

Among Men who Work with Hand or Brain

The Week's Progress.

Review of Recent Advances in Science and Industry.

SUNDAY, JUNE 3, 1906.

Animal factories may be an industry in future civilizations. Prof. Wilhelm Ostwald of the University of Leipzig, believes that by slow development science may even create a type of life as high as that of our domestic cats and dogs. Of course at first man will be able to produce only a piece of protoplasm, something like the water hydra, or the resemblance of the sea urchin Prof. Jacques Loeb of the University of California has evolved; but it will be distinct with real life and it will be a step to the new evolution. This evolution can only result in the creation of something the equal of the higher animals, but what it will be who can say?

It seems to the professor that the scientist who will be able to do this will be able to determine the physical form of his creation after the development has started and he will have created a new order of life, for this being will multiply in its own form indefinitely, just the same as all our modern animals. "I am not a biologist; I am merely a chemist. I cannot say whether this creation will be crustacean, amphibian, mammalian, or whether biped, quadruped, fish, fowl, or reptile; I know that by inorganic processes organic being can be produced, and that organisms may be furnished with a living object lesson in the doctrine of evolution. Who knows but a new order of humanity may be created? A living thing is nothing but a system of energy and life—it is but a matter of chemistry."

The Filipinos are being analyzed, classified and described by ethnologists. Mindanao and Sulu were conquered in the middle ages by Mohammedans, who established a new form of government and introduced a written code of laws. Previous to this there was no written history, but thenceforth the datus or chiefs kept their genealogies, and these, brief though they be, are the only sources for Moro history. Prior to the American acquisition of the islands the tarala or genealogies were rigidly kept out of sight of all foreigners and non-Mohammedans, but the ethnological survey has been successful in getting copies of them; these have now been translated. The Moros comprise various tribes, which widely differ. The language is Malayian, but the characters employed are Arabic, which makes the work of transliteration difficult.

A wind power electrical plant in Indiana is a successful novelty. The device heretofore tried for this purpose have usually failed because Wind Power makes Electricity. By the new method electricity is generated as a by-product in the course of the windmill's service in driving a water pump. The water is led into a hydraulic regulator built on the principle of a water lift in which the pressure is controlled by weights. Approximately a uniform head pressure of seventy-five pounds corresponds to the capacity of the water pumped by a ten foot windmill wheel. This is increased to 100 pounds for a fourteen foot wheel. The water is discharged from the hydraulic chamber by means of automatic valves. This regulator is the means of maintaining an even pressure, under all conditions whether the windmill is revolving fast or slow. Under the uniform pressure the water is passed from the hydraulic chamber through a water motor to which a dynamo is attached. Then it is discharged through troughs and led away to the fields if desired. Or it can be stored up in tanks or reservoirs to be pumped back into the hydraulic regulator in case water economy should be necessary. By producing an evenness of pressure in this way the dynamo is run at uniform speed whether the wind is blowing a gale or is just enough to make the wheel go round. The whole arrangement, when once put in operation, requires little or no attention. Secondary batteries take any current generated in excess of immediate demands. It has been calculated that a fourteen foot windmill should produce enough electricity to light the average farm, generating in the daytime the current that is burned at night. The cost of maintenance is said to be almost nothing, and it must be remembered that while the electric plant is doing its good work the windmill proceeds with its usual operations.

Pessimistic prophets sometimes sound sage and logical, but the unreasonable optimism who sees better things despite the argument outstrips them. In the days of Stephenson's early experiments it was predicted that a speed of more than twelve miles an hour by rail would be impracticable, if for no other reason than that the human system would not withstand traveling at a higher rate of speed. In the early days of steamboats it was declared that transatlantic steam navigation would be impossible, mainly because of the inability to provide room aboard ship for the coal that would be necessary for the voyage. The prophet had not done a speaking when the news arrived that the ship had just finished a trip across the Atlantic under steam. So with transatlantic cables. Some prophesied that the belief that they could never be laid because the density of the water below a certain depth would be so great that the cable would not sink to the bottom of the ocean. All the wise folk regardless, however, the cable promptly descended to the ocean bed at a depth of 16,404 feet, and within the last year a cable was sunk in the Pacific ocean in the vicinity of the Lakin Islands at a depth of 20,969 feet.

Prof. Piltchikoff of the University of Charkow has found that some metals give off rays that decompose the silver bromide of the photographic film and others that restore the decomposed bromide. He names these radiations positive and negative. Most metals, including cadmium and zinc, are positive; osmium and tantalum are negative; copper and brass have a neutral radiation with no action; and gold and mercury give off no radiation at all. The radiation is deflected by air currents, but not affected by electric or magnetic fields. One suggestion is that it may be a kind of metallic ions penetrating this metal and also human skin. More than sixty years ago Mooser noticed that certain bright metals emit rays capable of affecting photographic plates and of passing through thin screens of paper, etc. Prof. Piltchikoff's work is a continuation of this process.

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Profit on First Cow.

In order to make the care of Trilby interesting I have endeavored to make it express my ideal. In the beginning I knew a moderate part of the caring for cows, so I opened up communications with the dairy department of the Iowa State Agricultural college at Ames. I asked the questions, and those at the head of that department were glad to furnish me with all the information at their command. They have given me much valuable information and I have obtained more through experiment and experience. Many good pointers have come to me in literature pertaining to the dairy. Our excellent care of Trilby brought such satisfactory results that we decided to purchase another cow. We purchased Trilby in March and in July we purchased the second. Trilby was not fresh and would not be for



Engine House an Idle Place; Firemen Should Be Occupied

By David Gibson.

YOUNG MAN, keep out of the fire department. It's a killer of ambition and a destroyer of manhood. This statement is credited to Chief Wallace of the Cleveland fire department. There are instances of domestic unhappiness in the lives of city fire department members; for the same reason there is no domesticity in the life.

Should Profit by Their Industry. A number of Cleveland men, interested in education, have formed a committee to devise a plan for promoting study and certain industries among members of that city's department. "No law should prevent any class of men from profiting by their industry," said one of this committee, "especially when it costs the city nothing and does not conflict with other craftsmen. The records show that these men are occupied about one-fourth of the day in department work. They are not wantonly idle—idleness is forced upon them. The proof of their industry is in the physical condition of the live stock, the apparatus, and the department houses. A fireman jumps out of a swam bed in the middle of the night. A few seconds later he is on an open vehicle half clad and running the risk of being killed at the turn of every corner, and still has another chance or two on arrival at the fire. These men are the ones who suffer from our lax building regulation of past years, and money is the only way we can reward them. They are entitled to all they can get through industry—while waiting for a wall to fall in on them."

Men Made Mission Furniture. The captain of the company said the public library willingly sent boxes of books to the department houses, but so many volumes have been lost and destroyed that they no longer accepted the service.

The men in this same house made mission furniture for a time, and it was beautiful, too. They also built a loom and wove flannel, socks, rugs, mats, and things, but the law forbids indulging in extraneous businesses, and after supplying their friends and neighbors they grew tired—men find little joy in work when they get nothing for it.

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Get Good Milk and Make Money by Keeping Your Own Cows.

By Leroy Berrier.

SEVERAL causes have inspired me in the establishment of our little dairy. The first and greatest cause originated in our desire for fresh, clean milk and cream from healthy cows that are fed on wholesome foods. That states the primary cause; others I shall mention further on.

This outspoken demand in every city and even in small towns is for fresh, clean milk that contains the proper percentage of cream. When I purchased the first cow I said this is one way to meet that demand. I can do it for ourselves, and the man who can bring forth a plan whereby he can furnish milk which contains the proper percentage of cream to all those in every city and town who buy milk, that man will prosper in the milk business.

When our first cow was purchased I was in need of outdoor exercise, my occupation being that of an instructor and writer. Trilby—that is her name—would give me exercise in milking and caring for her. This is useful exercise and therefore more valuable than mere plays, or games, or physical culture, and in the use of the milk she produced all of us were to be more certain of health and strength. So the desire for useful outdoor exercise was another cause that started our little dairy.

Business School for Boy. Our boy was well taken care of and produced more milk than we needed, so we decided that some of our neighbors should have fresh, clean milk. We soon found customers who were glad to get it. At this point the assistance of our 10 year old son came in. He delivers the milk. He attends the public school where teachers and books tell him of quarts, pounds, bushels of feed, cents and dollars. The starting of our little dairy furnished him with another school wherein he handles quarts, pounds, bushels of feed, cents, and dollars—that is the practical school. Our little dairy furnished another school for our young son. He had been saving his pennies and we induced him to invest them in a bosky with us. That gave him an interest in the little dairy. From the beginning I have kept him with me as an assistant in caring for our bossies. In this he is receiving another form of education that is certainly useful. This school constituted another cause that led to the little dairy that we now have.

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Saved Road Millions in Damage Claims.

By W. L. Rice.

ELISHA R. POTTER has settled more damage claims than any man in the world. He has saved the New York, New Haven and Hartford railroad and the roads that it has absorbed hundreds upon hundreds of thousands of dollars in damage claims by his cunning, his skill in interpreting character, and his ability to drive a bargain.

And now, when 70 years old, he stands at the head of the business, and in New England and New York the name "E. R. Potter" which is all the title he ever had as a railroad man, balks the men who attempt to beat the railway through fraudulent damage claims. Potter, still vigorous, and with the same kindly, easy manner that has enabled him to settle \$25,000 damage claims for \$14 and send the claimant away happy, talked recently of his career as runner down of claims against railroads.

Gets Into Business in Odd Way. He fell into the business by accident—after sketching out quite a different career for himself. He was born at Scituate, Dec. 16, 1830, and, after the family moved several times, settled down temporarily in East Greenwich. He drove a baker's cart as a boy and worked in a grocery, but his ambition was to be a shipbuilder, so he went to New York to learn the business—and, after working a year in a hardware store, got employment in a shipyard and learned the business. Then he went back to East Greenwich and organized a company that built the ship John Howard. They meant to build a boat of 200 tons burden—but when it was finished it had twice that capacity.

It was not until 1872 that he became a claim agent—and he got the place in a peculiar manner. He was riding on the old Stonington road when the engine struck something. Potter ran forward and discovered a dazed junk dealer, a slightly injured horse, and a pile of junk in the wreckage of an old wagon. Potter knew the junk man, so he took him aboard the train, went home with him, and got the man to release the railway from all damage claims on payment of \$25. His work attracted attention and the Stonington railway made him claim agent, and in that capacity he showed such skill that the New Haven system appointed him—and gave him perhaps the greatest claim agent job in the country—at least the man who has settled the greatest number of damage claims aggregating the greatest amount.

Damage Claims All Peculiar. Speaking of the claim agent business the veteran says: "Damage claims are all peculiar. Almost every man, woman, and child seems to think he has a right to bring a case against the railroad whether it is blame or not. People are encouraged in this way by a crowd of lawyers, who are on the scene the minute an accident occurs and urge the injured to bring a suit against the company."

"We had a case several years ago where a man was killed down in Connecticut. It was a bright fellow, but at a critical time he neglected to use his common sense and was killed. It was as much the fault of another workman as it was his, and after one of these lawyers had talked with the man's relatives they came around to see me. They

tried to collect for old horse. A little town case of this kind occurred in a little town down in the suburbs part of the state. A horse jumped over a fence or to the railroad. The train scared the animal so that it strained one of its hind legs beyond the power of use, according to the claim. "The owner wanted \$500, and I went down to look things over. From the appearance of the wounds I was satisfied that the horse had been injured for a long time, and from the man who worked about the barn I learned from whom the horse had been purchased. I looked up the former owner, who said the horse had never been paid for. It had been injured as long as he knew anything about it, and the man who wanted \$200 took the animal to see if he could not do something to cure it. If he was successful he was to receive one-half what the animal brought. We did not settle."

Fallos Spinal Injury Claim. "All of the cases that come into an office are not of this kind. Some are for larger stakes. Several years ago two of our trains came together, and several people were hurt. We settled with most of them, but there

terup by name, and she certainly is a buttercup. She is now producing seventeen quarts per day. She is an exceptional Jersey. I do not think there is one in a hundred that produces such a quantity.

Fanny has just freshened also, and she is now producing more than eighteen quarts per day. Hold in mind that they are doing this while in the barn. What will they do when out on June grass? But I must go on with my description of my feeding regime. First, let me say that a good milker must be a good feeder and drinker. For hay there is none like clover. Cows all like it and it brings returns in milk.

Keep Record of Each Milking. We arise at half past 5 each morning and proceed to the barn. My son now cleans the barn and weighs the milk as fast as I milk. He makes a record of the weight of each bosky's mess and then it goes to the house for straining.

I do not plan on getting milk for nothing fed. After the milking and feeding I give them hay and one half each of fresh water from the well. I give them just hay enough to be eaten up clean by noon. Then I give them two pails of fresh water each and just hay enough to be eaten up clean by half past 3 or 4 o'clock. Then they are again given hay and just enough to be eaten up clean by milking time, half past 5. Between 4 and 5 I water them again, giving two pails to each if it is wanted. Then I use the brush and currying comb to their enjoyment. When through with this part of the regime they are clean and ready for milking and feeding. This takes place from half past 5 to half past 6. The last course for the day is a pail of fresh water for each.

Now they are ready for the night so far as feed is concerned. Their mangers are empty but the bossies are full and ready to rest during the night. Under this regime we are realizing better results than ever before.

Buying Another Jersey. Now comes the feeding in our sanitary barn. As a rule I think that farmers and dairymen believe that if a cow gets enough water and feed some time during each day, that should be sufficient. I have learned better than that. If you will step into our barn you will see a row of bright eyed, fat, sleek, and clean bossies. In February we purchased another well bred, full-blooded Jersey, Buttercup by name, and she certainly is a buttercup.

Keeping Substitute Cows. From the first of December to the first of May it is necessary to keep one or two substitute cows. Their milk is needed while the regular herd is dropping off in its production and nearing another freshening. Not long ago one of our substitutes was giving eleven pounds of milk at a milking when she was at her best. For some reason that I did not at first understand she would drop down to perhaps eight or nine pounds, and then go up to eleven again. We always fed her the same amount, and there was no variation in quality. I made up my mind that I would discover the cause, and I did. It was in the system of watering her. We were watering her twice a day, once at 11 o'clock a. m. and again at 4 p. m. I noticed that she was often thirsty and drank more water than an ordinary cow. I put her on the system adopted with the fresh cows of the regular herd, and that gave her water four times a day, morning, noon, 4 p. m., and the last thing at night. From the day that I commenced to water her under that system there has been no variation in the first yearling in her mess. Just the proper, orderly arrangements of watering times has saved many pounds of milk. So much for science and system.

Little Dairy a Success. In concluding, I wish to say that our little dairy is a success from every point of view. Excellence is our aim in every phase of it. There is no food product that demands as much care in handling as milk. It must not only come from the barn or pasture clean, but it must be carefully strained into clean cans, and clean measures must be used when it is sold. Our milk is often warm when it is delivered. If our patrons present clean utensils in which to receive it, there is no reason why they should not enjoy excellent, fresh, clean milk as we do.

Milk pails and cans and measures, and especially strainers, must be thoroughly washed and scalded out with boiling hot water, which sterilizes them. Too much care cannot be taken. To return again to our bossies, I wish to say that we keep on friendly terms with every one of them. The bosky that likes to have his milk her will give more milk than she would if she disliked me and would rather I should not milk her. These are matters that all count in pints and quarts. We shall be able to sell fifty quarts of fresh, clean milk each day for the six months beginning May 1. Four cows will furnish it, but we shall probably keep five, so as to have extra milk and cream. The income for fifty quarts per day is \$5. or \$50 per month. The cost of pasture for five head is \$25 per month. That is a fair showing for a small dairy that demands but a few hours a day or two hours' attention each morning and evening.

Heart Disease Doesn't Kill; Weak Hearts Die Slowly.

The heart is perhaps the organ of the body least known by members of the medical profession, and many a man who has been told he would die in a given time has outlived the doctor who pronounced his doom. Heart disease is coming to inspire less and less terror in the average man, and nine men in ten who are allotted ten years, to live double that time to die of an entirely foreign complaint. "Some years back," says Dr. Warren Schomover Jr., in the Medical Record, "heart diseases were a cause of great worry and fright to the laity as well as to the pro-

was one man, a big healthy fellow, who claimed he had injured his spinal column. I met the train that brought him to town, but he would not allow either myself or the surgeon to get anywhere near him. The man's doctor said we would excite him, or something of that kind.

"I had a man follow the carriage that took him away, and the next day we went around and examined him. The surgeon said he was not hurt seriously; that he would be all right within a month. It went on for about six weeks, when I got a letter from a lawyer in New York, saying that the man was in bad shape, his spinal cord was injured, and it would be a question of only a few months before he might die.

"I took our surgeon, went to New York, and, after a lot of trouble, met the injured man in the office of his attorney. He was apparently in bad shape. All the organs on the left side of the body were paralyzed; it took him five minutes to move in his chair, but his face was the picture of health, and his hands were plump and fat. Whenever he moved he groaned heavily and altogether his feelings and his dignity were injured to the extent of about \$10,000.

Cripple Walks and Lifts Weights. "After I had a talk with him I allowed that he seemed to be hurt but that his figure was pretty big, and if he cared to do any business with me he knew where I was located. When I left the office I left a detective on that fellow's trail. He followed him everywhere and that chap, with the injured spinal column, tired him all out. One day the people got a snapshot photograph of the man carrying three large picture frames on his shoulder across Brooklyn bridge, and holding his crutches in his hand.

The detectives became acquainted with him, introduced two young women, and the crowd went tramping through the fields. One of the young women had him doing all kinds of stunts, and one day she got him to lift his strength on a lifting machine. He lifted nearly 400 pounds. When the case came up in court the man's attorney introduced evidence to show that he was unable to get about without the aid of crutches, that he would probably be crippled for life, and his injuries might result fatally. We brought in the photograph and asked him if he recognized it, and he admitted he did. Then we brought in the detectives. He admitted he had tramped through the fields with them without the aid of crutches. When we brought in the young woman who had him lifting the 400 pounds he also acknowledged his acquaintance with her. The case was continued over night, and before the court opened the next morning it was settled. It cost us just \$500.

Claim Agents Born, Not Made. "It requires a peculiar ability to become a successful claim agent. A man must be born to it. He must know human nature, have a wide knowledge of the value of a multitude of material things, and must be able to convince those who are really injured that the railroad stands ready to make good any damage that is caused through its fault. The average railroad does not object to any lawful claim, but it is obliged to fight the multitude of unjust claims which are brought against it."