

Ancient Beads in Africa.

A writer in *All the Year Round* describes two classes of ancient beads much prized by the natives. They are of glass, one kind being opaque, the other clear but rough. They are called respectively Aggry and Popo beads. There are many varieties of Aggry, some more treasured than others; only one of Popo. Both are dug from the earth, where the corpse with which they were interred is thought to have long since perished. The Aggry is found along the west coast, far into the interior. The Popo is rare in Ashanti and Fantiland, becoming more frequent near Lagos. It must not be understood, however, that either sort is common. The Birmingham manufacturers, and more especially the Venetian, have been trying many years to imitate the Aggry bead. To an English eye their success is perfect, but the youngest negro is not deceived. For all their science and study, for all the wondrous effects of the same kind which they have produced in transparent glass, Europeans cannot find the secret of running a colored pattern through and through the opaque substance exacted. They can make a facsimile of the surface, but that is all. The Popo bead has defied all attempts of imitation. Its peculiarity is that the glass looks blue in light, yellow in shadow. This change puzzles European workmen, who could turn out blue beads or yellow exactly like it, 10,000 of them, for a less sum than a single tiny cube of the real sort fetches. The best authorities suppose both kinds to have been of Egyptian manufacture—ancient Egyptian, that is. Such glass is seldom or never found with mummies in the form of beads, but small bottles of material very similar are frequent enough. If this be so, it is not surprising that Aggries and Popos are not discovered in Egyptian tombs. Made for a savage commerce, the civilized manufacturers disdained to use them, and one would only expect to find deposits in the excavation of a merchant's warehouse or of a glass-blower's works. The curious point of the matter is the evidence thus offered of a commerce very much wider than had been credited to Egypt. Chinese and Indian productions have long since been identified in the plunder of her tombs, and it would seem that she dealt, directly or indirectly, with negroid races on the shore of the Atlantic.

In a note on the Aggry (or Aggri) beads, lately read before the Anthropological Institute in London, Mr. J. E. Price said that they sell in Africa for more than their weight in gold, and on the Gold Coast are among the most valued of royal jewels. Mr. Price exhibited specimens of the beads recently discovered in Colchester, England. He thought their presence in England might be explained by the circumstance that when the Romans occupied the country they brought with them many African slaves, who, probably, wore necklaces with Aggry beads attached, and that when the slaves died their necklaces were buried with them.

The Boracic Acid Treatment of Diphtheria.

Dr. T. D. Harries, of Aberystwith, reports in the *Lancet* a very successful treatment of diphtheria by the local application of boracic acid in solution. The solution is prepared and applied as follows:

Boracic acid, two drachms; glycerine, half an ounce; water, half an ounce—to be applied freely to the fauces every hour at first, diminishing in frequency with the disappearance of the deposit and general symptoms. The application should be continued for some days after the throat has become perfectly clean. If discontinued too abruptly, the deposit is almost certain to re-form, with a return of the general symptoms; and with the view of warding off this danger, I make it a rule to continue painting up to the eighth day, after which date the patient may be considered comparatively safe. The solution seems to have no injurious effect when swallowed, as I have frequently applied an ounce during twenty-four hours in the cases of children of from four to five years of age.

Chinese Method of Manufacturing Vermilion.

There are three vermilion works in Hong Kong, the method of manufacture being the same in each. The largest works consume about six thousand bottles of mercury annually, and it was in this one that the following operations were witnessed:

First step.—A large, very thin iron pan, containing a weighed quantity, about fourteen pounds, of sulphur, is placed over a slow fire, and two-thirds of a bottle of mercury added; as soon as the sulphur begins to melt, the mixture is vigorously stirred with an iron stirrer until it assumes a black pulverulent appearance with some melted sulphur floating on the surface; it is then removed from the fire, the remainder of the bottle of mercury added, and the whole well stirred. A little water is now poured over the mass, which rapidly cools it; the pan is immediately emptied, when it is again ready for the next batch. The whole operation does not last more than ten minutes. The resulting black powder is not a definite sulphide, as uncombined mercury can be seen throughout the whole mass; besides, the quantity of sulphur used is much in excess of the amount required for mercuric sulphide.

Second step.—The black powder obtained in the first step is placed in a semi-hemispherical iron pan, built in with brick, and having a fire-place beneath, covered over with broken pieces of porcelain. These are built up in a loose porous manner, so as to fill another semi-hemispherical iron pan, which is then placed over the fixed one and securely luted with clay, a large stone being placed on the top of it

to assist in keeping it in its place. The fire is then lighted and kept up for sixteen hours. The whole is then allowed to cool. When the top pan is removed the vermilion, together with the greater part of the broken porcelain, has a brownish-red and polished appearance, the broken surfaces being somewhat brighter and crystalline.

Third step.—The sublimed mass obtained in the second step is pounded in a mortar to a coarse powder, and then ground with water between two stones, somewhat after the manner of grinding corn. The resulting semi-fluid mass is transferred to large vats of water, and allowed to settle, the supernatant water removed, and the sediment dried at a gentle heat; when dry, it is again powdered, passed through a sieve, and is then fit for the market.—*H. Maccallum.*

MISCELLANEOUS INVENTIONS.

Mr. Brooks French, of Fort Wayne, Ind., has patented a simple, easy-working, and effective stop action, by which there may be obtained a greater number and variety of stops with one stop drawer; also, to regulate and control the opening of the mutes by simple devices.

Mr. Rufus W. Blake, of Derby, Conn., has patented a bell attachment for organs, constructed in such a manner that it can be conveniently applied to the organs, and can be readily thrown into and out of gear with the mechanism of the organs.

A novel pencil sharpener has been patented by Mr. Franz F. Kullrich, of Berlin, Germany. The invention consists of two convex plates with roughened surfaces, and having a strip of felt or other fibrous or hairy material attached to their inner ends, which plates are hinged to each other or connected by a spring, so that they can be separated to admit the point of the pencil, and can be pressed together; as the diameter of the pencil point is decreased, by rotating or twirling the point between the roughened plates.

Mr. Edmond A. G. D'Argy, of Paris, France, has patented an improvement in the class of cigarette wrappers which are provided with a moisture-proof coating at one end; and it consists in constructing the wrapper and coated end or portion in one single piece, and in such manner that the wrappers shall be conveniently adapted for being put up in packages for use in making cigarettes at the convenience of the smoker. A cigarette paper which is made saliva-proof before being applied as a wrapper is adapted for making a better cigarette wrapper than can be made by applying a saliva-proof coating after the cigarette is made, since in the latter case the coating is liable to close the end of the cigarette, and, owing to the fact that the coating cannot then be applied to the folded part of the wrapper, the protection thus sought cannot be secured so well as where the paper is prepared in the manner above described; and it is well known that the manufacture of cigarettes with a waterproof coating according to the usual methods has been found impracticable.

An improved flaxseed cleaner has been patented by Mr. George Beal, of Gilman, Iowa. This invention relates to machines for screening flaxseed for the separation of chaff and other impurities. In operation the screen is in a horizontal or slightly inclined position. The material is to be fed by a spout to the screen surface, and during the screening operation a body of material will be on the screen and be worked gradually toward the delivery end. The smaller particles—such as mustard and foxtail seeds—pass through screen and escape; the flaxseed pass through another screen and out at another opening, and the remaining material passes off by a separate spout. The material is supplied to the screen at a uniform rate, and moves forward slowly at a speed regulated by the rapidity and extent of vibration. This insures effective and thorough separation.

An improvement in quilting frames has been patented by Mr. John R. Sheldon, of Montville, Conn. This invention relates to that class of quilting machines which carry the quilt under the needle arm of the sewing machine, and at the same time give it a transverse motion for stitching the pattern. It will form a perfect pattern and will stitch the last seam in the quilt perfectly.

Mr. William F. Smith, of Overton, Texas, has patented an improved baling press, in which the bale box has the lower part of its ends made flexible and adapted to be elevated with the follower. The object of the invention is to facilitate the baling of cotton by simplifying the operation of introducing the cotton into the press.

An improved wagon hub has been patented by Mr. Angus McKellar of Fort Douglas, Utah Territory. This invention consists of such construction of the metallic hub that the hub is adapted to be used on light freight, farm, and other wagons having wooden axles, the same number of spokes being used in the wheel as is ordinarily used with the wooden hubs used on such wagons.

An improved tire cooler has been patented by Mrs. Dora Ammerman, Thomas Baird, and Ebenezer M. Foreman, of Fairmount, Ill. This invention consists of a suitable wheel supporting rack or bed fixed on connected rocking bars of novel design within a water box in such a manner that the wheel rack can be elevated or depressed at will by means of a lever, whereby a wheel, with its heated tire, may be plunged into and raised out of the water in the said box, and the tire thereby quickly and evenly cooled.

An improved broom and scoop mechanism for evaporating pans has been patented by Mr. Carl F. W. Schramm, of Brooklyn, N. Y. The object of this invention is to facilitate removing crystals and other solid matter from evaporat-

ing pans, such as are used in the manufacture of soda and other substances. It consists in a brush or scoop mounted on the ends of arms of a revolving shaft journaled above an evaporating pan in such a manner that when the shaft revolves, the brush and scoop will be caused to sweep over the interior surface of the pan and remove the solid matter on the bottom of the pan into a suitable receptacle that is arranged outside of the pan.

Mr. Henry Morris, of Manchester, County of Lancaster, England, has patented a simple and efficient means of signaling between the signalman and the engine driver by the use of a bell or gong, with or without an air whistle, conjointly with the application of the brake when air brakes are used, whether pressure or vacuum, or when electric brakes are applied, whereby the use of fog signals in foggy weather may be rendered unnecessary, the cost of them, and also the cost of plate-layers' wages for laying them, with all the attendant inconveniences, may be saved, and the use of the distance signal and cost of maintenance may, in many cases, be dispensed with, also to test automatically the bell or gong apparatus and the brake, and to indicate to the man in the signal cabin if his apparatus and connections are in order.

A novel embroidering machine has been patented by Mr. Alfred Heaven, of Manchester, County of Lancaster, England. The object of this invention is to secure circular, oval, or other figures of velvet, satin, or other material to cloth, so that the said figures may be embroidered by an ordinary embroidering-machine. The invention consists of a guide-bar provided with a series of recesses having central apertures, and also in the combination, with the guide-bar provided with recesses and end apertures, of pins hinged to the carriage of the machine which carries the needle-holders, and adapted to enter the end apertures of the said guide-bar, whereby a series of figures is adapted to be held in alignment with and to be placed automatically upon the needles.

Bat Guano in Texas.

The progress of railway extension in Western Texas has led to the development of the beds of bat guano in certain caves in Uvalde county. A recent visitor says that there are two of these bat-inhabited caves, which have been partially explored. The entrance to the smaller, or Cibolo Cave, is about 50 feet high and 25 feet wide. The passage widens gradually for a distance of about 250 feet, when the outer cave is reached. The bottom is of guano. The shape of the cave is like an inverted bowl. The walls are of limestone and unite nearly 200 feet above in a grand dome. The cave is as dark as Egypt. There appear to be neither stalagmites nor stalactites. This cave is 300 or 400 feet in diameter, and the floor is covered with about 30 feet of guano. In some parts it is believed to be much deeper. The atmosphere is very dry, and five years ago the guano caught fire, the whole surface being burned over to the depth of about four feet. Since then, eight feet of guano have been deposited, so that we have proof that the fertilizer is being deposited at the rate of more than a foot and a half a year. On the inner side of the outer cave, in the side of the dome, about 120 feet from the floor, is an opening about 6 by 8 feet in size. Through this all the bats go to an inner cave, which has never been explored. It is believed, however, to be very extensive, because of the immense number of bats which daily sleep in it, and because at the time of the fire in the outer cave great quantities of smoke escaped through crevices in the rock near the Cibolo River, on the opposite side of the hill, two miles and a half from the main entrance. This inner cave is believed to be fully two miles long and very broad. The Uvalde Cave is said to be about six times as large as the Cibolo Cave. It differs from the latter in being moist instead of dry. There is no running water in either cave.

The district is quite hilly, and is composed altogether of a limestone formation. In the abrupt hills many small caves are known to exist, and all of them are inhabited by bats; but only the two mentioned, it is believed, are of sufficient extent to warrant working for the guano deposits.

The first shipment of guano was made from the Cibolo Cave but a short time ago. It is claimed that analysis shows the guano to be worth from \$50 to \$60 a ton. The Uvalde Cave deposit has not been touched. It is said that a factory for the production of sulphate of ammonia is to be set up at Uvalde by the company which owns and works the phosphate deposits at Charleston, S. C.

Removal of Metallic Particles from the Cornea.

The *Glasgow Medical Journal* (February, p 150) quotes from the *Revista de Ciencias Medicas* the following hint as to the treatment of foreign metallic bodies in the cornea. A blacksmith, while forging a piece of iron, received in his left eye a splinter of the metal, every effort made according to the ordinary methods for its removal having failed, Dr. Rodriguez employed a wash consisting of rose water, 90 grammes; iodine, 0.05 gramme; potassium iodide, 0.05 gramme. The result was satisfactory, the particle of metal being converted into iodide of iron and dissolving out, and the cornea regaining its normal condition.

THE Hudson River Tunnel has now reached a distance beneath the river of 839 feet in the North Tunnel, and in the South Tunnel 700 feet. The work is progressing at the rate of 4½ feet per day.

Tea.

One of the most valuable and exhaustive contributions to tea literature which we remember to have seen, says the *London Grocer*, is that just published in the form of a cyclopaedia, by Messrs. W. B. Whittingham, Gracechurch street, E. C. It consists mainly of compilations from the *Indian Tea Gazette*, a publication in Calcutta that has for a number of years been exclusively devoted to the consideration and discussion of all questions relating to tea in India, from the time of its earliest introduction there down to the latest periods of its importation here. The cultivation of the plant in the different districts and provinces, the selection of soils and manures, and buildings for its manufacture, etc., are all ably treated in this work; and as it deals thoroughly with the scientific, statistical, and domestic branches of the subject, it is a manual of information and instruction well deserving the attention of the tea planter, importer, dealer, and consumer.

In the ten years ending 1876 the imports and consumption of Indian tea in the United Kingdom increased from about 3,000,000 pounds to 28,000,000 pounds, and within the last five years the supply and demand have kept close pace together, till they have reached between 45,000,000 and 46,000,000 pounds! Imagine how this prodigious growth of the tea trade must have benefited the native Indian race and the country to which they belong. Our author says: "Hundreds of thousands of acres of land have been taken out of jungle and planted with tea. Districts hitherto deadly are fast becoming salubrious; coolies are in fair health, instead of dying off like sheep; and the tea industry, which was once looked upon as the last refuge for the destitute, is now viewed as a profession of the highest social rank."

According to the cyclopaedia: "We say that a green tea has a fine flavor, also that a congou has a fine flavor, but they are totally unlike." The volatile oil it contains gives to tea its flavor. The effect of this oil is to produce wakefulness; but, on the other hand, the best authorities declare that "theine," another property in tea, does not create sleeplessness, being of a nature to soothe and compose. Theine also supplies to the human system what it loses by fatigue. This property in coffee is called caffeine, and the drinking of it is attended with similar results; but at the same time it is well known that "green tea will produce effects on persons that black teas will not," and that there is a greater fermentation in black tea than in green. Tannin, which is a powerful astringent, is another ingredient in tea; when chewed it "puckers up the mouth," but it is thought by some that it aids digestion. "Tasting tea upon an empty stomach is injurious, producing a sense of weakness, as if one had fasted a long while;" and "tea experts," who are at it all day, "are made exceedingly nervous." Some assert that there is nourishment in tea; others say that there is none, and that tea consumes food; while the book we quote from informs us that tea, like liquors and drugs, when taken moderately, will have one effect, but if consumed largely it will produce just the opposite.

With regard to the names of different sorts of teas and their meanings, we may state that "Pekoe" is a term from the Chinese "Pai-hao"—White Down or Hair, because made from young spring leaf buds, while they are still covered with down. "Souchong" is from "Seao-chung," which means Little Sprouts. "Congou" is a corruption of "Kung-fou," or labor; and "Hyson," or He-Chun, signifies Fair Spring; while the meaning of "Young Hyson" (Yu-chien) is, Before the Rains. The instructions for "making tea" are likewise very useful, and cannot be too widely known; and retail grocers might render a service to their consumers by giving them reasonable directions. In the first place, "tea should not be boiled, as the volatile oil will escape with the steam, and a much larger proportion of the tannic acid is extracted, leaving the infusion bitter." The best way to make tea is to have an earthenware teapot, which should be quite hot when the dry tea is put into it. A few minutes after pour in the boiling water upon the tea, which, after "drawing" from seven to ten minutes, "is at the best point for drinking."

A sufficient quantity that is wanted for use directly should be made at the first drawing. The habit of filling the teapot a second or third time is not right, because the theine, which is quickly soluble in scalding water, will have escaped, so that those drinkers who are supplied from the second drawing will lose the most beneficial part of the tea, and will have instead "a decoction composed chiefly of tannin." Churned tea, properly prepared with milk, is a beverage highly prized in Cashmere in entertaining visitors; and we are told that "the ladies there no doubt vent their grievances to sympathetic ears, discuss their bonnets and their babies, and talk scandal over this cup in much the same way as their English sisters do over 'five o'clock tea.'"

The Medical History of Houses.

A writer in a recent issue of the *Lancet* has broached the very sensible idea that some measures should be taken to furnish tenants with the medical history of their houses. It is well known that much disease is spread among families who are constantly changing their residences, by the unsanitary conditions of apartments which they hire. In many instances the houses are rented at low figures because of defective drains, damp cellars, bad plumbing, unhealthful surroundings, or perhaps because of the previous habitation of them by persons afflicted with contagious diseases. It does not seem to be an impossibility for the health authorities of the different towns to have a list of houses in which con-

tagious diseases have been known to occur, or in which conditions inimical to health are known to exist, for general reference by the public. Such a list would be of great value to the large number of families who are at this season of the year looking around for new homes. In all instances a critical examination of the cellars and drains is more important than the inspection of the parlors and upper floors. And yet, how seldom is this done, and how often the tenants suffer in consequence. If health boards would keep a black list of unhealthy houses the landlords of the same would find it to their interest to look more particularly to the sanitary welfare of their tenants.—*Medical Record.*

Franco German War Statistics.

The official history of the "German-French war, 1870-71" has just been completed. The concluding part is filled with statistical information and carefully compiled summaries, which afford a clear conception of the magnitude of the forces which opposed each other in this greatest of all modern wars. The total strength of the German armies is shown by the following enormous figures—viz., 44,420 officers and 1,451,944 men, of whom 33,101 officers and 1,113,254 men have actually taken part in battle. During the armistice the German armies in France were again raised to their full war force, in order to recommence hostilities at once if necessary. On March 1, 1871, there were 823,648 Germans on French soil, including non-combatants, and comprising a field force of 464,221 infantry, 55,562 cavalry and 1,674 guns, besides 105,272 infantry, 5,679 cavalry, and 68 guns on garrison duty in French forts and towns. Altogether Germany had 1,350,408 men under arms at this time, while the French forces at the end of the armistice comprised 251,000 men fit for field service.

The total loss of the Germans, including dead and wounded, was 6,247 officers (inclusive of 81 surgeons, 4 chaplains, and 3 paymasters) and 123,453 rank and file. Of these 17,572 fell on the field of battle, 10,710 died of their wounds, 316 lost their lives by accidents, and 30 committed suicide; total, 28,628, while 12,253 succumbed to disease (typhus, 6,965; dysentery, 2,000; lung affections, 500.) Thus of the total number of deaths—40,881—70 per cent died of wounds and only 30 per cent by disease, while during the campaign of 1866 nearly 60 per cent of all deaths were by disease.

The French losses will never be accurately known, and the [German] general staff's work can only state the numbers of the prisoners of war. Up to the middle of February, 1871, there had been taken to Germany 11,860 French officers and 371,981 men. At the fall of Paris 7,456 officers and 241,686 men surrendered, and 2,192 officers and 88,387 men had been forced to cross the Swiss frontier, so that a total of 21,508 officers and 702,054 men had laid down their arms to the conquerors. The Germans captured a total of 107 flags and eagles, 1,915 field guns and mitrailleuses, 5,526 siege and heavy guns, and 855,000 small arms.

In the Sanitary Service of the German armies there were employed during the war 7,022 surgeons and physicians, 8,336 hospital assistants, 12,707 sick tenders, 7,800 sick bearers, 606 apothecaries with 254 assistants, 1,309 hospital officials, besides 523 officers and 8,398 men of the train and ambulance service, making a total of 46,955 persons. These were distributed throughout the field armies in 52 sanitary detachments, with 197 field hospitals, and 62 reserve hospitals and depots. In addition a large number of reserve hospitals and medical stations, with volunteer help, were established in all parts of Germany, numbering at the end of the war over 1,500. During the seven months of the campaign 290,000 patients were admitted into the field hospitals, while 812,031 were cared for in 368 reserve establishments. During the war the German field posts, with 2,140 officials, established 411 German post offices on French soil, through which were forwarded 101,267,500 letters and postal cards, nearly 3,000,000 newspapers, 2,500,000 packages, and 263,000,000 marks in ready money. The Field Telegraph Department covered the entire seat of war with its network, which at the end of the campaign comprised 525 telegraph stations and 23,510 kilometers of wires.

Launch of Her Majesty's Ship Edinburgh.

The Edinburgh, lately launched, is 325 feet long, and 68 feet broad. Her present weight is 4,800 tons, but when she is equipped this will be increased to 9,150 tons. Her armament will be four 43-ton breech loading guns in turrets, and four six-inch breech loading guns in the superstructure. She will have an indicated horse power of 6,000, and a crew of 400 men. She will have ten Nordenfolt guns for defense against torpedo boats. In construction she is very much like the Ajax, launched at Pembroke a couple of years ago. She has a central armor belt of three inches upon one inch, with nine and a half feet free board, and six feet depth below load water line. The armor is in two strips, the upper being 14 and the lower 18 inches thick, over a parallel breadth of four feet at the load water line, from which it tapers to eight inches. The semicircular ends of the belt, which are not so thick, are covered with protective plating three inches thick. In the wake of the ports the armor is 16 and elsewhere 14 inches thick. The ram is forged as a part of the stem, beyond which it projects six and a half feet at about nine feet below water load line. There are protective decks three inches thick, four feet below load-water line, and extending two thirds of the length of the armor belt, and before and abaft it. These decks are protected from the inflow of large quantities of water if the ship is

struck below water by cork chambers and coffer dams. The engines are supplied by Messrs. Humphreys & Tennant, of London, and are of 6,000 indicated horse power, the screw being driven by an independent set of engines of 3,000 horse power. The Edinburgh's speed will be 14 knots.

New Jersey Industries.

According to the report of James Bishop, Chief of the Bureau of Statistics of Labor and Industry, New Jersey is ahead of all the other States of the Union combined in the production of silk goods. These goods are manufactured by eighty-four firms, in whose mills were consumed last year 1,572,078 pounds of raw silk. The capital invested in the business is \$7,524,200, and the value of the product \$18,053,210, one dollar of capital annually reproducing \$2.50 in silk goods. The average number of hands employed was 14,152, of whom 5,458 were men, 5,175 women, and 3,489 children. Their average earnings per day were: Men, \$1.81; women, \$1.01; children, 63 $\frac{1}{10}$ cents. Skilled men received as high as \$4, and skilled women \$2 a day. In the entire United States there are 383 silk mills, employing 31,300 hands, who are paid \$9,000,000. These mills furnish 39 per cent of all the silk goods now used by us. Twenty years ago all but 13 per cent of the silk goods consumed in the United States were imported.

New Jersey holds the fifth place among the iron producing States. Skilled mechanics earned \$2.32 per day and unskilled \$1.21. There was paid in wages 16 $\frac{1}{2}$ per cent of the value of the products manufactured—\$10,341,896.

In the hat factories, which produced 538,626 dozen hats, over 31 per cent of the total value of the product went to the employes. The average daily wages was: for men, \$2.07; for women, \$1.06; for children, 73 $\frac{1}{10}$ cents.

In the pottery industry, for every dollar of capital invested \$1.12 was produced. It gave employment to 3,682 persons. The average daily wages was \$2.01 for men, 88 cents for women, and 70 cents for children.

The brick, glass, and clay industries yielded \$1.24 for every dollar invested. Thirty-seven per cent went into the hands of the employes. The average daily wages of men varied from \$2 to \$1.10, those of women from \$1 to 75 cents, those of children from \$1.12 $\frac{1}{2}$ to 40 cents. Skilled workmen earned as high as \$5 a day.

Glass blowers and nail cutters were paid the highest wages, their yearly average earnings amounting to from \$900 to \$1,080.

Unskilled workmen made annual average earnings as follows: Employes in canning factories (10 $\frac{1}{2}$ hours), \$237.50; brick yard laborers (10 hours), \$366.66; oyster men (11 hours), \$368.75; puddlers' helpers (11 $\frac{1}{2}$ hours), \$375; nail factory feeders (boys, 10 hours), \$287.50; glass batch mixers (10 hours), \$390; glass packers (9 $\frac{1}{2}$ hours), \$390.83; railroad employes (10 $\frac{1}{2}$ hours), \$399.29; longshoremen (10 hours), \$425; miscellaneous iron workers (9 $\frac{1}{4}$ hours), \$438; miscellaneous glass workmen (10 $\frac{1}{2}$ hours), \$383.89; miscellaneous occupations (10 $\frac{1}{4}$ hours), \$457; laborers unclassified (10 $\frac{1}{2}$ hours), \$349.93.

In those industries where all or the greater part of the employes are women or children, the pay is not only comparatively small, but the hours of work are many, and, in general, as the number of hours increase the wages decrease.

Of the 11,000 employes mentioned in the report the wages of 1,916 were increased last year, while those of 571 were reduced. The advance was among glass blowers, harness makers, hatters, iron moulders, shoemakers, trunk makers, machinists, printers, bricklayers, carpenters, masons, painters, and carriage makers. Among those who suffered a reduction were miners and jewelers, and the silk workers in some departments.

Farm wages averaged, without board, \$22.39; with board, \$14.86 a month. New England paid \$22.76, without board, per month, on yearly engagements, but the cost of subsistence there was \$9 a month, against \$7.53 in New Jersey.

Ataxy and Sewing Machines.

In the *Union Medicale*, M. Octave Guelliot contributes a valuable paper on two cases of locomotor ataxy in women employed on sewing machines. In hysterical women, working at the sewing machine seems to be, in certain cases, the occasional cause of the appearance of locomotor ataxy. The symptoms commence in the lower limbs and progress upward. Shooting pains traverse the limbs from below upward. Improvement is noticed when the patient rests, and it may last a long time. Working at the machine by means of a treadle probably acts chiefly by the concussion, which is diffused throughout the spinal cord. Therefore the continuous movement of the treadle is dangerous to the workwoman, and endeavors should be made to substitute some other motor for the foot power.

Fast Ocean Steaming.

The Alaska, of the Guion line, appears to be the fastest of the steamers now plying between New York and Liverpool. On her last trip she left Queenstown on Sunday, April 9, at 1:50 P.M., and reached New York Harbor on Sunday, April 16, at 2:30 P.M.—actual time, 7 days 6 hours 20 minutes. The fastest run during any twenty-four hours was 419 miles. Her passengers might have attended church at Queenstown on the morning of Easter Sunday, and could have been present at divine service in this city the following Sunday evening, thus worshipping on one Sunday in Europe and on the following Sunday in the United States.