THE GREAT SUBJECT OF FAT.

AN ADDRESS TO A FAT MAN'S CLUB BY GROVER CLEVELAND'S DOCTOR.

If You Desire to be Thin You Must First Ascertain the Cause of Your Corpulency—The Good and Bad Effects of Dieting—Too Much Sleep Makes People Fat—So Do Gluttony and the Bottle—Some Valuable Hints.

DALLAS, Texas, Aug. 29.—The Fat Men's Club of Texas listened to-day to an address by Dr. John W. Gibbs of New York city on the subject of "Obesity and its Cure." Particular interest was manifested in Dr. Gibbs for the reason that the narration of his experiments with Grover Cleveland's flesh had obtained wide circulation in this State. The lecturer said:

PRESIDENT DISBROW AND GENTLEMEN OF THE FAT MEN'S CLUB OF DALLAS, TEXAS: I felt extremely honored when a request was made that I should prepare an address for your benefit and instruction. Yet, in complying with the demand, I recognize somehow or another that the fact of your being united together in an organization of fat men is more or less of an evidence of your being, each and every one of you proud of your corpulency. I suppose that as Texans you glory in the "fat soil" of the Lone Star State, which produces on your ranches the fat of the American flocks and herds. There are some of you also who, perhaps, are contented with simply being known as "the Fat," as King Alfonso II. of Portugal, and as the French monarchs, Charles II. and Louis VI., now live in the memories of men. Others, perchance, hope to attain the future Presidency of your club by becoming still fatter than they are now, and descending into history with as big a record as those eighteenth century obese wonders, Edward Bright, who weighed 616 pounds, and the champion, Daniel Lambert, who tipped the scales at 739 pounds avoirdupois.

But alas! The fleshy man or woman who has passed the 200 pound limit can only be regarded by the eye of science as one who is suffering from disease and is a fit subject for the care of a physician. No longer, therefore, delude your self with the idea of "laughing and growing fat," for there never was a celebrated man who was fatter than his fellows but that effect resulted from abnormal or unhealthy conditions. Let me first instance two famous authors. The gross corpulency of Edward Gibbon, the historian of the Roman empire, can be traced from a sickly childhood to the period when the small bones of the once big-headed but delicate boy were hardly able to support the weight of his unwieldy corporosity.

Samuel Johnson, the great dictionary maker, dated his obesity from the time when he became a prey to that morbid melancholia which reacted on his body through the sedentary and other habits, directly occasioned by his early mental troubles. Two of the really famous statesmen of modern times also come to my recollection as somewhat similar examples. One of these was Charles James Fox, the celebrated British Prime Minister and friend of the American revolutionists, whose immense size was far less the result of his naturally lethargic disposition than of his drunken dissipations.

The other is the greatest of all living statesmen, the Iron Chancellor, Prince Bismarck, who developed his former bloated and dropsical condition from his inordinate love of the table and the bottle, which made him a chronic invalid until rescued from that state by the personal care and treatment of Prof. Schweninger of the University of Berlin.

This brings me to the point where I wish to arrive, and which is that there is no longer any necessity for a solitary human being to remain obese, for, thanks to Schweninger, it is almost as easy to cure the fat disease as to get rid of a sty on one's eye. There is only one cure, and that is Schweninger's. Other systems may temporarily alleviate, but his is sure and permanent. The Schweninger cure is based upon nature's laws. Its permanency comes from a proper study of cause and effect. That is the sole secret of the treatment. First, you discover the cause of the obese effects. Then you remove the reasons for the unnatural and unsatisfactory condition of the patient, and the cure will soon follow. Once reduced in weight by the Schweninger treatment you remain so. If a man's vital organs are all right, then mere corpulency ought not to take long to cure.

I am a firm believer in the Schweninger method of reducing fat. A sufferer from corpulency myself, I went abroad in 1886 to study the system. My attention was first called to the method by the remarkable accounts of how the Man of Blood and Iron, the great Bismarck, was such a sufferer from his unwieldiness that he would probably have to resign his control of the German empire. Then I read how Dr. Schweninger had transformed the very being of the Chancellor by reducing him from 246 pounds to 186, a reduction which had been permanent for the last eight years. Before the doctor took him in charge his general appearance was dropsical to a painful degree, and as he walked his feet actually dragged along.

After the cure was completed he had become really thin, bony, and muscular. His gait was swift and automatic, his step brisk and springy, and his complexion clear and almost pink. Since then Bismarck's general health has never been better, and he has permanently remained a living example of Schweninger's triumph over fat.

Fat is the oily concrete substance deposited on the cells of the adipose membranes under the skin and in various other parts. Obesity is the accumulation of fat under the integuments, or in the abdomen, or in both situations in such an amount as to embarrass the several voluntary functions. Reduce the cause of the overplus of fat and obesity disappears.

If this be not done, fatty degeneration of the heart will quickly follow. That is what killed Daniel Lambert when he was but 40 years of age, although obesity is generally only considered to begin after the 40th year. It commences frequently much earlier, some times even in infancy, as take the remarkable case of a certain female child, whom Dr. Elliotson tells us, weighed sixty pounds when she was but 12 months old. Such a freak as that must have had a very large wall of adipose around her heart, and throughout her term of life, as with older persons, necessarily became not simply uncertain, but surely soon ended. The heavy drinker, who adipose cells are filled with water, are in the most dangerous of all fatty conditions and are the quickest to die from fatty degeneration, notwithstanding, as the old saying runs, "an old ox fats as well and is as good as a young one."

Another danger is more or less mental failure, or weakness through fat, it being popularly accepted that those persons are the most acute in intellect. Perhaps the young kaiser dismissed the Iron Chancellor, now reduced down by Schweninger, for the same reason that Cæsar says to Antony:

> Let me have men about me that are fat;
> Sleek-headed men and such as sleep o' nights:
> Yond' Cassius has a lean and hungry look:
> He thinks too much; such men are dangerous.

I hold that not even a man six feet tall should weigh over 185 pounds. If he does, some organ is at fault or his condition is the cause. He or she who is emaciated suffers from some abnormal condition of the organs of elimination, such disease is the cause, just the same as it is with fat people. One physical condition causes the alternate other fat.

The first essential thing by which the mode of treatment must be determined in every case, is the state of the kidneys and the heart of the patient. The means of cure must be regulated as regards the quantity, character, and proportion of food, by the healthfulness or debility of those vital organs. This is why I have repeatedly said that the Schweninger cure can never be made an adair of popular knowledge and self-practice.

The system recognizes three important causes of obesity. The first is artificial heat, the second inactivity, and the third and active, an abnormal condition of the kidneys. The latter are the essential factors. They must first be in a certain healthful condition for a reduction of corpulency, and by that I mean a permanent reduction. Thus you see, it is first a question of bringing about a certain initial state for curative treatment. Nine-tenths of the people who think themselves fat are not so at all, or they are correctly diagnosed from a scientific standpoint only. They are dropsical, or have a tendency in that direction.

Dropsy and obesity are rather synonyms than diseases. They consist of the effusion of watery fluid from the blood into the skin and subsequent textures, or into the cavities of the body. Sometimes they depend on disease of the heart and of the kidneys, and frequently the liver and spleen aid in the work.

Drowsiness and sleepiness as I have called your attention other potential factors. Never sleep over six hours in an hour, and if you reduce that number to six, all the better. Sleep is simply the relaxation of the muscles and nerves—men only sleep in mental or as well as exercise. Indolence of mind and immunence of body are always associated with obesity. Shakespeare makes *Prince Henry* say to *Falstaff*: "Thou art so fat-witted with drinking of old sack, and unbuttoning thee after supper, and sleeping upon benches after noon." Yet there have been stout men the opposite of this, but they have been the exceptions, not the rule. Sleep always superinduces obesity when indulged in to excess. Women in Oriental countries which are in preparation for being made the prides of the harem, are made to sleep as much as possible. They are not allowed to walk about, are forced to take huge draughts, are fattened up with figs, sugar cane, and palm oil nuts, and, above all, they take warm milk. To reduce my fat patients I always insist on their living and sleeping in cool rooms, never putting a superabundance of covers on them at night, and especially eschewing dressing in clothes of too great warmth.

Regarding the assertion of oversleeping leading to obesity, I can quote the example of Thomas Alva Edison. He claims that in the first week of experimenting upon himself that he slept four teen hours. In the second week he increased it to twenty-two hours and the result was a gain of six pounds at the end of the second week. This was due, you see, to sleep alone.

Take my own case. Sleep with an incipient kidney trouble was the cause of my becoming fat. I can tell you here, by the by, that some should drink and some should not. I stopped and gained weight. I drank water and fat. I slept nine to ten hours a day and that did me not any more. Further, I took a nap, and after dinner a doze. It became a chronic habit with me, and to stop doing this was a torture. It acted as an opiate, much as morphine would. The more I continued to do this, the more I wanted to. In three years my weight actually rose from 195 pounds to 237. I had the sensation of feeling myself gain in weight. Then in accordance with the Schweninger cure treatment, I exerted my willpower and determined to stop short. I did so. I ate only six to seven hours a day only, and never allowed myself to doze, and forced myself not even to dispose a nap. The consequence is that I reduced myself to 172 pounds, and the permanent result was that although I brought about this condition, four years ago, I have ever since remained at one normal weight.

Men who are not gluttons, in any way whatever, frequently grow excessively stout. A very slight daily excess stores up a gradual increment of fat in the adipose cellular tissues. Often a person grows fat, although he has dieted himself down on a minimum.

Yet the Schweninger system pays attention to dieting, but in an extremely simple manner. I can even state that there is next to no dieting at all, and m at a-suredly not so as compared with other systems.

As I suppose you will wish to diet yourselves, whatever I may urge to the contrary, I will now give you a small bill of fare that will doubtless be useful:

DIETING MENU.

Breakfast—One cup of tea or coffee, with milk or sugar, six ounces; three slices of stale bread, three ounces; with butter, ounce; two eggs, or two to three ounces of either meat or fish.

Dinner—Meat or fish, 6 ounces; vegetables such as spinach, cabbage, string beans, asparagus, cucumber, or beet tops and fashionable food, rice, hominy, &c., four ounces; salad, with plain dressing, two ounces; fruit and light wines, beer, hock, or claret in moderation.

Supper or Lunch—Two ounces of lean meat, six ounces salad, radishes, or pickles, one ounce; one slice of stale bread, one ounce; fruit, four ounces; light wines in moderation.

As a general rule avoid ale or beer or sweet wines. You may have milk now and then. Do not eat anything that is fried. Fish is better than meat at all times. Be particularly on guard in your eating against hot or fresh bread. Be still more sure to leave potatoes alone.

Always use discretion in the selection of the food you eat, and if you think that a certain food is fattening avoid it as you would poison.

Above all things always eat in moderation. The large-eaters not necessarily the man who is fat. In nearly all cases I have found that persons who have not eaten as much as the dieting menu I have just given you would have permitted them, have, nevertheless, contributed to be fat. No doubt, more often than not, find that thin people are the large eaters? Was not Cassius a lean and hungry man?

There is another thing I wish to impress upon you, and that is to sip all your drinks. A small amount of liquids is far better than large quantities, which cannot fail to increase the work of the kidneys, and this extra work is really very bad for those really delicate organs, but especially so when they are in an abnormal condition.

Thirst is located in the throat, not in the stomach. I believe that if you will only try it, you will soon discover that more pleasure and benefit comes from sipping liquids than anything else. It is really a fallacy that thirst is located in the stomach. Watch the average fat man and you will find him on a hot day, throwing rapidly down his throat glass after glass of beer, lemonade, or something stronger, in a vain effort to quench his thirst and cool off. Nothing can be more stupid. He forces upon his system a mass of unnecessary liquid, and then mother nature relegates it to the skin glands, and he is bathed in perspiration, the day long, with his body trying to eliminate it.

Never drink water at night before retiring to bed. I suggest that as many people injudiciously do this. They never weigh a pound less in consequence. Another strange feature of the Schweninger cure is that some patients must drink fluids excessively, others must not. The kidneys must be in a certain condition for the Schweninger treatment. Although I have made this statement, I consider it proper, as a rule, to insist upon a certain restriction of fluids at all times.

To return to general dieting again, I can take a pound off a patient a day or put one on if I feel like it. I wish to specially impress upon you that I have no faith in dieting unless overeating is the cause. *Simile similibus* treatment is often necessary. Diet at no time unless you believe that excessive eating is the foundation of your obese troubles. There are occasions when dieting is actually no good, for excessive dieting may be the cause.

By the process of dieting the fat of the body becomes gradually reduced for the simple reason that a patient, through such dieting, loses both muscular and glandular tissue. If you make a reduction in weight by either exercise or dieting, it must be kept up. When either is suddenly or gradually stopped, it matter not which, a reaction takes place. You weigh more than you did before, and your last condition will be worse than your first.

Speaking of other systems of decreasing weight and the necessary reactions ensuing there from, I answered that question five years ago, incidentally the same terms that I shall now, for I have no reason to retract what I said then. This was my reply: "The absorption of an excess of adipose is not difficult to effect. That can be achieved by any one of a score of systems, if the patient has the desperate self-denial to follow them. But the trouble with all of them is, it is the hour in which the patient relaxes his dieting and ventures to enjoy, even in the most moderate degree, the pleasures of the table, he begins to regain fat faster than he lost it. That is because he has simply forced the body to live upon its accumulated fat, and that has not cured the disease, inclination or tendency to manufacture fat. That is where the Schweninger treatment is superior to all others."

All such systems as the Banting semi-starvation methods must be condemned. Fat eats should always feel better under treatment, never worse. Banting, who started the overdieting and over-exercise myth, was an undertaker not a physician. Banting's own case shows his fallacious reasoning. He says: "Few men have led a more active life than myself, as that any corpulence and subsequent obesity were not through lack of necessary bodily activity, nor from excessive eating, drinking, or self-indulgence of any kind." How could violent exercise and over dieting, which is most assuredly more harm than good, ameliorate the condition of a man whose obese troubles resulted from those very causes? All such treatment is empirical, tentative, and not permanent.

My advice is that you exercise in moderation. Eat walking is the best of all. But don't overdo it. When tired stop right away, for it then becomes work and not exercise.

Nothing is gained in the end by the usual sweating and dieting system. As a reduction takes place, your physique becomes different to what it was. As certain organs undergo great changes gradually, so from time to time the treatment should correspond. Violent exercise creates an unnatural desire for food and drink. What you have lost in weight the adipose cells at once glean from the return to the former usual dishes of solids and liquids necessary to appease the ravening appetite.

As a corollary to this result will be found in the fact that each and every man who took part in the last walking match at Madison Square Garden lost gained from four to seven pounds in six days. Take the horse jockey or prize fighter—they are reduced usually by sweating, dieting, &c., to a given time for a certain contest. The day after the race or pugilistic encounter passed they at once gain rapidly in bulk and in a short period weigh more than they did before. Thus the don't-eat-this and the don't-eat-that theory of dieting cannot meet with approval, for in the end nothing is gained thereby. Once more I repeat that when you must eat after dieting, your fat is as bulky and more, too, in an abnormal condition.

No excessive exercise can possibly ameliorate. When I was an inspector of the New York Board of Health I had to daily undergo what was to me the most violent and forcing exercise. I was always clambering up long flights of stairs, frequently six to seven in one house. Yet all the time I became fatter and fatter. "That ought to have removed your obesity," some might urge. How could it, for the cause was trouble in the kidneys, and no exercise could cure that. If you have an injured limb you do not work it. On the contrary, it is carefully nursed and coddled. You should do the same with all the internal organs when diseased, but more especially the kidneys, which are nature's eliminators.

Gentlemen of the Fat Men's Club of Dallas, in conclusion I give one advice to once more never to try any system of reducing the weight without a physician handy all the time to advise you. The man who follows the everman-his-own-doctor idea has a fool for a patient for certain reasons to what you should eat, what you should wear, how much, and the like, may mean, if possible, in consequent death. Besides, violent remedies are always bad for as a case is found so it must be treated.

Finally there is, to my mind, only one means of a reduction of flesh: first find the cause, remove that, and then you have a permanent reduction.

RAILROADS TO THE CLOUDS.

MOUNTAIN CLIMBING MADE EASY BY THE IRON HORSE.

Feats in Railway Construction and Operation that Would Have Been Deemed Impossible a Few Years Ago—Some of the Most Interesting Mountain Railways

From the St. Louis Globe-Democrat.

If George Stevenson, when he placed the first locomotive on the track and guaranteed it a speed of six miles an hour, could have foreseen that in less than eighty years the successors of his rude machine would be climbing the sides of mountain ranges, piercing gorges hitherto deemed inaccessible, crossing ravines on bridges higher than the dome of St. Paul's, and traversing the bowels of the earth by means of tunnels, no doubt his big blue eyes would have stood out with wonder and amazement. But he foresaw nothing of the kind; the only problem present in his mind was how to get goods from the seaports in western England to London as easily and cheaply as possible, and to do this he substituted for horses, which had for 150 years been drawing cars along wooden or iron tracks, the wonderful machine which has revolutionized the freight and passenger traffic of the world.

It was, indeed, impossible for any one to foresee the triumphs of engineering which have accompanied the advance in transportation. To the engineer of the present day there are no impossibilities. The engineer is a wizard at whose command space and matter are annihilated. The highest mountain, the deepest valley, has no terrors for him; he can bridge the latter and encircle or tunnel the former. The only requisites which he demands are that something in his line be needed, and that the money is forthcoming to defray the expense, and the thing will be done. But the railroad he is asked to construct must be necessary, and the necessity must be plainly shown, or no funds will be advanced; and although the theory does not invariably hold good, especially when a craze for railroad building is raging, as a rule no expense for the construction of a road will be incurred without a prospect of remuneration.

Hence the need of railroad communication has caused lines to be constructed through districts where only a few years ago the thing would have been deemed impossible. The Pacific roads of this country were a necessity long before their construction, and in the face of difficulties almost insuperable were carried to successful completion. So, also, of the railroads in the Andes of South America. The famous road from Callao through the heart of Peru is one of the highest mountain roads in the world, as well as of the most difficult construction. The grades are often of 300 feet and more to the mile, and when the mountains were reached so great were the difficulties the engineers were forced to confront that in some places laborers were lowered from cliffs by ropes in order that, with toil and difficulty, they might carve a foothold in order to begin the cutting for the roadway. In some sections tunnels are in numerous than open cuts, and so far as the road has gone sixty-one tunnels, great and small, have been constructed, aggregating over 20,000 feet in length. The road attains a height of 15,000 feet above the level of the sea, and at the highest point of the track is about as high as the highest peak of Mont Blanc. It pierces the range above it by a tunnel 3,847 feet long. The stern necessities of business compelled the construction of this road, otherwise it never would have been begun.

The tunnels of the Andes, however, do not bear comparison with the tunnels, bridges, and snow sheds of the Union Pacific, nor do even these compare with the vast undertakings in the Alps—three great tunnels of nine to eleven miles in length, and a fourth projected for the transit of travelers and freight. The requirement of business necessitated the piercing of the Alps, and as soon as the necessity was shown funds in abundance were forthcoming for the enterprise.

But the Rigi mountain is a different thing from either of the Alps. Many years ago the attention of inventors was directed to the practicability of constructing a railroad up the side of a mountain on grades which, to an ordinary engine, were quite impossible. The improvements in locomotives, twenty-five and thirty years ago rendered them capable of climbing grades which, in the early days of railroad engineering, were deemed out of the question. These improvements proved a serious stumbling block in the way of the inventors, who found that an ordinary locomotive was able to climb a much steeper grade than was commonly supposed. The first railroads were laid almost level, but it was soon found that a grade of a few feet to the mile was no impediment to progress, and gradually the grade was steepened. The inventors of mountain railroad transportation might have been discouraged by this discovery, but it is a characteristic of genius that he is not set back by opposition, which, in fact only serves to test make his zeal. The projectors of inclined roads and mountain engines kept steadily on, and in France, Germany, England, and the United States many experimental roads were constructed each of a few hundred yards in length, and locomotives were built and put in motion to the amazement of the general public, who jeered alike at the contrivances and the contrivers, deeming the former impracticable and the latter crazy.

But the idea of building a road up the side of a hill was not to be dismissed. There was money in it for the successful man, so the cranky inventors kept on at work in spite of the jeers of the rabble and the discouragements of capitalists loath to invest their money in an uncertain scheme. To the energy and perseverance of railroad inventors the success of the mountain railways is due, as also is the construction of the various mountain railroads of which the road up Mt. Washington, finished in 1868, was the first, and the road up Pike's Peak, completed the other day, was the latest.

Of all the mountain roads which have been constructed since the one up Mt. Washington was first built, the most notable is that which ascends the world-famous Rigi. With the exception of Mont Blanc, Rigi is perhaps the best known of any peak in the Alps, though it is by no means the highest, its summit being but 5,905 feet above the level of the sea. Although scarcely more than a third of the height of some other mountains, Rigi seems much higher because of its isolated position. Standing as it does between Lakes Lucerne, Zug, and Lowertz, it commands a series of fine views in every direction and he who looks from the summit of Rigi, if he does not see all of Switzerland, can gain a fair idea of the Swiss mountains. Scores of the most noted peaks are in sight, and from the Rigi can be seen the three lakes beneath, the villages which here and there dot the shores, and, further on, the mighty Alps, with their glaciers and eternal snows.

Many years ago the idea was built on the summit of the Rigi for the benefit of the tourists who daily flocked to this remarkable peak to enjoy the beauties of its wonderful scenery. The mountain is densely wooded, save where the trees have been cut away to clear the land for pastures. The ease of ascent by the six or eight miles paths which had been made, the gradual and almost regular slope, and the throngs of travellers who resorted to it, made it a favorable place for an experiment, and to Riggenbach, the engineers in order to ascertain the practicability of such a road. The credit of the designs is due to a German engineer named Regenbach, who, about the year 1861, designed the idea of a mountain road, and drew up plans not only for the Rigi but also for the Mount Cenis Pass. The scheme dragged. Capitalists were slow to invest their money in what they deemed a wild and impracticable undertaking and even the owners of the land on the Rigi were reluctant for such an experiment to be tried. But Regenbach persevered, and at last the people of the adjacent inhabitants of Vitznau, at the base of the Rigi, were astonished to see gangs of laborers begin the work of making a clearing through the forests on the mountain slope. They inquired what it meant, and were told that a road up the Rigi was to be made. The Vitznauers were delighted, for they had no roads and there was not a wheeled vehicle in the town, nor a highway by which I could be brought thither. The idea of a railroad in their desolate mountain region, and, above all, a railroad up the Rigi, never entered their heads, and a report which some time after circulated currency in the town that the laborers were beginning the construction of a railroad, was greeted with a shout of derision.

Nevertheless, that was the beginning of the Rigi line, and in May, 1871, the road was opened for traffic. It begins at Vitznau, on Lake Lucerne, and ends near the border of the canton and almost to the top of the mountain. It is 19,000 feet long and during that distance rises 4,000 feet, at an average grade of 1 foot in 4. Though steep, it is by no means so much so as the Mt. Washington road, which rises 5,285 feet above the sea at an average of 1 foot in 3. There are, however, stretches of the Rigi road at which the grade is about 1 foot in 2½, which is believed to be the steepest in the world.

The Rigi road has several special features aside from its terrific slopes which enable it to be considered a triumph of the engineer's skill. About midway to the mountains the builders came to a solid mass of rock which presented a barrier that to a surface road was impassable. They determined to tunnel it, and, after an enormous expenditure of labor, finished an inclined tunnel 225 feet in length, of the same grade as the road. A gorge in the side of the mountain where a small stream, the Sheuribach, had cut its far passage also hindered their way, and was crossed by a bridge of lattice girder work in three spans, each eighty-five feet long. The entire road bed, from beginning to end, was cut in the solid rock, and, instead of a wooden cross tie under the central beam, which contain the cogs fitting the driving wheel of the locomotive, the engine is in the rear of the train, and presents the exceedingly curious feature of a boiler greatly inclined. In order that at the steeper gradients it may not be almost perpendicular. The coal and water are carried in boxes over the driving wheels, so that all the weight of the engines is really concentrated on the cogs—a precaution to prevent their slipping. The cost of the road, including three of these strangely constructed locomotives, three passenger coaches, and three open wagons was $260,000, and it is a good paying investment. The fare demanded for the trip up the mountains is 5 francs, while half that sum is required for the downward passage, and the road is annually traversed by from 30,000 to 50,000 passengers.

Curious sensations are produced by a ride up this remarkable line. The seats of the cars are inclined like the boiler of the locomotive, and so long as the cars are on a level the seats tilt at an angle which renders it almost impossible to use them. But when the start is made the frightful tilt places the body in an upright position, and, with the engine in the rear, the train starts up the hill with an easy, gliding motion, passing up the ascent, somewhat steeper than the roof of a house, without the slightest apparent effort. But if the going up excites tremor, much more peculiar are the feelings aroused on the down grade. The trip begins with a gentle descent, and all at once the traveller looking ahead sees the road apparently come to an end. On a nearer approach he is undeceived, and observes before him a long declivity which appears too steep even to walk down. Involuntarily he catches at the seats, expecting a great acceleration of speed. Very nervous are his feelings as the train approaches this terrible slope, but on coming to the incline the engine dips and goes on more or less swiftly than before and not more rapidly on the down than on the up grade. Many people are made sick by the sensation of falling experienced on the down run. Some faint, and a few years ago one traveller, supposed to be addicted with heart disease, died on Rigi when the train was going over the Schweizerhof bridge. The danger is really very slight, there not having been a serious accident since the road was opened. The attendants are watchful, the brakes are strong, but even with all these safeguards, men of the steadiest nerves cannot help wondering what would become of them in case anything did happen to go.

Bold as was the project of a railroad on the Rigi, a still bolder scheme was broached ten years later, when a daring genius proposed a railroad up Mt. Vesuvius. A railroad up the side of an ordinary mountain seemed hazardous enough, but to build a line on the slope of a volcano, which in its eruption had buried cities, and every few years was subject to a violent spasm, seemed as hazardous as to trust the rails of an ordinary line to the rotten river ice in springtime. The proposal was not, however, so impracticable as it looked. While the summit of Vesuvius changes from time to time from the frequent eruptions, and varies in height and in the size of the crater, the general slope and contour of the mountain are about the same to-day as when Vesuvius, a wooded hill, with a valley and lake in the centre of its quiescent crater, served as the stronghold of Spartacus and his rebel gladiators. There have been scores of eruptions since that in which Herculaneum and Pompeii were overthrown, but the sides of the mountain have never been seriously disturbed.

A mountain of Vesuvius gave promise of being a good speculation. Naples and the other resorts of the neighborhood annually attracted many thousands of visitors, and a considerable number of these every year ascended the volcano, even when forced to contend with all the difficulties of the way. Many, however, desiring to ascend, but being unable or unwilling to walk up, a chair service was established—a peculiar chair being slung on poles and borne by porters. In course of time the chair-service proved inadequate for the numbers who desired to make the ascent, and the time was deemed fit for the establishment of more speedy communication.

Notwithstanding the necessity, the proposal to establish a railroad met with general derision, but the scheme was soon shown to be perfectly practicable and a beginning was made in 1873. The road is what is known as a cable road, there being a single sleeper with three rails, one on the top, which really bore the weight, and one on each side under the bottom, which supported the wheels, which coming out from the axle at a sharp angle, prevented the vehicle from being overturned. The road covers the 1,000 feet of the ascent, and the power house is at the bottom, a steel cable running up the passage round a wheel at the top and returning to the engine in the power house. The ascent to the lower terminus of the road is made on mules or donkeys; then, in a comfortable car, the traveller is carried to a point not far from the crater. The car is a combined grip and passenger car, fitted in some points to the grip car of the present day, while the seats of the passenger portion are inclined as in the car on the Rigi road. But the angle of the road being from thirty-three to forty-five degrees, makes both ascent and descent seem fearfully perilous. Very precautious, however, is taken to insure the safety of passengers; each car is provided with several strong and independent brakes, and thus far no accident worth recording has occurred. The road was opened in June, 1880. Although there have been several considerable eruptions since that date, none of them did any damage to the line but what was repaired in a few hours.

The fashion thus set will no doubt be followed in many other quarters. Wherever there is sufficient travel to pay working expenses and a profit on a steep grade mountain road it will probably be built. Already there is talk of a road on Mont Blanc, of another up the Jungfrau, and several have been projected in the Schwartz and Hartz mountains. A route on Ben Nevis, in Scotland, is already surveyed, and it is said surveys have also been made up Snowdon with a view to the establishment of a road to the summit of the highest Welsh peak. Sufficient travel is all that is necessary, and when that is guaranteed, whenever a mountain possesses sufficient interest to induce people to make its ascent in considerable numbers, means of transportation, safe and speedy, will soon be provided. The modern engineer is also the dreamer, and ready to build a road to the top of Mt. Everest, in the Himilayas if he is paid for doing so.

KNEW HIS WIFE.

His Observations by Proxy Through the Knothole of His Back-yard Fence.

He was about five feet tall, had light hair, and looked meek. He was making strenuous but unsuccessful efforts to reach a knothole in a high board fence on the outskirts of East New York. A tall man was passing, and the small man glided up to him, plucked him timidly by the coat, and said:

"Hate to trouble you, sir, but would you mind doing me a favor?"

"Not at all; would be happy to." The small man took him by the arm and led him over to the fence.

"You see," said he, "I promised my wife I'd be home four hours ago and beat a carpet, and—well, I just want you to stand on that rock, look through that knothole up there, and tell me what is going on inside."

The tall man looked rather surprised, but complied, while the other leaned up against the fence to await developments.

"What do you see?" asked the meek man presently.

"Why, I see a woman——"

"Sh—Not so loud. Tall woman, with auburn hair, red face, and wart on her cheek?"

"That's her."

"Beating a carpet, isn't she?"

"Yes."

"Look warm?"

"I should say so."

"Kinder excited, too, isn't she?"

"Well, yes."

"Um—got her skirt up around her knees, and her sleeves rolled up to her shoulders?"

"Exactly."

"Has she got on a black bonnet with a white feather stuck hind side before and tied underneath the chin in a double hard knot?"

"That's just the way she's dressed."

"What's she using, a carpet beater or a broom?"

"A hoe handle."

"Lord! She's worse than I thought."

Just then came from the other side a crack, a groan and a snort. The fence shook, and the tall man almost tumbled from his post.

"Gee whiz!" said the other, trembling; "but she's got 'em bad this time. Did she smile when she hit that whack, stranger?"

"Smile! She—niggers!"

"That's all right. Much obliged to you, sir. The will do. I guess I won't go in yet. Good day, sir."

A Bulldog Kills a Valuable Horse.

From the St. Louis Globe-Democrat.

SAN FRANCISCO, Aug. 22.—A savage battle took place yesterday in the suburbs between August Whitemore's valuable horse and his bulldog. The horse, in going out of his stable, kicked the dog, whereupon the latter bit the horse. Then both animals became infuriated.

The dog jumped and got a good hold on the horse's flank. He took a mouthful and set his jaws hard. Whitemore and his hired man hastened to the rescue. The horse, however, was in the fight, and not at all a mild. He shook the dog loose and then sent him flying in the air with a well-directed kick. As soon as the bulldog could pick himself up he made another savage rush, jumping at the horse's throat. This time the dog fastened his teeth in the throat of his foe, and in a flash he had torn it horribly, partly severing the horse's windpipe.

The horse screamed with pain and terror, and fell to the ground, while the dog held on tearing at his throat. Whitemore and his hired man and neighbors several vain attempts to separate the animals. Whitemore got a pitchfork, with which he struck at the dog and finally drove him from his victim. The maddened brute then turned on his master and caught him by the thigh. Whitemore aided by his hired man, beat the dog off, escaping without serious injury. The bulldog then turned to his prostrate adversary and began to chew his throat.

Finally seeing that the horse was near dead, Whitemore procured a rifle and sent a bullet through the dog's head. As the brute was dying he fastened his teeth again in the flesh of the dying horse, locking his jaws so tight that the teeth had to be broken before the bodies could be separated. The horse was a thoroughbred roadster, and cost his owner $1,200.

Delay in a Florida Sawmill.

From the Cincinnati News.

A negro mill hand at Inverness ran his head against the cut-off saw Thursday afternoon while the saw was in full motion. Result: The teeth of the saw will have to be round ed up and the saw hammered before the latter may be used again. The negro only stopped two or three long enough to dress an inch-long cut in his scalp, the result of the collision on his side.

DOGFISH AT CAPE COD.

They Made Fishermen Gloomy by Eating Everything Worth the Catching.

PROVINCETOWN, Mass., Aug. 29.—The ravenous dogfish that struck on all the eastern New England coast in countless numbers a week ago have let up a little in their onset, fishermen think, after they have driven all other fish to the depths of the ocean.

The dogfish is not very big, but there is a lot of business in him. He is twenty inches long, looks like a shark, and eats everything that swims. He is quite as ready to bite a chunk out of a man in the water as to tackle a codfish. For a week or ten days all the "fresh" fishermen from the bay of Fundy to Nantucket have been in the dumps, for when dogfish abound they can get few other fish, and they believed the run of the voracious little sharks would continue three weeks longer. All the fishermen suffered from their ravages, and none more so than those of the cape. The dogfish wrought great havoc in the trawls. One fisherman of this port upon visiting his trawls the other day found 2,000 dogfish dangling from the hooks. Others found as many codfish heads on their trawl hooks; the dogfish had devoured the rest of the fish.

Dogfish are good for nothing except to be sold to the oil works men at Race Point, where they are boiled and ground into fertilizer; and it hardly pays a fisherman to ferry them thither, so they gloomily snap them off their trawl hooks and send them drifting. Vast numbers of them are washed ashore, and the beach is littered with their bodies from end to end of the New England seaboard.

Word came here yesterday that great schools of edible fish had struck on the coast again, and thus it is evident that the detestable dogfish has gone. Immense swarms of bluefish have appeared at Block Island, and yesterday Capt. Weeks of the yacht Sylvia sailed through a vast school of them right in the harbor of Provincetown. This is good news to thousands of fishermen all along shore, for many of them had feared the dogfish would ruin their business this season.

Swordfish, too, are plentiful. Capt. Weeks, with a pleasure party, yesterday sailed so close to a mammoth fellow just off the harbor that the passengers saw his gleaming eyes, and a fresh-water woman exclaimed: "Why, Captain, he has his sword out; he's always supposed they carried their sword on their backs." "No," replied the Captain gravely, "his sword is in the right place I guess." The swordfish was an 800-pound fellow, a colossus of his tribe. Though a famous swordfisherman, Capt. Weeks had no harpoon with him, and so saw the monster graze his boat with impunity. The Captain has had many thrilling and hairbreadth escapes while hunting these most ferocious inhabitants of the sea. Twice he had his dory smashed to pieces under him by tremendous thrusts from a swordfish's sword, and once he returned from a cruise with three swords protruding two feet through the bottom of his boat. The fish had died with their swords in the craft, and the sailors sawed them in two beneath the boat. On another trip two of the monsters drove their long sabres into the stem plank of his schooner, and the Captain did not know the blades were there until weeks later, he pulled his craft on the ways to paint her.

One Provincetown sailor got a swordfish's sword through his thigh, and he was put ashore in a New Bedford hospital to die. He got well, however. Another Provincetown sailor encountered a swordfish in his dory, and was killed. The fish had dragged the frail boat twenty miles in an hour by means of the harpoon line, when the monster suddenly turned and came in a terrific flurry straight for the boat. He pierced the dory and drove his blade through its bottom, and directly into the body of the man. The sailor lived two or three days, and died in agony.

Mackerel and cod, too, are becoming plentiful again on the Massachusetts coast. Yesterday the bluefishermen of this port took several thousand pounds of fish in set nets.

NEW $2 SILVER CERTIFICATES.

They Will Be the Handsomest Bills Ever Sent Out from the Treasury.

WASHINGTON, Aug. 28.—The most beautiful piece of paper money ever produced by the United States Treasury is the new $2 silver certificates, first proofs of which on cardboard were shown privately this morning at the Bureau of Engraving and Printing. Although they were endorsed on the margin in Secretary Foster's handwriting as "Approved," they had not previously been exhibited to anybody save a few high officials of the department.

It is not true, as has been reported, that new designs have been adopted for the certificate mainly because there is a plausible counterfeit of the present one in circulation. This fact has had influence in the matter, but the change is made chiefly for the reason that the face of the old bill is not satisfactory, and it is thought just as well to substitute a new picture at the same time with the introduction of the distinctive paper. The portrait on the face of the present certificate of Gen. Hancock is not well adapted to its purpose in the arrangement of light and shade. After passing through a few hands it gets dim and is practically effaced. Paper money of small denominations requires more careful execution than large bills, as it must go through much more wear and tear.

The new $2 silver certificate is really a work of art. In the middle of its face is an oval portrait of Secretary Windom, with his name beneath, which, in lifelike resemblance to its original, is unequaled by any other production of the engraver's art. Features of the rest of the design consists of the conventional legend gracefully drawn in lettering, with a figure 2 in each corner. The back is a wonder. Nothing so elaborate in geometric lathe work, which is the despair of the counterfeiter, has been produced hitherto in the manufacture of paper money in any country of the world. The counterfeiter will find this new certificate a more difficult subject for imitation than any that he has yet encountered. People have asked, "Why should not the counterfeiter procure a geometric lathe?" He could, very easily; but to reproduce with its aid the patterns he would imitate is an impossibility. If you look at the complicated concentric and eccentric devices on the reverse side of any United States note or certificate, considering that they can be reproduced only by a duplicate copying of engraving by hand, you will appreciate the difficulties. The back of the new certificate is engraved with a view to showing as continuously as possible the two stripes of silk fibre, each about as wide as one's thumb, that run across the paper on which the designs described are to be printed, dividing the length of each bill into three parts. For this purpose portions of the surface are left white. In the middle is an oval, containing a legend, on each side of which is an elaborate piece of lathe work, with a big figure 2 in the centre and little 2s scattered about at points where the lines converge. There are other features of the design, including some very difficult small lettering, which are into deed to embarrass the counterfeiter.

A sample of the distinctive paper at the Treasury Department was exhibited to-day. It looked somewhat like a fine quality of note paper, foolscap size, with two bands of closely scattered red and blue fibres running from top to bottom. Each sheet was intended for the printing of two certificates for $2 each. The fibres are merely silk threads, bought from a New York importing firm by the contractor who works for the Treasury, cut in lengths of a quarter of an inch, and run through the paper sheets. No little difficulty was found at first in making the process satisfactory, and the Government pays somewhat more for the material than it used to for the plain article.

**His Teeth Blocked the Tunnel.