

Among Men who Work with Hand or Brain

The Week's Progress.

Review of Recent Advances in Science and Industry.

SUNDAY, MAY 20, 1906.

They say they have seen the ethereal body, one of man's subtler bodies interpenetrating the dense physical body. The etheric body has long claimed to have seen it with a higher vision and the occidentals are now seeing it by the aid of instruments. In being able to see the skeleton of a live person by Röntgen rays we have gone far to surmount difficulties in making out the shadow of the ethereal body. A hazy, semi-transparent mass surrounds the bones in a skin which seems to invite definition by similar methods of research requiring little more than a better understanding of the office of the different rays of light to give us a glimpse of the man that survives the mortal case. The etheric body, erroneously termed the soul, seems to be a compound of those electric corpuscles of which matter is supposed to consist, with the unknown principle of animal life, and it is obviously a connecting link between mind and matter. A discovery of this sort is calculated to revolutionize the mental sciences and correct many erroneous ideas. It is particularly important to ascertain how the ethereal body acts during life. Many doubt the existence of any inner form of this kind. But it is an established belief in the east, especially in India, handed down from ancient days. It is difficult to see how their knowledge could have been so complete, even including the fact that the ethereal body never grew old after attaining maturity, unless they had been able to catch sight of the inner form.

Even the eternal rocks are being made to order in 1906. The Germans are having an artificial pumice stone made of sand and clay which is supposed to excel the genuine article in durability. There are five different makes. The first is either hard or soft with a coarse grain for wall paper, water-proof garments, and the modern auto industry. The second can also be supplied hard or soft. It has a medium grain and is mainly used for stucco and sculptural work; also for rubbing wood before painting. The third is soft, of fine grain, and is recommended for polishing wood and tin. The fourth is of medium hardness and fine grain and gives wood the right polish before being finished with oil. The fifth is hard and of fine grain and used for polishing stone, especially lithographic stone. The manner of using it is the same as for natural pumice stone. For wood it is first used dry, afterwards mixed with oil.

There is a new theory of the earth's interior. It is believed by Mr. Bessendorf Ingram, a physicist of England, that the earth embraces three concentric spheres, or three spheres within spheres. The solid nucleus he supposes to be between 8,000 and 7,000 miles in diameter and this to be surrounded by a liquid substratum, outside of which is the crust, variously estimated at 70 to 2,000 miles in thickness. More than two centuries ago a similar theory, including the right polar region of the solid sphere on a different axis from that of the entire globe, was held by Dr. Edmund Halley to account for the changes in the earth's magnetism. The axis of the nucleus was thought originally to have been that of the entire globe. The earth's internal heat, it is now pointed out, may be accounted for by the friction of the differently rotating bodies.

Oats, peas, beans, and barley grow better, it appears, when they have been fertilized with pure sulphate of manganese. The small quantities of manganese shown by chemical analysis in animal and vegetable substances have been looked upon as accidental and unnecessary. Recent investigations, however, have tended to prove that the metal is indispensable to the living cell, and Mr. Bertrand, a French experimenter, has found that pure sulphate of manganese has marked fertilizing effect, an application of about fifty pounds to the acre giving an increase of 22.5 per cent in a crop of oats. The crop from the manganese fertilizer, however, is shown by analysis to contain no more of the metal than the crop from other soil, the plant seeming to require a certain definite proportion.

Will the oyster work? He is in jest or earnest, sane or unsound, there is one O. Greenburg who expects to displace gasoline motor power with the epicure's friend, the bivalve. Mr. Greenburg believes that no animal is better muscled or more powerful for its weight than the oyster. To put this power to practical purposes he has experimented for a number of years, and now states that he can use it for locomotion. The principle whereby the device works is that of the expansion and contraction of the muscles of the oyster. By means of an electric current the muscles of the bivalve animal may be made to contract and to expand, and a scheme has been devised which at least for the present is a secret. The movement of the oyster drives a piston with sufficient force to run a car at a good rate. Various sorts of oysters can be used, and those grown on the coast of India, weighing sometimes 300 pounds, are suggested as especially useful.

Decimal weights and measures are in order for Uncle Sam after July 1, 1906, according to Dr. A. G. Bell, who has pointed out that all civilized countries with the exception of the United States and Britain and her colonies have adopted the simpler and more scientific decimal system. By reference to the decimal system of coinage Dr. Bell has provided convincing instances of the simplification possible with it in the conversion of units, and explained that the United States, when it changed from the old system of pounds, shillings, and pence to dollars and cents did not adopt the metric system of weights and measures because the latter, as we know it, did not appear until after the American coinage act of 1792. The facts that our whole system of arithmetic is decimal, that no difficulty whatever is experienced by ordinary workmen in the use of the metric system—provided there is no question of converting their measurements, and that the use of the metric system need not mean the use of new tools—were all clearly explained.

Artificial Pumice Stone.

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"Cutting Corners" on Clock Business Man's New System.

By Louis Weaver.

CHICAGO business man who has had remarkable success in a field in which many other men as naturally bright and as ambitious as he have failed ascribes his success to a system which he calls "cutting the corners on the clock." Any man who follows his system cannot fail to have greater success in whatever line of endeavor he is engaged in. The system is simplicity itself, can be used without the payment of royalty, and is neglected probably because it is so obvious that few people think that such a simple thing can have such beneficial results. The man who has almost doubled his income by its use and who is enthusiastic in its favor says it is based upon the trulism that time is money, and consists of coining money out of time that under ordinary conditions would not be used for the purpose of forwarding his business interests.

A Minute Here and There. He begins with sleep. Before he decides to utilize for the purpose of getting ahead every possible moment of the day he has gone to sleep at least nine hours a night. The only times he misses his nine hours are on occasions when he stays up too late the night before. Since the installation of his new system he never tries to get more than eight hours' sleep. Any physician will say that eight hours' sleep is better than ten, and so Mr. Business Man not only has an extra hour to give to his working day but he is in better physical trim.

He used to dawdle over his bath. Now he clips three minutes in that function of taking a shower, and he feels better in consequence. Six minutes he has eliminated from the time he used to take for breakfast. He glances over his paper at the breakfast table, and reads it thoroughly later in the day. In the elevator he works upon business computations instead of gazing out of the window. He does not use the smoker now on his way to work, and finds his head clearer as a result. A heavy cigar after breakfast is a soporific that he is better off without. His office hours are not changed, and his hour for luncheon remains the same. But instead of lunching with a crowd of "good fellows," as he used to do, he takes his lunch now with men who are engaged in his own line of business. He picks up a great deal of important information at this noon hour. On his way home at night he reads the papers on the car, instead of losing that time, and when he gets home he is ready for his dinner, a book and a pipe, or the theater. He has also set in motion a system of absolute punctuality in keeping appointments, and figures that each day he saves almost an hour by being present promptly at the time he has set, and in insisting that his subordinates do likewise. His watch has become his mentor, and he has discovered that while there is nothing so easy to squander as time, there is nothing so hard to get back, saved frugally, pays such heavy returns. He commends his system to those busy men who say that they haven't time enough to do all they should. He says that there is plenty of time, but the principal trouble is that men don't economize in its use.

Worst Trade in the World Is Wall Paper Color Mixer.

By William Giles.

POSSIBLY it wouldn't be the worst trade in the world if the matters of hours, salary, and chances for employment were to be considered as offsetting the things that go to make an occupation unpleasant. The pay sometimes runs as high as \$100 a week. The hours run on an average eight and one-half a day. The trade is so far from overcrowded that every competent man in it is known to practically every employer in the country. Every man in it is sure of work, if he stays in the localities where his trade is of use, that is life to him one grand, sweet song of employers trying to hire him from each other. The demand always exceeds the supply. And employers treat their men as considerably as they do customers. BUT—it is the worst trade in the world, just the same. The favorable things mentioned do not compensate for the unfavorable features of the work. The economic conditions of the workers in it as a class may properly be considered as near to the ideal as this mundane sphere offers to any wage earner. But the actual work that the men engaged in this trade do is so dirty, so foul, so unwholesome, and so generally repulsive to the normal human being that it merits the title that knowing ones bestow upon it: The worst in the world.

The trade is that of the wall paper color mixer. Workers in ink, ink compositions, paints, leads, and colors of any kind are "up against it" in the matter of having unpleasant work. Makes Beauty from Foul Things. For some strange reason or other it has been decreed in the alchemy of nature that the pretty things of the world must spring in the beginning from the foul. The brightest colors come from the most deadly, and most loathsome compositions of chemicals, etc. The fairest shade of ink or paint material was once in the foulest form of protoplasm. The men who handle these things in their original forms have work that is worse than unpleasant. Color printers, paint mixers, and ink-makers work hard and die quick. But the men who mix the colors that go to make ink for printing wall paper work much harder and die much quicker than any of these—unless they quit their trade. They have without question the foulest skilled work in the world—and they admit it and curse because it is so. Combines Foulness of Foulest Trades. The man who cleans catch basins has a dirty sort of calling in life. The man who scrapes the inside of a gas tank after the gas has been emptied therefrom has duties

Hotels Offer Good Opportunities for Many Kinds of Women Workers.

Anna Carleton. In perfect order, ready for the decorator and waiters. In large hotels the household furnishings are bought by sample, but the housekeeper has this to do in the ordinary family hotels. She buys all the wall paper, the curtains and linens, and this is no small task. She must have considerable knowledge of materials, for people who live in a hotel, year in and year out want their apartments as attractive as their own homes. They expect carpets to harmonize with wall papers and have ideas when it comes to a question of curtains. A housekeeper must use tact and judgment with maids. If the average woman who keeps house finds it no easy task to get along with two or three, certainly housekeepers find it a task to manage from twenty to fifty. Many girls prefer to work in hotels because they have their work planned for them, are expected to do so much and no more, and when their work is finished their time is their own.

Girls Prefer Hotel Work. As one housekeeper said: "Yes, we keep our girls for years, because they know their work is, and are put on their honor and held responsible. I never ask a maid to do anything I should hesitate about doing. Committing a maid occasionally for work well performed acts as a wonderful stimulant for better work." When it comes to a question of maid or guests the housekeeper often is presented with knotty problems. She cannot afford to insult guests in the house, nor discharge a good maid without careful consideration. It is a frequent occurrence for people living in hotels to suspect maids of having taken their belongings, but in nine out of ten cases the stolen articles are found in a few days, and the woman explains that she has been mistaken. The housekeeper has little time for herself, and is satisfied if she has time to do a little neglected shopping. Her vacations are few, for hotels keep open all the year round. But she finds that her compensations are many. The wages are good; she may start on \$50, but if she is competent and experienced she can command from \$75 to \$100 a month. Her work is dignified, and offers variety and gives her opportunity to meet new people. And, best of all, her advancing years are in her favor. All things being equal, she is considered a more valuable worker at 60 than she was at 45.

Age and Experience Valuable. This work cannot be learned in a day. It is more inclusive than it seems and requires her day's work at it and it does not close as long as any one needs her. At a moment's notice she may receive word from the manager to get a suite of five to seven rooms ready in two days. This means she must get scrubwomen, paperers, carpenters, and maids ready to refurbish these rooms in two days. When business is rushing she has many such suites to get ready in one week's time. She is responsible for the appearance of the bedrooms and laundry and she has full charge of the linen room. Though she is assisted by two or three girls who do the mending, sewing, and the assorting of linen for the towels, each week she looks after 700 to 800 towels, 500 curtains, 700 napkins, and 200 tablecloths. It is her business to see that every maid brings the same amount of linen at the end of the week she was given at the beginning. The dining room linen is an important consideration; it is not unusual to have fifty napkins make a sudden disappearance.

Does Buying in Family Hotels. In the winter, when there are parties, luncheons, and receptions day in and day out, her duties are heavier. She must see that the banquet rooms and luncheon rooms are kept in perfect order, ready for the decorator and waiters. In large hotels the household furnishings are bought by sample, but the housekeeper has this to do in the ordinary family hotels. She buys all the wall paper, the curtains and linens, and this is no small task. She must have considerable knowledge of materials, for people who live in a hotel, year in and year out want their apartments as attractive as their own homes. They expect carpets to harmonize with wall papers and have ideas when it comes to a question of curtains. A housekeeper must use tact and judgment with maids. If the average woman who keeps house finds it no easy task to get along with two or three, certainly housekeepers find it a task to manage from twenty to fifty. Many girls prefer to work in hotels because they have their work planned for them, are expected to do so much and no more, and when their work is finished their time is their own.

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Served as a Trained Nurse.

Another successful housekeeper served as a trained nurse in a family for many years. inch with colors as variegated as Joseph's coat ever dreamed of being, drippings from the vats, caldrons, and mills. And over and above all is the odor which makes life unpleasant for the mixer. Clothes Discarded When Work Starts. Coming to work the mixer, if he is at all careful concerning his person, removes his outer and under clothing and enters his working clothes, which are in the main composed of a pair of overalls. It is his habit to change his shirt and trousers before he starts his work. But most mixers are not so particular. Still, there is one advantage in the shirt preparation, it is easier to peel off an ink bespattered undershirt than to bathe the upper part of the body. But the sleeves in the shirt are strictly untenable. It is impossible to drive a sleeve covered arm into a slimy, sticky mass of colored ink and krazed and handle it with as much facility as is accorded by the naked limb. From the time the work is started in the morning the work of the mixer is one constant revel in the kind of endeavor at which the foregoing is slightly hinted. He stirs smoky, smelly compositions with his bare hands, bends over vats full of concoctions of decomposed animal and vegetable matter that stink higher than any Pittsburgh divorce scandal, and for hour after hour breathes in air that is polluted beyond the wildest

dreams of even a professional magazine exposé. At night he goes out as the whistle blows with a face that is nearer the color of rank, sickly sea weed than a healthy physiognomy, and his hands and wrists are steeped through the skin in a combination of red, green, yellow, black, blue, etc. If he happens to lay off from work for a few weeks he gets this work off. It takes longer to take the green out of his face. Pay High, But It Is Earned. For doing the job he receives from \$20 a week to \$100, ranging according to his ability as a handler of colors and as a producer. A head color mixer seldom receives less than \$50 a week. He earns his salary. He helps to make or break a firm's business. He is an artist in his way, although he would probably curse scornfully if this were intimated to him. He is paid for what he knows, the men under him for what they do. He does not require any particular talent to learn to do what they do. Almost anybody can learn it in considerably less time than is required to master the ordinary trade, if he gets the chance to try it. When it is learned a man practically is sure of steady work, and he should earn \$30 a week whenever he works. Most color mixers don't work all the time. "You got to go out and forget it once in a while, anyhow." is one motto that the guild swears by. Even the distinction of belonging to the worst trade in the world falls on mankind.

Work in Terrible Heat. The mixer usually works in the basement of a factory. This is because the boiler room is there, and heat is a paramount factor in the work of preparing the coarse ink of wall paper making for the presses. The work of mixing all is done in a room where the temperature is more like the oven of a bakery than one in which the average person of sane ideas in regard to heat would be pleased to work. Vats, tables, mills, caldrons, and equipments of many kinds are at hand. The floor usually is covered to the depth of an

Girl Milliners Make Hats of Chiffon at \$1.50 the Dozen.

By Grace Clark.

This is what is called "learning," and for learning you are paid \$2 a week. During this time if you are half way clever, you will make from two to three dozen hats a week. In a couple of weeks you will go on "piece work." And then, with a discouraging chiffon model—with a chiffon pull in a honeycomb of shirrs, and maddening little straw braid ruffles to gather around the brim, beaded coverings of Swiss and lace straw underneath, you will do six or seven of these in a day, and because they are difficult you will get as high as 15 cents a piece for them.

Full of Hope and Good Nature. "I know I can easily make my \$2 a day when I get started," said Marie, a quick motioned little girl who looked about 16 and who was cheering herself along under a difficult problem with crown of spiral lace edges, which had to be sewed on by hand. She had been on piece work three days; the first day she made \$1.50 doing Leghorn hats that are "trimmed" only and that bring 10 cents a piece. The next day she had knocked off work early and had made only \$1, and today— "Well, I guess I'm stuck today," she said cheerfully. "You see I got a poor 'draw' but it will go better tomorrow." Marie has to take care of herself so it will be necessary for it to be better tomorrow. At the same time that you learn mechanical millinery you learn optimism. Good nature of the kind that isn't teased by handling materials and shapes that "you can't get hold of," and optimism that refuses to see the day in any light but that of the full sun that is to be made in the end, and all setbacks as only part of the day's work, is the only force strong enough to dig out a salary as high as \$15 a week from mechanical millinery. The long table in the first room is a sifter

Bookkeeper Tells of Methods of Old Days.

By J. L. Graff.

When Mr. Goodhue commenced keeping books there was no such thing as steel pens. He used quills, and was obliged to have a specially sharp knife to keep them in order. Not a sheet of blotting paper could be found in the land, the correspondence and the ledger and day book pages were blotted with sand kept in a receptacle for that purpose. All the ink was imported. In a good many particulars there is absolutely no change in the bookkeeping of today from that of more than a half century ago. The books are about the same as they were then, save the innovations in the matter of loose leaves and other similar features. Books cost about as much now as then. When Mr. Goodhue had a commercial business of his own he kept his own books. He has been bookkeeper for some old and well known mercantile concerns, that handled an immense business. Mr. Goodhue was born at Warren, O., came to Indiana in 1837, and has been here ever since. He uses no adding machine other than his head, and he writes a hand that is as steady and clear as it was forty or fifty years ago.

One milliner married to a musician came to one of the factories for work when her husband was out of a job. "Why don't you have him do millinery, too?" she was asked. "What! Him make a hat?" said the woman. "Of course. He can do it," she was answered. "He did, practicing on the white straw and chiffon and turning out his seven dozen a week until he got back his job." The question, "How can I learn?" can be answered here— "with \$2 a week when learning" by the woman who has courage to face the conditions, as easily as at the more expensive schools. Here as nowhere else is seen in its true place the quick, rough skill, the "clever slighting" combination which is often the hardest to grasp by the woman who could afterwards display attractively. And— as to speed, without mastering which the most talented artist cannot get started to making money out of her creations, it is here, where being quick and being able to cut and live, are all one and the same, that one gets the first inspiration of its meaning. The aspirant to high class millinery will at least not lose anything of the understanding of the wider scope of the work she is undertaking if she takes the first lesson in the mechanical part in the factories.