

## WHAT TO DO WITH THE BUNCES.

A WAY FOUND FOR MAKING EVEN DULL CHILDREN BRIGHT.

How the Schools Tackle the Problem of Dealing With Mental Defectives. — Success They Are Having. — Manual Training Where Other Methods Fail.

"It is far more interesting work than ordinary teaching," said Miss Elizabeth Farrell to a N. Y. Sun reporter. Her eyes wandered over the members of her little class with an expression which showed how truly fond of them she was. "One feels that one is accomplishing results worth while in making life for these boys."

It was down in Public School 1 at Henry and Oliver streets, N. Y. The classroom was one in which carpenter's benches mingled with the desks, where pictures and growing plants took the place of maps and globes, and cases of tools and kindergarten materials stood about the walls. The pupils were typical youngsters of the East Side, ranging from 7 to 17 years old.

Scarcely four years ago when this class was established under the direction of Miss Farrell, it was looked upon as an experiment. Now it is considered the finest of a system of ungraded classes which is attracting teachers from other cities all over the country to New York for study and observation.

Entering upon a field entirely unexplored here, Miss Farrell has worked out methods which are now looked upon as models for all such classes. In summer she has travelled through Great Britain, under the direction of the Board of Education, to study and report upon the methods of training mental defectives in use there, where such work has been carried on in the public schools for more than ten years.

With all her advance in educational matters, America has been singularly slow to acknowledge that she has other than bright young people under her wing. Many countries abroad have long since discovered that from 1 to 10 per cent. of all school children were unable to benefit by ordinary instruction, and have set aside schools for their special education. But only recently has it dawned upon our educators that the percentage of such children here was fully as large as that of other lands. Investigation proved that in New York city alone there were some 5,000 little ones belonging to this class, whose parents could not, or would not place them in institutions, and who therefore fell under the care of the public school system.

Under ordinary conditions these children were called stupid or feeble minded, and to teach them was looked upon as a hopeless task. After being allowed to repeat their classes for a term or two they were advanced, regardless of their merits, until they became so discouraged that they dropped out of school altogether, to the joy, and often with the consent, of the teacher whose class they encumbered.

Boys and girls only slightly defective were thus allowed to degenerate, becoming in the end weak minded and vicious. It was found, however, that fully 50 per cent. of these little dunces were suffering from no mental defect whatever, but from physical ailments which their parents and teachers failed to recognize; that with their bodies properly nourished and strengthened they could return to regular class work and excel in it.

Hence the establishment of the first ungraded class, the success of which speedily led to the beginning of others in different school districts, until we have to-day the system which is attracting widespread attention by its interesting work. In these classes ordinary routine is set aside, the pupils receiving individual treatment, mental, physical and moral, in order that each shall be developed as far as possible into a self-supporting man or woman.

"The first thing one must aim at is to develop their self-respect," said Miss Farrell. "Before coming here, they have never known what it is to succeed in anything. They have been left behind in their classes, becoming the butt of brighter boys. At home they have been ridiculed and abused because of their inability to do anything whatever. 'Can't do it,' is their invariable reply to a request to perform the simplest task.

"It is pathetic to see the delight of a boy when he first realizes that there is something he can do really well. From that moment his manhood and self-confidence assert themselves, and improvement begins.

"The power of choice or initiative is another thing such children entirely lack. It is one of the first things to be worked for, and almost the last thing to come. They are unable to name the game they

find pleasiest or the work they prefer. It may take two or three years before a boy comes to know that there is one thing he would rather do than anything else in the world; but the knowledge comes at last.

"Usually it is some kind of manual work he grows fond of. It may be carpentering, as in the case of that boy. [Miss Farrell nodded to a youth who was industriously planning a piece of wood.] He is never so happy as when working at the bench. Or it may be merely driving in nails, which one little fellow in my class finds the pleasiest of all occupations. This is some of his work."

From one of the cases Miss Farrell took pieces of cork into which brass-headed tacks had been driven in the form of circles, squares and triangles.

"This work teaches precision and neatness in placing the nails exactly on the line, and also number and proportion by allowing just so many nails to each side of the square and more for the long side of the triangle than for the others," she explained.

"Little can be done with these children through ordinary instruction. They fail to comprehend or benefit by it. Their minds must be trained through their muscular senses. Motor work, which includes both manual and physical, must precede all mental training. A boy, for instance, who cannot comprehend the fact that a square has four sides will gradually come to understand it from running his finger around the edge of a square surface. Thus, also, he will grasp the fact that a triangle has three sides. After he has acquainted himself with these shapes he may be able to draw them on the blackboard.

"It is quite impossible for most of these children to understand that a square cut in two diagonally will form two triangles; but given pieces of colored paper to first form into squares and later to fold and tear into triangles, they gradually come to perceive this.

"Little things which would be played to the normal child task the powers of mentally defective children to the utmost. Most of them have, at first, no sense whatever of direction and proportion. All such children are anaemic and undernourished, and have little or no muscular control. Their fingers' work with big objects only. Precise work, such as sewing, threading beads, or even cutting a piece of ruled paper into strips along the lines, cannot be done without months of patient effort.

"It is quite impossible for these children to sit still or manage their feet properly—a fact which explains the ease of many a boy who has been considered restless or troublesome in the ordinary school room. With constant practice and perseverance these defects may be lessened or entirely removed. A little boy who was in my class last year had infantile paralysis so badly that he could not walk up or down stairs by himself. Every day I had him mount the stairs in the hall, a few steps at a time, then more each day, until he had learned to go up and down the entire flight without assistance.

"I do not see that there can be a question as to the great necessity of special classes for mentally defective children. The defective child is in our schools, whether we will or not. Every day he is there he is forming habits of indolence to which he is naturally disposed. If he is a borderland case—that is, just a shade or two from the normal—he soon becomes a cat's paw for smaller boys. He follows with impunity the suggestions of others, assumes an attitude of rebellion against the school and finally turns to a career of truancy. Many a boy or girl who might have been made self-supporting drifts into our institutions in early manhood or womanhood, and for lack of a little proper training, when young, must be supported at the public expense for the rest of their lives.

"But besides economic reasons, there is a great moral responsibility to care for these children, not only for their own sake, but for that of the community. Before coming to a class like this they have seldom known what love or sympathy is. Made sullen and morose, they start life feeling that the world is against them, regarding all men as their natural enemies.

"Now there is a boy," added Miss Farrell, smiling at a dark haired youngster whose face lighted up all over as he grinned back at her. "He was brought to me with the explanation that he was an uncontrollable little tough. He is a sweet child. There is sweetness in every one if we only know how to draw it out.

"A little sympathy and encouragement do wonders for these boys. It changes their whole view of life and sends them out anxious to live well and do their best."

"That mentally defective children can be taught to work is shown by the story of a boy who left Miss Farrell's class last year and who had never been able to learn to read or write. Though he had entered the class branded as a hopeless

dunce and without an interest or ambition in life, he developed a great ability for carpentering and, in fact, became a star pupil in the manual training department of the school. Mr. E. D. Griswold, who presides over this department, shows with much pride a set of shelves, a stool, and other pieces of furniture perfectly executed and stained. They were the work of this defective and are preserved among the best pieces the class has turned out. Two weeks after leaving school the boy obtained work in a carpenter's shop.

"That boy is not, and never will be capable of designing or planning a thing for himself," Miss Farrell explained. "But so well does he grasp the ideas of size, proportion and shape from his manual training that he can follow a given plan perfectly. This makes him valuable in his present position. Manual training teaches such things to these children as nothing else can.

"It has been the experience of those connected with the work that, after all is said and done, the problem of the special class is to make the children able to earn a living. Children not capable of being taught this much should be placed in institutions. So far the work in this country is only in its infancy. Wood working, metal working, basket weaving and such forms of manual work have been attempted in our classes. In London, however, where there are no less than fifty centres for work among defective children, with a total of 2,359 children under instruction, there are well equipped kitchens and laundries, and even model homes have been provided where both girls and boys receive instruction in cooking and housewifery, with excellent results.

"All children who are mentally defective are found to be also in poor condition physically. Sound, strong bodies, with the blood coursing freely, cannot fail to improve and brighten the mind. Physical exercise and active games, therefore, form an important part of the instruction in all ungraded classes.

"Drills and exercises are good for training the eye in precision and the ear in accuracy, as well as for body building," said Miss Farrell. "Among the sports, running games are best, I think. They quicken the circulation and serve to train the boys to guide their movements. A defective child, at first, will not be able to run in and out among desks without bumping into them or falling down. Then games are excellent forms of discipline. They teach the children to control their temper, and instill a spirit of fairness in dealing with one another."

Frequent bathing is considered to have so important a bearing upon the physical well-being, and consequently upon the mental improvement, of the children, that the boys in Miss Farrell's class receive two baths a week in school, and those who can do so with benefit take one every day.

"To care for defective children properly, it is necessary for a teacher to gain the cooperation of those in the child's home. Lack of sanitary conditions and malnutrition have much to do with the whole state of the body and mind of these little ones. Many a child is stupid and dull at his desk during the day, simply from sleeping in an unventilated room at night.

Lack of nourishing food is generally caused by ignorance rather than by want of means to buy what is wholesome. East Side children, it was shown, for instance, drink a great amount of coffee and eat much heavy pastry. A cup of coffee for breakfast, coffee and a piece of pie for lunch and another cup of coffee with dinner are often the daily diet of boys and girls of all ages. Nutritious fare could be had as cheaply, and it is rarely difficult to induce the mother to provide this, once she understands.

"Defective children," Miss Farrell said, "are almost always proved to be inveterate cigarette smokers, a habit which the family is not often able to correct. My boys are now served with their lunch in the school, a point we have been striving for ever since the class was started. It has been arranged by having the girls in the cooking school prepare the meal each morning. The food is simple, but good and nourishing, and the plan is proving so beneficial that it will doubtless be introduced into all the other defective classes.

"As to the work in class, in the morning Miss Farrell usually reads a part of some interesting book; talks from the Jungle Books or one of Ernest Thompson Seton's animal stories being most in favor. The morning's work is based upon the tale. Pictures of the animals are shown the boys and they are asked to tell the story in drawings which will illustrate the most striking incidents, or the scenes which impress them most.

A collection of these drawings which Miss Farrell has preserved is interesting. Often they are so crude as to need interpretation, as when a mass of green crayon marks, with tall purple strokes rising out of it, represents the stockade into which the elephants were driven in one of the Jungle stories. At other times the drawing is clever enough to do credit to any child.

"Compositions in which these stories are retold in words instead of by pictures show that defective children may be brought to a degree of proficiency in writing and spelling. Miss Farrell thinks that even greater improvement could have been wrought in some of the scholars had they been taken earlier in life. Ungraded classes being a new institution, however, the education of these boys had not begun until they were almost too old to profit by it. A defective child, to be really well trained and developed, should be taken in hand at the earliest time possible. After a boy is 12 years old, it is hard to begin with him, though of course, he can be improved.

A card catalogue is kept of every child examined, one card giving points concerning his or her family history, home companions, age, place of birth, etc. A companion card records the date and

result of the examination. Whether a child is placed in a special class or not, he receives a new examination every six months. The policy is always to give him a chance.

### BUTTER MADE FROM MILKWEED.

### And Beefsteak from a Mysterious Plant — Startling Discoveries of Scientists.

Discoveries have been made in agricultural science on the estate of Capt. Honeybrain, near Morrisville, Va., which promises, according to reports, to revolutionize the beef and dairy interests of the world.

At a convention of dairymen, held in Copenhagen in March, 1901, Capt. Honeybrain met Dr. Maurice de Ruyter, who had for years been experimenting with the asclepias lacteifera, ordinarily known as milkweed, to see if it were not possible by cultivation and a system of selection similar to that used in producing the modern sugar beet to produce from an improved variety of milkweed, milk and butter that would compare with the article produced by the cow, and at an infinitely lower cost.

The Dutch government finally became alarmed, lest a successful outcome of Dr. de Ruyter's experiments might injure Holland's dairy interests and prohibited any further work along these lines.

Capt. Honeybrain spoke of the proposition in which the milkweed grows in his section, the use by the Indians of its copious milk and invited Dr. de Ruyter to return with him and continue his experiments on his estate, where he would have the advantage of his extensive laboratories.

Dr. de Ruyter was unable to accept Capt. Honeybrain's offer for himself, but succeeded in interesting Prof. Rugwater of Cornell in his investigations. He agreed to put Hideyo Tashimari in Capt. Honeybrain's laboratories for a series of experiments.

For three years Prof. Tashimari has labored continuously, devoting his time and energy to give practical value to the theories of Dr. de Ruyter, and at last they have reaped the reward, it is said.

According to report, there is being produced in the laboratories of Capt. Honeybrain from the milk of an improved variety of milkweed, with the addition of 5 per cent. of cow's milk, a butter that cannot be distinguished from the best dairy butter.

### Vegetable With Meat Taste.

Even more interest has been excited locally by the production on Capt. Honeybrain's estate, through the efforts of Dr. Hollowzollern of a plant popularly known as the vegetable beefsteak. This new addition to the vegetable kingdom does not appear to be a vegetable, possessing a flavor of beef when cooked, as the salsify does the oyster, but seems to be a vegetable substitute for beef.

Dr. Otto Earnest Augustus Hollowzollern, has, after 16 years of experimenting, given to the world the wonderful plant.

The new plant is inclined to sterility, and very delicate, thus far having been grown only under glass, but Dr. Hollowzollern is working to remedy these defects.

The plants have flexible stems six or eight feet tall, bearing irregular bell-shaped flowers. Soon after the flower falls the stems are bent to the ground, and the young fruit is covered heavily with earth and left to develop. The fruit is about twice as large as a large watermelon and somewhat similar in shape.

The fruit when ripe is covered with a shell, like the shell of a cocoon, although it is harder and tougher, and is of a scalelike formation; attached to the inner surface of this shell is a coating of fat two or three inches thick; enclosed in this fat is a rich red flesh of firm texture and open grain.

While all visitors are courteously received at Capt. Honeybrain's and shown the sights of the farm and laboratories, there are portions of the farm and some laboratories from which they are rigidly excluded.—New York Herald.

Miss May Sutton, of Pasadena, the new women's tennis champion, forgot her racket at the King's County Tennis Club of Brooklyn.

"I am absent-minded," she said, laughing; "as absent-minded as one of the instructors at the University of California."

"This gentleman was left at home alone one evening with the children. His wife knew he was at work upon a magazine article on the subject of Shintoism, or the Memphis hieroglyphs, or something equally abstruse, and so, though she dreaded his absent-mindedness, she thought it would be safe to trust him by himself for once.

"When she returned, about nine o'clock, the house was very still. She had left the children playing, but now they were nowhere to be seen. She asked what had become of them, and the professor said that their noise had disturbed him, and he put them to bed.

"I hope they gave you no trouble," she said.

"One did," the professor answered. "The one in the cot there fought like a young tiger when I went to undress him. He kicked and screamed and bit. A bad child. I got him in, though, hard and fast. He howled a while, but in an hour he fell asleep."

"The professor's wife tiptoed to the cot.

"Why," she cried, "that is little Harry Brown, from next door."

## POTATO A FOOT LONG.

SOME TALL TALES OF CROPS IN THE FAR NORTHWEST.

### WEALTH FROM THREE ACRES.

One Year's Crop of Celery, Cabbage, and Lettuce Paid \$2,385—Two Crops of Celery in One Year—One Acre Produced 13,650 Nine-pound Heads of Cabbage—Can Be Done Elsewhere.

This is the country, the very country itself, which one of the most broadminded and distinguished statesmen of the Union once said was a place fit only for the abode of wild beasts and wilder men, and that she should never vote a cent for its purchase or support. Mr. Webster was only uninformed on the subject, and to his credit be it said that he was not beyond changing his views after he had talked with Dr. Marcus Whitman, the pioneer missionary who made his almost impossible midwinter journey across the Rockies to Washington to head off Congress on the eve of its surrender of our great Northwest Territory to England, and so saved Washington and Oregon.

There are all sorts and conditions of soil and climate in Washington. Some of its soils are rich and some are richer. In some localities its rainfall is the heaviest in the United States, in other places it is almost nil. Generally speaking, the coast country is very moist, while the Cascade Mountains cut off the moisture-laden clouds from the ocean and leave the eastern half of the State arid and needing irrigation for the production of crops.

And the crops produced are something to brag about. What would you think of a potato a foot long by the rule? I can get the ruler as a proof. Nor would there be any trouble in getting plenty of shells for Peter, the Pumpkin Eater, to put his wife in, and she would be very comfortable, too. And they do offer to produce the sworn records that over a hundred standard bushels of wheat have been produced from one measured acre of Washington soil.

### Some Prunes.

William Gordon, who raises prunes near Colfax, ships considerable of his fine fruit to New York. On this he pays the roads \$600 a car. Mr. Gordon expects to get seven carloads of prunes this year, so that if he can be induced to ship to New York the railroads will get \$4,200 from his twenty acres in prunes. This is why the railroads are in favor of the policy out here of settling up the country in small tracts. They can certainly make more in freight charges on such propositions than they can in shipping cattle.

By the way, Gordon expects to make some \$2,500 to \$5,000 himself out of his prunes. It is something of a gamble with him, depending on prices and all sorts of contingencies. It is no gamble with the railroads, though. Sure thing there—cash down in advance, I presume. Gordon may be good for it, though, in case they all rot on the way.

J. H. Hale, of the town of Elma, in Chehalis County, was set down for a paper-collar dude farmer, and admits that ten years ago he knew nothing about the art. But Mr. Hale seems to have accumulated a few nevertheless, and he does it on three acres. Included on this are his dwelling, barn, a small greenhouse, and poultry house; also some fruit trees.

### Three Acres Paid \$2,385.

Last year the sales from the produce of this three-acre farm aggregated the sum of \$2,385. The work was done by himself and son. The main crop is celery, grown by such intensive methods as to reach a yield of over 53,000 pounds per acre. Last year from a measured three-fourths of an acre 40,000 pounds of celery were raised. The soil is known as a mixture of muck and leaver-dam, with substrata of sand and clay. It is underdrained with tile laid about four feet deep and twenty feet apart, and there is water from near-by springs for irrigating. Fertilizers, consisting of forty loads of cow manure and commercial fertilizer in a large quantity, are piled on. The manure is applied early in the spring, plowed under deeply, and the commercial fertilizers applied just before setting out the plants. Mr. Hale has found after considerable experimenting that kainit applied at the rate of half a ton per acre is an excellent preventive for fungus diseases.

The celery seed is sown in cold frames in February, then once each month to May for a succession of crops. The first plants are large enough to set in the garden rows about the last of May. The rows are about three feet apart, with plants six inches apart in the row, and as one crop nears maturity the second crop of plants is set midway between the first rows. Thus two crops can be taken from the same piece of ground. Having luxuriance of available plant food and moisture, the celery grows rapidly on the approach of warm weather. The blanching is done by means of boards ten feet long, convenient for handling, in addition to the ground, which is banked up against them. When ready for market the crisp bunches are of uniform size, about twenty-six inches long and without decayed specks or blights.

### A Few Heads of Cabbage.

Some people think it does not pay to grow cabbage, but last season Mr. Hale raised cabbage at the rate of 13,650 heads of nine pounds each per acre. On a measured one and a half acres of ground seventy tons of produce were raised and sold last season. This includes celery, cabbage, and lettuce.

Now, this is a story of Washington irrigation and intensive farming with enormous production. But something like it can be accomplished almost anywhere, if even a good location which can be tile-drained and a good water supply

for irrigation and you can make an acre produce beyond all belief. The original richness of the soil is not necessary. You can afford to pile on manure, as Mr. Hale does or as the New York market gardeners do, at the rate of sixty double-horse loads per acre every spring, and after you have built up a soil which you can plow fifteen inches deep you can use large amounts of stimulative commercial fertilizers without danger of burning, for you have your artificial water supply.

### Too Much Fertilizer Possible.

Fertilizer is a good thing, but too much of it will kill plant growth. This is a fact with which the Western farmer who irrigates his crops oftentimes is brought face to face. Alkali is an unquestioned advantage to some crops, for instance, the sugar beet, yet much land in the irrigated country is ruined by being alkali-ified. This is, however, largely, if not entirely, the effect of careless irrigation by which the salts are brought by capillary attraction to the surface soil, where they burn and kill the feeding roots of vegetation. Yet even where land has been ruined by alkali it has been demonstrated by government experiments that to restore it to fertility only requires an ordinary system of either under or open ditch drainage, by which any excess of irrigation water will carry off the alkali salts instead of leaving the soil saturated with them. The calamity cry which emanated from a writer in New York last year that the entire West must sooner or later be abandoned to alkali had no foundation in fact.

### HAD TO SHOW HIS WHISKERS.

Cleveland Man's Wife Locked Him Out After They Were Shorn.

When Herman Flick, a prosperous grocer at Wilson and Payne avenues, parted with his thirty-five-year-old whiskers the other evening he almost lost his home.

Flick lives at 168 Hoadley street, and his family is grown up, for he has seen thirty years. For thirty-five years of his time Flick and his whiskers have never parted. They were proud, breezy, luxuriant whiskers, too, of the Jerry Simpson alfalfa—not the common garden variety. For years the customers of the big grocery knew the proprietor by his whiskers.

A few neighbors dared Flick to divorce those whiskers.

"You wouldn't dare!" said one. "What do you bet I won't!" said Flick. "Well, \$10."

"Where's the money?" "The cash was made up and the party went over to a barber shop. There were a few snip-snips of the shears, the scraping of a razor, and Flick's face was whiskerless.

That night a smooth-faced, young-looking man turned into the yard at 163 Hoadley street and rang the bell. The door opened cautiously and a woman looked out.

"What do you want?" she asked. "I want to come in."

"Who are you?" "I am Herman. Don't you know me?"

Bang went the door, click went the key in the lock. Flick tried to argue. It was no use. So he ambled back, woke the barber, gathered up the late crop of alfalfa, and took it home. Passing it in at the door, his wife was convinced and admitted him.—Cleveland Dispatch to Chicago Inter Ocean.

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