PATENT OFFICE DECISIONS.

Improvement in Stove Pipe Elbows.

LEGGETT, *Commissioner:*

The applicant seeks a patent on his device as a new article of manufacture. He takes a stove pipe elbow, after it has been finished, and dips it into a vat of molten solder.

The references show that buckets, water pipes, etc., were before made and prepared in exactly the same manner as applicant's device is prepared. It is preposterous to suppose that the mere application of this coating metal to an article so analogous as a sheet metal stove pipe possesses any element of novelty or indicates any exercise of the inventive faculty. One man discovers that he can take a water pipe, dip it into molten solder, and thereby coat it and protect it from corrosion. He makes application and obtains a patent for the same. Another man makes a stove pipe, coats it in the same manner and by the same process, and claims a patent for the same. If this second can be granted, then there is no reason why fifty thousand patents may not be granted for coating in the same manner fifty thousand different articles of manufacture. This simple aspect of the case is sufficient to answer it without further examination.

It was never the design of the patent law to grant a separate patent on every possible application of a process. To do so would be a fraud upon inventors and the public alike.

The decision of the Examiners-in-Chief, rejecting the application, is affirmed.

Perforated Sheet Metal Pipe.

APPEAL OF HALL AND HALL.

LEGGETT, *Commissioner:*

Applicants claim "a perforated sheet metal pipe, constructed substantially as and for the purpose described." This pipe is to be used, in connection with manufacturing establishments, for the purpose of extinguishing fires. It is extended along the ceiling of a factory, and water, being forced into it by suitable apparatus with which it is connected, makes its exit through the perforations, and is distributed beneath like rain or spray. This general device is old, as shown by the references. If the applicants were the first to produce sheet metal water pipes, or if they were the first to make smooth holes in them, or if they had discovered a new process of making smooth holes, they would have good ground for a patent. As it is they have no ground, for they have made no invention. They have, doubtless, been misled by supposing that, in the process of manufacturing, the stage at which they make their holes, whether before or after forming the pipe, has anything to do with conferring upon the pipe itself, as a finished article, the element of novelty.

The decision of the Board, rejecting the application, is affirmed.

Improvements in Rolling Mills.

APPEAL OF JOSEPH L. PENNOCK.

LEGGETT, *Commissioner:*

The object of applicant's invention is to convey a pile from the bed of a heating furnace to the rolls of a rolling mill. He accomplishes it by means of power-driven hauling mechanism, which withdraws the heated pile from the furnace and deposits it on a platform of a crane that swings it round and delivers it to the rolls. It is shown by the Examiner and illustrated in applicant's argument that similar mechanism has been employed to drag the pile from the furnace on to a platform of a truck which delivers it to the rolls. Applicant has substituted a crane for the truck in this case. But, as is well known, cranes are in common use for conveying heated piles to be forged and rolled. In substituting the crane applicant has effected a saving, and in the details of his device has exhibited invention. It is not, however, of a very comprehensive character, in view of the references, and I think does not justify a claim so broad as the one under consideration. It is, in my opinion, fully comprehended in the second claim, which has been allowed.

The decision of the Board is affirmed.

DECISIONS OF THE COURTS.

United States Circuit Court, District of New Jersey.

WELLS *vs.* GILL *et al.* SAME *vs.* YATES *et al.*

Wells' Patent for Manufacturing Hat Bodies.

This was a motion for a provisional injunction in a suit in equity brought by Eliza Wells, administratrix of the estate of Henry A. Wells, deceased, against John Gill and George H. Gill, for an alleged infringement of letters patent for a machine for making hat bodies, the original patent having been granted Henry A. Wells, April 25, 1846, and the reissue, under which the suit was brought, bearing date May 19, 1868.

The main question involved, besides that of infringement, was the effect to be given to a judgment in favor of the patent previously rendered in the trial of an action at law in the Circuit Court for the Southern District of New York; it appeared that such judgment had been taken up by a writ of error to the Supreme Court of the United States, and that the cause was still pending before that tribunal.

The motion was heard by Mr. Justice Strong, of the Supreme Court, and his honor, Judge Nixon.

In connection with the above there was argued a similar motion in the suit of *Eliza Wells, administratrix, &c., vs. Yates, Wharton & Yocom;* the questions involved in the two motions being the same.

The opinion of the Court was delivered by Mr. Justice Strong, holding that the complainant is entitled to an injunction. But, in view of the fact that the judgment in the Circuit Court of New York may be reversed, an injunction should be withheld if the defendants give security for the payment of the profits they may derive from the use of the invention, and for the damages their use may cause to the complainant. Bond to be given in the penal sum of $20,000.

The same order in the case of *Wells* vs. *Yates* et al.

E. N. Dickerson for complainant.

Soule & French for defendants.

Supreme Court of the United States.

THE GORHAM MANUFACTURING COMPANY, appellant, *vs.* GEORGE C. WHITE.

Design Patents.

Appeal from the Circuit Court of the United States for the Southern District of New York.

The complainants are the owners of a patent, granted on the 16th day of July, 1861, to John Gorham, Gorham Thurber, and Lewis Dexter, Jr., for a new design for the handles of table spoons and forks, and their bill charges that the patent has been infringed by the defendant. The validity of the patent is not denied, nor is it controverted that the defendant has sold spoons and forks which had upon them designs bearing some resemblance to the design described in the complainants' patent. But it is contended that none of the designs on these articles thus sold are substantially the same as the design covered by the patent, and that they are all independent of any thing secured to Gorham, Thurber, and Dexter, the patentees.

Mr. Justice STRONG delivered the opinion of the Court, holding as follows:—

The acts of Congress, which authorize the grant of a patent for designs, contemplate not so much utility as appearance; and the thing invented or produced for which a patent is given is that which gives a peculiar or distinctive appearance to the manufacture or article to which it is applied.

It is the appearance to the eye that constitutes mainly, if not entirely, the contribution to the public which the law deems worthy of recompense, and identity of appearance or sameness of effect upon the eye is the main test of substantial identity of design.

It is not essential to identity of design that the appearance should be the same to the eye of an expert. If, in the eye of an ordinary observer, giving such attention as a purchaser usually gives, two designs are substantially the same, if the resemblance is such as to deceive such an observer, and sufficient to induce him to purchase one supposing it to be the other, the one first patented is infringed by the other.

COMMUNICATIONS RECEIVED.

The Editor of the SCIENTIFIC AMERICAN acknowledges with much pleasure, the receipt of original papers and contributions upon the following subjects:

On an Improved Conservatory. By F. W. P.

On Instinctive Marriage. By W. T. R.

On the Darwinian Theory. By M. R.

On the Wheel Question. By J. A. B., and by J. B. J.

On A Means of Saving Life in Case of Disasters at Sea. By F. H.

On a Geometrical Problem. By O. W. G.; also by M. F., and by G. B. L.

On Self Propelling Fire Engines. By F. G. W.

On the Injury of Trees by Lightning. By F. S. R.

On a Recent Boiler Explosion in Ohio. By J. A. W.

On a New Method of Feeding Canals. By B.

On Human Antiquity. By D. K.

On Insensibility. By E. H. R.

On Perpetual Motion. By I.

On the August Meteoric Display. By J. B.

On the Separation of Ramie. By M.

On Terrestrial Heat. By W. L. W.

Business and Personal.

The Charge for Insertion under this head is One Dollar a Line. If the Notice exceed Four Lines, One Dollar and a Half per Line will be charged.

ANSWERS TO CORRESPONDENTS.

SPECIAL NOTE.—This column is designed for the general interest and instruction of our readers, not for gratuitous replies to questions of a purely business or personal nature. We will publish such inquiries, however, when paid for as advertisements at $1·50 a line, under the head of "Business and Personal."

ALL references to back numbers must be by volume and page.

R. and A. say:—Is it possible to bring such an intense degree of heat upon a leaden pipe, say ¾ inch, that the heat would melt the pipe provided a continuous stream of water runs through the pipe? Is it possible to melt a pipe at all under those conditions? Answer: Yes. It is possible to melt a lead pipe under the circumstances you mention. One method of doing so would be to girdle the pipe with a platinum wire, heated to white heat by galvanic battery. It would quickly melt the pipe through.

W. B. asks:—At how many strokes per minute would it be most economical to run an engine the cylinder of which is fourteen inches and the piston stroke thirty inches? I am running it at 60 strokes per minute without a cut-off. I have plenty of steam, but do not get power enough at 60 strokes. Answer: Your engine, if of 14 inches diameter of cylinder and 30 inches stroke of piston, well made and well taken care of, ought to run without difficulty up to a speed of 80 revolutions a minute. If as carefully proportioned as the Allen engine, it would work well at double that speed, but it is improbable that you will succeed in going above our figure, just given.

S. says:—I am a fireman on a locomotive, and while running I notice that the indicator on the steam gage points to one hundred and twenty. While the engine is at rest and the boiler cold, the indicator points to ten; what is the actual steam pressure? Answer: We cannot tell you. The only way to determine it is to test your gage by comparison with a standard. Probably your pressure is between 110 and 120 when indicating the latter figure. Test it if you would be safe.

S. G. S. says:—How can I cheaply and simply generate a gas so irritating as not to be borne by air breathing animals? Answer: The gases generated by the burning of tobacco will perhaps answer your purpose. Florists use the weed to destroy insects on plants.

C. H. G., of N. Y., says:—We have just completed a reservoir to supply our city with water, which has about 250 feet fall. The water is pumped from the river, to the top of College Hill where the reservoir is located, by powerful engines, so that we shall have a plentiful supply for years to come. When the project was first proposed, it was mentioned as an inducement that those requiring a small amount of power (there are quite a number here) could use it more economically by various water motors than they could steam power. Other cities were quoted as an example. But now when we have water in plenty, all are afraid to try, some saying that it will cost too much, others that we have not water enough, and all hang back waiting for somebody to make a start. I wish to ask: What diameter would a turbine wheel require with 250 feet fall, and how many gallons water would it use per hour, to run two small back geared foot lathes, having 4 foot beds and 12 inch swing, used for light work, and how much would such a wheel cost? From this standard, the probable cost of any requisite power can be obtained. Answer: The smallest and cheapest wheel that you can find in the market will drive your two lathes of 12 inch swing. They will require less than a quarter horse power, and your wheel should use less than 300 gallons of water an hour under such a great head. Write to any good wheel builder.

J. M. F. says:—I enclose a "magical fish;" please explain why it moves when placed on the hand. The motion is not from heat, as it will not move when placed over a warm iron, nor does it move when placed on other parts of the body, say the leg. Are you correct in your answer to F. H. N., page, 346, in reference to the report of two guns being heard farther than one? Suppose one man could throw a stone 100 yards. Then place 50 men there, and let them throw. No stone would go over 100 yards, but there would be many more stones in the air. Is it not so with regard to sound? The report of 50 guns would be much more intense within a given circle, but would it be a greater circle than if made by one gun? Answer: It is the warmth with moisture from the hand that causes the thin membrane to expand and contract and thus to wriggle. Your illustration of the throwing of stones does not apply to the throwing of sounds. In the case of the stones each individual exerts his strength on a separate body. But when a number of persons join in simultaneously making sound, they exert their united strength to move the same body, namely, the air; and it necessarily follows that they will unitedly cause the air to vibrate for a greater distance than could a single individual.

J. N. writes as follows:—There is a discussion going on in our shop on the subject of friction, and Morin's experiments have been quoted in support of the theory that friction is proportionable to pressure and independent of the extent of the bearing surfaces when they are of the same quality and not in any way injured. Will you inform us if Morin's experiments were carried far enough, and if they are to be depended on as being reliable? Answer: Morin's experiments are generally considered standard and perfectly reliable. The only difficulty in applying known laws of friction to actual examples arises from the uncertainty of our determination of the limits of pressure which may injure or change the character of rubbing surfaces.

S. M. H., who states that he is a machinist, suggests that street cars may be driven by compressed air, to be carried within suitable cylinders, placed upon the car. Also that canal boats may be propelled by means of traction engines running on the track instead of horses. Both of these ideas are very old, have been frequently and successfully tried and have been repeatedly described in the SCIENTIFIC AMERICAN.

E. O. J. says:—In answer to G. P., who wishes to know the fastest time on record made on any railroad in this country or in England, I would say that in June, 1855, the locomotive Hamilton Davis, on the New York Central Railroad, with six cars, ran fourteen miles in eleven minutes, seven seconds. This is on record.

To J. S. E., query 7, page 298.—From the center of gravity of any triangle let fall perpendiculars on the sides of the triangle. In each of the three quatrilaterals thus formed, one at each angle, inscribe circles, which will be the circles required. (See "To inscribe a semicircle in a right angled triangle," in any geometry).—B., of Mass.