

The court now holds that this second reissue is invalid, and for the same reason given on the trial of the first reissue, namely, double use, as shown by the Hyatt and Meyer patent of 1854.

The decision in *Meyer v. Pritchard* upon the reissue then before the court to the effect that the alleged invention covered thereby of forming thickened ribs in rubber shoes or sandals by rolling was but a double use of the invention disclosed in the prior patent to Hyatt and Meyer—viz., forming the soles of rubber shoes of different thicknesses by rolling—*Held* to govern this case, the present reissue only differing from the former in being specifically limited to ribs around the mouth of the shoe.

A reissue may include matter shown in the model which was not described or indicated in the original specification or drawing; and it seems that the character of a lost or destroyed model may be established by oral testimony.

Argument against the propriety of holding that the claim of the present reissue was not patentable by reason of the earlier patent is argument against the propriety of the decision which was made in the *Pritchard* case.

The bill is dismissed.

United States Circuit Court.—Southern District of New York.

GARDNER et al. v. HERZ et al.—PATENT CHAIR SEAT.

Wallace, J.:

This action is brought to restrain the infringement of Reissue Letters Patent No. 9,094, dated February 24, 1880, granted to the assignee of George Gardner for an improvement in chair-seats.

Reissue Letters Patent No. 9,094, for a chair-seat made of laminæ of wood glued together, with the grains in one layer crossing those of the next, concave on the upper surface, convex on the lower surface, and perforated, examined and found to present no patentable novelty over the patent to Mayo, granted December 26, 1865.

Merely giving the well known concave or dishing shape by an old process to a chair-seat formed of the materials covered by the Mayo patent is not invention. It is merely applying a process that is old to a material that is old to obtain an old form.

United States Circuit Court.—Southern District of New York.

COBURN et al. vs. SCHROEDER et al.

Wheeler, J.:

This cause has now been further heard upon motion of the defendants to have the decree opened and leave granted to put in as further defenses to the patent an English provisional specification, left by James Ritchie Butchard, January 23, 1866, at the office of the Commissioner of Patents in England, with a petition for a patent, and other evidence of prior knowledge and use. The invention is understood to have been made in February, 1866.

Motion to have a decree opened and leave granted to put further defenses to the patent denied where it appeared that the new evidence would not affect the result.

An invention is not patented in England, within the meaning of the third division of section 4,920 Revised Statutes, until the completed specification has been filed.

An English provisional specification is not a bar to the grant of a patent in this country, and when relied on as a printed publication under section 4,920 Revised Statutes it seems that the defendant must show that it was actually published before the date of the patentee's invention.

Motion for opening a decree on account of an alleged change of issue made by the filing of a disclaimer by the patentee, denied where it appeared that the effect of the disclaimer was merely to limit the claim of the patent and the issue, and where the parties had full opportunity to try, and diligently availed themselves of the opportunity to try, the question which would be open if the case should be again opened.

United States Circuit Court.—Southern District of New York.

HOLLIDAY et al vs. PICKHARDT et al.—PATENT 250,247.—ROSAINE COLOR.

Blatchford, J.:

On a motion for a preliminary injunction, question being raised whether the patentee's description would make the product claimed by him, and it appearing that this point was decided in favor of the patentee by the Patent Office on a direct issue between him and another patentee whom the defendants represented, *Held*, for the purposes of the motion, that the product claimed could be obtained by following the description of the patent.

The successful party to an interference is entitled to preliminary injunction against the representatives of the defeated party in case the infringement is clear, and the decision of the Patent Office in an interference between the parties as to the identity of the products sufficient proof of infringement.

Nathan Rixford.

Mr. Nathan Rixford died in Hartford, Conn., August 29, at the age of sixty-seven. He was, at his death, probably the oldest living representative of the silk culture and manufacture in this country. He started the first silk manufactory in Mansfield Hollow, Conn., where he was a manufacturer for more than thirty years.

Correspondence.

Balsa of Lambeyeque.

To the Editor of the Scientific American:

The Indians of Lambeyeque, Peru, use a canoe called the lambyeque balsa, which I believe would go over Niagara Falls with perfect safety. It will dance on the top of the highest wave or even spray when the wave breaks into foam, and is impossible to submerge or upset except for a moment; its material, being two bundles of reeds, lashed together longitudinally, and its peculiar shape rendering it secure against either mishap. It is broad in the center and tapering at each end, with the bow turned up like a skate. If turned upside down this curved bow will point downward in the water, and being composed of hollow reeds the least motion will make it seek the surface and throw the balsa on its beam ends, which position it could not maintain. The center width being double its thickness, it will immediately right itself. It is amusing to see one forcibly held in an inverted position and then released; the instant restraining power is removed, it will turn upright in the fraction of a second. Between the two bundles of reeds there is a hollow space covered with water tight skin. In the Peruvian balsa this space is small, but it might be made large enough for a man to lie



down in. In the case of going over Niagara Falls (supposing any one was foolhardy enough to attempt it), a line might be attached to the bow and extend to the shore below the Falls, in order to draw the navigator ashore after his descent. A dog recently went over the Falls without being killed, and in 1829 (I think that was the date) the famous ship Niagara was sent over, having on board two bears and a quantity of geese. The geese took flight when the ship went over and alighted in the river below; one of the bears was never seen afterward, but the other swam ashore below the falls with a broken leg. The ship itself was completely demolished. So the transit is not *certain* death.

To convey a better idea of these Peruvian balsas, I subjoin a sketch. W. B. W. Milwaukee, Wis.

True Disinfectants.

Many a so-called disinfectant is employed to-day in a certain solution, when it does not possess any value whatever under the circumstances. If it is really our intention to disinfect wounds, we must be certain, at least, that we will achieve our object with the remedy we use; if such is not the case, we only irritate without doing good.

The Imperial Board of Health in Berlin has published a number of experiments which have been made by Dr. R. Koch, with the view of establishing the real value of many so called disinfectants. It would lead us too far to give the whole procedure employed to ascertain the facts mentioned, and we will, therefore, confine ourselves to giving the more important results of the investigations of this celebrated physician.

Most surgeons have been satisfied to wash their hands and clean their instruments with a 2 per cent solution of carbolic acid. Such a solution is almost inert, and a 5 per cent solution is necessary to achieve the desired object.

But what is the most interesting is the fact that *carbolic acid dissolved in oil or water proved itself totally inert!* What do our surgeons who still make use of so-called carbolized oil say to that? Koch found that carbolic acid, when dissolved in oil or in alcohol, had not the slightest influence on the vitality of any of the micrococci or bacilli.

Concerning sulphurous acid, it was found to be powerless against spores; bacilli and micrococci, when exposed to the fumes in a box, were killed within twenty minutes, but were very little influenced, or not at all, when exposed to the fumes in a room at the usual temperature.

Chloride of zinc showed itself just as harmless. A 5 per cent solution exerted absolutely no influence on the spores of anthrax, notwithstanding the same had been exposed to the action of the remedy for a period of thirty days.

Of other drugs, the spores of the bacilli were killed by chlorine water, fresh prepared; 2 per cent bromine water, 1 per cent aqueous solution of corrosive sublimate, 5 per cent solution of permanganate of potassium, 1 per cent osmic acid, within one day; formic acid, four days; oil terebinth, five days; solution of chloride of iron, four days; 1 per cent arsenious acid, 1 per cent quinine (water with muriatic acid), 2 per cent muriatic acid within ten days; ether within thirty days.

Inert or possessing very little influence: distilled water, alcohol, glycerine, oil, sulphur-carbon, chloroform, benzol, petroleum-ether, ammonia, concentrated solution of common salt, bromide and iodide of potassium, 1 per cent; sulphuric acid, sulphate of zinc and copper, alum, 1 per cent; perman. of potash, chromic acid, the chromates and bichromates, chlorate of potash, 5 per cent; boracic acid, 5 per cent; acetic acid, 5 per cent; tannic acid, 5 per cent; benzoate of sodium, 5 per cent; quinine (2 per cent in water 40, alcohol 60), iodine (1 per cent in alcohol), thymol

(5 per cent in alcohol), salicylic acid (5 per cent in alcohol, 2 per cent in oil).

As regards remedies which prevent the further development of spores, the following results were obtained. The first number means retarding the development, the rest totally preventing it:

Corrosive sublimate,	1 : 1,600,000	1 : 320,000
Oil of sirapiss,	1 : 330,000	1 : 33,000
Arsenite of potash,	1 : 100,000	1 : 10,000
Thymol,	1 : 80,000	
Oil terebinth,	1 : 75,000	
Hydrocyanic acid,	1 : 40,000	1 : 8,000
Oil of peppermint,	1 : 33,000	
Chromic acid,	1 : 10,000	1 : 5,000
Picric acid,	1 : 10,000	1 : 5,000
Iodine,	1 : 5,000	
Salicylic acid,	1 : 3,310	1 : 1,500
Permang. of pot.,	1 : 3,000	
Muriatic acid,	1 : 2,500	1 : 1,700
Camphor,	1 : 2,500	
Eucalyptol,	1 : 2,500	
Benzoic acid,	1 : 2,000	
Borax,	1 : 2,000	1 : 700
Carbolic acid,	1 : 1,250	1 : 800

But as, for purposes of disinfection, the micro organisms must be killed, and in the shortest possible period, and the effect of retarding the development of the spores (antiseptic) is not sufficient, only the following remedies can, according to Koch's experiments, be said to be of value: corrosive sublimate, chlorine, bromine, iodine. Bromine in form of vapor is, as concerns rapidity of action, superior to chlorine and iodine. — *Med. and Surg. Rep.*

National Telephone Association.

The National Telephone Exchange Association held a convention in Boston, September 5 and 6. The committee on Central Office System and Apparatus Exchange Statistics reported that reports had been received from eighty-one exchanges, representing some 29,000 subscribers. There are about 60,000 to 70,000 subscribers in the United States. In New York there are 2,873, and the smallest number in any one place is 10. There is a steady and continued growth all over the country. The number of connections increase each month at all localities with improved service.

In an informal discussion of line construction and maintenance, Mr. E. S. Babcock, of the Evansville (Ind.) Telephone Exchange Company, gave an interesting account of 400 miles of wire maintained by his company and worked successfully without insulators of any kind, by simply attaching the wires to the poles. He said no difficulty was experienced in sending messages, and it was found that the wires thus situated worked better than those insulated.

W. D. Sargeant, of Brooklyn, from the Committee on Electrical Disturbances, read a comprehensive paper treating of three subjects—leakage, induction, and earth and atmospheric currents—saying that the increasing number and length of wires prove the value of good insulation and conductivity. No loose or unsoldered joints should be tolerated on a telephone line. The great enemies to long lines are induction and retardation. The latter appears to be the most difficult to remove. In so-called anti-induction cables retardation is most manifest. When inductive shields entirely inclose the insulated conductor the metallic current appears to remove much of this trouble. A cable, the longest in this country, has been recently laid from Newark, N. J., to Jersey City, some ten miles. The conductors in this cable change their relative positions at every joint of about 1,000 feet, and the remedy seems to be effectual, conversation on a single grounded circuit being carried on without interference with others, and the sound of several Morse wires working from batteries and dynamos was scarcely audible. As to earth and atmospheric currents, it is believed that with well-insulated lines of non magnetic material a degree of perfection may be attainable that will leave but little to be desired.

There were present at the several sessions representatives of principal exchanges throughout the country, and quite a number of practical papers were presented.

The National Geological Survey.

Hitherto the surveys conducted by United States geologists have been confined to the Territories. Last winter Congress authorized the prosecution of such work at national expense within the lines of the States. Accordingly parties are now at work in North Carolina, Kentucky, Missouri, and Arkansas, under the direction of the Chief of the National Survey, Professor Powell, obtaining data for a geological map of the entire country. Meantime the territorial surveys are not neglected, Professor Powell going to join the large party at work in Arizona and New Mexico. The Bureau of Ethnology has several parties at work in the Mississippi Valley.

National Museum of Hygiene.

Surgeon-General Wales, U. S. N., describes, in an official circular, the scope and plan of the National Museum of Hygiene, organized under the Bureau of Medicine and Surgery, at Washington. The design is to make the collection one that will illustrate the entire scope of sanitary science, to have courses of lectures by capable sanitarians from all parts of the country, and to establish a library of sanitary science, accessible to all engaged in the study of this branch of knowledge. The library of the Bureau already contains many standard works in English, French, and German. The support of the Museum has been provided by act of Congress.