

court rule and the statutes and that the former was consequently invalid and asked for the writ of mandamus to set the decision of the court aside. The Supreme Court decided that the court rule was valid. This has the effect of practically establishing the Patent Office rules limiting the appeals which can be taken from one tribunal in the office to the other to six months. It should be borne in mind in this connection that on January 1, 1898, the new statutes recently enacted by Congress will be in force, and one year will be allowed under this new law in which to file amendments and take appeals. The six months rule was a Patent Office rule which was established by the ex-Commissioner of Patents, Mr. Seymour, and was in violation, apparently, of the statutes which allowed two years within which to take such action.

#### AMERICAN INDUSTRIAL SUPREMACY.

A recent issue of the Iron and Coal Trades Review (England) discusses editorially the relative condition of the wire industry in England and America. The facts which are given afford a striking proof of the rapidity with which a new industry is developed in the United States when once it has gained a firm footing, and they indicate also the rapid decrease in the cost of manufacture which has characterized our entrance into such industries.

According to our contemporary the English manufacturers of wire rods, wire, and wire nails are threatened with the loss of their business in consequence of the successful competition of Germany and other Continental countries and of the United States. The rivalry of Germany is of long standing and has become an accepted fact; whereas that of the United States is a more recent and has grown to be a much more formidable feature.

Thirty years ago there was no such thing as a wire industry in this country. During the progress of the Paris Exposition of 1867 Mr. Abram S. Hewitt stated, in a report on "the production of iron and steel in its economic and social relations," that the manufacture of puddled wire rods was a very extensive business in Great Britain, but that no one had succeeded in naturalizing it upon American soil. With the best grades of charcoal iron it was, indeed, possible to make good puddled wire rods in the United States, but at a cost too high to compete with the foreign article, in the production of which no charcoal was employed.

In the thirty years which have passed since Mr. Hewitt made his report, Bessemer steel has revolutionized the industry, and the United States now holds a commanding lead over all competitors. We find that a single Garrett rod mill in the United States is producing 7,808 gross tons of wire rods in a single month, which would mean an output of 100,000 tons of finished product in a single year.

The total output in Great Britain is only 200,000 tons per year, so that two such American mills would, to-day, equal the annual production of the very country upon which, thirty years ago, we were dependent for this article.

The statistics of the wire nail industry are equally striking. A single establishment, the Joliet Steel Works, produced 300,000 kegs of wire nails in 1895 and it is capable of exceeding that amount if necessary. The wages which are paid in the mills per keg of material appear to our contemporary to be "incredibly low," but it is noted very justly that the figure quoted, about 83 cents per keg, refers to a mill which is capable of producing a larger output of rods than any in England. It is the improved machinery, the careful attention to detail in the matter of saving time, and the intelligent resourcefulness of the American workman that enable our manufacturers to turn out a cheaper article, although the operatives take home a larger weekly wage than they do in England. The wonderful progress in economical production is shown by the following figures: In 1870 the average output of the mills was 14 tons of rods per double shift; in ten years this had doubled to 28 tons; during the next five years, or in 1885, as the result of the introduction of the Garrett mill, it had grown to 100 tons; and in 1895 the average output was 280 tons per double shift. Extraordinary as these figures appear to English manufacturers, our contemporary draws attention to the fact that there is no reason to doubt them, "since the prices quoted for sales speak for themselves, and it is well known that our American rivals are now offering wire rods and wire nails in most outside markets at such low prices that our home manufacturers admit their inability to understand how it is done."

That we should be able to undersell the English manufacturers in outside markets is the more remarkable when it is remembered that most of their mills are situated on or near the seaboard, whereas many of our large mills are situated inland, and a haul, sometimes of hundreds of miles, is necessary before the commodity in question can be loaded for foreign ports; moreover, when it has been carried to the seaboard, we are at a further disadvantage on account of the cheap sea freights and the vast carrying facilities of our competitor.

Our easy supremacy in the manufacture of wire is only

typical of our progress in a score of other leading industries. The fact that we are able to undersell our competitors in outside markets at a time when we are producing, or are capable of producing, a large surplus above the needs of the home markets, suggests that our future commercial growth must take place chiefly in outside fields. There is no reason to doubt that our foreign trade could be greatly and rapidly extended if a systematic, thoroughly well organized effort were made to open up new markets and enlarge those that exist. If our consular service were strengthened, and if its efforts were supplemented by the establishment of local bureaus for the display of our products and for gathering and disseminating information likely to foster our trade with foreign countries, it is likely that we could soon open a market for our surplus product and bring back something of the industrial activity of the early years of the present decade.

#### A CIRCULATING PICTURE GALLERY.

It is strange that the thought of an enterprise should have slept through all the ages to become a reality in these last days of our century. To whom the conception is due we know not, but its materialization we owe to the Hull House settlement, Chicago, says the Critic. The gallery at Hull House consists of about fifty framed reproductions. Some of them are the publications of the Arundel Society, but in addition to these there are colored prints of Fra Angelico's angels, and many photographs of paintings by the old masters. Modern art is not entirely neglected either, Millet, Bastien Lepage, and Abbott Thayer being the most important of the latter painters represented.

A few water colors are also included, though the gallery is mainly photographic. Each of these pictures may be taken out for two weeks at a time, a privilege which may be once renewed; but this limitation is not too rigidly adhered to. No charge is made, and no security required, except a certain knowledge of the subscriber and his address. Men and women of the working classes take a lively interest in the gallery, but its most enthusiastic patrons are children.

The pictures are all framed, and they are well cared for by the temporary owners. The most popular of them are Fra Angelico's Paradise, the Sistine Madonna, and several other Raphaels, the Presentation in the Temple of Carpaccio, and, curiously enough, Bastien Lepage's Jeanne d'Arc. Imagine that beautiful, serene, exalted face in a bare, ugly room on West Halstead Street. It could not remain there two weeks without having some subtle, uplifting influence. And for this reason the new enterprise seems one of the most beneficial that Hull House has undertaken, outranking even the library, for the reason that everything the gallery contains is of fine quality, is true art.

That is what we need—to have art brought close to the people, to make them see it and feel it and live with it. It should be a part of themselves, as necessary and inevitable as food and shelter. To rich and poor alike in this country it is still alien, still a thing apart, too much of a luxury to be taken into our daily lives, too exalted to become a part of our daily thoughts. We talk about it, we criticize and patronize it; we even, when much aroused, admire it; but we do not love it. It is like a foreign language to us, and we have yet to learn to think in it.

#### DANUBE-MOLDAU-ELBE CANAL.

The agitation in favor of a canal which, starting from Vienna and proceeding in a northwesterly direction to Budweis, on the Upper Moldau, then utilizing the Moldau and the Elbe, would connect the Black Sea with the North Sea, now finds support in the Monatschrift für den Öffentlichen Baudienst, the official organ of the Austrian ministry of the interior. The idea, of course, goes back to remote times. Charles IV, the stepfather of the German empire and father of his own country, Bohemia, made a cutting through the Rosenberg as a starting point for the canal in 1366. Two hundred years later a full project providing locks was drawn up. The Austrian government has as yet dreaded the expense, and not taken any steps. But a committee has long been appointed, and of three projects submitted, that of Lanna-Vering has been approved. The survey and the preliminary work have been done. It is now a question of funds. It is estimated that 2.1 meters of water (nearly 7 feet) could be secured all the way from Vienna to Ausrig on the Elbe (near the frontier of Saxony), with the expenditure of 100 million florins (about \$50,000,000); and it is pointed out that Germany might help, since the distance Hamburg-Sulina would be diminished by 55 per cent and Hamburg-Constantinople by 41 per cent. That may not be a strong argument, but Germany contributed nearly \$5,000,000 to the St. Gothard railway funds—a somewhat similar case of indirect interests.

THE electrical works and laboratory of Mr. Harry Barringer Cox, at St. Albans, Eng., which were totally destroyed by fire on Feb. 22, contained a valuable collection of electrical and other instruments, with the records of Mr. Cox's ten years' research into the problem of the cheap direct conversion of heat into electric

city. Every one of his experiments had been photographed, and all these photographs were lost. We understand that Mr. Cox has been attempting to make a thermopile which would be commercially practicable as a generator of electric current.

#### A WARNING TO INVENTORS.

In this nineteenth century the profession of patent solicitors is degenerating from the professional to the commercial. Inventors and patentees have their attention arrested by flaming announcements, with the object of catching unwary inventors and patentees. One class of these agents offers medals as certificates of value of inventions, and large lottery prizes, amounting to thousands of dollars, to inventors who place their applications for patents in their hands. However, before a medal or prize is awarded these inventors, in order to become acceptable competitors, they are compelled to pay into the hands of these agents certain fees.

These competing inventors are induced to believe that a scientific and mechanical corps of experts in the employ of these agents makes crucial examinations of their inventions, in the light of the prior state of the art, and the inventions of all others who are competing for a medal or the prizes, and in due time they respectively receive a communication from their agents, accompanied by a medal, certifying that they have been awarded the medal by a corps of experts, on the ground that the invention is determined to be the best of all others presented to them for patents. At some subsequent period it is announced that the money prize has been awarded to A. B or C.

It would seem that intelligent men would not fall into such traps in this enlightened age; but alas! they, like innocent lambs, are led to enter and made to suffer, or are dealt with in the same manner as are unsophisticated rural citizens who fall into the hands of "green goods" merchants.

For many years the story of the gold [gilded] medal awarded by a French scientific society to United States patentees has been well known, and yet victims are constantly being made. When the announcement is received from Paris that the gold [gilded] medal has been awarded to a United States patentee for his invention, after an examination by its savants, and that it has been found to be the best of the kind patented, there is a demand for a considerable sum of money to pay the expenses of the transmission of the medal to this country.

The expectation of receiving this sum of money is the secret of all the interest that this French association manifests in regard to United States patentees. A bald attempt to get money for a gilded medal, issued by a set of questionable persons, ought to be understood by intelligent patentees when they read the word "gilded" in small letters, inclosed in brackets, following the word gold. Such medals, whether American or foreign issues, should not be accepted by inventors, or investors in inventions of others, as proof of merit. They are nothing more than sawdust sold by "green goods" men.

Recently an inventor applied to one of the United States medal awarding patent agents and received a medal, but no patent; and after he had expended about \$175 as fees to this agent and to the Patent Office, he made a visit to Washington, D. C., and called on the chief of police in respect to his patent business, and finding that his money was wasted and beyond recovery, requested him to refer him to an honest, reliable and capable patent counselor and solicitor, and being given the name of a respectable house in Washington, he visited the same, and on entering the door he said: "I am referred by the chief of police to you, as the kind of patent solicitor I am seeking. I do not want a medal awarded me, for my medal has cost me \$175, and no patent has been granted me. I want such an honest, reliable attorney, that, when he takes my case, and I pay him my money, I can go home and feel satisfied that all will be done squarely, and I shall get a patent for my invention from the United States Patent Office, instead of a mere medal from my agent." The experience of this inventor ought to be a warning to others, and the course that he pursued should be followed by them.

Another trap set for patentees is the one that the Inventive Age, of Washington, D. C., has for many months been warning patentees against. This trap is set by the patent right selling agent, who sends to every patentee a letter, which letter says: "Your patent has been examined by our scientific board or corps of mechanical experts, and it has been pronounced to be worth \$25,000, or \$50,000, or \$100,000, and we would like to have the agency for selling your patent." Furthermore, offers are made to take out foreign patents on already issued United States patents for one-half the usual fees, etc. It is only necessary to say that patentees in many foreign countries for United States patented inventions, which have been published in the United States Patent Office Gazette fully enough to be understood by practical mechanics, are invalid, even if granted by such foreign government.—Lords' Power and Machinery Magazine.