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In view of the vast shifting of population from country to city which has been so marked for the last few decades—a movement no less noticeable in Russia and Germany than in England and America—it will hardly do for the authorities or for others who interest themselves to be too complacent about improving sanitary conditions of cities. Among the poor, a symptom of the congestion following this movement is the frequent rioting for a chance to work. By some accounts the numbers of the very poor in some of our cities is beyond belief. The pressure of so many makes a fateful competition for lodgings and workrooms, to pay for which takes so much that other needs cannot be met. If Mr. Hunter and the Countess of Warwick are to be believed, the number of those suffering from want of food in large cities is appalling. To bad housing and insufficient food are mainly laid the great ravages of tuberculosis, which is now claimed to be readily curable in the early stages by means of pure air, sunshine and food. While this disease is claimed to be yielding to modern skill, others like pneumonia and spotted fever are increasing in virulence and volume in cities.

But the congestion in cities does not stop with the very poor. If one is out for a vicious and vitiated atmosphere he has only to take a street car of a stormy day to find a condition that would not be tolerated in any audience room. Skyscrapers thrust themselves to such airy heights that they will perhaps be the last places to be accused of unhealthy congestion. If, however, one were to take all the occupants of the many levels and collect them on one floor he would find enough of a crowd. This crowd is commonly scattered through the length of an immense flue, inlets and outlets to which are closed as much as possible during cold weather. At such times tenants of the upper floors are served with such air as the construction of the upper part allows to escape after crowding itself up through the lower part and serving all the tenants on its way up. The number of skyscrapers in which the upper rooms are provided with real fresh air supplies is too small to take into account. On mental health principles, it is no doubt well for the tenant of the sky-scraper to fancy himself as enjoying good hygienic conditions, but it would be far better for him if they really existed. A lesser evil going with this movement of population to cities is the withdrawal of agricultural laborers to an extent that is seriously hampering the production of some staples.
While Gen. Oyama and his friends are busy cultivating a desire for peace in the Muscovite breast, and English and American investors are struggling for Japanese securities at the advanced rate, there are those who speculate on the effect of such successes on the Japanese themselves. To all appearances they can "figger" as well as fight. If Oom Paul had had the forethought to sell a good lot of Transvaal bonds on the European bourses, his people need not have fought and lost. These loans will make good friends for the Japs even if indemnities fill the general coffers. There are few signs of that "emotional jingoistic ebullition" in the Japanese press which was by some expected to follow victory, but it tells of the elaborate funeral ceremony lately held at Yokohama in honor of the horses that have given their lives in the Japanese service during the war. Evidently these people are so self contained as to keep the western world guessing as to their course for a long time yet, and it is quite as evident that none of the western predatory powers will take such chances as did Russia for many a moon. That the west may learn from this curious people in affairs of war is admitted, and it is fairly safe to assume also that Japan will have some profitable lessons in peace for those who are wise enough to learn. That the successful war will give the nation a great impulse in commerce and internal activities may well be believed, and it is safe to predict that the material expressions of this impulse will show enough of poise and restraint to commend itself to the thoughtful. That it will find expression in forms that are merely reflections of western forms can hardly be expected from such a people. Triumphal arches and columns are not foreshadowed by what has passed thus far, and what will be substituted it is idle to guess. Japan must, it would seem, take a place among the machine using nations, as well in the arts of peace as of war. What art expression will be given to her manufactures under the new conditions forced upon her? Her enemies could hope for no worse failure than attended the attempt of the western nations to engraft Japanese art upon their own a quarter of a century ago.

Labor Unions are supposed to exist largely for purposes of self-defense. This theory meets with the respect of intelligent outsiders who know the ways of the world; and when the unions carry this idea into the larger civic life, as has been done in some instances where they have proven the mainstay of movements to rescue the body politic from the grip of franchise grabbers; or when they turn some of their effort into educational channels, they still farther raise themselves in the esteem of the intelligent public. Even the way in which members of unions hold together to secure their ends ought to commend the admiration of and be a lesson to men who hold themselves superior to the workmen composing the unions. Much of the criticism of union methods is based more on old class notions that working people have small rights as against employers, than upon any more decent grounds. Unions have secured for workmen, both union men and others, a much more reasonable share of the profits of modern productive methods than would have fallen to them otherwise. They have certain benevolent features that are of great good to themselves and the public.

The legitimate work of the unions, after so much experience ought, it would seem, to be carried on with little friction with employers and the public. To accomplish this would mean probably that the defensive features of the unions would retain prominence. It is probable that the abandonment of these defensive methods and the substitution for them of offensive and predatory ways have brought the Minneapolis plumb- ers to the pass in which they find themselves. In our March issue were published a number of the rules proposed to govern relations of the members of the union and the employers for the coming year, and they were so manifestly of the "hold up your hands" type that public sympathy was forfeited at once. This particular union had for years been successfully unreasonable in the same direction, and unwisely assumed that the worm would never turn. In fact it was some days after the new rules were submitted before the employers really got themselves together to combat them, but the way in which they gradually heated up was a treat to see. Some of the rules issued by the masters in answer to those of the local union are given below, and the prospects for united and determined action by the masters is good.

Rule 1. The hours of work to be as follows: From 8 a. m. until 12 m., and from 1 p. m. until 5 p. m. Time and one-half to be paid for night work and double time for work on Sundays, Christmas Day, New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Washington's Birthday.

Rule 2. Plumbers and Gasfitters will be paid according to a scale ranging from $3.00 to $4.00 per day of eight hours. The employer to decide what he shall pay each individual workman.

Rule 3. At least one apprentice to be employed in our shop; one additional apprentice to each five (5) journeymen plumbers or gasfitters, at the discretion of the employer.

Rule 4. This shop shall have a regular pay day at least once in every two weeks.

Rule 5. Each workman shall be required to install or construct any material furnished regardless of kind or manufacture and in manner instructed by his employer.

Rule 6. Any defective work done by any employee in this shop or material spoiled, one-half of said damage shall be made good at his expense.

Rule 7. Employees shall report, prepared to begin work either at our office or the building on which they are working at the hours of 8 a. m. and 1 p. m., and shall cease work only at the hours of 12 noon or 5 p. m., or upon completion of the work.

Signed.
The Copley Society's exhibition of Monets held in Boston during the last of March, brought together 95 pictures by that master, covering a wide range, but leaving regret in the hearts of those who had seen a certain collection in New York not half as large but which contained nearly all of the famous series of pictures of Rouen Cathedral, only one of which was in the Boston collection.

In this age of research it is the chemist who leads perhaps, but it is he, above all others who is the curious victim of his discoveries. They have trodden his beliefs under foot and left of them hardly anything that is to be recognized. Not only this, he is in luck if he escapes a revival of older beliefs at which he has long made merry. Elements, atoms, beginnings, as he supposed he knew them, he now sees dissolved into the imponderable for aught he knows; and worse yet, there are signs and threats of transmutations that may at any moment cause the dreams of the alchemists to usurp the place of the scientific dicta of but a few days ago. Madam Currie's radium has been caught in the act of passing into helium, while hydrogen, least ponderable of things, has been so dissolved and divided that it is hard to tell it from the theoretical ethers in which all things were imagined to be bathed. Lead has not yet been transmuted into gold but we are gravely told to expect that copper will be so transmuted before lead—because a certain series of atomic weights points to copper as more likely to be thus honored than lead. Meanwhile silver has been turned into something that looks like gold, but isn't, something that might satisfy the man in need of a gold brick but not the chemist. Copper may not be made into gold for some time yet, but it has lately come into proud place, not only in Lawsonian literature, but as the cure-all for all manner of pollutions in ponds and streams, from algae to ague. As to gold it is not threatened by transmutation alone. To say nothing of the perennial sea water supply, the chemists and their cyanides have really produced such volumes of it that its purchasing power is noticeably weakening. Outside of its use for money and jewelry it is not of much account anyway. Cheaping iron or copper brings increased use, but any great cheapping of gold might easily lead to its abandonment for display by the people who set the fashions, the demand lessening with the supply increasing. Before the realization of the quest of the alchemists we may hear a clamor for the demonetization of gold by the creditor class, and the revival of the populist money standard—so and so much of this and that staple article of consumption.

THE STRUCTURAL VALUE OF HOLLOW TILE FOR BUILDINGS.

In a paper read by Mr. E. V. Johnson, before the Chicago Architectural Club, he drew the following conclusions as to the value of hollow tile in buildings, and these conclusions, it seems to us, state very fully, and yet succinctly, the arguments for the use of tile.

I believe that hollow tile, made in suitable forms, and of assorted colors, also hollow tile, faced with brick or plastered on the exterior surface with ornamental stucco, is the material best adapted to take the place of wood, both for interior and exterior construction of buildings, and base this opinion upon the following claims:

1st. Tile is the lightest and strongest material for building construction.

2nd. It furnishes a perfect surface for the receipt of plastering, both old style lime mortar and patent plaster.

3rd. Can be laid at any season of the year, regardless of rain, frost, or extreme hot weather.

4th. Can be plastered upon within forty-eight hours after being laid in place.

5th. The tile, being hollow, serves as a non-conductor of heat, cold and sound, assuring a warm house in winter and cool in summer.

6th. Does not shrink, thus causing disfigurment to plastering and decorations.

7th. Being non-combustible, there is no necessity to carry insurance.

8th. It is impervious to climatic influences, and time enduring, assuring a minimum outlay for annual repairs.

If there are any disadvantages in the use of hollow tile, other than first cost, they have not made themselves apparent to me in practice. Throughout the state of Ohio, there are a great number of different classes of buildings that have been built of this material, using the standard eight inch by eight inch hollow building blocks, owners and occupants of which, when consulted, have in every case expressed themselves entirely satisfied with the material. There are large factories in almost every state of the Union engaged in the manufacture of clay products, and the selling price of this material is being decreased gradually every year. At the same time, the price of lumber is constantly on the advance, and it will only be a short time when the owners of buildings will find it to their interest, on the grounds of economy of first cost, to use hollow tile in preference to any other material. The demand for this class of construction is surely coming, and the young draughtsman of today who will be the architect of the future, will be called upon to furnish the plans and designs for the buildings.

The practical examples of structures already erected and in use eliminate the objection that may be raised on the ground that this system of construction is new or untried. It is for this reason that I have dwelt so particularly upon the results of the tests that have been made, and are now being made, so that architects may be fully informed upon the actual unit values of this material, and also the latest improvements being devised for its economic application to building construction.
The full text of the treaty of alliance between Harvard university and the Massachusetts institute of technology has at last been perfected by the legal advisers of the two institutions, and it has now been published. In its salient points this instrument contains nothing which has not already been made known to the readers of The Republican, which was able to present an outline of the scheme last autumn. The agreement, as was then stated, provides that each institution shall preserve its independence, while the entire department of Harvard now known as the Lawrence scientific school, except the school of architecture, shall be transferred to the institute. The institute's directing body shall be an executive committee of nine, to be appointed by the institute corporation, and only three of these shall be taken from the corporation of Harvard university. The institute is to get the income of the Lawrence scientific school and three-quarters of the income of the McKay funds, and also the income of whatever money shall be given to Harvard for instruction in applied science in the future. In view, however, of the doubts raised as to the right of Harvard to divert the McKay legacy to the institute under these articles of agreement, it is specifically provided:

"Whereas, the carrying out of such agreement will require the employment of the income of the funds which the university holds or will hereafter hold in trust, and the university feels that faithfulness in the performance of these trusts which it has accepted is its first duty, to which all other considerations must yield, this agreement shall not go into effect until and unless the university shall have applied to the supreme judicial court for instructions and the court shall have made a decree that this agreement may be carried out without violation of its duties as a trustee and in accordance with law and equity."

While the Harvard corporation is ready to go ahead, everything now awaits the pleasure of the institute. President Pritchett called a special meeting of the corporation Friday afternoon, and the question was considered. Reports indicate that an opposition exists in that body, but no vote was taken on the project, the feeling being that no hasty action should be permitted. As the treaty of alliance is now made public, there will doubtless begin an open discussion of its merits, which is likely to continue through the spring. The opposition among the "Tech" alumni would incur a heavy responsibility in causing the defeat of the scheme, if it should finally prove victorious. The agreement appears to have been drawn with rare skill, and, while it might be possible to strengthen it in detail, no improvement seems within reach for those clauses which lay down the broad lines of the alliance. In this treaty the principle of co-operation in education between two great institutions is at stake—From the Springfield Republican.
ALABAMA CITY A MODEL FACTORY TOWN.

Alabama City is the most remarkable town in the state of Alabama. Its public square is broad and generous and the pavement glistens bright in the sunlight. The only marks across it are black rails of the Alabama City, Gadsden and Attalia Electric Railway line. The streets that radiate from the square are broad and firm, paved with clinkers and coal ashes. The sidewalks are wide and glistening with chert pavement.

Lining these streets are more than 400 houses, no two alike. They are uniform only in neatness and attractiveness.

A lake covering six acres, with a bathhouse containing 42 rooms, is a feature of the town. A few yards away in beautiful oak groves are the Union Church and the library. The church is used as a place of worship by all denominations. It is a beautiful building. There is perhaps in no other town of its size in Alabama so handsome a structure.

The library across the street is equally as attractive. There is a commodious town hall, in which public meetings are held and lecturers and entertainers heard.

Over the oak mantel in the library hangs an oil portrait of a young man with blonde locks, fine spun and curling. The eyes are blue and frank, the chin is firm and rounded and the mouth smiling. The name on the bronze plate is “Howard Gardner Nichols.”

Across the room a piece of yellow golden Egyptian marble is sunk into the wall. It tells him who...
reads that "This building was erected by the Dwight Manufacturing Co. in memory of Howard Gardner Nichols, under whose supervision this town was laid out and the first mill constructed."

The inscription recites that he was born in Haverhill, Mass., in 1871, was graduated from Harvard in 1893 and that he died in 1898, of injuries received while performing his duties. The inscription thus ceases: "Beloved and lamented, his memory lives to bless this community."

Another picture of the young man, a photograph, hangs in the office of the Dwight mills. He is wearing the cap and gown of Harvard and has in his hand his doctor's degree.

The town is a monument to the young man, who was the son of J. Howard Nichols, treasurer of the Dwight Manufacturing Co.

It was the young man's dream to make Alabama City his life work. He was favored by fate in working to the fulfillment of his dream. His natural gifts were varied and strong, and he was equipped by environment, heredity and education for the task he had mapped out for his life.

The Dwight Company, one of the largest manufacturers of cotton goods in the United States, had determined to extend its operations to the South. The home mills of the company are at Chicopee, Mass. As a son of the treasurer and Alabama agent, Howard Gardner Nichols took active part in forming the plans for a Southern mill.

The whole South was gone over and it was determined to build the mill in Alabama. Gadsden put forth its claims and obtained it.

Alabama City was laid out with the mill at its center. Young Nichols drew the plans and superintended the laying out of the new town. Work on the mill was done under his supervision. Alabama City and the mill were three years in building.

While directing the installation of machinery in May, 1898, a heavy piece fell upon young Nichols and he received injuries from which he died 30 days later.

The thing that most impresses the visitor to Alabama City is the diversity of architecture in the houses of the employees. The statement that no two in the town are alike conveys some idea of this diversity. The building of each house called for separate plans. Some of the six-room houses in which the bosses live are nothing short of beautiful, with their walks, flower yards and oak tree shade. The houses range in size from three to six rooms. The rent is $1 a room a month, $3 for a three-room house, $6 for a six-room house.

The tenants have ample room for flower and vegetable gardens. The lots are 75 feet front and they run back 175 feet. The houses stand 30 feet back from the street.

The Dwight Inn is a two-story hotel of attractive appearance that would be an ornament to a town much larger than Alabama City. The company gives the rent free to the proprietors of the inn for keeping
The church is in the Elizabethan style of architecture. Over the chancel is a memorial window erected in memory of Howard Gardner Nichols by his sisters. It is a reproduction of Allison's famous painting of the "Young Man of the Bible."

The school building is a model structure. It has 25 pupils and four teachers. Not a cent cost is attached to the school for any patron.

The company sells coal to its employes at a reduced rate. The company owns its own coal property, and mines as fine a grade of coal as can be found on the market.

The water supply of the town comes from Lookout Mountain. Water mains run through the principal streets, giving ample fire protection.

The company owns its own ice plant. A ton of ice each day is furnished to employes in the mill without charge.

The mill is the largest in Alabama, having 10 acres of floor space. It is four stories high, 138 feet wide and nearly 1,000 feet long. It has 60,000 spindles and 1,000 looms. It uses 80 to 100 bales of cotton daily and 1,300 to 1,500 persons have daily employment within its walls.

Its products are sent direct to the markets of the world. The machines which mark the goods are made in every language. One of these stamping outfits contains a likeness of Li Hung Chang, with an inscription that looks like a Chinese laundry ticket. Another shows a Chinese warrior, riding, over a laundry ticket. Goods with these stamped upon them are shipped to Chinese ports. There are also stamps for goods that go to the West Indies, Labrador and South America.

Said the company agent, A. B. Mitchell: "We have absolutely no drunkenness here. No whiskey is sold in Alabama City. Moreover, we discharge a man the first time he gets drunk; not the second or the third time, but the first time. This rule is inflexible."

Alabama City is more than the model mill town of Alabama. It is the model mill town of the United States. Cotton manufacturers from the North, where the industry has reached its highest development, say that its equal is not found in the New England States.
section of the routine business of the meeting, Mr. Louis F. Brayton read a very interesting paper on "Concrete Construction."

Sketches were received by the competition committee for the "Park Bandstand" competition. Mr. E. H. Hewitt will judge this competition. The next meeting will take place on Friday evening, April 28, at the Builders & Traders Exchange, Minneapolis.

A dry Niagara is foreshadowed by the article by the New York state geologist in the current number of the Popular Science Monthly. It seems there is only 224,000 cubic feet of water per second to go on, and careful estimates show that when the power companies have used 80,000 feet of this the American Falls will have gone dry. Two American companies are now operating under charters allowing them to use 16,300 total of 30,000 feet. This would make a grand total of 8,000 feet more than enough to dry the American Falls. New York has required no return for these water privileges, but Canada has been less kind to the companies operating on her side, and exacts substantial payments from them. A graduated tax might bring things to pass if the authorities on both sides were to agree upon it.
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