

Correspondence.

The Spread of Cholera.

To the Editor of the Scientific American:

With reference to your account of the introduction of Asiatic cholera into Chili, permit me to point out that water is not an unusual, but most common, vehicle for the spread of the infection. It is, I suppose, unnecessary to remind you that if the disease were to reach San Francisco, nothing could be better adapted to carry it across the continent and to spread it everywhere than the conveniences attached to our railroad passenger coaches. C. J. G.

Oil for Boots and Shoes.

To the Editor of the Scientific American:

Referring to No. 20 of Notes and Queries, issue May 14, I can say from experience that if C. L. will use a vegetable oil—say castor oil—for softening the uppers of his shoes, he will have little trouble in polishing them the next morning. It is the animal oil that troubles the user in polishing.

I have used castor oil for ten years past for this purpose, and find no ill result from its use. Let me caution C. L. to keep grease of all kinds away from rubber or sewed work of shoes or boots. A. S.

Oil for Boots and Shoes.

To the Editor of the Scientific American:

In your replies to correspondents, May 14, 1887, No. 20, C. L. asks: "What oil can I use to rub into my shoes at night, so that I can polish them in the morning by using ordinary shoe blacking?"

I have for a number of years obtained great satisfaction from using crude castor oil. The method to be observed is about once a month to thoroughly shine the shoes in the evening, and immediately after to apply the oil with a soft paint brush. Set aside until morning, when it will be found that the oil has soaked into the leather, making the shoes soft and pliable and the shine perfect. The following morning the shoes may be as well polished as though they had not been softened. I have found my shoes last nearly twice as long, since I adopted this method, and they are capable of a higher polish. DR. H. A. WILSON.

A Victim of Misplaced Confidence.

He was an agent for a step ladder. Not an ordinary step ladder, but a combination, convertible, extensional, generally utilizable step ladder. He greeted the lady of the house at a White street residence, last Friday afternoon, with a winning smile, as she opened the door in response to his knock, and proceeded at once to expatiate and illustrate the many advantages of his step ladder over the ordinary step ladder. It was just what every model housekeeper could not possibly do without; that fact any intelligent woman could see at a glance. It could be used in cases where every other step ladder could not; an attachment here made it a most comfortable chair for a grown-up person, another attachment there converted it into a high chair, and still by other combinations it could be made into an ironing table, a cradle, a drawing room what-not, or a garden wheelbarrow. And then it was indestructible, and would last a family a lifetime. Why, it would bear the weight of four men. That was where the agent made the greatest mistake of his life. To prove its strength he gave a spring in the air and sat down on top of it hard. That is, he meant to. For as he landed, there was a terrific crash, and the air was filled with flying bits of wood that made the lady of the house think of the time that she was in the coal cellar when a load of kindling wood was dumped in the cellar. Then there was a dull, sickening thud as the agent landed flat on his back on the piazza. She laughed as he slowly crawled from beneath the wreck and gazed ruefully about for a moment. Then he said, "You can use it for kindling wood," and walked sorrowfully away.—Orange Journal.

Inclined Road up Lookout Mountain, Tenn.

Probably one of the most famous engagements of our civil war was Hooker's famous "battle above the clouds," on Lookout Mountain, near Chattanooga, Tenn. The place thus made historical is one of the most sightly on the continent, and has attracted many visitors, so that a small park has been laid out on the small available space on the summit, and buildings are being erected for the accommodation of the public. On this account an inclined railroad has been built covering the most tedious part of the ascent. The grade averages 1 foot in 3 1/2, and the road is 4,300 feet long, making a total rise of about 1,200 feet. The cars are drawn by steel cables of 1 inch diameter, the car being calculated to carry 35 people on each trip, and to make the ascent in five or six minutes. The track has two curves, one to the left and one to the right, and from the point of the mountain where the inclined road terminates, a narrow gauge road, a mile and a quarter long, covers the more gradual ascent to the summit.

PHOTOGRAPHIC NOTES.

Copying Engravings and Drawings on Dry Plates.

—In making negatives of line subjects on dry plates, it is frequently difficult to obtain clear lines, since the latter will, to a certain extent, clog up during the later stages of development.

The method lately recommended by the *British Journal of Photography*, of first immersing the plate in a bath of gallic acid just prior to development, greatly improves the negative and secures greater density.

The plate is left in the gallic acid solution—water one oz., gallic acid two grains—for half a minute. It is then transferred without washing to the developer, as follows:

Pyrogallol solution (10 per cent).....	40 minims.
Potash solution.....	2 drachms.
Water.....	1 oz.

The potash solution is prepared as follows:

Carbonate of potash C. P.....	360 grs.
Sodium sulphite.....	360 grs.
Water.....	6 ozs.

Referring to the development, the directions to be observed are that in half a minute or so the image commences to appear. Watch carefully, and when the details in the darkest part of the engraving acquire tolerable strength, add five minims of a sixty grain solution of bromide of potassium and go on until sufficient density is acquired.

In case the development is retarded too much, a few drops of an ordinary diluted ammonia solution may be added, which will hasten the action of the developer. As a rule, it is better to slightly overexpose. Then the image will develop more uniformly and quicker, and the need of forcing the development be prevented.

Six times the normal exposure has not produced any signs of the plate being overdone, showing plainly that the gallic acid exerts a restraining influence of much value. As a remedy for overexposed plates generally, we advise, as soon as the fact is discovered, the pouring off of the developer and the immediate flowing over with the weak solution of gallic acid above mentioned, letting it remain for a minute or two. Then reapply the developer. Density will thus be easily acquired.

DECISIONS RELATING TO PATENTS.

Supreme Court of the United States.

BRAGG et al. vs. FITCH et al.

Appeal from the Circuit Court of the United States for the district of Connecticut.

Mr. Justice Bradley delivered the opinion of the court.

This is a suit on a patent granted to Charles B. Bristol, May 16, 1865, for an improvement in harness hooks or snaps, the complainants being assignees of the patent. These hooks are usually attached to the end of a strap or chain for the purpose of fastening it to a ring or staple, as in the case of a tie strap, for fastening a horse to a post. The small hook by which a watch chain is fastened to the ring or stem of the watch is an example. It has a movable part, called the "tongue," which is connected to the shank of the hook by a pivot, and is kept in place against the end of the hook by the pressure of a spring acting between the shank and the tongue. The tongue may be pressed inward so as to admit the ring or staple, and is thrust back to its place by the action of the spring. In some form or other the implement has long been in use. The patent in question relates to the mode of arranging the spring in the tongue and of attaching both to the shank of the hook.

Held, where the patented invention is but one of a series of improvements, all having the same general object and purpose, the claims of the patent must be restricted to the precise form and arrangement of the parts as described in the specification and to the purpose indicated therein.

Where all the parts claimed, with one exception, were old and had been used in a similar combination in other things of the same general character, the defendant, not using the excepted part, escapes infringement.

On the whole view of the case, we are satisfied that the defendants do not infringe the patent sued on when construed as it must be to give it any validity. The decision of the circuit court must therefore be reversed, and the case remanded, with instructions to dismiss the bill.

U. S. Circuit Court.—Southern District of New York.

HIGGINS et al. vs. KEUFFEL et al.

LABEL COPYRIGHT.

This bill is brought upon a copyright of a label registered in the Patent Office by the orator Higgins, October 27, 1883, numbered 3,693, act of June 18, 1874. (Suppt. Rev. Stat., 40; 18 Stat., 78.)

The law prescribes that the word *copyright*, with the year and the name of the party, shall be inscribed; or the words *entered*, etc., with the name and the year. The plaintiff failed in this. No notice of a copyright by inscription on the labels is given, otherwise than by the words and figures, "Registered, 3,693, 1883," printed on their face.

The exact form of the notice is prescribed by law,

and no equivalent is provided for, nor any room for an equivalent left. If that specific notice is not given, the right of action otherwise conferred is withheld. All the requirements of law on which the right of action rests must be complied with, or the suit cannot be maintained. (*Wheaton vs. Peters*, 8 Pet., 591.) This notice is so defective that the publication of the label with no other was the same in effect as a publication without any would have been. Such a publication is practically an abandonment of the copyright. Let there be a decree dismissing the bill of complaint, with costs.

To maintain an action for protection of a label by virtue of its registration in the Patent Office, under the act of June, 1874, notice of such registration must have been given in the form prescribed by the copyright law.

Publication of the label with a defective notice is the same as a publication without notice, and is practically an abandonment of the copyright.

If the orators have any rights to the contents of the label growing out of its use as a trade mark, these rights are not involved in a suit for infringement of copyright of the registered label.

Peculiarities of Customers.

"Customers have queer peculiarities," said an old retailer to an interviewer on the St. Louis *Grocer*, "and it takes a long apprenticeship to wait on all of them satisfactorily. Now, I know all the failings of my old customers, and I can get along with them without any trouble. But let a new clerk tackle one of these, and not knowing the peculiar individuals he has to deal with, he will soon find himself in hot water. So, when I get a new clerk, which rarely happens, for I do not believe in making changes, I go over my list of customers and post him as well as I can how each will have to be treated to get along without friction.

"Speaking of the peculiarities of people, they are almost beyond belief. Now, I have one old customer, a farmer, who would not buy anything of me if I promptly met him at the door and asked him what I could sell him. If I did, he would leave the store at once. I just let him alone, and he will hang around the store a long time, watching me wait on customers and looking at one article after another, not forgetting to nibble at the crackers and cheese. When he has done this to his heart's content he is ready to buy, and I generally succeed in selling him a nice bill of goods.

"Another customer is just the opposite of this one, and the moment he steps into the store he must be recognized and treated in such a manner as to make him believe his trade is more desirable than that of any one else. Then there is another customer who must taste everything he buys. Butter, cheese, sugar, salt, tobacco, sirup, pepper, cinnamon, vinegar, and I almost said coal oil. The latter he would want to smell any way. That man could no more buy a bill of goods without sampling each article than he could go to sleep without shutting his eyes.

"But it is among the women that I find the most peculiar customers, probably because they do more of the buying than the men. Their peculiarities are legion, and life is too short to tell of them. There is the one who is afraid she will be cheated in every purchase she makes, and will insist on some private mark by which she can tell that she gets the particular articles prepared for her. Then there is the one who wants a 'sampling' of this, that, and the other thing to take home and try, in order to see if they will suit the 'old man.' She is almost as bad as the one who wants everything a little under price because she does all her trading with you and does not trade with your competitor across the way, and she does think of giving him a part of her trade. Finally, there is the young husband and wife who have just gone to house-keeping, but their peculiarities are too sacred to be mentioned, and I will spare them. I was there myself once."

Natural Gas in Wayne County, New York.

Natural gas was discovered at North Rose, N. Y., on May 18. For several weeks workmen have been employed there boring an artesian well. They did not have the least idea of finding natural gas. When the workmen were preparing to quit the well at night, the land about the mouth of the well was thought to be giving way. To see down into the well, a lighted candle was lowered a few feet into the well. An explosion followed, and a great flame of fire burst out of the mouth of the well. Several men who were standing near watching the operation were thrown violently to the ground. Their hair and whiskers were singed. The flame shot into the air over ten feet and in less than half an hour increased to seventeen feet, with a diameter of four inches at the bottom.

When darkness came, the flame could be seen for miles away, and hundreds of farmers thought the village of North Rose was burning, and drove long distances to help the villagers. The flame has continued steadily, and seems to increase in volume each hour. The citizens propose forming companies for boring wells for natural gas. Wells will be begun at once in Wolcott and Clyde and Lyons.