many notable Europeans, particularly Germans, for American pupils' drawings, such as were exhibited in Switzerland and Germany, sent over to Berne and Munich from New York and other American cities. Witness, also, the laudatory expressions on our new method of teaching drawing from nature, uttered by the Prussian commission of school men, who were sent to study our efforts in preparatory schools for industrial pursuits. Witness, lastly, the enthusiasm this branch of study has aroused among drawing teachers, parents and talented pupils. Hence there must be merits in it.

A few quotations from Prof. Haney on the subject may indicate these merits:

"Our former teaching called for much in the way of imitation; our present work calls for much in the way of creative effort. A continuous appeal is made to induce each pupil to show what he himself can do. Individuality is emphasized and invention encouraged. The schools can not make artists, but they are most careful to see that they do not by rigid and formal practice discourage or mislead the talented. Our former teaching was mechanical, the teaching of today is far more free. Technique is taught, but it is taught at the proper time and in the proper way. The time comes when

the child experiences a real need for skill of hand, and the way is made plain, when he sees his practice work as a needed preparation for the solving of the problem he has before him. An appreciative eye, a vision sense, a skilful hand; these are the things elementary art teaching tries to give.

“As our teaching has progressed it has developed a two-fold aim. It seeks to give taste and with it skill. That which we call taste is critical judgment developed through repeated discrimination, and it is the belief of art teachers that this judgment may be cultivated. Taste, in other words, may be taught. Not all will develop good judgment, nor will all become skilful craftsmen, but all will be helped. Every pupil will have his ideas of what makes for excellence in form, pattern, and color, aided by his efforts to make fine lines and good arrangements, and every one will be given some knowledge of drawing, which will later serve him in excellent stead in any trade or profession he may enter.”

Councilor von Czihak, one of the commissioners sent over from Germany, says:

“The leading ideas of American instruction in drawing (in the elementary school) are those laid down by Herbert Spencer in his work on Education. *What the children, left to themselves, like to draw, is to be drawn: Things in their environment, which in size, shape, color, or motion excite their attention, life forms, utensils, animals, human beings.* * * * * The drawing of straight, curved, and composite lines for exercise is wholly rejected by Spencer, as in general the drawing from copy. Furthermore, he places greater value upon the rendering of color impressions than upon that of outline. He lays down the principle that it is of

less importance that the child produce beautiful drawings, than that skill in drawing be developed. Howsoever crude and awkward their first efforts in form and color, the natural interest of the children in drawing should be encouraged. With increased experience, in the place of striking incidents, the children would of themselves gradually succeed in the better observation and truer representation of simple objects. For the first years, Spencer considers regular instruction in drawing scarcely practicable, but only encouragement in rather desultory graphic work. On the whole, he condemns the construction of a course of drawing on the basis of its elements—combinations of lines—for the same reason, for which he condemns in language-instruction the practice of beginning with grammatical analysis, because in instruction the abstract should never precede the concrete, nor scientific ideas experience or doing.”

Councilor Mathesius describes the method as he observed it in its application, as follows:

“*Fundamental Principles.*—In the elementary school proper instruction soon assumes a more definite form; but one point of view is never lost sight of, namely, that the drawing instruction is concerned with an artistic activity. America lacks altogether those European points of view, that the children need at first, for the exercise of hand and eye, geometrical models for free-hand copying, or that, in order to become familiar with the various modes of representation, they should draw from copies. The American idea is, in the first place, to represent objects that are or have been seen, and, in the second place, as soon as possible to attempt independent artistic composition in small sketches and constructive work.

· “*Contrasts with European ideas.*—The old European idea that drawing and painting from nature are too difficult for the child, and that only the adult can be permitted to deal with nature—and he only after drawing from copies and dead plaster casts—has no place in America, and would be received there as a myth. Also the American children are given from the start all the means of graphic representation; they handle from the beginning brush and paints, crayon and pen. Also in this the American idea is opposed to the old European idea, which considers aquarelle painting as especially difficult and to be learned only by older pupils.

“*Drawing from nature.*—In the majority of American elementary schools * * * * drawing from nature is practiced from the lowest grades on, and in this practice preference is given to plants and flowers, which are represented directly with brush and water color. The plant is placed at some distance from the group of pupils, and these attempt to fix the general appearance of the object, partly without previous pencil sketch, in water color. Of course, if the pupils were required to render the object correctly in these drawings, many defects would be found, especially in the lower grades. The pictures are more or less schematic; foreshortening, the foldings of leaves, etc., are usually not represented. On the other hand, the freedom with which the general impression is fixed, and the taste with which this is rendered in color, are frequently surprising.”

And yet, despite it all, lean back, patient reader, and listen to the other side. Drawing, or sketching, or designing, or whatever it may be called, is one of the branches of study of the common school. Every

school study must exert a disciplinary force upon the pupil. That is the characteristic feature of all scholastic work; otherwise it would be more of an obstacle than an object in view. If we accept Spencer's maxim, "What the children, left to themselves, like to draw, is to be drawn," it must of necessity be applicable to all other branches. Let us see where we shall land, if we apply this generally: Suppose the teacher in the lower grades of school would let the pupils read what they liked, instead of carefully graded reading matter in their readers. I have had opportunities to watch the result of newspaper reading in the school-room; it was confusion pure and simple. Happily, the fad died out before it had done irreparable damage. Suppose the pupils were allowed in arithmetic to do whatever sums they liked to do; suppose we allowed them to learn from their geography whatever knowledge they are pleased to fish out of it; suppose they might write on any subject of their choosing; suppose they might sing "any old thing," just to derive as much pleasure as possible. In short, suppose the various branches of study were opened to them, "fair field and no favor," would not such a procedure, for the (to me) sacred term instruction could no longer be applied to it, lead to the wildest kind of anarchy? Haney says: "The schools are most careful to see that they do not by rigid and formal practice discourage or mislead the talented." To me, this seems a most reprehensible heresy coming, as it does, from a teacher. The school is not established and supported to produce geniuses, but to raise to a higher level of existence the millions who are not especially talented. A mode of procedure aiming at protecting a few geniuses, and resulting in letting millions of average children "run

to seed," does not deserve sober consideration in a republic.

It is more than a possibility, that out of such an anarchistic chaos there may arise a Cæsar, a Charlemagne, a Cromwell, a Napoleon, a Shakespeare, a Dante, a Göthe, a Wagner, a Michel-Angelo, a Holbein, a Phydias, etc., in other words, it may end in producing a few leaders and millions of cowardly or imitating followers. Is it not, on the other hand, the object of the common schools to produce a large number, in fact, an overwhelming majority of men and women, who need no leader, but can see the way to acceptable achievements themselves?

That the new American method of drawing has a weak backbone is easily seen from the fact that it denies or disregards the principle: Every branch of study must be carefully graded, in order to permit healthy growth. Education, like nature's own unhurried growth, is gradual development. Nature does not act in leaps and bounds, but in gradual unfolding; education should imitate her. Every student of pedagogy knows that there exists for every branch of study a certain technique, which if applied will make teaching successful; if neglected, will lead to confusion. To do away with that technique, that methodical residuum of experience in the teaching of drawing, and simply allow the children "to draw as they please," is not progress, but a sample of retrogression, such as can be exhibited only in a country which lacks the profession of teaching.

The weakness of the new anarchistic method of teaching drawing is further seen in the very poor results in the upper grades of school. This was very carefully observed by the Prussian visitors. I quote only a few sentences:

Councilor von Czihak, under the head of "Trifling Results," expressed his great astonishment at finding the evidences of the influence of this anarchistic drawing so slight in the work of industrial art schools, in the widely distributed dilettanteism, and in the American home.

"Either," he adds, "the current method followed in drawing (in the elementary school) has been too recently introduced to have had any influence, or it does not go deep enough in its effect, or our faith in the taste-developing force of the instruction in drawing is not justified. In any event, the United States are in this, as in so many other points, the 'land of contrasts.'"

Councilor Muthesius reports as follows:

"The results of the instruction in the lower grades exceed all expectations. In the advanced grades, however, they do not accord with this auspicious beginning. While the work of the children of eight or nine years is so admirable the pupils of fifteen or sixteen often offer correspondingly little that is satisfactory. We should expect from the pupils of the highest grades, that in drawing from nature they would have the ability to see forms clearly and to apprehend an object accurately. But instruction has failed to develop a disposition to see clearly. The plant drawings of the 16-year-old pupils frequently present the same schematic picture as those of the lower grades. Manifestly, this is due to the fact that instruction wholly neglects exercises in accuracy. One is forcibly reminded of the desultory method of piano instruction that plays only parlor pieces without introducing the finger exercises necessary for the systematic progress of the pupil."

Prof. Haney says: "Technique is taught, but it is

taught at the proper time and in the proper way." The meager results in the upper grades in drawing clearly prove that Haney's desire has been the father of his thought. As a matter of fact, technique, accuracy, geometrical proportion, perspective view, etc., are rarely taught. The children are taught drawing in the same way in which boys teach their dogs to swim: They throw them into the water; if the dogs succeed in reaching land, they know how to swim; if they are drowned, the average boy is not apt to burden his conscience with his act of cruelty.

A COURSE OF DRAWING FOR PRUSSIAN ELEMENTARY SCHOOLS.

AFTER many years of patient waiting the teachers of the peoples schools of Prussia* have at last been furnished with a "course of study" and a handbook for drawing, if this incongruity of expressions be allowed. The handbook had long been promised, and it was pretty well understood which one of the three or four systems in vogue in Germany the minister of instruction would favor; but no official announcement had been made until now, that a printed manual for teachers appears published by Prof. Dr. A. Stuhlmann of Hamburg. It is based upon the course prescribed by the minister of public instruction. This course is so characteristic a document that I will translate some passages trying to preserve its peculiar Prussian government style of command. It consists of three parts. To teach I shall add samples of models taken from the handbook mentioned above. Though it would give me great pleasure

*The author sincerely hopes that no reader will mistake Prussia for Germany, or vice versa. It is done so frequently in the American press that this caution seems proper. Prussia is merely one of the states of the German Empire as New York is a state of the Union. That the King of the largest and most populous state, Prussia, is at the same time Emperor of the entire Union, called Empire of Germany, and that the President of the King's cabinet is also Chancellor of the Empire, ought not to lead to the error referred to. The schools in Germany are, as with us, not a matter of legislation of the Empire, but of each separate state. And though in many things the example of Prussia is copied by other states of Germany (as legal enactments and administrative measures of one state in our Union are copied by others), it can be said without danger of contradiction that the schools in each state of Germany have their own peculiar features. Thus for instance the Saxon, Bavarian, and Prussian schools represent different kinds of organization, though being alike in aims and to a great extent also in methods of instruction.

to offer the entire course I must desist, and instead offer a few characteristic figures which may show both the great variety of forms and the methodical treatment which distinguish this course.

Directions for the Instruction in Drawing in the Peoples Schools of Prussia.

The instruction in drawing in schools of three or more grades begins with the second school year in two half-hour lessons per week, which are to be laid on different days. From the third school year to the end of the course two whole hours per week are to be devoted to drawing. The following plan of instruction is to be strictly adhered to.

Part First—Second and Third School Years—Drawing in Netlines.

The hand is to be practiced and trained, the perceptive faculty to be developed, the comprehension of simple plane figures to be awakened and the power of representation and imagination stimulated.

The pupils be enabled to perceive correctly and represent plane forms which will fit into a net of lines, learn to complete fragments of symmetric figures, to draw simple forms from memory, and to change and combine given forms to produce others.

The instruction comprises drawing of straight lines in different positions, ribband and other, so called, flat patterns, polygons and stars, the component parts of which are to be discussed as to position, form and relative size.

All forms to be drawn by the class must be drawn by the teacher on the blackboard partly or entirely, so that class instruction is made possible. The pupils

draw in blankbooks the pages of which are ruled cross-wise with blue lines, one centimeter apart. The exercises in net drawing cease at the close of the third school year.

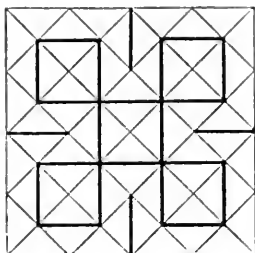


Fig. 1

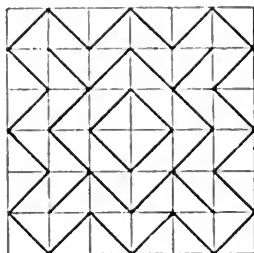


Fig. 2

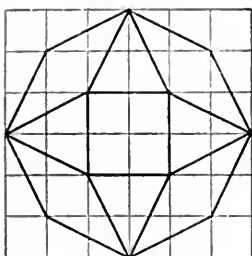


Fig. 3

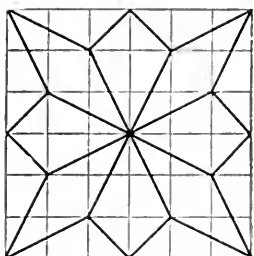


Fig. 4

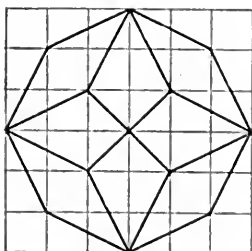


Fig. 5

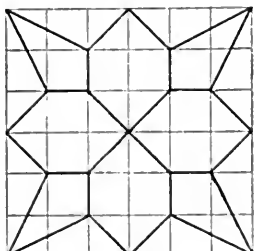


Fig. 6

(These are only a few specimens taken from more than two hundred figures all of which are to be drawn.)

*Part Second—Fourth, Fifth and Sixth School Years—
Free Hand Drawing of Plane Figures.*

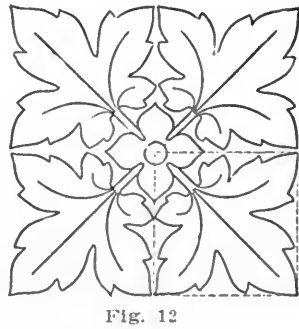
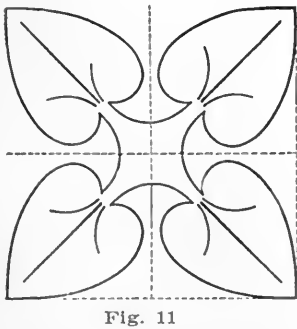
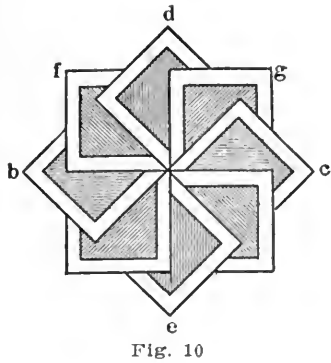
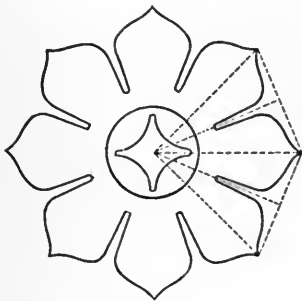
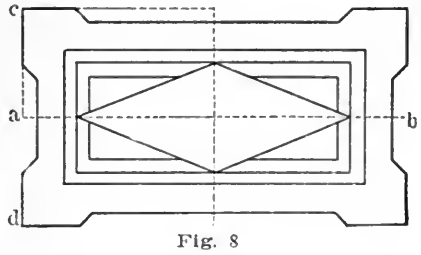
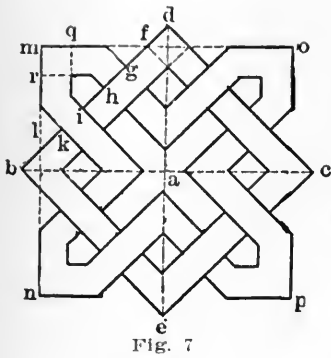
The sense of form is to be developed, skill in representing plane figures without the use of rules and other instruments to be obtained, and the power of imagination and representation to be animated to self-activity.

The pupils shall be practiced in correct and free outline representation of plane figures; in completing figures given in part; in drawing from memory and in changing given figures, as well as in inventing forms. In these things the greatest possible skill is to be gained.

The instruction comprises (1) straight-line figures, that fit into a square. (2) figures fitting into a regular octagon, hexagon, or dodecagon, (3) circular figures, and (4) curved-line ornamental figures on the plane surface.

The pupils draw in blankbooks without printed construction lines or dots, for the purpose of enabling them to learn the free use of their hand. At first the teacher draws the figure on the board, thus shows the way; afterward the complete figures are hung up in form of charts. When a new figure is drawn on the board, the teacher will make construction lines for a part of the figure to guide pupils in their work; but these aids must be abandoned during the fifth school year.

The instruction begins with classwork, but soon proceeds to division work, and is likely to end in individual work, to enable more talented children to proceed faster. Special tasks may be set them to employ their time and talent. From the great number of figures prescribed I select these six.



Part Third—Seventh and Eighth School Years—Free Hand Drawing of Solids.

The object of this instruction is to train the faculty of observing and representing solids. The pupils are to obtain skill in correct representation of objects in outlines and with light and shadow.

The course begins with drawing of simple geometrical bodies, then proceeds to more complicated forms, and ends with the drawing of utensils, vessels, plaster casts, etc., in outlines and with reproduction of light and shadows. Each pupil must be furnished with a model.

All models or casts are placed from 80 cm. to 1 m. distance on a level with the drawing paper, and shall be drawn as it appears to the pupil. When the visible sides of a solid are drawn in outlines, the covered edges shall be represented by dotted lines.

Both outlines and shading is to be done with pencil.

It is essential that a suitable position be given the solid models, so that the light is properly distributed, respectively concentrated, and shading be facilitated.

The instruction is to be both class and individual instruction.

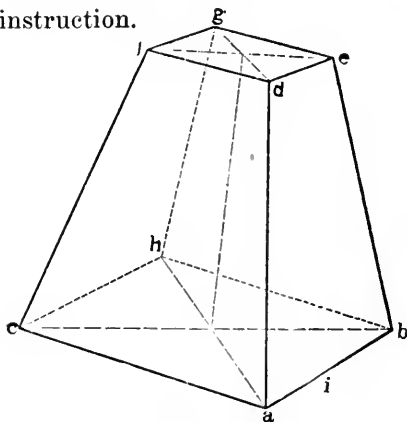


Fig. 13

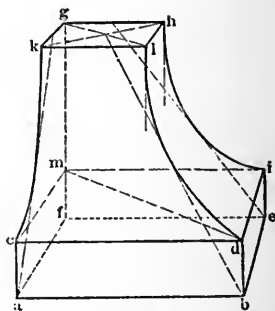


Fig. 14

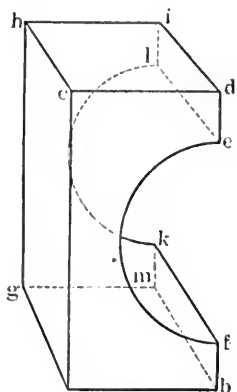


Fig. 15

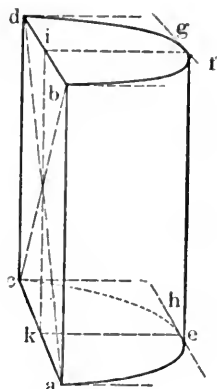


Fig. 16

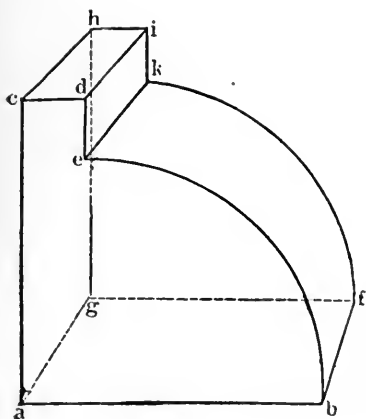


Fig. 17

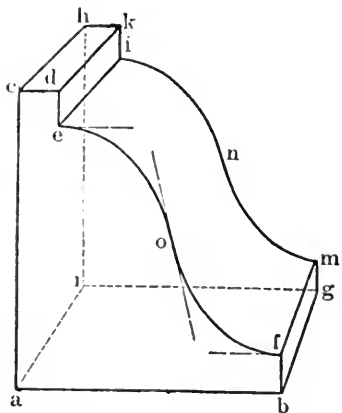


Fig. 18

During the last two school years, the girls are to draw patterns and ornamental forms for needle work. Paper ruled with net lines is to be used, the squares

of which are not to exceed a width of three millimeters, every tenth line is to be marked heavier than the others. It may be left to the decision of the local authorities whether the girls are to participate in the drawing of solids.

In schools of only three grades it may be found desirable to dispense with the drawing of solids. In that case the course prescribed in Part Second is to be extended over the seventh and eighth school years.

Here are given cuts of a few solids prescribed, but only in one position.

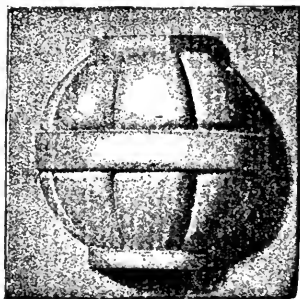


Fig. 19



Fig. 20

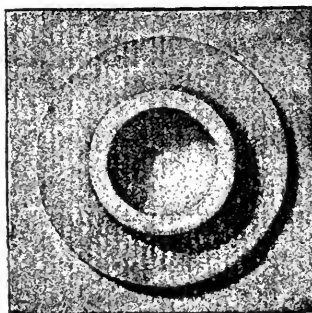


Fig. 21

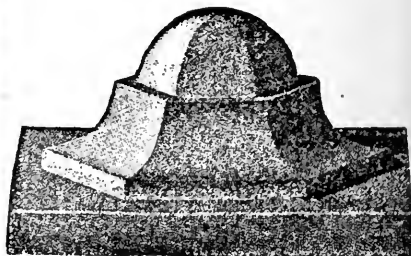


Fig. 22

WHAT LITTLE GIRLS CAN DO.

NEEDLEWORK was taught, when I was young, in a very primitive way. I remember that my sisters came home from their Wednesday's and Saturday's lessons with the "torso" of a stocking, or a much soiled embroidered tidy, which was the result of minute copying of a printed pattern, the stitches of which were counted and reproduced with more or less skill. When they reached the higher grades they embroidered a pair of slippers for me, and that was the end of the course.

Lately, when passing a few restful weeks with my sister, I told her what the girls did now in their industrial lessons; what I had seen in various schools of the German empire, and it opened her eyes wider to the world's progress than Edison's phonograph and Bell's telephone had done. She could scarcely believe me when I showed her the sketches I had gathered during my visits through the schools of Rhenish Prussia. Since I firmly believe that the industrial training of girls in this country needs an impetus to raise it to a higher standard. I may present a number of forms which were drawn by little girls, none of whom was over twelve years old.

These figures are not the girls' own conceptions, but were "developed" from simpler forms on the black-board. The greatest elbow-room is allowed to the teacher in her method. Thus I saw in some schools very coarse free-hand sketches, in others sharply-defined figures done with instruments of rude make.

Fig. 1

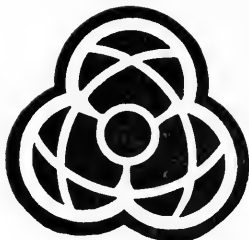


Fig. 2

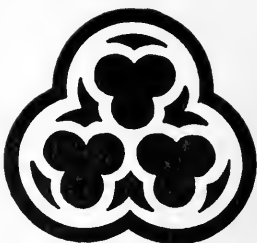


Fig. 3



Fig. 4



Fig. 5



Fig. 6

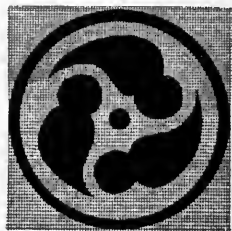
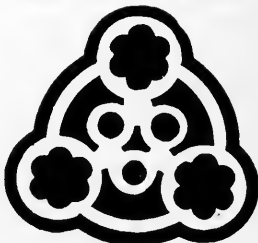


Fig. 7



Fig. 8



Some talented children colored their figures, while others barely succeeded in finishing the outlines. But all the work was done with an eye toward applying the

forms drawn in some needlework, in crocheting, embroidering, lace-making, etc.



Fig. 9



Fig. 10



Fig. 11

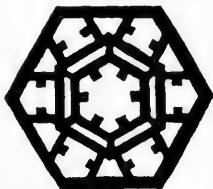


Fig. 12

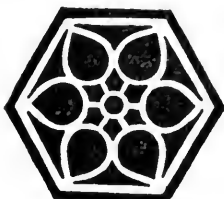


Fig. 13



Fig. 14



Fig. 15

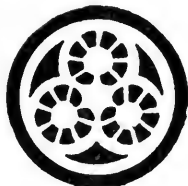


Fig. 16

Once I saw a figure done on the blackboard and I asked the teacher how the pupils applied this, for instance, in crocheting. She said: "What you see drawn in black is to be done in so-called solid stitches, while the white part is done in open, lace-like stitches." Well, but how can these children know how many solid or open stitches to take in each row? She smiled, and asked a little flaxen-haired girl to step forward and show me how she could tell.

When I saw what the child did I felt ashamed for having asked the question. This is what she did:

She took a ruler and covered the figure with a fine net-work of lines (as I did with figure 6), and then asked smiling, "Do you see now, how we can count the stitches?"

How different from the old-time copying process! And what a wealth of forms and ornamental designs are thus furnished!

A merchant with whom I had an interesting conversation on industrial art while on board the steamer *Moltke*, on the Rhein, told me that since drawing had been introduced into the schools of the Empire, and developed to such gratifying results, the taste of his purchasers was more refined and cultivated. "Ladies who years ago could not distinguish between styles, now select with truly astonishing knowledge. But what is even better," said he, "this, though limited instruction in art, makes my customers shun shoddy articles. An appreciation of art, however limited it may be, ennobles, refines, elevates. I now firmly believe in æsthetic culture." I agreed with him.

The girls' industrial training consists of lessons in knitting, crocheting, embroidering, sewing, lace-making, darning and patching. The course laid down to be followed is as methodically arranged as any course in geography or arithmetic. Side by side with the work of the hands and needles goes a course in decorative designing; and this, though of recent introduction, is so well developed in some centers of industrial Germany, that it is worthy of especial study.

In a sixth year class I found the girls skilful users of compasses and drawing instruments. They drew, after careful instruction on the blackboard, such figures as I present here. In very few schools India ink is used; in most of them pencils are used; in a few

others, colors, either water-colors or colored crayons. When an ornament is drawn and thoroughly understood, it is applied in various ways in needlework and lace-making. Instead of following printed copies, showing the stitches, as many ladies do to this day, these little girls work out their own patterns. This is lifting the industrial work of girls to a higher level.

XXXIII.

EIGHT WAYS OF MAKING A PENTAGON.

THE construction of a regular pentagon is easy, when you know how to proceed.

1. The unskilled schoolboy's way. He draws a circle, and then tries to divide its circumference into five equal parts. After many trials, and by dint of repeated adjustment of his compasses, he, at last, hits the exact distance. He punches his drawing paper, disfigures his circle by marks, and generally feels disgusted at not hitting the right point soon enough.

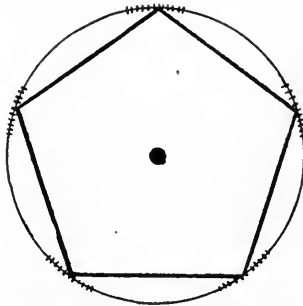


Fig. 1

2. The second way is not much better, for that, too, offers the disadvantage of chance measurement, unless the student be acquainted with the draftsman's way of dividing lines. However, it is a great improvement over No. 1. This is the way: The circle being given, draw a diameter; then with centers at a and b , radius ab , strike arcs meeting at c . Now divide ab into five equal parts, and draw a line from c through point 3 , till it strikes the circumference at x . The distance from x

to a will be one of the sides of the pentagon. Measure off five of them, and connect the points found.

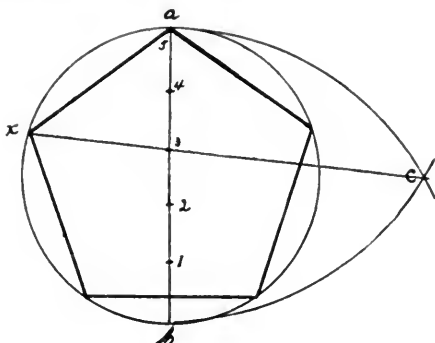


Fig. 2

3. The third, also, is difficult, because it necessitates chance measurement. The base ab being given, extend it to the right and left; construct semi-circles with centers at a and b . Now divide these semi-circles each into five equal parts. Then with centers at 3 and 3 strike arcs at x , radius ab . Connect the points found. In order to prove the correctness of the work, find the center of the pentagon, and construct a circle. If that touches the five corners, the pentagon is a regular one.

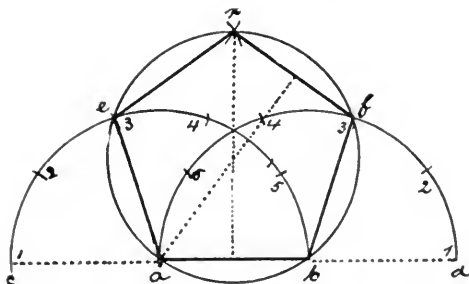


Fig. 3

found. It is a very convenient way and easily remembered.

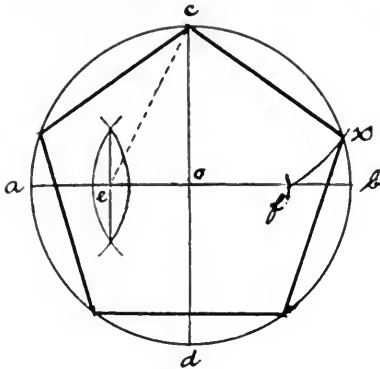


Fig. 5

6. The sixth way is known as the method of the golden cut. It admits of mathematical proof, and is withal a simple one. The circle being given, bisect radius ab , and construct a tangent at b , length ac . Connect da . Then strike an arc with center at a , which cuts da at x . The line xd will be found to be one of the sides of a decagon, hence its double length will be one of the sides of a pentagon. The distance from d to x cut off on ab forms an interesting formula, i. e., ax is to zb , as zb is to the entire radius ab .

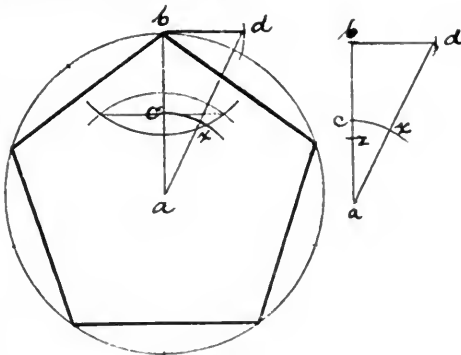


Fig. 6

ing of lines is necessary. This is the way: Base ab being given, draw circles with centers at a and b , radius ab ; draw a line through the points of intersection c and d , then draw a semi-circle with center at c , radius ca , which gives us points f , z and e , as well as g and h . From the latter two points find point x by striking arcs with radius ab . Connect ag , bh , gx and hx , and the pentagon is complete.

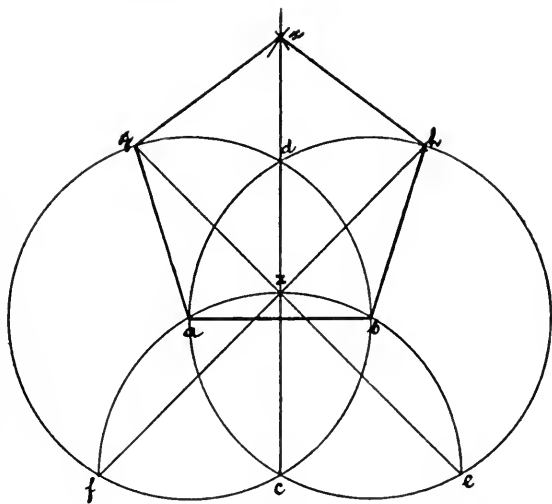


Fig. 9

XXXIV.

NUMBER OF DIAGONALS IN ANY POLYGON.

DURING one of our drawing lessons, the pupils beginning algebra were engaged in geometrical construction, and the question came up: How many diagonals are there in any polygon? Of course a thoughtless boy blurted out "Two!" We drew a pentagon and proved that there were five in that; thereupon the boy excused himself by saying he had in mind a square when he said two. Well, then, how many diagonals in a hexagon?

At once the pupils began to sketch a hexagon, and quickly found that it had nine diagonals. How many in a heptagon? The answer came less quickly, but soon it was decided that it had fourteen diagonals. How many in an octagon? The same work was done, and the pupils were astonished, when they found that figure 6 had twenty diagonals. To these results were added the number of diagonals in a nonagon and decagon, namely twenty-seven and thirty-five respectively.

Here we stopped and suggested that the results found so far be placed in a row, thus:

<i>Triangle</i> , 0 diagonals.	<i>Heptagon</i> , 14 diagonals.
<i>Square</i> , 2 " "	<i>Octagon</i> , 20 " "
<i>Pentagon</i> , 5 " "	<i>Nonagon</i> , 27 " "
<i>Hexagon</i> , 9 " "	<i>Decagon</i> , 35 " "

Now the class was asked to see whether there was anything in this line of numbers which suggested a rule. Soon most of the pupils saw that the differences between the different numbers was equal to 2, 3, 4, 5,



Fig. 1: 0 diag.

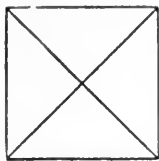


Fig. 2: 2 diag.

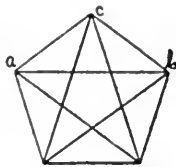


Fig. 3: 5 diag.

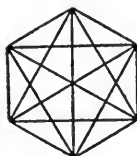


Fig. 4: 9 diag.

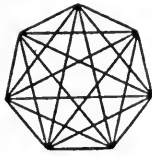


Fig. 5: 14 diag.

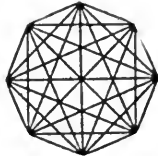


Fig. 6: 20 diag.

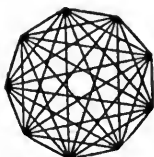


Fig. 7: 27 diag.

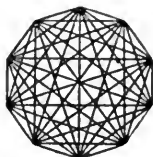


Fig. 8: 35 diag.

6, 7, 8. And then, one boy who prides himself on seeing a point quickly, jumped to the conclusion that, to find the number of diagonals in any polygon, one had to resort to this progression, until the one in question was reached.

This was put to the test by calling him to the black-board to determine how many diagonals there are in a figure of seventeen sides. It took the boy some time to reach the point. Thus he proceeded:

10 sides = 35 diagonals + 9 = 44 + 10 = 54 + 11 = 65 + 12 = 77 + 13 = 90 + 14 = 104 + 15 = 119, the number of diagonals in a figure of seventeen sides.

The class looked on calmly, and was soon convinced that there must be a shorter way. Thereupon the following colloquy took place.

Look at the pentagon (Fig. 3). Can you draw from angle c a diagonal to the adjacent angles a and b ? "No." Can you draw one from angle c to angle c ? "Why, of course not!" How many angles are left with which to connect a diagonal? "Two only."

Can two diagonals be drawn from each angle of the pentagon? "Yes, but that makes ten, and a pentagon has only five diagonals." Well, let us look at the hexagon (Fig. 4). How many diagonals issue from one angle? "Three." How is that number compared with the number of angles? "It is three less than the number of angles."

Do we find that fact repeated in the heptagon? (Fig. 5.) "Indeed, yes, and in the octagon, nonagon, decagon, also." May we take that as a rule? "Yes." Why? "Because no diagonal can be drawn to the two adjacent angles, nor to the angle itself. Three must invariably be deducted."

Very well, see whether what is true of one angle is so also of the other angles. "It is." To what conclusion do you come, then? "There must be five times two diagonals in a pentagon; six times three in a hexagon; seven times four in a heptagon; eight times five in an octagon; nine times six in a nonagon; ten times seven in a decagon, and so forth.

But is that the case? "No, only one half of that number of diagonals in each case is found, because the diagonal $a b$ is the same as $b a$. Hence it will be necessary to divide by two the products found in each case."

Let us express the process arithmetically:

<i>Triangle.</i>	<i>Square.</i>	<i>Pentagon.</i>	<i>Hexagon.</i>
$3 - 3 = 0$	$4 - 3 = 1$	$5 - 3 = 2$	$6 - 3 = 3$
$0 \times 3 = 0$	$1 \times 4 = 4$	$2 \times 5 = 10$	$3 \times 6 = 18$
$0 \div 2 = 0$	$4 \div 2 = 2$	$10 \div 2 = 5$	$18 \div 2 = 9$

<i>Heptagon.</i>	<i>Octagon.</i>	<i>Nonagon.</i>	<i>Decagon.</i>
$7 - 3 = 4$	$8 - 3 = 5$	$9 - 3 = 6$	$10 - 3 = 7$
$4 \times 7 = 28$	$5 \times 8 = 40$	$6 \times 9 = 54$	$7 \times 10 = 70$
$28 \div 2 = 14$	$40 \div 2 = 20$	$54 \div 2 = 27$	$70 \div 2 = 35$

Or algebraically stated: n (number of angles or sides in any polygon) less 3, multiplied by n , and the product divided by 2; thus

$$\frac{n(n-3)}{2}$$

Now test this formula. Find the number of diagonals in a figure of seventeen sides.

$$17 \times (17 - 3) = 238 \div 2 = 119.$$

The reader may think this a roundabout way, but let me assure him that it is a safe way, one which leads straight to the point, and the result is not easily forgotten.

OBJECTS AND SYMBOLS.

IT is well understood by primary teachers that the earliest lessons in arithmetic must be based on objects which the children can handle themselves, be these objects buttons, sticks, pencils, balls, or what not, assertions to the contrary of recent date notwithstanding. "Proceed from the object to its symbol" is one of Pestalozzi's maxims, which has been accepted after a test of eighty years. Every one who ever taught a primary school knows, however, that there is a difficulty in changing from the fact (the object as well as the number) to the symbol (the figure). As long as the children handle objects and talk about them, there is no difficulty, but just as soon as the numbers one to ten are expressed by figures on the board; that is, as soon as the facts are replaced by symbols, the young children are asked to perform mental gymnastics of (comparatively speaking) as high an order as when von Hartmann deliberates on the "Philosophy of the Unconscious."

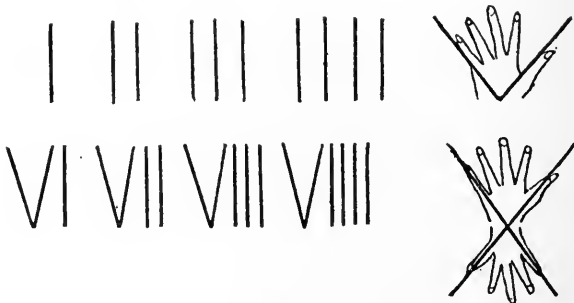


Fig. 1

If we used the Roman notation, the difficulty would be removed, for the Romans used lines for numbers, indicating that they stood for fingers. Thus, *five* was represented by an angle; that is, the whole hand, of which only the outlines, or the outer two fingers were made. *Six* was one hand and one finger; *seven*, one hand and two fingers; *eight*, one hand and three fingers; *nine*, either one hand and four fingers or ten minus one finger; *ten* was represented by two hands. *Ten* was not the letter *x* nor was *five* the letter *v* (the Roman *u*), text-book assertions to the contrary notwithstanding, as

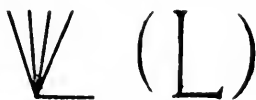


Fig. 2

Diesterweg clearly proves. *Fifty* was represented by five tens, that is, four fingers widely separated from the thumb. The Romans did not use letters in notation, until they came to express one hundred.

All through the Middle or Dark Ages the people used this Roman notation; but the Moors and Arabs, whose mercantile connections extended to Hindostan, found in that ancient mine of learning numerical figures which seemed to them less cumbersome. They adopted them and brought them to Spain, from where they found their way into the Christian world. It was shortly after the year of the fall of Granada, the expulsion of the Moors and the destruction of Moorish culture, and the year of the discovery of America that Adam Ries was born,* who published in Nuremberg, Germany, in 1550, the first school arithmetic using the new-

*Fig. 3 is his portrait, taken from the title page of his book. The inscription says "Year 1550. Adam Ries, in the 53th year of his life." Notice his coat of arms, symbolizing twice two is four.

fangled figures erroneously called Arabic figures. Hence it is no more than just for teachers to celebrate the 400th anniversary of the birth of Adam Ries, together with the 300th anniversary of the birth of John Amos Comenius. Permit me to do it by showing how the figures originated.



Fig. 3

They actually were facts before they became symbols, like the Roman figures (Fig. 4). It will be observed

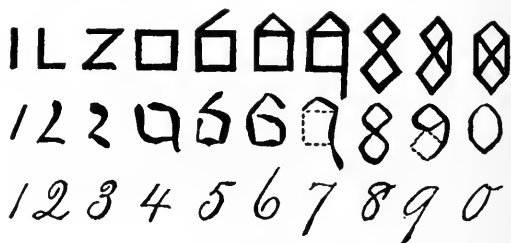


Fig. 4

that each of the figures in the first and second lines consists of as many bars as it symbolically represents. When these figures were written, it was done negligently (see line 2 of Fig. 4), and the difference between the

second and third lines is too insignificant to mark it out. Thus slowly and imperceptibly the *fact* of eight things, for instance, grows to be the figure eight (8), a mere symbol.

Looked at from an archaeological point of view, the origin of our present figures is interesting, but there is a deeper significance in this presentation of mine. When as a young man I taught a primary school, I discarded the conventional Arabic figures and used on the blackboard the geometrical figures of Fig. 4, and after a week or two those below them, thus doing away with the difficulty of applying symbols at too early a stage. Gradually the figures I made on the board, and the children on their slates, became more and more rounded off,—conventionalized, as it were,—till they were mere symbols. Later on in the course, the children made the figures as done everywhere in the civilized world, without having to go through the difficulty of dealing with symbols before they were prepared for such mental athletics. In other words, I made the pupils proceed the same way mankind has gone, only with this difference, that I abbreviated the process of evolution from object to symbol.

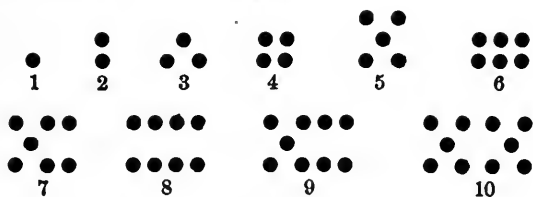


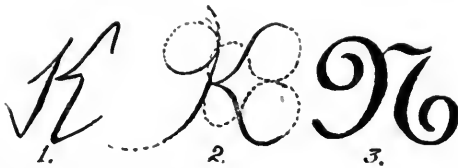
Fig. 5

Grube, in his admirable treatise on primary arithmetic (see Seeley's translation), has the wisdom of giving to each number up to ten a typical figure which combines fact and symbol (Fig. 5). They are the well-

known domino-figures extended to ten, and Grube consistently refers to them in the analysis of numbers. This is only another way of doing the same thing that in the innocence of my heart I did when the origin of the Arabic figures was revealed to me.

A WRITING LESSON FOR TEACHERS. A LETTER

MY DEAR YOUNG TEACHER:—Did it ever occur in your experience that a child made an angular-looking letter, and you could not tell him what was wrong in it without much waste of time and repetition? The letter (Fig. 1) had



the essential features, yet it was not a good letter. Of course you showed him a better form, and of course you tried to correct the child's angular letter by rounding it here and there, but, after all, next time the child would make the same kind of a letter in all the innocence and sincerity of his heart. Ah, did not you sigh and murmur something of Job's patience? Honor bright, did you not?

Well, let me ask you some questions that will lead you to see where you missed it. How do you measure a distance? By a standard measure,—mile, rod, yard, foot, etc., as the case may require. How do you measure the weight of an object? By a standard measure of weight. How do you measure a man's actions? By an acknowledged and approved standard as found in the actions of good men. How do you gauge the conduct of boys? By their conforming to standard rules and regulations, laws and commands. Everything is measured by a standard.

Why not penmanship? "Ah," you will say, "but what is the standard of good penmanship; and if there is one, how shall I apply it?"

Yes, there is a standard; but it is not Jones', Brown's, nor even Smith's model. It is no particular man's penmanship, but a *geometrical form*. Look at Fig. 2. What geometrical form do the parts of this letter remind you of? Every part of that K is a part of a circle. The same may be said of the N in Fig 3.



Now these are not the kinds of letters you want to teach. Take Fig. 4. What is the standard here? It is the oval (Latin *ovum* = egg, hence *oval* = egg-shaped), Analyze the K in Fig. 4. Do you find a single part in it that is not a piece of an oval? Of course there are letters like D in which a straight line occurs. Well then, we have the standard measure of our school penmanship. The oval and straight line applied to the parts of a letter prove to us whether it is correctly made or not, and if all the letters of a person's handwriting conform to the same standard (which may be of different sizes, just as the standards of weights, for instance, vary in size,—pound, ounce, grain, etc.), then it may be said that that penmanship is consistent in form. I need not mention other essentials, such as slant, regularity, height, etc.

Now let us apply our standard to a few letters,—Figs. 5, 6, and 7. It is well to subject printed letters to a little measuring, also,—Figs. 8 and 9. It may be done

on the board for the benefit of the whole class. It is apt to make the children observant of forms and analytic.



Fig. 8



Fig. 9

In my early days of teaching in primary schools, where I invented most of my tricks or devices, I cut out of pasteboard some large-sized ovals, fastened a pin through the centres, and then applied them to letters made on the blackboard. It was astonishing to see how quickly the children saw the fitness of things. It was exactly like using the pint and quart measures in the schoolroom. We had secured a standard measure and applied it. Do likewise and show Johnnie *why* his angular letters are wrong. Drive the truth home to him, sigh no more, and leave poor old Job with his proverbial patience in peace.

A COUNTRY-TEACHER'S PRIVILEGE.

MANY country teachers in Germany improve their position by agricultural and horticultural pursuits. Their schoolhouses generally offer a more attractive sight than our frame cross-road schools do, though sometimes consisting of dilapidated buildings, because the houses are covered with grape-vines and ivy, and surrounded by fruit orchards and flower-beds. Many a useful lesson is given out in the grounds. The German normal schools offer instruction in horticulture in connection with botany, and thus equip the country teachers with knowledge which will give them a good standing in agricultural communities. Teachers there are almost invariably secretaries, or even presidents, of agricultural societies.

I recall with much pleasure a lesson in grafting, to which I listened on a calm, serene March afternoon. The lesson was given by an old friend of mine. He and I had been teachers in the same building when we were young. For nearly forty years after we had drifted apart we never even heard of each other, but when I called to see him, he was still the same phlegmatic, jovial man he was years ago. And here in the self-same place, where four decades ago he began to teach, he was still teaching, except, that now he was principal.

He had a class of boys and girls out in the orchard, and proceeded to give them an object-lesson on grafting. A number of young saplings were sacrificed to actual experimenting. I will not tire my readers with a sketch

of the lesson, but, instead, present in tangible form the results of the lesson.

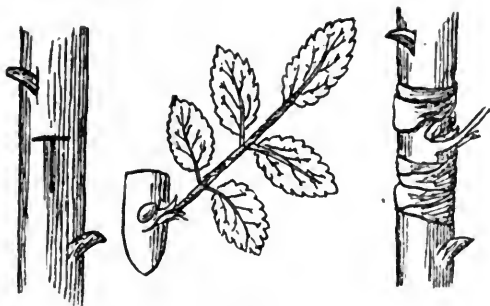


Fig. 1

Grafting is the general term, but applicable only to one kind of plant-improvement. The Germans call it "veredeln" (ennobling), which term covers all the many methods. The first method may be termed *budding*, or

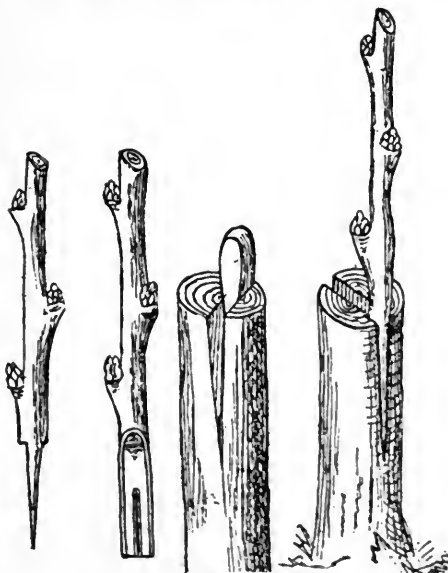


Fig. 2

scallop-budding, or *inoculation*. The first cut explains the mode of procedure better than a verbal description will. This method is frequently applied in improving rose-bushes.

The second method is the true *grafting*, also called *splicing*, or *cleft-grafting*. The second cut represents the method accurately. It is commonly used in improving fruit trees. Of course, after the joint is made, it is carefully wrapped to protect it.

The third cut shows the third method,—that of *copulating*. The cut speaks for itself. It only suffices to say that this method is the most difficult of the three.

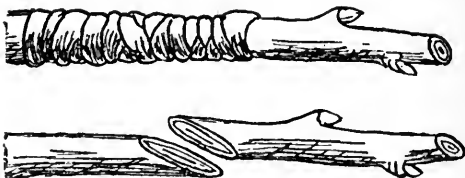


Fig. 3

All three methods were shown in the lesson, and the pupils then tried them themselves, or, to speak in terms now in vogue, they learned to do by doing.

It may be argued, our American youth is too unruly, too wild, to respect a nursery of fruit-trees around the schoolhouse. At least, that was said when I urged the planting of trees and arranging for flower-beds around the school buildings. But I recall with intense pleasure the exquisite order seen in some rural school yards in Northern Ohio. The turf was respected, the flower-beds were kept lovingly, and the trees pruned carefully. What could be done there can be done elsewhere. But so long as the country teacher looks with longing eye toward the city, he will not become very useful to his community. Make yourself useful where you are, and you will improve with your surroundings. A rolling stone gathers no moss.

XXXVIII.

TEACHING NATURAL HISTORY.

IN this article I shall offer the reader a model lesson, translated from the German of Max Fischer in Strassburg, but much condensed, to fit it to the extent of the proverbial impatience of American readers. It would be doing violence, though, to the author's good intention if I neglected to mention the object he had in view. He suggests that such a sample of practice gains life, if it proves to be a part of a well conceived and well arranged course of study. Model lessons are usually very deceptive, because, in them the teacher too easily succumbs to the temptation of presenting results rather than the mode of procedure by which such results are obtained.

As subject of the lesson the *bear* is chosen, and the matter is presented by a method which is gaining much ground in European schools, the so-called biographical treatment of entire species. Since this mode of treatment is well known I need merely repeat that, as in the history of human affairs, so in natural history, *one biography may be made the center*. In this case one animal in which the peculiar qualities of its class are very pronounced, is made the center of observation, and around it is grouped incidentally, but designedly, knowledge of kindred animals. As the orang-outang may be made the central figure of the first order of mammals, the marmot or the rat, the central figure of rodents, so the author takes the bear as a suitable figure around which to group the pupil's knowledge about the sole-walkers or plantigrades. This treatment has the

great advantage of causing knowledge to be organic growth. Knowledge thus gained does not consist of loosely connected or disconnected bits of information. While knowledge thus gained is in itself valuable, it has the additional advantage of being proper food for intellectual growth.

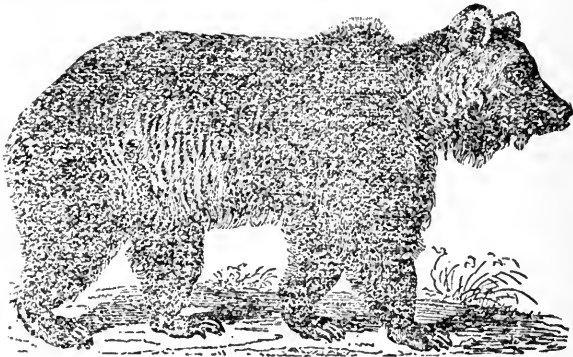


Fig. 1

Introduction.—The pupils when entering the classroom see the large colored picture of a bear hung up for inspection (Leutemann's pictures are in use), and nod to each other, as though they mean to imply that they see a familiar object. *Teacher*—"I see, you are glad to meet an old acquaintance. What is his name?" "Bear."—"In Latin we call it *Ursus*. Learned men add another name to this, they call the animal the brown bear, *ursus arctos*. But let me tell you that *arctos* does not mean brown. It is simply the Greek word for bear. It is as though a boy were called Charles Carl, that is, have an English and a German name which both mean the same. So the bear is called *ursus* in Latin and *arctos* in Greek; translating both would mean *bear bear*, if not bear of bears. This double name is given the

animal to distinguish it from other bears. Do you know of any others?" "Yes, the polar bear?"—"How does it come, that you know the brown bear?" "We saw one on the street, with a ring through his nose, and being made to dance by the sound of a drum."—"What animal is usually his companion when he is shown on the street?" "A little Turkish monkey." (*Inuus ecandatus.*)

Offering New Knowledge.—"We cannot well measure the length of the bear; this picture represents him reduced in size. He is about twice as long as shown in the picture, or about as long as a lion, but lower in stature. Which of our domestic animals comes nearest his size?" "The hog."—"In measuring his length we miss a part usually found on animals of his size. What is it?" "The tail."—"Yes; it is so small that it can hardly be seen, it is hidden under his thick fur. The bear has a long-haired, shaggy pelt. He is therefore frequently called *Zollebär* (shaggy bear). But tell me why he has such a warm garment." "Because he lives in cold regions."—"Where is his home?" "He lives now only in the high mountainous regions of Europe."—"Where is the nearest place to find him?" "In the Alps."—"Yes. The pelt is so thick, that it hides the real form of the bear. He appears, therefore, more clumsy and awkward than he really is. One can scarcely believe how skilful he is in running, swimming, and especially in climbing. He can also walk on his hind legs unsupported. He even fights with men, and you know yourself that he can be taught to dance on his hind legs. No other four-footed animal can do that. The cause of it must lie in the structure of his body. Where shall we have to look for a cause?" "In the hind legs."—"Let us see what their parts are." "Thighs, lower leg, foot,

toes," (they are seen in the picture).—"Think of the toes of the fox and the lion, in what do their legs differ from the bear's?" "The bear walks with his entire foot, the fox and lion walk only on their toes."—"Hence we call the bear a sole-walker. What other sole-walkers do you know?" "The monkey,—and man, too, is a sole-walker."—"Now you must be able to explain why the bear can walk and dance." "The bear steps like man, hence he can stand and walk upright like man."—"Right; but we may go deeper to reach the cause. You have all played with tin soldiers,—which ones stand firmest?" "Those that have a broad base."—"And how does the dog stand when he plays sentinel?" "Oh, yes; he uses not only his toes, but his entire foot, in standing."—"Now you have mentioned how the bear can securely stand and walk on his broad soles. Look at the parts of the fore-legs." "In the skeleton we call them upper and lower leg, wrist, middle hand, and fingers." "How does the bear step with his fore-legs? Also with the whole sole."

Result—The middle part of the foot of the bear is not like that of the fox and lion standing upright, so that the animal would have to walk on its toes, but he uses it in walking. This makes him a *sole walker* and *plantigrade*.

"Count the toes." "The bear has five toes on each of his hind feet."—"What makes counting the toes so easy?" "On account of the long claws."—"What position have the claws of the lion when he is walking?" "They are drawn back."—"Does the bear draw his claws back, also?" "No, he touches the ground with them."—"What is the consequence?" "The claws wear off quickly."—"Does the bear use his claws for any other purposes than to serve him in walking?" "He

uses them in climbing trees and rocks, and in digging in the soil.”—“His claws aid him also in getting his food. But before we touch upon that subject let us look at other parts of his body, one that concerns the food more. What part may that be?” “Oh, you mean his mouth.”—“Yes, more particularly his teeth.” (Comte’s chart is shown.)

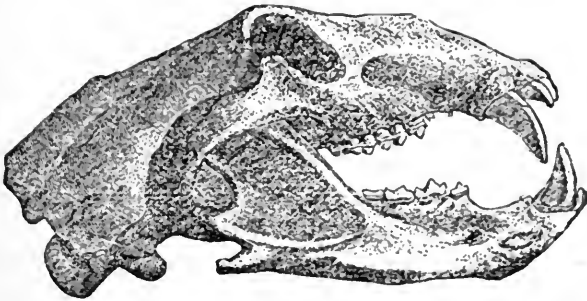


Fig. 2

“What do you see here?” “The corner (or canine) teeth.”—“What are the other small teeth in front called?” “The cutters (or incisors).”—“And what shall we call the teeth in the back of the mouth?” “Those are the cheek teeth (or molars).”—Now let us frame a formula for his teeth:

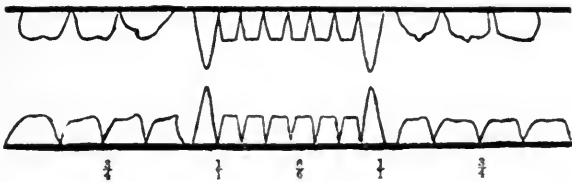


Fig. 3

“Where did we find the same formula?” “With the fox.”—Then a short discussion of the small teeth not

spoken of before (see cut No. 2) follows, and the whole subject is concluded by the following concentration:

Result.—The teeth of animals of prey (carnivora) show great similarity; namely, six cutters above and six below, four strong, sharp corner (or canine) teeth, and several kinds of cheek teeth, chiefly molars.

“The sharp teeth are suitable for seizing and tearing the flesh; the rugged molars are best for grinding vegetable food. We, too, tear and cut with our front teeth, but grain we grind in the mill before putting it into the mouth. What do you take to be the bear’s food, considering that he has both kinds of teeth?” “That he eats both meat and vegetables.”—“Yes, indeed, he eats, or devours, large animals, like horses, cows, and sheep, as well as fish, crabs, ants, and he also grazes on meadows and wheat-fields, and digs for roots and bulbs in the ground. How do you know this?” “His long claws speak for his digging, his sharp corner teeth for his eating meat, his molars for his eating grain and vegetables.”—“Hence the bear is not particular as to what he eats, he is called a *glutton*, or *great feeder*.”

A repetition is now indulged in, which is made interesting by sketching with pencil the outlines of the parts spoken of thus: “Draw the outline of his back; of his skull; of his face. Where does his face begin? Does the bear have an upper lip like man? If not, draw his snout; draw the outline of his fore-leg, of his fore-foot and hind-foot, his claws. What claw corresponds to our thumb? Show the ball of his foot; now draw the whole foot.”

THE DYING LION: A COMPOSITION LESSON.

[The following is so original an account of a lesson given by Dr. M. Heidingsfeld, in Liegnitz, (Province Silesia, Prussia), that I venture to present it in English garb to my American colleagues. It is found in "Lehrproben und Lehrgaenge," published in Halle].

LESSING recommends the invention of Æsopian fables as very fruitful composition work for pupils of eleven to thirteen years of age—'not that I should try to make poets of our boys, but because it is incontrovertible that the medium by which fables are invented is the same which is applied by all inventors. This medium is the *principle of reduction*. But the application of this principle offers great difficulties. It demands extended knowledge of the particulars and of all the individual things upon which the reduction is to take place. Even though this knowledge be not wanting, it will be the wiser plan, in the beginning, to lead the pupils to *find*, or reinvent, rather than to *invent* the fable.'

Such a trial—namely, to let my pupils find a fable—I made in a class of boys of twelve years, for the purpose of framing a narrative in composition work. It was a very successful effort. Lessing's fable*, "The Dying Lion," appeared to me the most suitable subject. If I had read this fable to the boys their interest would soon have lagged during the subsequent conversation. This I prevented by the procedure hereafter set forth. When—after this preliminary discussion, during which

*This fable is found in many readers credited to Lessing, though it is not contained in Lessing's complete works, neither in Lachmann's nor in Goeschen's edition.

the pupils *found* the fable, almost identically in words and expression—I read it as the poet had written it, it gave them great pleasure. With bated breath they compared their own production with that of a master mind. And now the lesson:

Teacher—“We will prepare a composition today. I have selected a fable for that purpose. What is a fable?”

Pupil—“A fable is a narrative in which the active persons are animals.”

Quest.—“What animal often plays a role in fables?”

Ans.—“The lion.”

Quest.—“What is the lion usually called?” Ans.—“King of the animals.”

Quest.—“Why is he thus called?” Ans.—“Because he is the strongest and most beautiful animal.”

Quest.—“How do other animals look upon the lion?” Ans.—“They fear him.”

Quest.—“Why?” Ans.—“Because he makes his superiority over them felt in a cruel manner.”

Quest.—“Our fable tells us that an old lion who had always been very cruel lay powerless in front of his den, and expected death. The news of this spread rapidly among the other animals. Now, if they had loved him, what would have been the consequence?”

Ans.—“They would have been very sorry and have mourned his loss.”

Quest.—“Do you think they had reason to do this?” Ans.—“No, indeed not.”

Quest.—“Tell in a general way the reason of their want of sorrow.” Ans.—“No one regrets the death of an enemy.”

Quest.—“Give this thought in form of a question, introducing it with the word *for*. They did not pity

him, for—— ——” Ans.—“They did not pity him, for who feels sorrow for the death of an enemy.”

Quest.—“Another pupil may try it.” Ans.—“—— ——, for who would feel sorrow for the death of a peace-breaker in whose presence no one can feel secure?” The thoughts brought out are repeated.

Quest.—“Now, if the animals did not pity the old, dying lion, what do you think they felt?” Ans.—“Joy, to be sure; they felt uncommonly glad.”

Quest.—“Why?” Ans.—“Because they hoped soon to be free of their cruel enemy.”

Quest.—“State it differently.” Ans.—“They felt glad that they would soon get rid of him.”

Quest.—“Do you think they hid their joy before the lion?” Ans.—“No.”

Quest.—“Why not?” Ans.—“Because he could not punish them any more.”

Quest.—“In what way, do you suppose, they expressed their joy?” Ans.—“By vexing, nettling, and teasing him.”

Quest.—“Mention some animals that often appear in fables, and which, it is reasonable to suppose, were there.” Ans.—“The *fox*.”

Quest.—“Another.” Ans.—“The *raven*.”

Quest.—“Well, yes; but we will leave the birds out of the play this time. Why?” Ans.—“Because they were not likely to feel a grudge against the lion, never having been injured by him.”

Quest.—“Name other animals.” Ans.—“The *donkey*.”

Quest.—“Others.” Ans.—“The *wolf*, the *horse*.”

Quest.—“Good; I will mention two more who happened to be there, the *ox* and the *boar*. How, do you think, did the fox vex the dying lion?” Ans.—“He

said: "See, there lies our king, who so cruelly pursued us. A nice king he is, to be sure; he can't even raise his head any more!"

Quest.—"And the donkey?" Ans.—"He kicked him with his foot."

Quest.—"With his hoof, you mean, do you not? And the wolf?" Ans.—"He bit the poor, dying fellow."

Quest.—"That is possible, but in other ways he may have expressed his malicious joy." Ans.—"Yes, he may have called him names."

Quest.—"Very well. And the ox?" Ans.—"Oh, he poked him in the ribs with his horns."

Quest.—"And the boar?" Ans.—"He gave him a kick."

Quest.—"No; I differ with you there. What weapon does the boar use in fighting?" Ans.—"His tusks."

Quest.—"Then we will say the boar dug his tusks into the lion's sides. What would you term such action. Was it noble and generous?" Ans.—"No; it was the action of a coward. Now that they were sure the lion could not defend himself they vented their spite."

Quest.—"You are aware that a fable always contains a precept or moral. What moral do you see in this one?" Ans.—"One should not revenge one's self on an enemy who cannot defend himself."

Quest.—"Will some one express it differently?" Ans.—"It is villainous to revenge yourself on an enemy who is no longer able to injure you."

Quest.—"Does the poet always himself express in words the moral of the fable?" Ans.—"No; sometimes it has to be guessed from what the actors do in the fable."

Quest.—"What do *you* say?" Ans.—"I think sometimes one of the animals expresses the moral."

Quest.—“Which one of the animals that surrounded the dying lion, do you think, expressed it?” Ans.—“I believe it was the horse.”

Quest.—“Why?” Ans.—“Because it is always called a noble animal.”

Quest.—“How did the horse come to express that moral?” Ans.—“It did not like to see the other animals treat the dying king so villainously.”

Quest.—“Yes, my son, the noble horse alone stood by and did not wound the lion with his hoofs any more than he pained him with biting words. What impression did this make upon the other animals?” Ans.—“It astonished them, and they asked the horse to show the king his contempt and punish him for his cruel treatment of former days.”

Quest.—“What animal may have thus asked the horse?” Ans.—“The fox.”

Quest.—“Possibly. What other animal?” Ans.—“The donkey.”

Quest.—“Why?” Ans.—“Because he is a relative of the horse.”

Quest.—“Who can give a better reason?” Ans.—“Because horse and donkey have the same mode of defense; they use their hoofs.”

Quest.—“Well, yes, it was the donkey who asked the horse, whether he would not also punish the lion for having once cruelly torn to pieces the horse’s mother. At what place in a fable is the moral usually found?” Ans.—“At the end.”

Quest.—“So, then, who was it that spoke last?” Ans.—“The horse.”

Quest.—“Then there remains to be stated the order in which the animals are to be mentioned in the fable. How shall we arrange them?” Ans.—“According to their mode of revenge.”

Quest.—“What difference do you perceive in their modes of revenge?” Ans.—“Some revenged themselves with words, others by using violence.”

Quest.—“Which ones used words?” Ans.—“The fox and the wolf.”

Quest.—“Which ones violence?” Ans.—“Donkey, ox, and boar.”

Quest.—“But, as we have seen, the donkey is the one to address the horse, so it will be better to mention ox and boar before the donkey. Which animal’s revenge seems to you the meanest of all?” Ans.—“That of the donkey.”

Quest.—“Why?” Ans.—“Because he hits the lion from behind.”

Quest.—“Yes, the stupid ass does not even think the king worthy of a look. Now state what order we shall adopt.” Ans.—“We ought to begin with the most refined kind of revenge and end with the coarsest.”

Quest.—“Why will this be the best arrangement?” Ans.—“It will bring out the generosity of the horse the more forcibly.”

The order observed by the poet was observed also by the pupils, to-wit: “The wily fox revenged himself by sarcastic remarks and biting speeches; the wolf advanced with coarser ammunition; ox and boar applied violence; but the donkey revenged himself in the meanest way—he expressed his contempt without looking at the lion and only giving him a kick from behind.”

Quest.—“Now let us select a fitting heading for our fable. What do you propose?” Ans.—“The Lion and the Animals.”

Quest.—“What! all the animals?” Ans.—“No; the lion, the fox, the wolf, the ox, the boar, the donkey, and the horse.”

Quest.—“But that would be too long a heading. Let us suggest another.” Ans.—“‘The Generosity of the Horse.’”

Quest.—“Very good; but is not the lion the principal figure?” Ans.—“Well, we might say ‘The Sick Lion.’”

Quest.—“I am afraid that is too narrow; it does not cover enough. The lion was not only sick.” Ans.—“He is also old.”

Quest.—“If the lion had only been sick, I suspect the animals would not have dared to treat him as they did.” Ans.—“No; he might have gotten well again and then have punished them.”

Quest.—“Precisely; for that reason it seems best to select the heading ‘The Dying Old Lion.’ Now I will read you the fable as Lessing wrote it. Listen:

“*An old lion, who had always been very cruel, lay powerless in front of his den, and expected death. The animals who had feared him greatly did not pity him, for who would feel sorry for the death of a peace-disturber before whom no one can feel secure? The animals were glad to get rid of him. Some of them, who were still smarting under the wrongs he had done them in former days, now gave vent to their hatred. The wily fox vexed him with sarcastic remarks; the wolf used coarser expressions; the ox poked his horns into the lion’s sides, and the boar wounded him with his tusks; even the lazy donkey gave him a kick with his hoof. The noble horse alone stood by calmly and did nothing, although this lion had killed the horse’s mother. ‘Are you not going to give him a kick, too?’ asked the donkey. Solemnly the horse replied: ‘No; for I consider it villainous to revenge myself on an enemy who cannot injure me any longer.’”*

Quest.—“Into how many parts may we divide the story?” Ans.—“In two—the revenge of the animals and the generosity of the horse.”

Quest.—“Is not the revenge to be introduced by some statement which can explain it?” Ans.—“The condition of the lion.”

Quest.—“So then, we may count three parts. Which are they?” Ans.—“Condition of the lion; revenge of fox, wolf, ox, boar, and donkey; conduct of the horse.”

“Now repeat the fable in your own words. Fred tell the first, Paul the second, Max the third part. (It is done.) Now I will read it once more. Some one will narrate it again.”

After this the boys were told to write out the fable, and I need not assure my readers that it was done very well.

XL.

COMPARISON AND CONTRAST: LEVERS OF INSTRUCTION.

IT was a cultured audience in Europe that smiled incredulously when I stated that the area of the United States was nearly equal to all of Europe including Russia; it was a normal school class of young ladies that had passed through a four years' course of high school studies, who could not believe that the Amazon River drained a larger area than the Mississippi and Missouri; it was a class of precocious boys, from 15 to 17 years, who were ready to lynch me for treading on their patriotic corns by deciding that the Victoria Nyanza Lake was about as large as Lake Superior. These are only a few of the common errors into which we fall through faulty study of geography. The maps rarely being on the same scale makes the dimensions of some countries look insignificant in comparisons with others. Of course anyone who understands what such expressions as "Scale: 1 to 15,000,000" mean, will know that a continent represented on a scale of 1 to 15,000,000 appears larger than when drawn on a scale: 1 to 20,000,000. But to the average child this fact remains a mystery for many years, and I can testify to the fact that even teachers sometimes are not aware of the meaning of such expressions as "scale," when used in connection with maps. Many text-books fail to state the scale on which their maps are made, hence the learner would seem justified in measuring the dimensions of Lake Chautauqua, that appears as a good-sized sheet of water on a local map,

and in finding it equal in dimensions with Lake Titicaca on the map of South America.

A praiseworthy feature of some of our geography text-books is the small side-map of a familiar state, say Iowa, found on all the other maps of the book, always appearing in conformity with the scale of the respective map, *as a standard measure*, so to speak.

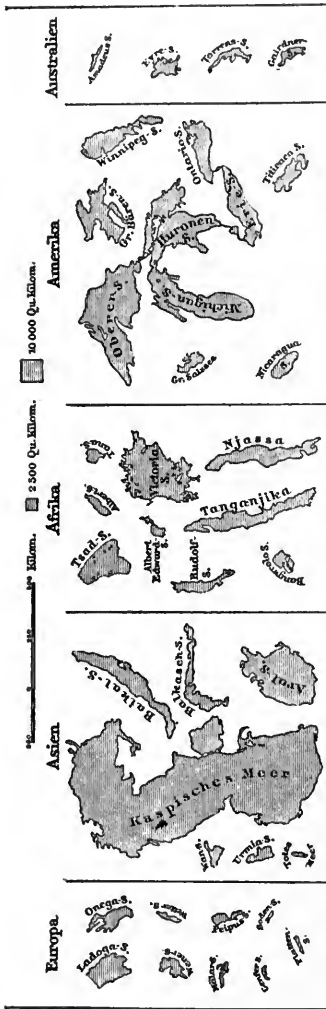
Comparison and contrast are valuable means of instruction, and I am afraid much of what our pupils learn is not organically connected, because a proper comparison with related facts is wanting. A similar case is found in the chaos of knowledge of the average American who looks down upon systematized knowledge presented to him in scientific treatise, and who prefers to glean his facts from detached newspapers and magazine articles. His facts are numerous but not related, hence frequently worthless.

Newspaper advertisers who have an eye single for that which catches the eye, are beginning to see that the statistician's bars, representing figures on a scale of 100, teach better than figures. Hence we see baking-powder manufacturers apply this mode of representation, and with good effect. I had a fine opportunity recently when speaking to a gentleman from South America, of leading him *ad absurdum*, by using the old-fashioned scale of 100. He claimed that his country did fully as much for education as any other. He dictated to me long and ponderous figures of sums spent in his country for education. After noting these down, I found the ratio per capita. We found that in his country only 8 per cent. of the population are in school, while in the United States it is 22.4 per cent., in Germany nearly 20 per cent., in Canada 19 per cent., in England 16 per cent., in France 14.5 per cent., and so

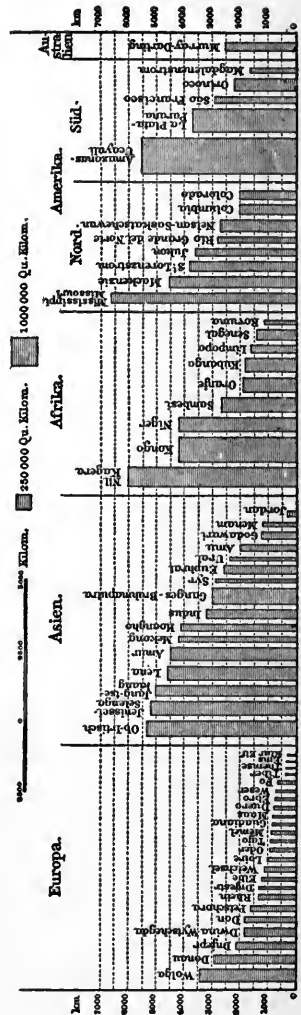
forth. We found that Prussia paid \$3.86 per capita of the population for public education, while his country managed to spend 43 cents. The gentleman was completely upset, and in our further discourse he admitted that he had been misled in thinking that his country stood right at the top of the ladder.

Considerations like the foregoing have induced me to make a loan of a German atlas (Andree's) in which the principle of proper comparison is beautifully illustrated, as seen from the cut inserted. I sincerely hope that I am not appearing in the role of a carping critic. The illustration is offered merely to afford teachers an opportunity of informing themselves, and then presenting geographical facts as they should be presented. Naturally I quote the German atlas, but use English names.

Note: Lake Amadeus in Australia is not found on any American map in my possession; nor the rivers Kubango and Rovuma in Africa.



The most important lakes on the same scale, 1 to 25 millions.



Length and area of valleys of most important rivers on the same scale, as stated in the margin.

EXPLANATION OF THE GEYSER-PHENOMENON.

THE following is the result of a lesson I heard in an eighth grade of a "Volkschule" in Rhenish Prussia:

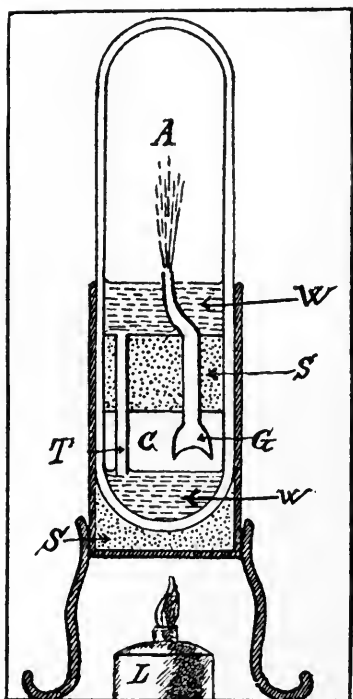
Among the numerous hot springs coming from the depths of the Earth, the so-called spouting springs, or geysers, are the most interesting. Their peculiarity consists in the fact, that they are not continually flowing, but that they spout, at longer or shorter intervals, masses of hot water with great force high up into the air. The springs of this kind known earliest by civilized man, are the hot spouting springs of Iceland, where within a comparatively small space about fifty springs bubble up. The largest one on Iceland is the Great Geyser, the name of which has gradually been applied to the entire species of springs. A second geyser region with an even greater variety of phenomena is found on New Zealand, but not one of these bubbling and boiling springs approaches the Great Geyser in power and height.

These two insular geyser regions are far surpassed by the one found in the wonderland of the Yellowstone Park in the United States. These springs are known to the civilized world a little over forty years. There are about 7,000 hot springs in the Park, among which are over eighty actual geysers, some of which excel the renowned spouter of Iceland in grandeur and power.

Scientists have developed different theories to explain this interesting phenomenon. It is now generally accepted, that the hot water is thrown upward, after

intervals of rest, through the force of steam which forms at the bottom of the spring. Many experiments have been made in physical laboratories to prove the correctness of this theory.

Mr. W. Marek in Vienna recently invented an apparatus which produces a geyser on a small scale, and this proves that steam is the actual cause of the periodic appearance. It was in evidence before the class. The accompanying illustration may explain the apparatus. The illustration is adapted from a cut in the "Pestalozzianum, No. 3, 1907."



A round iron vessel which rests on curved feet and standing high enough to give room for small lamp (L), contains an oblong closed glass globe. At the bottom of the iron vessel is a deep layer of sand (S), on which rests the glass globe. In the glass we notice two layers, one of sand (S) and one of water (W). These two represent the upper crust of the earth. Below this crust we see a cavity (C) half filled with water (W). The narrow tube (T) connecting the lower with the upper layer of water, is to represent a fissure in the Earth's crust. The other tube, widened like an inverted funnel, is to be the geyser or mouth of the cavity. Now when the lamp under the vessel is lighted, the sand and water at the bottom of the oblong glass globe is heated. In the cavity (C) steam collects, and when it is of sufficient strength, it will spout through the geyser's mouth, carry the water with it, and thus produce periodic eruptions into the atmosphere (A); but while doing so, the level in the cavity will sink, the pressure is released, and the water spouted out will return through the tube (T) to the lower level. As long as the lamp heats the water, the periodic eruptions will continue.

That which makes the apparatus particularly suitable for school use is the fact, that the essential parts are made of glass, which enables the student to plainly observe the process.

CHANGING COMMON FRACTIONS TO DECIMALS.

THIS is the way I saw a German teacher in a little country school teach it:

“What is a decimal fraction?”—No reply.

“What is the decimal system?”—“A system of notation according to which numbers are arranged in classes of ten each; as ten units make a ten; ten tens make a hundred; ten hundreds make a thousand.”

“Now if the fraction has a denominator of ten, it is called a decimal fraction, provided the denominator is left unwritten, and the numerator is placed after the decimal point. Thus 2.5 means 2 wholes and 5 tens. If it were written $2 \frac{5}{10}$, we should have to call it a common fraction. Now write in form of decimal fractions $1 \frac{5}{10}$, $7 \frac{3}{10}$, $4 \frac{6}{100}$.”—The pupils do so, some on the blackboard.

The last fraction was a poser. Reference to the decimal system of money bridged over the trouble: 4 marks, no groschen, and 6 pennies; hence 4.06. More examples were used for drill.

It was then explained, that though there were fractions, the denominators of which were 100, 1,000, and more, yet all were called decimals.

“Now express $\frac{1}{2}$ decimally: = 50-100.”—“ $\frac{1}{4}$ = 25-100.”—“ $\frac{3}{4}$ = 75-100.”

“How do you find these decimal fractions?”—The pupils studied awhile, then some raised their hands, and one, being called upon, said: “It is like this: I divide 1 whole by 2 to get two halves; writing it this way $1.0 \div 2$ would give me 0.5 or 0.50, or 0.500.”

“Another pupil may do it with $\frac{1}{4}$.”—“ $1 = 1.00$ divided by $4 = 0.25$.”

“Another pupil may do it with $\frac{1}{5}$.”—“ $1 = 1.00$ divided by $5 = 0.20$.”

“Still another may show what $\frac{3}{4}$ looks like as a decimal fraction.”—“ $3 = 3.00$ divided by 4 would give 0.75 .”

“That is right; but tell me how you get the dividend 1.00 and the dividend 3.00 .”

“Why, don’t you see, we divide the numerator by the denominator every time.”

“Let us see whether that holds good every time:”

$\frac{1}{5} = 0.2$	$\frac{1}{8} = 0.125$	$3 \frac{1}{2} = 3.5$
$\frac{2}{5} = 0.4$	$\frac{3}{8} = 0.375$	$4 \frac{3}{10} = 4.3$
$\frac{3}{5} = 0.6$	$\frac{5}{8} = 0.625$	$9 \frac{11}{20} = 9.55$
$\frac{4}{5} = 0.8$	$\frac{7}{8} = 0.875$	$1 \frac{19}{25} = 1.76$

Questions were asked to make all see the solution of the examples of the third column, and more examples were given to practice the mode of procedure; these were preferably solved mentally when the fractions were small, pencil and crayon were resorted to when they were needed.

Teacher: “According to the way we have just learned, we divide 1 by the denominator of the common fraction, and multiply the quotient thus obtained with the numerator. If we had the fraction $\frac{5}{6}$ and divided with 6 into 1, or 10, or 100, we should receive a quotient with a remainder. Then again, much tedious multiplying must be done, also the adding of the remainder. Hence a merely mechanical way is used: We divide the numerator by using the denominator as a divisor. Now try again: $\frac{5}{6}$.”

Pupils working the long way first: $6 \overline{) 1000} \mid 0.166$, etc. Then the new way suggested: $6 \overline{) 5000} \mid 0.8333$. “There is always a remainder of 2.”

Teacher: "Try $\frac{9}{16}$."

Pupils working: 16 | 9000 | 0.5625.

Pupils: "Yes, that comes out right without anything left over."

Teacher: "Now try $\frac{5}{7}$." Pupils working:
7 | 5000 | 0.71428571.

Pupils: "Again we have a remainder, if we try forever."

Teacher: "Right; if a common fraction can be changed into a decimal fraction without remainder, we call the result a *final decimal fraction*. But when in continuing the division a remainder is left, the decimal fraction thus obtained is called a *periodical decimal fraction*. Try this one, $\frac{31}{75}$."

Pupils working: 75 | 31 | 0.41333. "There is a remainder, then this must be a periodical decimal fraction."

One pupil who was looking dubiously at his work on the blackboard, said: "Teacher, in the decimal fraction of the last example the 4 after the decimal point means 4 tenths; the 1 means 1 hundredth; the 3 means 3 thousandths; the next 3 means 3 ten thousandths, and so on, each following 3 represents a smaller part, does it not? Then the decimal fraction, called periodical decimal, is never exactly as large as the common fraction. Will not the calculations made be wrong? Will not there be something lacking?"

Teacher: "Yes, my boy; however, the part is so very small, that it may be disregarded; but the more figures you work out to the right of the decimal point, the more nearly exact the result will be. The ordinary business transactions people do not go beyond the third place after the decimal point. Now try this, $\frac{9}{12}$."

Pupils working: 12 | 900 | 0.75. "This is a final decimal fraction."

Teacher: "Now solve this example: A merchant received $19 \frac{3}{4}$ centiweights, 12.71 cw., $16 \frac{5}{9}$ cw. and 4.135 cw. of goods. What was the total weight?"

Pupils working:

$$\begin{array}{r} 19 \frac{3}{4} = 19.75 \\ 12.71 = 12.71 \\ 16 \frac{5}{9} = 16.555 \\ 4.135 = 4.135 \\ \hline 53.150, \text{ or } 53 \text{ cw. and } 15 \\ \text{pounds.} \end{array}$$

Teacher: "Now tell what a man saves a year, if he has $95 \frac{2}{3}$ marks income a month, and if his weekly expenses amount to 21.56 marks."

Pupils' result (only one of them had made a slight error in division):

$$\begin{array}{r} 95 \frac{2}{3} = 95.66, 12 \text{ times} = \text{M. } 1147.92 \\ 21.56, 52 \text{ times} = \quad \quad \quad \text{1121.12} \\ \hline \text{M. } 26.80 \text{ savings.} \end{array}$$

Teacher: "Now tell me, how to change a common fraction into a decimal fraction."

Pupil: "We simply divide the numerator by the denominator. If the division gives a quotient without a remainder, it is called a final decimal fraction. If a constantly recurring remainder is left, we call it a periodical fraction. We do not in ordinary business transactions work farther than the third place after the decimal point."

There were a few more questions than I could sketch in a hurry, but I left out no essential steps. The class partly worked at the blackboard. For home work two examples similar to the foregoing were given them, to be handed in on paper next day; but I saw the majority do them before the next lesson (one in geography) began. Home work of such dimensions is no burden.

PROMOTING THE TEACHER WITH HER CLASS.

A TEACHER took me to task, after reading my views on promoting the teacher with her class:—"It is a scheme, which has more disadvantages than advantages," she thought. I had suggested that it would be well to promote the teacher with her class, year after year, as the Germans do, because there is a great deal of waste of time and energy incident to the getting acquainted every year. Before the teacher knows every one of her new pupils, many points of hostile contact are established between both parties; and before she has acquired knowledge of the pupils' individual traits, much valuable time and energy are lost irretrievably. This might all be obviated by an arrangement, commonly found in Germany, which sends the teacher up annually with her class, until the seventh year is reached, when the teacher takes leave of her pupils, and starts a new cycle of classes below.

My friend's objections to this are charmingly stated, and are not without weight. First she says:—"It subjects the pupils to the danger of becoming one-sided in their education, each teacher having her own peculiar strong and weak traits, while if the pupils change teachers every year, they come into contact with many different minds, and thus obtain a many-sided education." In reply I asked whether there is any education which could cope with that offered by home influence. No. Then my friend would not suggest to have mothers and fathers changed every year to sub-

ject the child to manifold personal influences. Besides, it is reasonable to suppose that the many special teachers, the principal, the supervisors, will all bring their individuality to bear upon the pupils. We need not fear that children, in these latter days of rapid transit and nomadic life, will not have sufficient contact with other people. The trouble is, they get too much of it.

Again, she objected to my plan on the ground, that "it would make the teacher less efficient, because she would have new work every year, and thus be obliged to prepare anew for the work in the schoolroom too often to make teaching pleasant; she could not concentrate her powers and attention." With charming candor she admitted, that "she herself would prefer to have the primer class year after year, because she considers herself a veritable specialist in the work of teaching the mechanical part of reading, writing, etc."

I answered with a simile. A special teacher nearly always resembles a man who digs a well, and throws the soil up around the edge of the hole. The deeper he digs, the higher becomes the embankment, and the smaller his horizon of vision. That is to say, being occupied with one line of thought, and with little things, little in comparison with others, with weak and childish efforts, with trifles, she is apt to lose sight of what is going on in the community, among the people—in fine, upon the world's stage; and the more efficient she becomes in her narrow line of duty, the less she is fit to be a teacher of children, and to prepare them for the wondrous multiplicity of demands which life makes.

But I do not wish to be misunderstood: The trifles I spoke of may be significant enough for, both, pupils and teachers in their work, and at the time being; but

they are insignificant as compared with other things going on in the world. I have seen such teachers of primary grades who could not pass an examination for higher grades. It seemed, as though their knowledge of literature ended with the last page of the primer or, at least, the first reader, and their mathematical talent had shriveled up within the compass of numbers from 1 to 10.

Lastly, I may mention the frightful waste which a careful statistician might be able to put into figures. I mean the waste in money attended by annually changing classes and teachers. There is in this country too much waste in every domain of human activity, from the national government down to Bridget's domain in the kitchen. It is said, that many a European family could live upon what an American family throws into the garbage can. That may be speaking metaphorically, and upon reflection I know it is, but it may serve as an illustration of what I mean to convey. Prussia has for its six millions of pupils 100,000 teachers. We have for seventeen millions of pupils over 400,000 teachers. And yet the results of these 100,000 teachers are superior to those of the 400,000, as I know from actual inspection. But one rarely sees in Prussia teachers taking leave of their pupils after having had them for less than a year.

All of this is submitted to calm reflection. If we think it over, we shall find that it is a question of political economy of eminent importance.

WHAT IS MEANT BY THE TERM APPERCEPTION?

SINCE most of my readers have studied physiology, and understand the process of digestion and assimilation, I shall indulge in a homely but applicable analogy. The idea of apperception is not a new one. The process it indicates has been well known by philosophers, but only since Leibnitz have we a technical term for it, which like all technical terms, not expressed by an Anglo-Saxon root, needs a definition to be generally understood and well applied.

Apperception appears to me a process of apprehending perceptions, a process of organically combining new perceptions with others previously gained, and of classifying them into the categories of the mind, or rejecting them, if they fail to fit into the categories.

There is nothing in modern psychology that shows as plainly as the idea of apperception does, that the mind grows by means of nourishment like the body. The various stages in the upbuilding of the body are (*a*) mastication, (*b*) swallowing, (*c*) digestion, (*d*) assimilation; now apperception is to the mind what assimilation is to the physical man. The physical food digested is taken up by the lymphatic ducts, and conducted to a vein, in which it mingles with the blood, and after having gone through the lungs, it enters the heart, from where it is sent to the various parts of the body. Just so sensations become perceptions, which enter consciousness, there to be classified and organically connected with previous mental formations, to form concepts (not to say corpuscles of mental blood).

Food that fails to be assimilated, owing to bad mastication and digestion, passes out of the body without adding to its substance. Just so careless perception and poor concepts prevent apperception.

Mental as well as physical food may in itself be nutritious, and yet it sometimes fails to be assimilated (or apperceived) owing to its being "badly cooked, poorly masticated, and insufficiently digested," or because precautions as to the proper quantity have not been taken.

The gastric juices and lymphatic system are not of equal effectiveness in all human beings. Some stomachs re-act against acids, others against fatty substances. Just so the mind. Some minds take in facts from one branch of knowledge, and refuse those of another.

A good physician is not likely to prescribe the same diet for all his patients. He will make proper inquiries, and if he has time enough, study each one to find what will agree with him, and then direct what he shall eat. Just so with a good teacher. He will know that one kind of mental food will not do for all his pupils, and although he is bound to furnish them all with a certain amount of "mental albumen," a certain amount of "mental fat," etc., he will have sense enough to know that the result of mental assimilation differs greatly in various minds.

But if the entire apparatus of digestion is in prime order, and the lymphatic ducts act as they should, there is still left a possibility, in which the process of assimilation may be checked. The blood may be too weak to accept the nutrition, in which case strong food has the contrary effect from that which it has upon a strong man. Babies feed on milk, and could not assimilate

Worcestershire sauce. This is easily applied to apperception.

I might spin out this comparison still further, but I resist the temptation, in order to turn to a side of the question which shows a difference between assimilation and apperception.

The mind comprehending or apperceiving one idea thoroughly, obtains thereby a power to grasp other ideas with greater ease. It grows by gathering apperception-material, which in turn pre-determines the form new matter is to assume that enters through the senses. In this particular the process of apperceiving differs from that of assimilation. Different people observing the same phenomenon do not form the same concept of it in their minds, because the power of apperception is different, as is also the accumulated material of apperception. Hence the paradoxical saying: "We learn only by what we know," that is to say, we apperceive new perceptions, if we have knowledge of related facts with which we can organically connect the new cognition. Or as Göthe has it, "Oh, how we like to hear what we know so well."

Try to teach a youth conic sections, before he has gone through the whole range of mathematics that leads up to that branch, and mental assimilation (apperception) fails to take place. The digestive apparatus does not increase its capacity much; on the contrary it decreases with advancing years. Notice, on the other hand, that mental assimilation, or apperception, increases beyond calculation. The more we know, the more we learn.

Another difference is to be noted. In physical digestion we act upon substance, in mental digestion we deal with phenomena, or the appearance of things. The

sense impressions that become perceptions, which through the appereceiving process, become concepts, or ideas (from which springs judgment), probably only change the brain in its cellular structure; hence, when I spoke of an accumulation of apperception-material, it must not be taken to mean substance.

Ordinarily the same kind of food will produce the same kind of tissue, but the same perceptions produce different ideas, owing to the difference in the appereceiving power. No two persons think or know precisely the same things.

One of the modern philosophers likens the act of appereceiving to the moving of an object into the focus. While a great many objects may be in one's field of vision, only one can, at one time, be focused, and from this fact the philosopher derives the necessity for a directing power that does the focusing which he finds in will-power, while others find it in interest. This, however, leads me away from the definition of appereception, which I should like to condense by saying, it is the act of *mental assimilation*.



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