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# THE TECHNE

Life without Labor is a Crime, Labor without Art  
and the Amenities of Life is Brutality.—*Ruskin.*

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## THE PEOPLE'S WAR.

"This is a peoples' war," our President has said; "a war for freedom and justice and self-government among all the nations of the world, a war to make the world safe for the peoples who live upon it and have made it their own, the German people themselves included.

"We have no selfish ends to serve. We desire no conquest, no dominion. We see no indemnities for ourselves and no material compensation for the sacrifices we shall freely make. . . . We fight for the things we have always carried nearest to our hearts; for the right of those who submit to authority to have a voice in their own government; for the rights and liberties of small nations; for a universal dominion of right by such concert of free peoples as shall bring peace and safety to all nations and make the world itself free.

"To such a task we dedicate our lives and our fortunes—everything that we are and everything that we have, with the pride of those who know that the day has come when America is privileged to spend her blood and her might for the principles that gave her birth and happiness, and the peace which she has treasured.

"God helping her, she can do no other!"



**Buy a Liberty Bond**

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STATE MANUAL TRAINING NORMAL  
PITTSBURG, KANSAS

# THE TECHNE

PUBLISHED BY THE STATE MANUAL TRAINING NORMAL, PITTSBURG, KANSAS.  
A COLLEGE FOR TEACHERS.

VOL. 1.

MAY, 1918.

No. 5.

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The purposes of this magazine are: To set forth the distinctive work of the State Manual Training Normal; to publish papers that will be of interest to its readers; to assist teachers to keep in touch with the development in their subjects; to foster a spirit of loyalty that will effect united action among the alumni and former students in promoting the best interests of the institution.

Alumni, teachers and friends of the Normal are invited to send communications on such subjects as fall within the scope of the magazine to the committee in charge.

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## The Child.

The Child? He is  
The "morning of the day."  
The candle power by which  
All future light is measured;  
Constant burden of mankind,  
As is the fire on the hearth.  
His education begins,  
Not with the written language,  
But with kindly pressure  
Of hands, nods of approval,  
Looks of reproof, plucked flowers,  
Peeps into birds' nests  
With sweet reverence,  
Kindly thots toward justice  
In play, charity to the broken doll,  
The dead flower.  
His true democracy directed  
Toward beauty and good.  
No human need be wholly wretched  
So long as there is a child  
To love, and direct.  
A world without a child  
Would be as a mansion on whose hearth  
No fire is ever lighted;  
Whose andirons are cold  
As steel.

—LENA MARTIN SMITH, '13.

## Value of the Classics: A Review.

PROF. SAMUEL J. PEASE, Department of Languages, S. M. T. N.

One of the outstanding facts of the history of education is that every basic subject, whether Latin, mathematics or the Bible, has no sooner been declared safely dead and buried than it springs to life with irresistible resurrective force and reassumes an almost dominant position in the educational field. Of late the tendency has been away from idea-minded subjects and toward the thing-minded subjects, until the former have been crowded out of many curricula, whether rural school or college. It is, therefore, with no little surprise that a teacher of the classics finds Latin as the fourth subject in numbers of all subjects taken in high school, and Greek, though near the bottom of the list, more than two-thirds as popular as industrial subjects (1915). In our own school, with its natural emphasis on manual subjects and hence its greater appeal to the minds of motor tendency, the foreign language department has been able to fill only three calls for Latin teachers out of a total of eight for the past year. In fact, the supply of Latin teachers is not likely to catch up with the demand for some time.

If the reviewer may be pardoned a personal reference, he would like to acknowledge his indebtedness to two of the Princeton committee: Prof. Edward Capps, who vivified in his experience as fellow at the University of Chicago an already lively interest in the inner life of ancient Greece; and Prof. Frank Frost Abbott, who first changed for him a sufferance for Latin into a real liking—a liking that has recently grown almost into a hobby.

Latin is preëminently the teacher's language. About twenty teachers who have been members of the reviewer's classes in "Latin in English" have agreed that the pupil, even in the first grade, has quite a number of Latin words to use, while the number in the regular school work of the sixth, seventh and eighth grades is almost appalling. It is difficult for any but a trained observer of the attitude of people in general to the accurate spelling, pronunciation and use of words even to imagine the carelessness and indifference with which all notion of accuracy is shunned, dreaded or even scorned, not only by many pupils, but by countless teachers of the "get-a-certificate-quick" type. Even good teachers fail. Recently in assigning the spelling lesson of four simple four-letter words, the second lesson in the book, the teacher remarked to her second-grade class that it was a hard lesson. Poor encouragement indeed for a beginner! And this teacher is famed far and wide for her results with primary pupils. It is precisely the common disregard for the form and historical perspective of language that makes our boys poor readers at fifteen (and hence forever), and makes Bible names and those of Russian generals and French diplomats and musical selections as akin to the voices of the birds as was the language of the "barbaroi" in the countries foreign to ancient Greece. It should be the teacher's business to know how to analyze any word, to recognize the importance for modern speech of the Latin or Greek root, of the survivals of the ancient tongue in formation, declension, case, number, conjugation, tense-

stem, person, comparison, irregularities; yes, in style, syntax, rhetoric, logic, ideas. Most of all, ideas; for there is many an idea in the news, the editorials, the cartoons, the advertisements, the comic section of the newspaper that gains interest and perspective if traced back to its ancient source. A few simple principles of word analysis will help an eight-year old to gain the power to read the newspaper; every *very* great writer of English knew his Latin before he was eleven years old.

But the book. There is an introduction by Dean West of Princeton that is worth every educator's careful study. Indeed, it sums up in brief compass arguments and facts, ways and means, and indicates the kind of emphasis that should be placed on classical study under present-day conditions. There are ninety pages of addresses delivered at the Princeton conference last spring, each of value, each presenting clearly one or more important points. There are over 230 pages of statements from leaders in every field: every president of the United States since 1893, except McKinley, whose untimely death antedated the present movement in the classics; world-famous men in every rank of public life, business, schools, colleges, universities, the ministry, law, medicine, engineering, sciences, editing, literature, history, political science, economics, philosophy, sociology, fine arts, oriental studies, British and French authorities. It would seem almost, yes, quite universally true, from the testimony of these greatest men, that the leader in every intellectual sphere, including engineering, the sciences, and the fine arts, should have a foundation of Latin and Greek, not perhaps as they have been taught in many places in the past, but as taught by inspiring teachers pointing forward to the future. Thirty pages of statistics give facts as to (1) the enrollment of classical students in secondary schools; (2) the record of classical students in college entrance examinations; (3) the general record of classical students in school and college; an index to the relation of classical training to prominence in later life. The book closes with useful indexes of contributors and subjects.

Dean West's introduction and the statistics are of great value even to the casual reader; the addresses and statements should be convincing to doubting Thomases each in his own line; every classical teacher and every administrator would do well to read, to digest, to assimilate the whole book in order to know where to place the emphasis for future work.

It will be noted that the argument of this book is diametrically opposed to the opinion of a certain prominent educator who has spoken at our institution—a man closely associated with the chief opponent of the classics in the whole world. His arguments against the classics are shown in this book and elsewhere to have been based on an improper use of statistics. In fact, a true statement of the real situation would be somewhat as follows:

For all who are striving for more than earning a living and the control of material things, for those who wish to be at home in the realm of ideas and ideals of human life from a genetic standpoint, for those who wish their minds to remain longest plastic that they may most fully develop, the study of the classics for a sufficient period to be well grounded in their thought, language and literature is practically indispensable.

## The Crafty Spider.

W. E. RINGLE, Department of Biology, S. M. T. N.

Most persons, when they chance upon a spider, draw back quickly for fear of being bitten. But students of nature have discovered this fear is wholly groundless.

There are about 4,000 living species of spiders. Yet with the exception of the tarantula, there has never been one undoubtedly authentic case of spider bite proven against any of them. Even the bite of the dreaded tarantula is only slightly poisonous to man, leaves no permanent traces, and is not at all dangerous.

The so-called spider bites are bites inflicted by certain blood-sucking insects large and small. The mandibles or jaws of ordinary spiders are not powerful enough to pierce the human skin. Besides this, if all the poison contained in a spider's glands should be injected into the flesh, it would not cause as much irritation as a bee sting. Spiders do not suck the blood of mammals and would not bite if they could.

The people of the middle ages not only believed spiders would bite human beings, but that the bite was very poisonous. The victim, they believed, would be seized with paroxysms, soon be overcome by exhaustion, and finally die. The only cure for a person bitten by the tarantula was to dance to the music of the "Pastorale." The patient had to dance until he lost consciousness. On awakening he would find himself cured.

No, the spider does not deserve his bad reputation. It is hard to understand why, to most persons, he is so extremely repulsive, seemingly meriting only persecution and annihilation under the sole of a No. 8. In fact, the habits and the skill of the crafty spider make a most interesting and instructive chapter in natural history. One not only finds he is the subject of some real misconceptions, but also that he has certain most novel ways which the ordinary observer never suspects.

### THEY'RE VALUABLE TO MAN.

For one thing, spiders should be regarded as valuable to man instead of dangerous. They feed on flies, mosquitoes, gnats, moths, crickets, beetles and bugs and other insects that trouble men. They themselves are the best kind of food for birds. When the canary gets sick, the best thing one can do for it is to put it on a spider diet.

Another incorrect notion about the spider is that it is an insect. It lacks, however, several structural characteristics of the insect. Insects have six legs, while the spider moves about on eight. Insects have both compound eyes and simple eyes and distinct heads, and they pass through a series of developments called "transformations." The spider has no separate head, has eight simple eyes, and does not pass through transformations.

There is really every opportunity for observing the ways of spiders. They set up housekeeping in our yards and gardens, in our barns and cellars, and sometimes in the best rooms of our homes. They are found everywhere, no place being too sacred for their occupancy.

Their devices for obtaining their food are various and often quite curious. Some run to catch their prey. Others dive beneath the surface of the water. Some drive horizontal tunnels into the ground. These

tunnels are really lined with a soft, silky fabric and are closed with a carefully woven lid which the spider may open and shut at will. Some spiders are able to imitate the stamens of certain flowers, and in this way catch the unsuspecting butterfly. Some not only make themselves look like withered flowers lying on the ground, but have developed a perfume like jasmine that attracts the unwary insects to their destruction.

The wonderful webs others of these tiny animals make are also traps for their prey. By means of spinning organs consisting of hundreds of microscopic tubes, they are able to spin the finest silk fabric. This they may fashion into a magic veil of most artistic webs or into nets with radiating cables of nearly mathematical accuracy. The spiral threads connecting the cables are covered with gummy globules, about 14,000 to the inch. The moment an insect touches the net it is held by legs or wings and becomes meat for the industrious weaver.

The comparative strength of this fiber is remarkable. Experiments have shown that it exceeds that of common iron of like diameter, and, being elastic, is one of the most efficient fibers for mechanical purposes known to engineers.

There is near Paris a factory where ropes for balloons are made of spider web. The ropes are said to be of the strongest character possible. Twelve spiders are placed above the reel upon which the threads they spin are wound. Each spider is required to furnish from 30 to 40 yards of thread before it is released. The web is then washed and cleaned of its sticky covering. Eight of these washed threads woven together make a strong silken cord that is used in balloon service by the French *aéronauts*.

But in addition to furnishing material for *aéronautics*, spiders even compete with men as *aéronauts*. They were, indeed, the first to overcome gravity, mount aloft, and make long *aërial* journeys. They use curiously constructed balloons with streaming pennants of silken filaments. It is believed all young spiders, as well as many small species of all the great groups of spiders, have the instinct of *aërial* migration. The month of October is the season most favored by spider *aéronauts*. If one will glance upward at this season he will probably see a long, white, sinuous filament drifting through the air, far above the treetops and across the hills and valleys. This is the airship of a ballooning spider seeking a home in some distant meadow. These *aërial* journeys of the spider have excited man's imagination, awakened his curiosity, and stimulated research.

When wishing to make an *aërial* journey, the spider will select a fence post, the feathered plume of the golden rod, or the blossom of some tall weed, as an ascension platform. It then proceeds to emit jets of liquid silk from its spinnerets. These harden at contact with the air and are held apart or combined at the will of the spider. The streamers are from six to twenty feet long, their combined length depending on the weight of the spider and the height it wishes to ascend. They are soon caught up by the breeze, and off the spider sails. When it wishes to descend it draws in the filaments that buoy it up and give sailage surface to the wind. Thus the spider can sail high or low at will, and can land at any place it chooses.



If one will ramble through the country on an early autumn morning he will find a sheen of myriads of fine silken filaments floating from shrubs, hedges, bushes, and every elevated spot. They interlace the foliage and the blades of grass with the delicate meshes of a wonderful veil in which the dewdrops sparkle like diamonds. As the sun rises the veil becomes animated, its threads fluttering like ribbons, rising and falling in rhythmic waves of gossamer. These are the ropes and netting of the ballooning spiders.

One would think it would take some courage for the spider thus to go ballooning. But for the young male to go courting requires far more. This courage is needed because of the peculiar and thoughtless ways the female has of expressing her affection. And what makes matters worse for the male, he is generally a dwarfed individual. His part in the romance must therefore be carried through by agility and cunning.

The manner of the female spider in dealing with her lover seems without parallel in the animal kingdom. A male seldom returns from courtship without having lost a leg or two. Sometimes the peril in which his wooing involves him has been so drastic that the profound modification resulting in his mental as well as bodily structure render him hardly recognizable as a spider at all. For the female spider is savage in her love affairs.

The male spider seems to realize he makes love at his peril. He therefore haunts the border of his sweetheart's web with hesitation and irresolution. He will hang back for hours, feeling cautiously with trembling legs the silken carpet of the web, trying to ascertain the nature of the welcome that will be accorded him as a suitor. Sometimes he is admitted into the parlor. But unless he is extraordinarily agile in taking his leave at the proper moment, the idyll of the evening is followed by a hideous tragedy. She to whom he came with overtures of love will slay and eat him for his pains.

These dramatic and fatal results of courtship have resulted, through natural selection, in a breed of very swift spiders among the males.

Often the male must show unusual proficiency in dancing before he can win the heart of his innamorata. The female sits in an elevated position so she can watch his antics at her ease. He then begins his try-out with the most remarkable performance a lover can offer for the delight of an admiring female. She both repels and invites him, while he dances and dances with all the grace possible for him to display. At last he reaches a giddy, whirling, mazy tango, whereupon she either joins him in the dance or pounces upon him and devours him.

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Every industry in the district finds place in our curriculum. Every kitchen, barn, dairy, shop, is a laboratory for our schools. The growing crops, the orchards, the vineyards, the gardens, the forests, the streams, the domestic animals, nay, even the tools of every farm, are part of our scientific equipment. The horizon forms the walls of our museum of natural history and the sky is its roof, and all the life within is material and specimen for our study.—*Frederick T. Gates, Chairman of the General Education Board.*

## Manual Arts Conference at University of Missouri.

The annual conference of men in the Mississippi valley who are engaged in training teachers for manual arts and industrial education was held at the University of Missouri December 13, 14 and 15. The conference was under the management of the United States Bureau of Education, and was presided over by Dr. William T. Bawden, specialist in industrial education. Representatives from fourteen states were present, representing the territory from Ohio to Utah and from Texas to Minnesota.

At the first session, after an introductory speech of welcome by President A. Ross Hill of the University, Dr. J. H. Coursault, acting dean of the College of Education, spoke to the theme, "Making Democracy Safe for the World."

The conference program included the following main subjects:

1. Practice teaching.
2. The Smith-Hughes act.
3. Examination and certification.
4. Course.

Prof. Albert F. Siepert, of Bradley Institute, spoke on "Preparation for Teaching Now Offered in the Institute Represented in the Conference." This presentation was the result of an extended study of curricula of ninety institutions giving teacher courses. He presented tables showing: (a) Types of curricula as to character and length of time required; (b) entrance requirements; (c) faculties as to number and degrees held; (d) faculties as to experience in trades and in teaching; (e) academic subjects taught; (f) professional subjects taught; (g) technical subjects taught. The conclusions reached were presented in the following theses:

1. In view of (1) the rapid growth of the teacher-training movement in the field of manual arts, and (2) the probable effect of the Smith-Hughes act, there is need of a study of the curricula of each institution with reference to (a) the type of teacher being prepared, (b) the subjects taught, (c) the time spent upon each, and (d) the sequence in which they are arranged.

2. Adequate time must be allowed in any given curriculum for the preparation of a teacher who will be competent to teach or do the line of work he is in charge of.

3. A clearer statement by the institution of the aim to be attained by a student who is following any given program, is desirable.

4. The degree of specialization open to a prospective teacher should increase as the age of the pupils he will teach advances.

5. While each institution must be left free to work out its own problem, an agreement as to minimal essentials in the preparation of teachers for the various grades of school work would be beneficial.

6. The lack of definite standards and readily administered tests is a serious matter, and should receive more consideration than is now given it in various institutions.

7. Practice teaching and observation are essential factors in the preparation of every teacher, and more adequate attention must be given to these topics.

Professor Fred C. Whitcomb, of Miami University, Oxford, Ohio, spoke on "Present Conditions in Respect to Practice Teaching." "A Pro-

posed Program for Practice Teaching" was presented by Hans Schmidt, of the Oshkosh State Normal School. After considerable discussion it was decided that this whole subject of practice teaching be continued for consideration another year.

The discussion of the second main subject, The Smith-Hughes act, was opened by Robert J. Leonard, district agent of the Federal Board for Vocational Education. He first stated that he was not present in an official capacity, and therefore whatever he might say should be regarded as his opinion and not as an expression of the policies of the federal board. He then gave a remarkably illuminating address on the possibilities of work under the Smith-Hughes law, especially as they concern the training of teachers. He presented the subject under three heads: (1) The legal status; (2) kinds of schools; (3) suggested methods and plans that may be adopted under the Smith-Hughes act.

In the discussion, which was very spontaneous and freely indulged in throughout the session, there were a few points around which interest especially centered. One of these was the suggestion that has come to members of the federal board that five years of practical experience be expected of men teaching unit trade courses in shop work under the Smith-Hughes law. Mr. Leonard pointed out that the "five years" is not in the law, and that the effort of the federal board will be to insure "adequate training." It was understood from this that the term "five years" was intended to express a general idea rather than a fixed time, and that the federal board is likely to recognize that some men are better mechanics after three years of experience than others are after twenty. But federal funds can be used in support of industrial-teacher training only when the students are trained workers or are taking a course to become such. The Smith-Hughes teachers must have two vocations—their trade and teaching. However, the initiative for establishing the standards for such "adequate training" rests with the state boards instead of with the federal board, but the state boards must establish standards that meet the approval of the federal board. Whether the federal board will have a uniform standard for all the states was not brought out in the discussion. There may be good reasons for different standards. Having such may obviate some of the difficulties in administering the law. Concerning standards it was further stated that there should be a sliding scale of requirements for teachers, beginning with what is reasonably possible at present, and increasing to a satisfactory standard; but the basis for certification should always be performance rather than passing a written examination. The sliding scale plan can be accomplished by having three kinds of certificates—provisional, limited, and permanent.

Another center of interest in the discussion was the general industrial school for cities of 25,000 population or less, a school which would come under the provisions of the Smith-Hughes law. The fact that the kind of teachers needed for giving instruction in shop work in such schools will not be far different from the best that have been trained by several of the schools now preparing teachers for the manual arts, was especially noted. The general industrial schools will devote one-half of the school time to

industry and one-half to related and academic subjects. For such schools three types of teachers will be needed: (a) Teachers of shop work who may give instruction in several trades; (b) teachers of related subjects; (c) teachers of modernized academic subjects. In some cases one teacher is likely to cover (a) and (b), or (b) and (c). Several present courses in state colleges, universities, state normal schools, special normal and technical schools, with but slight modification, will meet the needs for all three types of teachers. Some of these courses, covering four years of work beyond the high school and requiring 50 percent or more time spent in shop work and drawing, are now available.

The Hon. U. W. Lamkin, state superintendent of public instruction, and H. C. Givens, director of industrial arts at the State Manual Training Normal, Pittsburg, spoke on examination and certification of teachers. As a result of the discussion it was felt that the topic should be placed on the program for next year. Mr. H. B. Mays, of the Huntsville Normal School, Texas, and Mr. Givens were appointed on a committee to make a study of this particular topic. George F. Buxton, of Stout Institute, spoke on the topic, "Content of Technical Courses in Intermediate or Junior High Schools."

The place of meeting decided upon for next year was the Indiana State Normal School, Terre Haute, Ind.

H. C. G.

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### Making Education Real.

"The introduction of more hand, ear and eye work, such as drawing, carpentry, music, sewing and cooking, and the giving of much more time to the sciences of observation—chemistry, physics, biology and geography—not political, but geographical and ethnographical geography. These sciences should be taught in the most concrete manner possible; that is, in laboratories with ample experimenting done by the individual pupil with his own eyes and hands, and in the field through the pupil's own observation guided by expert leaders. In the secondary schools situated in the country the elements of agriculture should have an important place in the program, and the pupils should all work in the school gardens and experimental plots, both individually and in coöperation with others. In city schools a manual training should be given which would prepare a boy for any one of many different trades, not by familiarizing him with the details of actual work in any trade, but by giving him an all-round bodily vigor, a nervous system capable of multiform coöordinated efforts, a liking for doing his best in competition with his mates, and a widely applicable skill of eye and hand. Again, music should be given a substantial place on the program of every secondary school, in order that all the pupils may learn musical notation, and may get much practice in reading music and in singing. Drawing, both free-hand and mechanical, should be given ample time in every secondary school program, because it is an admirable mode of expression, which supplements language, and is often to be preferred to it, lies at the foundation of excellence in many arts and trades, affords simultaneously good training for both eye and hand, and gives much enjoyment throughout life to the possessor of even a moderate amount of skill."—*Dr. Chas. W. Eliot.*

## Over the Top.

Lieutenant John N. Broadlick, who is an observer in the aerial service, described at a Normal assembly, while on furlough in Pittsburg early in March, some of the sensations that come to the flyer who is new to the air. Lieutenant Broadlick was transferred to the air service December 22 and made his first flight December 27. Previous to that date the loftiest altitude with which he had much acquaintance was that gained by climbing to the fourth floor of Russ Hall on some school duty. But the pilot who carried him into the sky above Post Field, Fort Sill, took him, by way of initiation, to an altitude of nearly a mile. They flew over Ft. Scott, which was far enough below them to look like a mere rough place on the ground.

"I confess to having had a creepy feeling all over when I started on that first flight," Mr. Broadlick said. "The machine gathered speed as it ran lightly over the ground, until it was going about sixty miles an hour. Then the pilot gave the tail a down turn and the ship began to climb. I felt just as though I was in a long swing that was carrying me far out, but the difference was, there was not any come-back. When we had reached a certain height the earth began to look like a big bowl curved below us. The rim of this bowl was irregular, because the horizon was fringed with haze. At three or four thousand feet we found the air much warmer than it had been on the ground, but at about 5,000 feet it was much colder. We were in the air forty-five minutes."

"The members of my class who were to make their first flight that day had been duly prepared for it by the thoughtfulness of men older to the service," Mr. Broadlick continued. "These men told us all kinds of stories about the horrors of flying. We shouldn't eat much before going up, they said, for we were pretty sure to get seasick and have difficulty holding our lunches down. The rocking of the boat was violent enough to assure that, they told us. The evening before, they scattered on our bunks newspaper clippings of all the accidents, it seemed, that had happened in the last two months. Of course we read them and it made some of the boys pretty pale around the gills, too. We had never realized before that evening how many accidents there are in the air."

Lieutenant Broadlick found some aspects of air and sky he had not anticipated. He was surprised, one cloudy day, to find many of the birds above the clouds, disporting themselves in the bright sunshine. A thin veil of cloud gave the illusion of a body of water below him, at the bottom of which appeared fields and houses. At times the clouds looked as though he could step out of his machine and walk on them.

"The pilots usually dodge a cloud," he said. "When there are a number of planes in the air, passing through a cloud increases considerably the chances of a collision. Driving through a heavy cloud usually leaves the plane dripping wet."

"The actions of animals when they see a plane furnishes much amusement to the aviator," Lieutenant Broadlick said. "I recall two red pigs we flew over one morning. They seemed to take us for an eagle seeking to devour them. When they found they could not outrun us they squatted flat on the earth, attempting to hide in brown grass about two inches

high. One morning at the height of a thousand feet we flew into a group of four ducks. Two swerved to the right and two to the left, then all four tried to follow us, as though we were the biggest duck of all."

Ascertaining the direction in which the wind is blowing is sometimes a difficult bit of information to obtain preparatory to landing. Mr. Broadlick told of one aviator who had wandered so far away from Fort Sill that it became necessary for him to land in order to find some one who could tell him where he was. He sailed along until he saw a farmhouse. He circled and dipped until low enough to see the hosiery hanging on the line in the back yard. He ascertained the direction of the wind from the way the stockings were blowing, then came down in the face of it. If the aviator did not do this, he would have much difficulty stopping his machine after it was on the ground. The farmer, pleased to greet a caller from out of the air, told him Fort Sill was 35 miles to the eastward. So the birdman started his engine and was off again.

Lieutenant Broadlick and his pilot had to land in a cornfield one day because of engine troubles. They had carefully sought out this spot from a height of several thousand feet as they came slowly downward in long spirals, for a cornfield, with the stocks partly removed, at least offers rows between which the wheels may run until the plane is halted. The pilot started to tramp back towards the aviation field, but met a farmer who promised to telephone to headquarters for a mechanic. After a few minutes a plane appeared off to the north and soon settled down beside Lieutenant Broadlick's plane. An expert mechanic stepped out and tinkered with the balky engine of the other machine for a few minutes. Then everybody climbed aboard again, both pilots "turned on the juice," and the two planes soared away toward the fort.

An aviator who has to make a forced landing always looks for cows. That is because wherever there are cows there is apt to be a pasture, and a pasture usually offers some level spot big enough for a landing place.

As an observer, Lieutenant Broadlick's duty is to direct the flight and see that its purposes are accomplished, while the pilot, acting as chauffeur, takes instructions from him. Mr. Broadlick flies almost every day, nearly always in a machine he has not ridden in before and which he has no time to examine, and with a pilot he has not seen before. The reconnoissance flights are many. He makes sketches in the air operates a machine gun, and while at Fort Sill frequently directed the fire of the First field artillery regulars. He is in the air sometimes as long as six hours a day.

The air men expect a big battle in the air when they all arrive in France, Lieutenant Broadlick said. They are getting ready for it just as fast as they can, and are eager for plenty of machines.

Lieutenant Broadlick first enlisted in Pittsburg with battery C, 130th heavy field artillery, in which he was made a second lieutenant. He applied in November for transfer to the air service, a transfer that gave him the rank of first lieutenant. At the close of his furlough he reported to Camp Dix, Tex., where he became a member of the aerial branch of the signal corps instead of a flyer attached to field artillery. E. B.

### Flag Salute in Schools.

1. In some schools where the children are quite small the silent salute is practiced as follows: At a signal from the teacher, as the flag reaches its station by the teacher's desk every little one will raise his hand, palm downward, to a horizontal position, tip of front finger touching the forehead. Then at a second signal the hand is lowered to the side. This silent salute corresponds pretty nearly to the military and naval salute to the flag.

2. In schools where the children are old enough to understand, a form of pledge should be given, as follows:

"I give my hand and my heart to God and my country—one country, one language, one flag."

After the color bearer has brought forth the flag, at a signal from the teacher every pupil will stand erect in his place and give the pledge and salute in this manner:

- (1) Extend the right arm and point toward the flag.
- (2) Bring the tips of the fingers to the forehead saying, "I give my head"—
- (3) Bring the hand over the heart saying, "And my heart"—
- (4) Raise the hand, point and look upward, and say, "To God"—
- (5) Drop the hand to the side, repeating, "And my country"—
- (6) Standing erect repeat, "One country, one language, one flag."
- (7) When saying "One flag" advance the right foot, bend the body slightly forward, extend the arm and point to the flag.
- (8) Lowering the hand to the side, all sing a stanza of "America." or some other patriotic song.

The effectiveness of the flag salute must depend very much upon the spirit in which it is given, and this spirit must depend very much, as all school exercises do, upon the spirit of the teacher. If this is done in the spirit of true patriotism, it will, I am sure, beget in the hearts of the pupils a love for the stars and stripes and all they symbolize.

3. For older children: When the salute is to be given, at a signal from the teacher all the pupils rise. The boy or girl who has been selected for color bearer then brings the flag to the front, and after it is in place, at a sign from the teacher the pupils raise their right hands, palms downward, to level with their foreheads, and repeat in concert this pledge:

"I pledge all allegiance to my flag and to the republic for which it stands—one nation, indivisible, with liberty and justice for all."—*From Kansas State Bulletin.*

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### Most Blest of Nations.

It is no boast to declare ours the most blest of nations, favored with every good gift that can be bestowed upon the sons of men. A country upon which nature has lavished her treasures, where the fruits of the earth never fail, where dwell a spirited, red-blooded people, proud of its past, conscious of a wonderful future, and eager for its working out.—*Ex.*

## Beautifying Rural School Grounds.

The country school is often a dreary place. The plain frame building of the rural school, too frequently little better in appearance than a cattle shed, stands in the middle of its bare yard like a scarecrow in a cornfield after the corn has been gathered. And, like the scarecrow in his deserted field, the picture is well fitted to frighten children.

There is no bit of ground where beauty is more appropriate, where it will extend a wider and more constant blessing, and where it is more easily obtained.

There are ferns for shady corners; there are many varieties of tall goldenrod that, bending in September breezes, will beckon the children back to school as to a golden way of knowledge; there are quantities of sumac, which, put in clumps against the building or the high back fence, will change an ugly barrier into a gorgeous screen; there are vines that ask only for the chance to climb lovingly over the doors and windows; there are little trees only waiting for an opportunity to spread their roots in the school yard and grow great there, entering tirelessly into the games of a ceaseless procession of scampering children, receiving into their arms the boys and accepting the confidence of the whispering girls, and making for all, when the sun is high, a beautiful, welcome shade. There are violets and snowdrops that are eager to play hide and seek in the school yard in early spring days, and in some parts of the state there are wild roses to bloom in June and lend their sweetness for all the summer to the memory of school.

Since we can so easily make the school yard beautiful, a little oasis in the lives of ourselves and of those who are to follow us, and since it is fun to do it—going out into the woods and the fields for what we want—let us resolve that next fall there shall not be a single barren school yard in the rural districts of the state.—*Charles Mulford Robinson.*

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The purpose of this periodical is to help the teacher in his or her daily work. If it does not do that it is a failure. It is here to serve. Consequently, let the editorial committee know what you need. Don't hesitate to jot down your suggestions and mail them to THE TECHNE, care of the State Manual Training Normal, Pittsburg, Kan. Every effort will be made to fill these pages with reading matter that will be informing and usable.

Tell us how we can serve you.

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### Attention, S. M. T. N.

The new Carney Hall, erection of which on the Normal campus is just beginning, is to contain a museum. Curios and relics of historic, scientific, and literary interest, wide in range, are to be gathered for it. Now is the time for all S. M. T. N. alumni, students and friends to begin the making of this collection. It should be especially rich in historic interest, being started, as it is, at a time when history is so much in the making. All friends of the institution are therefore requested to keep their eyes open for suitable materials and to communicate with President W. A. Brandenburg, if they now have articles that should find their place in the collection. Things illustrative of the life and history of Kansas and the middle west are especially wanted.

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### Defects in Mental Training.

A keen analysis of the defects in mental training of our secondary and collegiate education is made by Alexis F. Lange, in an article entitled "Our Preparedness Program," in *School and Society*, September 29, 1917. "With respect to the mental efficiency of high-school and college graduates, the quality is not such as to encourage complacency and congratulations." The following defects are enumerated:

First: A low degree of power to seize the organizing thought of a chapter or book.

Second: Reckless thought aviation, difficult starting apparatus, and little experience in starting a train of thought and conducting it on a straight track to some terminus.

Third: Paralyzing embarrassment on being left alone with a problem, and inability to devise hypotheses, select pertinent facts and put out impertinent ones, and to reach conclusions with a decent regard for possibilities, probabilities, and certainties.

Fourth: Lack of resourcefulness for new use of old knowledge, with a corresponding excess of information kept in cold-storage compartments.

Fifth: Great weakness in handling the forms of discourse—narration, description, exposition, argumentation—as a form of effective thinking.

W. D. A.

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### Let's Get Together.

If you encounter a knotty point, or are working against the grain, write of your trouble to the S. M. T. N., and your letter will be referred to the proper department for the answer.

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If you wish to receive this magazine regularly, without cost to yourself, mail us your address written on this blank, and your name will be placed on THE TECHNE'S mailing list.

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