the mandible for correct occlusion, and hence chance to note any dropping or displacement of the splint.

5. The disadvantages of the plate are so few that they may be easily remedied, on account of its adaptability, and they differ with the patient's disposition: 1, the feeling of tightness around the head, which may give headache if not adjusted; 2, the slipping of the side tapes until the balancing point was found, can be remedied by making a downward curve (Fig. 5), bend or points in the wire, as seen in the diagrams.

6. The cap must be a good and accurate fit, the vertex leather not coming too low down to the ears.

7. The advantages of lightness, air through the mesh over the hair, use of non-corroding metal for the bars and sockets, or nickel-plating, the ease with which the plate may be slipped out and cleaned while the douching and irrigation is being done.

8. The advantage of drilling several holes in the sides and through the alveolar part of the plate so that syringing with water and antiseptics can be done, when the plate is put in, to get rid of particles of food.

9. The greater variety of solid food that the patient can eat, as it can be crushed by the tongue against the plate.

10. The bilateral, almost symmetric injury, giving no point of support within the oral cavity, yet resulting in very slight alteration of the face after recovery.

FIG. 5.—A.—Diagram of Points to Prevent Tapes Slipping.
B.—Diagram of Bend.

11. This form of splint, a modification of Kingsley's, has this advantage over others, it can be vulcanized in an ordinary flask and the metal bars slipped in after the plate is polished.

12. Lastly the age of the man, being the oldest recorded case of recovery in the literature at my command.

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THE PHYSIOLOGIC TRAINING OF THE FEEBLE-MINDED.*

SAMUEL J. FORT, M.D.

ELLIOTT CITY, MD.

American institutions for the care and training of the feeble-minded are the results of a little more than a half-century of the work begun abroad by various observers in a semi-scientific manner, it being reserved for the elder Seguin, a student of Itard and Esquirol—the French pioneer workers—to formulate a system from dilettantism. The year 1848 saw the beginning in this country of Seguin's enthusiastic, brilliant work, inspiring American workers—a beginning that places Wilbur, Brown, Knight, Kerlin and Richards almost side by side with Seguin; that saw two institutions in as many states multiplied in 1900 to 19 state and 10 private institutions, caring for a total of nearly 8000 feeble-minded persons. It is true that Seguin's methods of training the feeble-minded are yet considered the best, being founded on the only true method of all teaching—the physiologic—the only system that takes cognizance of the individual and the only system that prevents both student and teacher from becoming mere machines. Seguin died before he saw more than the beginning, in this land of his adoption, of a work for which he practically gave his life, but he left behind him a valuable legacy in the hands of brainy men, quite as enthusiastic as himself, and while the so-called physiologic system of training the feeble-minded still stands an enduring monument to a talented man, American talent has widened and extended the scope of the system far beyond the anticipations of its inventor.

Primarily, observers of the mentally deficient worked purely from philanthropic motives; later, from the standpoint that many such individuals were simply isolated from normal men by deprivation of proper training, and still later Seguin defined idiocy and apparently recognized somewhat indistinctly several types that differed from actual idiocy, types now definitely classified—thus:

1. Imbecile...	$\left\{ \begin{array}{l} \text{Mentally deficient} \\ \text{Mentally and mor-} \\ \text{ally deficient} \end{array} \right\}$	$\left\{ \begin{array}{l} \text{High grade..} \\ \text{Middle grade..} \\ \text{Low grade..} \end{array} \right\}$	Educable.
2. Idio-imbecile			
3. Idiot			Non-educable.

It is unfortunate that we have not yet as a people recognized the anatomic deficiencies of our feeble-minded charges as being of paramount importance in prognosis. Fostered by ignorant persons, interested only in securing large fees for impossible though promised results, advertised by yellow journalism, the idea of cure is yet

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prominent, notwithstanding the absolute fact that we have in all cases an inherent deficiency, beyond the reach of surgery or medicine to restore. Whatever share of active nerve-center is present may perhaps be acted on, but if a normal standard is a whole, no fractional part can ever be equal to the whole. This to-day stands like a wall barring the progress of our work as a factor in the system of public education.

Even the marvelous attainments of individuals like Blind Tom are urged as reasons why imbeciles may be trained so that may eventually become members of the body politic, forgetting that while one or more protrusive talents have raised the individual not only above his more ordinary brothers and sisters in affliction, or even above the average normal man or woman, there still remains the heritage of physical weakness and mental inertia in all save the one development, rendering them incapable of taking their place in the active busy world, handicapping them too heavily in the race for existence, making them useless outside of the fostering care of an institution.

The mere thought of restriction is so repugnant to many that the value of environment is lost to sight. Yet to the defective child of whatever grade of mentality, whether well-to-do, rich or poor, the home environment is as a rule bad. Whether *ego*, in so many cases rampant, is stimulated to an unhealthy growth by too much care, or on the other hand if the child's little meed of mind is crushed out by deprivation of its poor little wants, the results are the same, retrogression and mental apathy. No class of children responds more quickly to the community interests of the institution than the feeble-minded. Many may at first be homesick, but the orderly life, companionship of similar mental attainments, oversight by judicious foster-mothers, the music, the flowers, soon overcome the nostalgia and the warped and twisted human plant soon begins to grow and become more like the standard set by its trainers.

The physiologic system as formulated by Seguin contemplates the use of the hand, the eye and the ear as the avenues of entrance into the undeveloped mind, and demands an early recognition of the condition for its best results. The feeble-minded child as a rule is a creature of habit, and these habits are distorted from the normal by reason of the deficient or defective co-ordinate powers. Experience has proved the difficulty of overcoming the automatic or mechanical habits even in the young and of short standing, hence the advantage of placing the erring centers and muscles under regular systematic training at an early period in life.

The kindergarten has proved of great importance not only in the training of the young subnormal, but in the diagnosis of the youthful defective. The trained kindergarten can hardly fail in recognizing both moral and mental deficiencies in her classes from the very nature of the methods employed.

Nature studies and object-lessons follow in natural sequence, then sloyd and manual training, all aiding in mental stimulus and muscular activity. The underlying principle of our present system is to develop, by every available method, the ability to think and to do. If the state is to assume life-care of its feeble-minded population, it must endeavor to develop as many earners as possible. The asylum will contain the drones, those incompetents who will always be in debt for their existence; the training-school and the colony must return to the state as much of their cost as possible, and this can be done only by systematic application of intelligent exercises, devised to stimulate a desire to do something

that may be of use to others. This carries the boy or girl through the kindergarten and the class-room into the shops; those unable to keep along with others, reaching their limit of attainment, may still find room for employment in the more simple work of the farm, the garden or other duties needing a minimum of mental exertion, but still giving enough muscular work to prevent retrogression.

The ever widening horizon of this physiologic training has each year taken in every modern development of educational facilities. Of these, manual training as now seen in our numerous polytechnic institutions is one of the most important systems yet devised, and while yet in its infancy as an adjunct to our institutions for the feeble-minded, is each year assuming greater proportions. In its application to normal children, it proves an important agent in detecting mental and physical defects; in its application to the subnormal child, it is equally important in counteracting these defects. A writer has said: "What orthopedic surgery is to the body, such, I believe, manual training in childhood is to the mind." Twenty years of work among the feeble-minded leads me to think we have only seen the beginning of what the future will see of the results from manual training in our institutions.

It is even now a question of serious importance whether we have not paid too much attention to mere school training. If we are to assume the life-care of the feeble-minded, the question of an individual ability to earn all or a part of his or her support must be carefully considered and in this relation mental cramming can not be considered a factor in the ability to earn. Certainly there are at least those of one class, the moral imbeciles, even if their environment is to be permanently restrictive, that should not be too highly educated in the sense of knowledge imparted. Many of this class stand on the border-line of insanity and I am certain that to some might be said that which was said to St. Paul: "Much learning hath made thee mad."

It is not intended to make persons afflicted mentally prisoners for life at hard labor. Such are taught to work because it is wrong to be idle, and in the colony of defectives, free from the ever-present problem of whence their daily bread shall come, the grim specter of the self-dependent workman, they can labor through work hours, and be in position to enjoy the recreations and amusements provided under the same schedule that calls them to work.

Now, if this system of physiologic training is correct, and there seems to be no reason to doubt its efficiency, what can be urged for the future, judging by the results of the past?

1. The state owes its mental defectives proper care and training, and a proper consideration of the normal and subnormal demands life-guardianship of those unable to support themselves in the outside world and a bond on the part of the well-to-do that provision shall be made for the support of their feeble-minded progeny.

2. The enormous increase in the number of this class of incompetents urges a closer attention to the proper enumeration of all such defectives in each state, their registration on the files of state boards of health, and penalizing both parties to a marriage contract, in which one is known to be feeble-minded.

The question of asexualizing both sexes of the feeble-minded has been considered, but the proposition that contemplates such surgical procedure where no pathologic condition exists beyond the mental deficiency is

too extreme to be practical. Granting that the female is the only sex to be considered, the radical obliteration of her ability to procreate other imbeciles seems to me to argue our inability to properly care for her. And if we produce such a condition, simply to relieve ourselves of the protection she deserves, we are licensing an evil condition, and if her condition was known, throwing a veritable firebrand into the community. Procreation is not the worst evil that can obtain from the contact of sexes where one is weak, the other an unmitigated scoundrel.

3. Experience has proved the value of early recognition of mental deficiency, and application of proper training, hence the value of expert examination of school children, especially the so-called "incorrigibles," "truants," "juvenile delinquents," et al, and their grouping either in state institutions for the feeble-minded or in special classes under special instructors.

4. Our normal schools should make the study of training backward and mentally deficient children a compulsory and thorough course, that our public school teachers may be better able to co-operate with the medical examiner in detecting signs of mental deficiencies, and thus aid in weeding out the defectives from the ordinary schools.

5. The system of manual training as pursued in our polytechnic schools is one that is advantageously used in our institutions for the feeble-minded, and at least one-third the schedule time of school work might be passed in properly equipped shops with advantage.

6. Purely abstract education should be limited to the highest grades, and where these show signs of moral obliquity, every effort should be made to advance the physical rather than the mental development.

KERATOLYSIS OR "SKIN-SHEDDING."

R. M. STONE, M.D.

OMAHA, NEB.

I had the good fortune recently to see one of the rare cases of "skin-shedders." This was a man of 50, strong, hearty, quite intelligent and entertaining in his description of his peculiar condition.

Family History.—He comes of a long-lived race, two of his grandparents having reached over 100 and his father being alive at about 90. He has six living brothers and sisters. No one of his family has ever been known to shed his skin.

Personal History.—His parents told him that he was born in May, 1849, and that he shed all his skin in the July following, and every year of his childhood. Since he has reached years of ability to remember, he states that he has shed all the skin of his body every summer and, in the years 1893, 1894, 1899 and 1900, has shed it the second time about a month later than the first shedding.

The period of shedding is ushered in by a feeling of malaise and chilliness, followed by fever, which has risen as high as 103 F. The skin of the body generally scales off, while that of the palms, elbows, buttocks, penis and scrotum, the knee-caps and feet comes off in mass. The hair of the head, the eyebrows and his moustache all are lost. He is not rendered bald each year by the loss of hair, but it comes out little by little as it does after typhoid fever. A few times only has there been a shedding of masses of the skin of the legs. The nails of the hands and feet participate in the shedding. The new nail is, as would be expected, more sensitive than any other part of the body, and some-

what slower in renewal. In general, the body is not very sensitive, for he is able to work right through it if he wishes. Forty-eight hours after he has shed he can take a full cold bath without discomfort or danger.

He sometimes wears gloves for a day or two after the shedding.

When the skin begins to shed, the perspiration ceases to pass through to the outside and raises up the epidermis, which dries and becomes somewhat hard before it is cast off. When this is struck with a pencil it gives off a sound as of striking a piece of celluloid.

He spent twelve years in the regular army, and supposes that his case was reported to the surgeon-general.

He has been examined by many physicians, but has never been able to secure any suggestions as to relief