seven minutes shorter than it was under the beams of the diastatic substance is in the soluble portion of it, as I was whisky. I have never seen a drunken Chinaman in my life. solstitial sun.

THE PREVAILING STRIKES.

During the past year the general advance in prices has increased the cost of living very materially; for the plainer food staples the increase will average fully one-third, per-great physiological importance, which may be stated as fol- have been no epidemics among them; and there has been less haps more. Primarily this is chargeable to the severe and lows: long continued drought of last summer, by which the products of our farms and gardens were seriously diminished. The advantage taken of the occasion by speculative holders of the leading articles of food-grain, meat, etc.-has played a secondary but not unimportant part in effecting the *i.e.*, a combination of albuminoids with phosphates and increase in prices. With the steady and serious lessening of the purchasing power of their wages there has naturally arisen among wage-earners a desire for an increase of pay to precipitated by somewhat less than 100 c.c. of alcohol; the enable them to maintain something like their accustomed style of living.

In many of the minor industries the desires of the workmen have been, in part at least, gratified, and wages have been has been added some bibasic or monobasic phosphate of lion dollars a year, rising to a quarter of the crop in seasons raised. In the larger industries, which had begun to feel soda, then heated to boiling. more seriously the effects of the general diminution of industrial and financial prosperity, the demands of the laborers in case it resulted from treating it with bibasic phosphate have been met by a general closing of doors, with the assur- it is neutralized with the monobasic phosphate. The soluance that the works could better afford to lie idle than to pay tion contains an albuminoid substance which foams greatly the increased wages asked for.

This has been the case particularly in the iron and steel industries. Early in April the men in the iron and steel works of the great centers of these industries proposed a revision of the scale of wages, to take effect June 1. The starch. Comparative experiments with a solution that conmanufacturers refused to grant it, and also to accept a modi- tained the same amount of phosphate as the albuminoid fication of the first proposition. The amalgamated association of iron and steel workers accordingly ordered a general is three times as great as that of the phosphate solution strike for the scale originally proposed, on the day above alone. Probably other salts would increase the action of named, and the order was generally carried out. The association claims a membership of 80,000, embracing nearly all the skilled iron and steel workers in the country. It may be safe to estimate that when this great body of men stopped same and in related industries, were thrown out of employment.

What the result will be it is impossible at this time to advantageous to the strikers and those whose income has, trying to find some method of either preventing this evapcompelling employers to concede the scale of wages demanded. It is the common fate of these great labor wars but the object was attained by putting the article in an 1880, net tons, 7,974,705. that they come too late to be largely profitable. The wave atmosphere saturated with the vapor of the solvent, rubber of industrial activity-the trade "boom," as it is popularly stoppers, tubing, etc., which is perfectly elastic, is protected 28,646,995. Production of bituminus coal in census year the price of everything but labor drives the wage earners to large glass box, in which is an open vessel of ordinary united action for a corresponding increase in wages. On a $_{\parallel}$ kerosene. declining market, or one soon to decline, the temporarily excessive demand for the special manufacture having been substantially met, the manufacturers have the advantage and keep it in a wooden box. As far as practicable it is to be fiscal year ending June 30, 1881, 42. are in a better position to bear a suspension of work than the kept in the dark. Old rubber that has become hard is softworkers are.

It is to be noticed that, with one or two exceptions, the strikers have conducted themselves with commendable sobriety and a proper regard for the rights of others. There have been no riots; and, except at Chicago, no unlawful This simple regenerative process does good service for hard attempts to prevent the employment of non-union men.

MISREPRESENTATION AS A LEGISLATIVE INFLUENCE. In urging upon the favor of the House the recently passed bill to encourage the infringement of the rights of patentees, its advocates repeatedly asserted that the bill had been unanimously approved by the patent committee, and had received M. Pobek, of Breslau, with reference to the injurious elethe cordial sanction of the Commissioner of Patents.

The incorrectness of the latter assertion was sufficiently shown last week. We are now able to state that the former was not less inexact. A member of the committee. Mr. Jones, of New Jersey, writes us that he opposed the measure as strenuously as he could, insisting that it nullified all patents coming under its meaning; that it was retroactive, and that, in his opinion, it was unconstitutional; but the majority of the committee were against him.

is recorded on the astronomical calendar. It is only a min- albumen. This / succeeded in doing by treating the albu- and attributes their healthy condition and immunity from solution after expelling the alcohol at a low temperature.

The albumen contains glucose, and the volk of egg contains starch; the latter is changed into sugar when it reaches the albumen and is thus converted into nourishment.

Artificial Diastatic Ferment.-To make artificial diastase, other salts, the white of eggs is diluted with two or three parts of water, filtered, and decanted. The albumen is then precipitate is collected on a filter, washed several times with taken from the filter and stirred up with water, to which

The coagulum formed is them separated from the liquid. when shaken up with air, and which converts starch into sugar at ordinary temperature.

Experiments were also made to ascertain the power which phosphate of soda alone possesses of producing sugar from substance, proved that the saccharifying power of the latter this diastase.-Chemiker Zeitung.

Preservation of Rubber,

Every one who uses vulcanized rubber is aware that the

ened in a very short time by putting it in a vessel with vapors of bisulphide of carbon. The action of bisulphide is, however, too powerful if it lasts too long, hence it must be taken out and put in the vapor of kerosene afterward. stoppers; but tubing generally does not get fit to use again, as the little cracks and checks that form when it gets hard cannot be closed again. -D. I. Z

Dangers of Coal Gas.

Some old questions have lately been investigated anew by ments of common coal gas. This investigator has examined gas both before and after combustion, in order to determine the causes of any deleterious effect which it may be found to produce. He finds the chief source of danger in unburnt gas to be carbonic oxide. In some cases where a stream of gas escaping from a leaky pipe traverses ground not previously saturated, it deposits the hydrocarburets which give gas its characteristic odor, and afterward diffuses in dwellinghouses without its presence being perceived. In such a case The fact that there was one member of the Patent Com the danger of explosion is added to that of poisoning; although explosions are seldom caused in this way, because the

ute at first, but minutes will be piled upon minutes, as the men with three parts of water and precipitating the solution disease to their frugal life. "They eat to live, and do not earth rolls on, until the last of July, the day will be forty- with a sufficient quantity of concentrated alcohol. The live to eat. They are clean in their habits, and they drink no able to prove by experiments, by redissolving the albumen They consequently obtain a better resisting power to the that had been precipitated, and making comparative experi- attack of disease. They constantly wash themselves, and ments with that and with the substance that remained in keep themselves and their clothes clean. The death rate is greater among the whites than among the Chinese; greater The existence of a diastatic substance in egg albumen is of with adult white people than with adult Chinamen. There smallpox among them than among the whites, the ratio of population being allowed."

The Mungoose as a Rat Killer.

The introduction of the mungoose into Jamaica as a cure for the once formidable rat pest on the sugar plantations is said to have proved a notable success. The sugar rat is a huge white bellied fellow, measuring ten inches in length of body, his long tail adding ten inches more to his length. water, and allowed to drain until gelatinous. It is then Formerly the damage done to the sugar plantations of the island by these rats amounted to something like half a milof special ravages. About five years ago the mungoose, whose zeal as a snake and rat killer is well known, was imported from India. As a result the plague of rats has been greatly diminished, with a saving in sugar of not less than 25 tons of sugar on each estate. There is also saved the expense of rattage, formerly amounting to hundreds of dollars a year.

Iron and Steel Production in 1881.

THE report of the Secretary of the American Iron and Steel Association for 1881, just completed, gives the following summary of the year's work : Production of pig iron in net tons, 4,641,564, including 21,086 tons of spiegeleisen; production of all rolled iron, including nails and excluding rails, 2,155,346 tons; Bessemer steel rails, net tons, 1,330,302; open hearth steel rails, net tons, 25,217; iron and other rails, net tons, 488,581; production of iron and steel street rails included in above, 21,554; crucible steel ingots, net tons, working, four or five times as many more workmen, in the articles made of it will, in a longer or shorter space of time, 89,762; open hearth steel ingots, net tons, 146,946; Bessemer get hard and brittle, so as to be useless. Hempel has been steel ingots, net tons, 1,539,157; blister and patent steel, net investigating the cause of this hardening, and has come to tons, 3,047. Production of all kinds of steel, net tons, the conclusion that it is due to the gradual evaporation of 1,778, 912. Production of blooms from ore and pig iron, net foresee. That the strike will prove wholly or generally the solvents employed when vulcanizing it. He has been tons, 84,606. Imports of iron and steel, \$61,555,078. Imports of iron ore, gross tons, 782,887. Exports of iron and been stopped by their action is doubtful, judging from the oration, or of replacing the solvent by some other one. steel, \$15,782,282. Production of Lake Superior iron ore, general results of such conflicts, even when they end in In this he was quite successful. If the india-rubber was put gross tons, 2,336,335; production of iron ore in Jersey, gross directly into the solvent it always absorbed too much of it, tons, 737,052. Total production of iron ore in census year

Production anthracite coal in census year 1880, net tons, called—has usually culminated before the attendant rise in and prevented from spoiling by putting it in a desiccator or 1880, net tons, 42,420,581. Production of anthracite coal in 1881, gross tons, 28,500,016. Miles of railway completed in 1881: 9,650 miles of railway track in the United States, Simply sealing hermetically in a glass vessel preserves in- December 31, 1881, including double track and siding estidia-rubber for a long time. It is totally useless to try to mated, 130,000. Iron ships built in the United States in the

Flying Machines for War Uses.

GERMANY and Russia are both pushing forward experiments in flying machines for use in war or otherwise. It appears that the direction in which these are working is the only one likely to be successful. It ignores the ridiculous inflated gas-bag, which is enormous in size, difficult and costly to fill in war, and floats-a gigantic derelict-at the mercy of every current of air, a huge mark for the first gunner who can hit and bring it to the ground. Baumgarten, in Germany, and Baranovski, in Russia, adopt the principle of the inclined plane pressed against the air, and thus capable of making some attempt at least to regulate its own course. In the kite the force that presses the inclined plane is the hand of the boy acting through the string. In the sail of the boat the resistance of the water to sidelong motion keeps the sail pressed against the wind. In fiying machines the pressure is given by an engine carried by the machine and acting by means of fans of one sort or the other. The difficulty at present is the weight of engine and fuel; but with the development of electrical practical knowledge we may fairly expect to see accumulators which will supply the maximum of power with the minimum of

prevent its being pressed upon the House as a measure which definite proportions necessary to an explosive mixture are weight. Then the problem of flying in still air will be had received the committee's unanimous approval. In a not present. M. Pobek insinuates, however, that poisoning solved. Whether we shall ever be another matter.—Pall Mall Gazette. statement of that sort there was no room for a possible may supervene even when explosion does not take place. honest misunderstanding.

Diastase in the White of Eggs.

has been given. A substance resembling diastase has been taken in a very general sense. discovered in the albumen of the egg, by F. Selmi, the original discoverer of ptomaines, or poisonous alkaloids, in dead bodies. Previous to his death, in August, 1881, he wrote the following letter to Ercolani:

When gas is burnt under unfavorable conditions, M. Pobek is of opinion that the most injurious result is the excess of moisture which is thereby produced. There is no analysis It is well known that malt contains a substance capable of given of the particular description of gas that formed the France by M Jacques. He first impregnates the timber converting starch into sugar, to which the name of diastase subject of M. Pohek's experiments; they must, therefore, be thoroughly with a simple solution of soap, mixed with an

**** Hygiene Among the Chinese.

The "Heathen Chinee" has not a few revilers who are The reaction of the acid on the soap does not take place until ever ready to point to features in his social character which a portion of the water has evaporated. It is claimed that

Various consideration have induced me to assume that render him an undesirable neighbor. The medical officer of more perfect impregnation can be had in this way than with egg alhumen contained a body that would change starch the State Board of Health of San Francisco has, however, creosote, and there is no danger of the washing out of the preinto sugar. In fact, I found that a filtered aqueous solution something to say in favor of the Celestials. In his report servative from the exposed surfaces, as when sulphate of of albumen, when digested with a solution of soluble starch, lately presented to Congress he states that he never knew any copper is used. The government commission on technical induced this change very rapidly. This confirmed my sus- disease or pestilence originating or spreading in the Chinese railroad operation in France is said to favor this process.picion, and I attempted to isolate this body from ordinary quarters of the city. He admits that they live quite close, The Metal Worker.

solved. Whether we shall ever be able to ride the storm is

For the Preservation of Wood.

A new wood preserving process has been invented in acid-preferably phenic acid. This causes the fermentation, in a few days, within the wood, of a fatty acid, which is insoluble in water, and impregnates the remotest fibers.