

**NOTES ON EDUCATION.**

**MATTERS OF INTEREST TO PUPIL AND TEACHER.**

**Resolutions Adopted by the National Educational Association in Milwaukee—Modern Mathematical Methods—The College Girl Graduate.**

**Modern Mathematical Methods.** When some of us were boys at school we knew no other way of doing a sum than subtraction but the way of borrowing and paying back. Thus, suppose we had to take 1,689 from 1,878, this was the method:

1,878  
-1,689

179

Nine from 8 is impossible, borrow 1 from the tens, 9 from 18 leaves 0; next line, pay back your 1 by adding it to the 9, then borrow again 10 from 17 leaves 7; third line, pay back the borrowed 1 to the 6, and then 7 from 8 leaves 1, giving the answer, 179. The modern inspectors pour scorn upon this system and tell us its absurdity is held up in every text book. This we find to be a slight exaggeration. In one very excellent modern text book, to which we have referred out of curiosity, we find the good, old-fashioned "borrowing and paying back" fully described and awarded the first place in the alternative methods. The modern method is that of finding the number which must be added to the less to make it equal to the greater; so that the new way of teaching the young idea how to subtract is really a continuation of its

a path to Egypt and lecture to thousands on ancient Thebes."

**Cheaper College Degrees.** An important suggestion is embodied in a resolution offered by one of the attendants upon the convention of educators in session at Milwaukee. The resolution declares:

"The State should exercise supervision over degree-conferring colleges through some properly constituted tribunal having power to fix a minimum standard of requirements for admission to or graduation from such institutions, and with the right to deprive of the degree-conferring power institutions not conforming to the standard so prescribed."

It has long been apparent that if a college degree is to have any distinction at all something must be done to prevent the distribution of such honors by inefficient and low-grade colleges. There are 460 institutions known as colleges in the United States. The United States commissioner of education thinks that only about forty of these have the right to the name. His estimate is probably rather low, but it is obvious on a moment's reflection that a large number of the colleges are at best not qualified to confer a degree which will carry the same distinction as that given by a first-class college. The method proposed for avoiding the trouble seems rather cumbersome and impracticable. It is even doubtful if a law prohibiting an institution from granting a degree would stand. If a dozen men choose to get together and dub a thirteenth man "Master of Arts" there is nothing to hinder them.

At the same time, the practice of indiscriminate degree giving is an evil which threatens to deprive college de-



**A Delicious Fruit.** A type of berry in cultivation in but few places is the dewberry, which is a trailing form of the blackberry. The best dewberry is the Lucretia—named in 1875 in honor of Mrs. Lucretia Garfield. The fruit is early, of large size, and attractive in appearance and its receding habit of growth makes it valuable, as it affords opportunity for



CLUSTER OF LUCRETIA DEWBERRIES.

winter protection. It is very fruitful. The canes and lower sides of the leaves are very thorny, which makes picking very unpleasant, but proper pruning and mulching largely overcome this. Trellising is often resorted to and for small plantations can be easily adopted, but for field culture it is not deemed advisable. It is usual to plant about four feet apart each way and cultivate until the new canes get so long as to prevent it. The old canes are removed any time after fruiting, but if trellises are used the young canes are not tied up until the next spring. In the north, it is well to protect with light covering during winter. A mulch is often placed under the canes to keep berries clean and the weeds down.—Farm and Home.

**Roadside Watering Place.**

A simple plan for making an attractive roadside watering place is shown in the illustration here reproduced from the Country Gentleman. A hoghead contains the water that is brought to it by a pipe. The sides and top are boxed in, and a roof is carried up over the whole. Over this vines are trained until the little building is fairly hidden by them. It may be thought that this is considerable trouble to take for a watering place, but everything that enhances the beauty of a roadside en-



A ROADSIDE WATERING PLACE.

hances the value of the property adjacent to it and increases the respect of travelers for those who live adjacent. Well constructed roads, well kept roadsides, attractive watering places and properly marked guideposts indicate the vicinity of cultured, thrifty up-to-date residents.

**Windmill on the Farm.**

Probably the simplest and most inexpensive of the appliances for raising water is the windmill. A sixteen-foot windmill connected with a storage reservoir will raise water enough for the irrigation of about ten acres. You will observe that I have said that such a mill must be used in connection with a storage reservoir. The windmill would not have a sufficient capacity to deliver the amount of water needed if the water was wholly used during the time the pumping was going on. A reservoir with a pumping capacity of several million gallons may be constructed at a comparatively small expense, and into this reservoir the windmill pumps throughout the year, filling it up and affording a supply which will be drawn off during the irrigating season.

Probably, however, the most economical method of delivering water is by means of the centrifugal pump. This pump will raise water to a height not exceeding fifty feet at a cost of not to exceed twenty to thirty cents per million gallons. These centrifugal pumps are geared or constructed so that they can be operated either by steam or gasoline engines.—Farm News.

**Fatten Old Hens.**

The hens that cease laying and which are intended for market, need not be sold at a loss. Just before selling them let them be confined for ten days or two weeks, and give them all the wheat

in the morning and corn at night that they can eat, with a mixed ration at noon. Do not confine them in coops, but put a number together in a yard. They will, if made fat, not only be a pound or two heavier, but bring more than the market price per pound.—Maine Farmer.

**Butter Making.**

In a close, crowded and ill-ventilated stable, where there is too little air space for each animal, the air becomes foul from the exhalations, and this affects the milk, as well as the health of the animals. The remedy in this case is to provide more room for the stock and better ventilation. The stable should be kept as clean as possible, and the cows well bedded and clean. The utmost cleanliness should be observed in milking. All dirt should be brushed from the cow before beginning to milk, and it is best to dampen the udder and flank of the cow, so as to prevent the dust and fine dirt from falling into the milk. The milk should be strained immediately after milking, and not allowed to stand in the cow stable any.

A good strainer is indispensable, and one of cloth is much better than one of wire gauze. Milk pails should always be made of tin, and the seams should be soldered smooth, so that there will be no places for the dirt to lodge where it will be difficult to remove. They, as well as other dairy utensils, should be thoroughly cleaned every time after using. Tin articles should be washed first in cool, then in hot water, and after that thoroughly scalded with boiling water or steam. They should then be dried in fresh air, and, if possible, in the sunlight. In cleaning the butter bowl, ladle, worker, churn and any other wooden utensil, they should be first washed with hot water, then scalded with boiling water and steam.

**Co-operation.**

There should be more co-operation among the farmers; co-operation in buying, as well as in selling. Hearty, intelligent co-operation is the farmer's only weapon of defense against the middleman, the speculator and the commission man. By co-operation there is retained in the community not only all the profit which the speculator and commission man make, but also the wages which are paid to the men who do all the labor of handling the produce. Let us talk the matter over until every one is interested in it, and has some outlined plan of association.—The Agriculturist.

**A Summer Hog Pen.**

The swine quarters are often in buildings connected with the house, and in such cases are likely to become offensive during the warm weather of summer. It is wise in such a case to con-



FOR THE HOGS.

struct summer quarters out in the orchard. The cut gives a suggestion for a cheap little house and yard. The end of the yard has a sloping top, so that the pigs can lie out of doors from the sun. The roof of the little house can be of matched lumber and left unshingled.

**Care of the Icebox.**

The care of a refrigerator involves more than the obvious necessity of seeing that no accumulation of food is allowed to spoil therein. A prudent housewife will likewise direct that the ice itself, in extreme heat, be covered with newspapers, than which there is no better preventive of its rapid melting away. She will see that the shelves are frequently scoured and kept perfectly sweet, but that no hot water is employed for this purpose. She will give orders that the drinking water be cooled by being placed under the ice, and not by having the ice put into it. And, last of all, she will endeavor to convince the maids that there is no magic preservation on top of the refrigerator and that that particular spot is quite as warm as any other part of the storeroom; also that the coolest place in the box underneath is underneath the ice—that is, on those shelves beneath it—and not, as so often supposed, on top of it. Thus, anything placed over the cake of ice is much warmer than what is put away within the refrigerator.—St. Louis Republic.

**Potato Bugs on Tomatoes.**

One of the surprises to many tomato growers is that the potato beetle lays its eggs on tomato leaves just as freely, and the larva hatched therefrom are just as voracious, as if they had their own proper food. All branches of the solanum family are attacked by the potato bug, and even when pushed by hunger their larva cannot be forced to eat anything else, much less to thrive and grow to maturity on other vegetation.

**Feeding Pigs.**

In my own experiments in feeding hogs to produce the best quality of meat I fed ground wheat and oats in equal parts, and not more than one-fourth corn. I also fed skim milk and ripe pumpkins in connection with these, and secured a much larger per cent of lean meat than when fed exclusively on corn, and also a much stronger bone and a healthier hog, and, of course, better port.—New England Farmer.

**Grass Seeding in Corn.**

At the second cultivation, before the corn is hoed, sow on grass seed with a liberal hand. It is important that the entire surface of the ground be covered. Even seeding will do much toward keeping down weeds. I have a field seeded in this way last season, and it is in first-class condition. Bone dust was sown at the same time.—Agriculturist.



**SUMMER HOTEL INFLUENCES.**

**A**N Eastern woman who has written an article on the summer pleasures of children objects to subjecting them to the artificial constraint and worldly influences of great summer hotels. "I have an instance now in my mind," she says, "where a mother, forced to seek a certain altitude and very dry air for a delicate child, has prepared to exile herself this summer rather than repeat last year's experiences." Until then her little daughter had worn her simple dresses without thinking about them; until then she had taken her early supper of bread and milk and jam with eager appetite; until then she had been asleep at 7 o'clock, glad to rest after her long day's pleasure and exercise. The hotel brought longing desires for fine clothes, for all the dainties of the children's dining room, for late hours, "just to hear the music and dance until 9." Her pretty print frocks were despicable beside dainty silk slips and exquisite embroideries, her sensible shoes very trying to wear beside the rosetted dancing slippers, her bread and milk became babyish and her mother's good-night story was drowned in the strains of the band.

**World's Richest Woman.**

Senora Isadore de Cousino, the richest woman in the world, is soon to visit America. She is so rich that nobody knows just how much her possessions are worth. Her wealth is estimated to be at least \$100,000,000. The senora's property is in Chile. She inherited much of it from her father and brother, but her own shrewd instinct for business has served to add largely to the property. Among her possessions are many copper mines in Chile and Peru. Upward of a hundred steamers and sailing vessels, the entire town of Lota in Chile; coal mines of incalculable value, farm lands, plantations, fruit ranches, vineyards, and three palaces the like of which are not to be found outside the imagined glories of



SENORA ISADORE DE COUSINO.

the "Arabian Nights." Her income is about \$8,000,000 a year. The town of Lota, of which she owns every foot of ground, every house and other building, works for her daily with its 13,000 population. One of her sumptuous palaces is at Lota. It is described as a dream of beauty. In Santiago she has a white marble palace that cost \$2,000,000, and her house at Macul is a duplicate of the Santiago affair, except for its immense gardens, which require 200 gardeners to keep them in repair. Senora Cousino has six children, three young men and three young women, all married. She is 55 years old, tall, dark, and still beautiful.

**Complexion and Digestion.**

Complexion is all a matter of digestion. Where there is a good digestion a beautiful complexion is bound to follow. A well-regulated stomach invariably proclaims itself in a good-looking face, and to maintain this well-regulated condition attention to a fruit diet is recommended. Plums, blackberries, white and red grapes, oranges and peaches are among the table fruits, and it is difficult to say which is the best for a pretty complexion. If the skin is kept fresh and the diet is laxative the face will be good to look upon. People eat too much breadstuffs. A mud-colored skin is usually an indication of bad blood. A good thing for a sallow skin is a trip to the nearest mountain—walk up, rest and climb down again.

**Women and the Wheel.**

The best weight for a woman's wheel is from twenty to twenty-five pounds, and the smooth running qualities of all the trustworthy makes have now reached so high a standard of excellence that there is little choice among them. The average woman had better not undertake to ride with a gear higher than sixty-six or sixty-eight, because if she does she will find that the extra amount of force which she has to put into every push of the pedals is more exhausting than the process of making a few more revolutions with less effort in each one.

Have a comfortable, becoming, inconspicuous costume; black is considered very swaggar now, but the chief objection to it is that while it looks very chic it shows the dust, and many prefer the shades of brown and tan for this reason. Too much cannot be said concerning corsets for riding, especially rigid ones. Have a comfortably large pair of broad-toed regulation shoes.

Someone who has had experience enough to know says that a piece of light brass chain tacked to the inside of the hem of your skirt before it is turned up is the very best thing for keeping the skirt down. It does not tear through and drop out like

weights, nor pull a strap attached to the legging or shoe. One thing that detracts very much from the fair cyclist's appearance is the condition of her hands and hair. It looks quite as well as to have nice gloves and smooth hair as it does under any other circumstances, so be particular about these two little points. A thin gauze veil (not net, as it is not suitable for wheeling) on a blustery day will aid in keeping the hair in good condition and the hat on.



**Rules for Basting a Skirt.**

Amplitude of skirts is being somewhat modified, and their stiffness very much so. The fullness is all carried around to the back, the front and the sides being smooth, straight and carefully fitted. In cutting out a skirt the edges of the breadths should always be first ruled with a ruler long enough to go from top to bottom, for any irregularity in the seams of a skirt spoils its appearance and prevents it from hanging well. In basting the seams lay the two edges together on a long table, the bias edge uppermost, if a straight and bias edge are to be joined, and baste them while they are lying flat. If the goods is very thin, like gauze or muslin, or any sort of light silk, baste at the same time a narrow strip of paper along the seam. Stitch through this paper, which will prevent the machine needle from gathering in material. The paper may be easily removed afterward.

The stiffening has almost entirely disappeared from skirts. They are no longer as rigid as if they were made of wood, but have a degree of suppleness that is much more desirable. A haircloth facing five or six inches wide is put around the foot of the skirt to prevent it from clinging closely to the ankles, but this is the limit of stiffness. The wires and various other contrivances for expanding have entirely disappeared. Indeed, the wires never met with any favor among well-dressed women, as the effect was disagreeable, and with sufficiently good linings no such arrangement was needed for sustaining the skirt.

**Age and Beauty.**

It is absurd to claim, says a writer, that the ripe rich beauty of 40 is less attractive than the budding immaturity of sweet 16. When women live in harmony with nature's laws, each stage of life has its own charm. The fullness of beauty does not reach its zenith upon the stage at the age of 40. Aspasia was 36 when married to Pericles, and she was a brilliant figure thirty years thereafter. Cleopatra was past 30 years when she met Antony. Diane de Poitiers was 36 when she won the heart of Henry II. The King was half her age, but his devotion never changed. Anne of Austria was 38 when described as the most beautiful woman in Europe. Mme. de Maintenon was 43 when united to Louis, and Catharine of Russia was 33 when she seized the throne she occupied for thirty-five years.

The most lasting and intense passion is not inspired by two-decade beauties. The old saw about sweet 16 is exploded by the truer knowledge that the highest beauty does not dwell in immaturity. For beauty does not mean alone the fashion of form and coloring as found in the waxen doll. The dew of youth and a complexion of roses are admirable for that period, but a woman's best and richest years are from 35 to 40.

**A Reigning Favorite.**



**To Whip Cream Easily.**

Often very rich cream will not whip up readily; it should have a little milk added to it. Cream should be very cold to whip easily and quickly. If it is well chilled there is not the danger of the cream whipping to butter as housekeepers frequently complain it does.

**RESOLUTIONS ADOPTED BY NATIONAL EDUCATIONAL ASS'N.**

**T**HE National Educational Association, representing teachers of every grade and engaged in every form of educational effort, again affirms its unswerving allegiance to the highest ideals of our public educational system. We believe in the American public school. From kindergarten to university it stands for sound training, thorough discipline and good citizenship. While incompetent teaching, inadequate supervision, insufficient material support or sluggish public opinion may for a time limit its usefulness, they cannot wholly destroy its beneficent and uplifting influence.

We would emphasize in particular at this time the duty of the school to the community that it represents. The work of the school is not ended when its responsibilities to the individual pupils who attend it are discharged. It must keep constantly before it the aim, in co-operation with the home and other social forces, of so enriching and directing the public sentiment of the society it serves as to increase respect for law and order and devotion to high ideals and sound principles, as well as to promote efficiency in both public and private life.

We demand that school administration in all departments, including the appointment, promotion and removal of teachers, and the selection of text books, shall be wholly free from political influence and dictation of every sort. We appeal to educated public opinion and to the press of the country to enforce this demand, both in general and in particular instances.

We believe that the public schools are increasing in efficiency as the tenure of teachers is made longer and more secure. An increased tenure of office should go hand in hand with broader professional preparation and higher standards for admission to the work of teaching. We know that education is more than instruction. Those subjects of study and those school exercises that develop the pupil's power, refine his taste and call out his constructive capacity are not "tricks," but essential elements of school training. Especially do we ask for closer attention to the hygienic and sanitary conditions of school work, and to that instruction and factor in education and that develop an appreciation of it.

We believe it to be the duty, as well as the opportunity of the American college, even at the sacrifice of some cherished traditions, to open its doors to the largest number of students possible. To this end it must keep in close touch with the public high school. All efforts to reach this result and to bring college and high school into intimate relations of mutual dependency have our cordial approval and sympathy.

We urge more attention to the study of the history and principles of education in colleges and universities, not alone that their graduates may be the better prepared for the work of teaching, but in order that there may be sent out into the community an increasing number of educated citizens who have some knowledge of educational conditions and precedents, and who will thus be able to contribute a prompt and intelligent support to the work of the public school.

We ask the attention of the executive and legislative departments of the Government to the valuable work of the bureau of education and to the pressing need of adequate appropriations for its support. The salary of the commissioner is pitifully small and is beneath the dignity of the office and of this nation. On behalf of the teachers of the country we ask for its increase, and also for the provision of funds to enable educational investigation and experiments to be undertaken and extended.

The association has contributed to the current discussion of educational problems three reports of the highest importance, prepared after laborious and long continued study and investigation—one on secondary education, one on elementary education and one on the conduct and support of the rural school. We earnestly commend these reports, the work of trained specialists, not only to teachers, but also to Legislatures, to members of School Boards, to the press and to intelligent citizens generally. They offer a safe guide for future progress.

To all officers, associations and individuals who have contributed to the success of this meeting, and to the retiring president, Charles R. Skinner, for his vigorous, intelligent and progressive administration, the thanks of this association are due, and are most cordially tendered.

lesson in addition. The new plan of doing the above sum is this: Add to 9 the figure needed to yield the unit 8. This will be 9, making 18; put down the 9 and carry the 1; 10 to the next 7—namely, 17—is 7; carry 1 again; 7 to 8 is 1. There seems to be as much borrowing and paying back in the one method as in the other.—London News.

**The College Girl Graduate.**

Edward W. Bok writes to the college girl graduate in the Ladies' Home Journal. "Whatever the necessities, her desires or ambitions," he says, "let her not forget that first of all she was designed by God to be a woman, to live her life in true womanliness, so that she may be an inspiration, a strength, a blessing, not necessarily to a world, but, what is infinitely better, to those within her immediate reach whose lives are touched by hers. Very few lives are free—free to go and come, travel, read, study, write, think, paint and sing at will. In the lives of most women these gifts are an aside in life, as it were, an underbreath. Most of us are beset with loving calls of toil, care, responsibility and quiet duties, which we must recognize, heed and obey. We must love our mothers more than our Greek. If the instinct of daughter, sister, wife or mother dies out of a college-bred woman, even in the course of a most brilliant career, the world will forget to love her; it will scorn her, and justly. If she does not make her surroundings homelike wherever she is, whether she be teacher, artist, musician, writer, daughter at home, or a mother in the household, and if she herself is not cheery and loving, dainty in dress, gentle in manner, and beautiful in soul, as every true woman ought to be, the world will feel that the one thing needful is lacking: vivid, tender womanliness, for which no knowledge, however profound, can ever compensate. It is better for a woman to fill a simple human part lovingly, better to be sympathetic in trouble, and to whisper a comforting message into one grieving ear, than that she should make

gress of all meaning, and the Milwaukee convention does well to turn its attention to the subject. Incidentally, it would do well to find some means of preventing, also, the miscellaneous bestowing of honorary degrees upon public men. There is not much honor in a title which may be given at any time to any politician who has been boosted into prominence.—Chicago Record.

**New Methods of Training.**

At the meeting of the teachers in Milwaukee there were but few who arose with a good word for the old friend of the profession, corporal punishment. Moral suasion has taken the place of the rod, the children are placed on their honor, reasoned with and taught to do right because it is right, that they may be self-reliant when the restraining influence of the teacher is removed and they pass into the larger field of life.

When they become men they will have no one to stand over them with a rod, but what good they do must be done for its own sake.

A man goes to Congress. It is the theory that he will act in a patriotic manner not because he was thrashed within an inch of his life in the little red schoolhouse, but because if he does not do so the President will not appoint any of his friends to office, and when election again rolls around with its brass bands and misspelled transparency mottoes he will be left on the cold outside by the organization; or if he does not follow the lead of the speaker, in whom is supposed to be wrapped up the sum of all patriotism, he is placed at the tail end of the committee on ventilation, and his voice resounds not in the halls of legislation, for he cannot catch the speaker's eye.

The teachers may look at this and other examples and feel they are on the right track. Moral suasion is a grand and noble idea. It is taking firm hold the world over. The European powers are seriously thinking of using it on the Turk.

Germany makes 2,000,000 false eyes annually.