



One County's Work.

Bureau County is a good example of the possibilities latent in a gravel bed and developed by experience, common sense and a little persistent hard work. The writer well remembers the time when the only good roads in that county was the highway running easterly from Princeton and known as the old Peru road. For years that road was in good condition the year round, and the farmers along its route increasingly prosperous, while everywhere else the roads were, for a large portion of the year, hideous as a mine-pie nightmare. After suffering from this incubus for half a generation, people began to think. Finally it dawned upon a few bold and venturesome souls that if gravel were good for the poor road it might possibly be good for some others. So the idea spread and the experiment was tried until now the gravelled roads, comparatively smooth and always passable, ramify the whole county and distant farms are brought approximately close to town by that wonderful gent, gravel.—Bloomington (Ill.) Leader.

The Wide Tire Campaign.

Not only do wide tires save the pavements, but they are also a saving on beasts of burden. At the Missouri Good Roads Association at its recent convention in Columbia declared in favor of wide tires. Prof. H. J. Waters, dean of the State Agricultural College, added to the tabulated results of the tests made between narrow and wide-tired wagons the following:

"By using the wide tires an average of fifty-three pounds draught is saved. A horse is computed to exert a pull of 150 pounds for ten hours, traveling at the rate of two and one-half miles per hour. On this basis the wide tires save slightly more than one-third of the exertion of the horse."

The experiments with heavy wagons from which the conclusions of Prof. Waters were reached formed the most interesting part of the proceedings of the convention, and the results of all the tests were carefully noted. In every test it was demonstrated that the wide tire lessens the labor of the horse and is in other ways far superior to the narrow tire, which is the most commonly used.—Bloomington (Ill.) Pantagraph.

Cheap Roads.

A very wise philosopher has observed that the great bulk of the people must always support the mass of the population.

The people pay for everything the people have. The public pays for the railroads and the expense of running them. If the railroads were only half as good and could only haul half as much it would cost the people twice as much to ride or ship over them.

It is fortunate for the people that railroads are conducted in an organized business-like way. If the opponents to improved roads had their way the railroad would be neither profitable nor pleasant.

The people of a community are the ones vitally interested in the roads of that community.

If the farmers of each township were to get together and mutually agree that they would go about it in an organized way to build and maintain a system of good roads their sum of happiness would be increased.

Since the people pay for the roads why not have those that are cheapest and most pleasant—the best ones.

In Holland, where they have the best roads in the world, it is said that a farmer will haul, with a team of large dogs, as heavy a load as can be drawn over a bad road with a team of horses. This reminds us how dog-gone bad our roads are.

This country has 1,200,000 miles of common roads. This would encircle the globe fifty times, or go to the moon more than five times. But if most of them would go there just once and not come back, earth would be just about as happy.

He Liked to Be Sick.

Imaginary and fashionable diseases are among the most painful and vexatious annoyances of the physician's life. One venerable doctor, Dr. S. C. Bussey, of Washington, goes so far as to say that but for them, men of his profession might hope to live as long as the average of people. "Every community has its drug head," he remarks; and he proceeds to describe an example, "a small, red-haired, very bad-tempered man, who may once in a while have been actually sick, though oftener he thought he was sick, and oftener still was trying to make himself sick."

On one occasion I was summoned at night in impetuous haste to hear this man's story of the sudden loss of the senses of taste and smell, and indeed of general sensation. I found him sitting bolt upright in an armchair, his red hair standing on end, his face flushed with rage, and his mouth pouring out volleys of curses.

The spectacle was as ludicrous as it was sad, though the man's poor wife was in a condition of terror. I knew him well enough to believe that it was "all cry and no work," a pretence to frighten his wife for some fancied intention or neglect. I knew, also, that his love of deception was so great that

he would submit to torture rather than acknowledge his deception.

When the vocabulary of explosives was for the time exhausted, I said to him that his maladies were apparently complex and each would have to be treated by itself, and as the loss of general sensation was the most serious I would attack that first.

Then, seating him in a cane-seated chair, I enveloped him in several heavy blankets, put his feet in a hot mustard bath, to which at brief intervals I added some hotter water, and placed under the chair a lighted alcohol lamp.

He bore this for a time with amazing fortitude, but finally the rigid lines of his face softened, the sweat poured in streams from every pore, and his hair fell dripping over his brows. As he began to wince, I offered him a dose of tincture of capsicum. To my surprise, he swallowed it without a grimace, but when I quickly offered him another, he rebelled and reluctantly acknowledged a partial restoration of taste and sensation, adding, however, in insolent glee, that the sense of smell was still absent.

At that I poured from a bottle of the milk of asafetida such a dose as I thought would bring smell and taste to a tin funnel, and forced him to take it. He smelled it, and soon after I left him sleeping quietly.

He was cured for a time, and remained for a considerable period a sensible convalescent. His extraordinary ailments continued, but assumed a mild and harmless type. He lived to an advanced age, and died as he had lived—a complaining and fretful bore.

He Trusts the Reporters.

Chauncey M. Depew knows newspaper reporters as well as any man, and here is what he truthfully says of them:

"Every profession has its code of honor. That code is always based upon confidence and trust. I see more reporters and oftener than any ten men in the universe. They breakfast, dine, sup and sleep with me, or practically, that is what it amounts to. They come to me blue-penciled at all hours of the day and night for a revelation which they must take back in some form or be discredited at the office. It is often a matter which it is important for me, in justice to the interests which I represent, or the people who trust me, not to reveal, but when, as often happens, something can be said which will reach over the important crisis by a suggestion of facts, and the situation can only be understood by a full explanation, the reporter bears in confidence the story, and then the line drawn beyond which he must not go, and never has that confidence been misplaced nor the line overstepped."

Meadow Lark's Music.

During a short residence in California one of our delightful experiences came to us through the vocal entertainments of the meadow lark and meadow larks. Of the meadow lark I now write. It is a joy forever to have listened to the incomparable notes of one of those birds, which, cradled on the topmost point of some plume-like eucalyptus, bending beneath the weight of the breeze, poured forth its soul in irrefragable overflow of song, in tones so full, clear, sweet, and delicately modulated as to place this songster beyond the possibility of a rival. We were horrified, later, to see by a San Francisco paper that these songsters were being exterminated by the hunters, who killed them for the markets at so much a hundred.—Boston Transcript.

A Remarkable Photograph.

Professor Boys of London recently delivered an illustrated lecture in which he showed photographs of the Lee-Merford bullet as it passed through a quarter-inch sheet of glass. Just before the bullet touched the sheet the air wave cut a disk of glass about half an inch in diameter clean out. At the same time the glass around the hole was crushed into powder and driven back at an extremely rapid rate. The glass stuck to the bullet for a short time after it had passed through, the disk being driven out in front of the "bow wave." In this experiment the waves caused by the vibrations of the glass were plainly shown. A photograph of the bullet after it had cleared the glass by nine inches showed the remainder of the glass intact, but when the bullet had proceeded another sixteen inches the sheet of glass was seen to break and fall in fragments.

Aluminum Will Be Cheaper.

The production of aluminum in this country has increased from eighty-three pounds in 1883 to 850,000 pounds in 1896, and the estimate for 1896 is \$3,000,000 pounds. The process is for making it having been greatly improved. The price at the reduction works ranges from 50 cents to 55 cents a pound. Applied electricity explains the ease with which the light metal is now turned out.

What Weyler's Silence Means.

Gen. Weyler has gone on a new tack. When he was asked about the report that twenty-four Cuban citizens had been taken out and shot he said that he knew nothing about it. The New York Sun says there could be no plainer intimation to his subordinates to go ahead and do their worst.

Wood.

Wood soaked in a strong solution of common salt is thereby protected against decay, especially when placed underground.

It nearly always shocks a man to see a woman attending church in the middle of the day.

There is one thing we have always admired about pop corn: it keeps its promise; it pops.

NOTES ON EDUCATION.

MATTERS OF INTEREST TO PUPIL AND TEACHER.

Pith of Good Recitation Work—The Pedagogy Craze for Novelty—Have Time in the School Room—Teachers Should Know the Best Literature.

Good Recitation Work.

1. Self-activity on the part of the pupil in seeing, thinking and mastering things for himself.

2. Vigor and intensity of mental effort so as to establish habits of concentration and of strength, avoiding carelessness, sleepiness and general laxity.

3. A proper use of a child's previous knowledge as he advances into the new lessons.

4. All the knowledge acquired by a child should be based upon concrete and real objects of thought.

The history of education since Comenius' time emphasizes, over and over again, the necessity of sense training and the basing of all knowledge upon an experience with real things. There is perpetual danger in all schools of knowledge becoming simply verbal, a pure memory drill.

5. Thoroughness of knowledge. The knowledge gained by the children in the schools should be thoroughly mastered, and one of the most important things for the teacher to do in a recitation is to give such tests, reviews and drills as shall bring about a conscious mastery of the principles of a subject and the ability to apply them under a variety of forms.

6. School children not only need to master the school sciences theoretically and in the text book form, but they need to learn how to use knowledge in the practical affairs of life. The school cannot undertake the whole of this duty, and yet it must teach children how to use their knowledge; how to bring school information into relation with life, with real experience in the world.

7. In some studies the children are to learn not so much science as arts, such as reading and writing. They are to form habits in reading and writing which will be of the utmost value to them in school and in life.

8. As children move along through the school grades they should become conscious more and more of the scientific order and system that prevail in studies. There is a scientific framework in every study. The principal fundamental principles which give unity and correction to the parts of a study, as in grammar or geography, should be seen in their importance. As children advance in their studies they are capable of a better grasp of knowledge in its scientific form.

9. Knowledge should be so selected and presented to children that it will awaken a natural and spontaneous interest. There may indeed be many severe tasks and knotty problems to be worked out, but even these may often times contribute to a growing and deepening interest.

10. Children should be trained in school to think and reason, to exercise their own judgment, to be independent, self-reliant in thought and deed. Their minds are not so much to be molded as to be developed in every proper direction.

These are at least a few of the simple requirements which most teachers will agree to.—The Pacific Educational Journal.

A Criticism by Dr. Harris.

In an article on "Elementary Education," contributed to the May North American Review, Dr. William T. Harris tells the following about what he calls pedagogy craze for novelty.

While the old education in its exclusive devotion to will-training has slighted the intellect and the heart (or feelings), the new education moves likewise toward an extreme as bad, or worse. It slights direct will-culture and tends to exaggerate impulse and inclination or interest. An educational psychology that degrades will to desire must perforce construct an elaborate system for the purpose of developing moral interests and desires. This, however, does not quite succeed until the old doctrine of self-sacrifice for the sake of the good is reached.

"Our wills are ours to make them thine."

The philosophy of the Bhagavad Gita holds that the goal of culture is to annihilate all interest and attain absolute indifference; this is adopted by Buddhism in the doctrine of Nirvana. Indian renunciation reaches the denial of selfhood, while the Christian doctrine of renunciation reaches only to the denial of selfishness and the adoption of altruistic interests. However this may be, the pedagogic impulse to create devices for awakening the interest of the pupil becomes sometimes a craze for novelty. Change at any price and change of any kind is clamored for. It is a trite saying that change is not progress. It is more apt to be movement in a circle, or even retrogression. An amusing example was lately furnished in educational circles. A superintendent of rural schools defended their want of classification as an advantage. It was "individual instruction," and, as such, an improvement over that of the graded schools of the cities. His reactionary movement received the support of some of the advocates of educational reform, on the ground that it was a new departure. This happened at a time when one-half of the school children in the United States are still taught, or rather allowed, to memorize their textbooks by this method! The subcommittee on training of teachers and on the organization of the city school system have brought forward, in their respective reports, the latest devised measures for the perfection of normal schools and the procurement of expert supervisors for city school systems.

The importance of the recommendations regarding schools for the training of teachers is seen when one recalls to mind the fact that the entire upward movement of the elementary schools has been initiated, and sustained by the employment of professionally trained teachers, and that the increase of urban population has made it possible. In the Normal School the candidate is taught the history of education, the approved methods of instruction, and the grounds of each branch of study, as they are to be found in the sciences that it presupposes.—The School Journal.

Suggestions to Superintendents.

The Wisconsin State Board of Health makes the following suggestions to the county superintendents of that State, to the end that the public schools may be placed in good sanitary condition:

1. To clean and perfect all sources of water supply of their own, to furnish such.
2. In the absence of a better system, to prepare the windows and transoms, so that ventilation can be had without causing drafts, and that all schools introduce improved ventilating systems as soon as possible.
3. To place buildings in good repair, with tight floors, good roofs and under-plumbings.
4. To see that the grounds do not permit standing water, and to prepare gravel or board walks to keep the children's feet out of the mud.
5. Suitable closets for each of the sexes to be provided with every school house. They should be situated so as to secure privacy, be kept in good repair and cleaned and disinfected at least twice a month.
6. The rooms should be so warmed as to maintain an even temperature, and all to be kept comfortable; stoves and furniture should be safe and in good order.
7. Rooms should not be overcrowded; not less than fifteen square feet of floor space and 215 cubic feet of air space should ever be allowed to each pupil.
8. Blackboards should not be placed between windows; the surface should be dead black, not glossy.
9. The light should, if possible, be admitted from the rear, or rear and left of the pupil—never from the front.
10. Desks and seats of different heights should be furnished to suit the size and age of pupils.

Should Know the Best Literature.

This paper has at all times endeavored to impress upon its readers the belief that a teacher should be an untiring student of pedagogy in all its phases. At the same time we believe that too much stress cannot be laid upon the fact that the teacher should not make the mistake of allowing his professional studies to absorb all his time and thought. He who restricts himself to pedagogy can hope to become at best but a pedagogue, some writer has said. While it cannot be denied that there is a cultural side to pedagogical studies, especially in the line of the history and the philosophy of education, the teacher cannot be the embodiment of culture in its highest forms unless he give no small degree of his energy to the study of literature. Literature is specifically and distinctively life, and it is for this reason that we would have every teacher intimately acquainted with the best literature of all ages. The teacher who knows sympathetically the best of the world's literature lives in a higher and richer world than the teacher who contents himself with mere information. He is consequently a greater power among his pupils both in and out of the school room.—Journal of Pedagogy.

Save Time.

Learn to do things in the most direct way, in the way that takes the least work. If an interest problem can be solved by writing twenty figures, then the method that requires twenty-five figures is wrong, even if it does "get the answer." A man might go from Chicago to New York by way of Alaska and finally reach his destination, but it would not be the right way to go unless sight-seeing is his object instead of business. It is possible to save time by adding two columns of figures at a time instead of one, it will pay to learn to do it. Remember that extra labor means extra time, and that this extra time costs extra money.—Exchange.

Need of Compulsion.

In school relations there is need of some compulsion. Of course many cases of disorder could be checked without this aid, if the teacher were more perfect. Still he is associated with imperfect pupils and imperfect appliances. This being the case, he would hardly feel at home if he had reached anything like approximate perfection. Notwithstanding he knows that he has shortcomings, he ought to hold his pupils to reasonable requirements. Only in this way can a school be kept in a vigorous working condition.—Educational Exchange.

In talking about his father, the late James H. Beard, Dan Beard, the artist, of Chicago, said the other day: "He painted the portraits of the long list of distinguished men—Clay, John Quincy Adams, Zachary Taylor, William Henry Harrison and others. While painting Taylor, father said to him: 'Well, general, I suppose you are to be our next President?' 'I hope not,' granted the bluff old hero. 'No military man has any business in the Presidential chair, but if they offer it to me I suppose I'll be fool enough to accept it.' And he was."

E. C. Benedict, President Cleveland's Wall Street friend, who lives at Greenwich, Conn., has bought the American club grounds at Greenwich, on which he will build a fine summer residence, in which, it is rumored, the President will spend some time this year.

One variety of the cricket has its ears in its hind legs.

WHAT WOMEN WEAR.

STYLES FOR THOSE WHO WANT TO LOOK PRETTY.

Colors that Are and Those that Are Not Fashionable—Gray Shades Seen Seen Everywhere—Peraline Lining No Longer Mistaken for Silk.

Fashion's Late Fancies. New York correspondence:

FEW better opportunities are presented to the investigator of fashions to enable her to appreciate the vast amount of details at the hands of the dress designer than in consideration of what colors are and what are not fashionable. It is not putting it too strong to state that more colors are permitted than are forbidden. Among the reds cardinal red is not worn this year, nor any of the simpler and primitive shades. Cerise, coral, deep wine and mulberry red are used, the two latter ones rather for older people, but red is not generally in favor. All kinds of green are much used, though the dull shades tending to sage and bronze are less liked than bright grass, lettuce, chartreuse and hunter's green. The favored blues are turquoise and the standard navy that is never out of style. Browns hold their own always, but the artificial shades like tobacco and cinnamon are discarded and the old-time red terra-cotta, better, "terra" cotta is never seen.

Gray is seen on every hand. It is worn in the delicate romantic shade that the impoverished but virtuous stage heroine affects when she marries the young man of her choice, and proves that she is poor and domestic by wearing a dove-colored gray gown, with white muslin cuffs and collar, and by laying a table with the cover very crooked and with nothing on it but a sugar bowl and two plates. From this delicate shade fashion deepens to all stones and also runs into dull blue grays. The stone shades are especially suited to elderly women who do not like to go into black, and who yet prefer dark cloths. Black for facings or braiddings combines with these stone grays with excellent effect.

Gray is not relegated exclusively to the elderly or middle-aged, nor to dresses that are simple and domestic. Particularly handsome and dressy costumes are seen in this shade, and two of them have been chosen for these first two pictures. The first is made of gray crepon gauze over a gray silk foundation. Its bodice has a yoke of guipure over white satin with a point that is ornamented with the Dresden ribbon bows extending down the center of the front to the waist. The belt is of the same ribbon as these two bows and fastens at the side with a third bow. Bретelles of plain gauze and a collar to match with a pleated bow in back make further trimming for the bodice, and the sleeves consist of two puffs over a gray foundation.

The second employment of gray was in a summer dress of a coarse poplin de laine that was embroidered with

small gray silk dots. It was made in an untrimmed godet skirt and in a short fitted bodice whose lining fastened in the center. The revers widened at the shoulders and formed a narrow turned down collar in back. They were of pale gray faille and the same shade of satin ribbon have the stock collar and the straps at bust and

ed in the original of the fourth sketch, a rig that proclaimed its newness by the novelty of its design. Its jacket bodice had fitted back and sides, but the front was boxed. At the shoulders in front only were boxpleats of the goods and three crescents of the stuff ornamented the front, being in turn set off with buttons. The novel sleeves were very wide and were laid in pleats half way down the upper arm, allowing the stuff to spring out full at the elbow. Bishop sleeves are now very plentiful, and not a few designs of sleeves that inclose the arm tightly from wrist to shoulder but that drape it with an outer puff are to be seen.

Pretty, simple summer dresses are made of striped Dresden wash silk. The model shows a redingote of the silk that opens wide at the throat, turning away with shawl revers from an under bodice of white. At the belt line the redingote almost closes and then it spreads out again to show a narrow panel of white. Of course the gown is all in one, but for those who do not like coats and who are tired of round waists and like princess effect, this model serves charmingly. A simple model for utilizing striped stuffs is the subject of the final sketch, the goods in this instance being a light-blue and white striped silk. The bodice fastened at the side and had a stiff stock collar of the silk, the garniture consisting of a drapery of fine lace on one side and three jeweled gold buttons on the other. The sleeves were shrirred at the top to gain the drooping effect and were finished with lace ruffles.

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A dog is fully grown at the end of his second year.

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waist. The full vest was dark over gray silk. Concerning these loose fronts it may be said in general that the folds grow more and more exact, and the fit of the lining to loose waists becoming more and more absolute.

It is no longer the thing to line gowns with crinkly peraline, for the careful car has become trained and it no longer mistakes the crackle of the vulgar material for the soft swish of silk. So to crinkle is not to pretend silk, but to confess peraline. The correct skirt hangs without any stiffness, and silk with no interlining is the proper inside finish. Such a skirt is the one that

next received the artist's attention. It certainly should be correctly made inside since it is on the outside so harmoniously adapted to the jacket bodice that tops it. The skirt's material is lavender figured silk, and it has two panels of accordion pleated mauve silk poplin. From this latter material the bodice is made. It has a wide Louis XV. vest of guipure over lavender satin, which is ornamented with two rhinestone buttons in the waist. The material is shrirred several times on the shoulders, forming a head, and also in the waist, in lieu of a belt, the stuff springing out into panniers on the hips. A collar of lavender chiffon is worn, and above this the wee toque would be almost invisible were it not for corresponding chiffon bows.

If the peaceful injunction, "Let bygones be bygones" has any application to matters of dress, then crepons should be left severely alone, for they are certainly well gone by. Only the most careful and elaborate making up—silk lining, novel effects, etc., can relieve the stuff of commonness, and even then the gown is likely to excite pity rather than admiration, folks imagining that the wearer in misguided fashion spent a lot of money on the material before she realized how rapidly it was falling into disfavor. Of course the stores still hold lovely weaves that are remarkably cheap, but it won't do. If money is an object, then get some other material that is also inexpensive and not so conspicuous as crepon. Take some of the pretty healthier mixtures that are seen in so many new gowns. One of these was employ-



MIDWAY PUFFS.

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