

Correspondence.

Diet of Strong Men.

To the Editor of the Scientific American:

On page 118 of SCIENTIFIC AMERICAN of Aug. 20, under the heading of "The Diet of Strong Men," you say: "The coolie fed on rice is more active and can endure more than the negro fed on fat meat."

This is not at all the case in the British colony of Demerara, on the northeast coast of South America. There, the coolies, who are imported from India, are the least robust of the three races employed as laborers. They are not at all muscular, and are employed in hoeing the crops and in similar light labor. The Chinamen, who are never called coolies there, are stronger, and they, too, are employed in the crops, and also in mechanical and general labor. But the heavy work, the digging of ditches, the handling of heavy timbers, etc., is always done by negroes. No planter will employ a coolie in such work, for his muscular strength is not equal to it, nor to any severe labor.

The coolie does not confine his diet to rice, nor the negro his to meat. In Demerara the chief food of the laborer is salt codfish and plantains. The coolie probably eats more rice and less meat than the negro, but in other respects their food is about the same.

G. ROBERTSON.

33 East 21st St., New York, Aug. 21, 1887.

Gigantic Oaks.

To the Editor of the Scientific American:

In the issue of the SCIENTIFIC AMERICAN of July 23, mention is made of a gigantic oak discovered in the bed of the Rhone, and now on view at the Havre exhibition. The dimensions are given as follows: Length, 101'6 feet; circumference at origin of roots, 29'5; circumference at level of the soil, 19'6. Our friends the Frenchmen must (seeing the labor they have been at) be proud of their oak, and at the same time ignorant of some of the huge oaks still growing and recently standing in England. Mention of a few of these may, perhaps, interest the readers of the SCIENTIFIC AMERICAN.

The largest oak now standing in England is the Cowthorpe oak, measuring 78 feet in circumference at the ground. Tradition says at one time the tree and its branches covered an acre of ground. I visited this tree a few years ago, and although quite hollow and its interior made to serve for a calf pen, some of its branches still have plenty of leaves and acorns.

A few miles from Cowthorpe stands a farm house. On the lawn stands a majestic oak, as to size and beauty such a tree as we seldom see in a month's walking tour. A certificate is kept in the farm house which states that the tree on the lawn was an acorn planted from "the big oak at Cowthorpe." Dates are given. The Parliamentary oak in Clipstone Park is supposed by the ancient chroniclers to be 1,500 years old. This park existed before the conquest (1066), and belongs to the Duke of Portland. The "tallest oak in England" belonged to the same nobleman. It was called the "Duke's walking stick," and was higher than Westminster Abbey. The "Three Shire oak," near Work-sop, is so called because its branches stand in three counties—Nottingham, Derby, and York. Perhaps the most productive oak was that of Gelemos, in Monmouthshire, felled in 1810. Its bark was sold for \$1,000 and its timber for \$3,350. In the mansion at Tredegar Park, in Monmouthshire, there is a room 42 feet long and 27 feet broad, the floor and wainscot of which are the product of a single tree felled on the estate.

In Dr. Hunter's edition of Evelyn's *Sylvia* is a figure of the Cowthorpe oak already alluded to. About a mile and a half from Shrewsbury, there formerly stood an oak 44 feet circumference at the base, 27 feet circumference at 8 feet from the ground.

There formerly stood in Hainault Forest, near Barking, Essex, a tree called the Fairlop oak, 36 feet in circumference. Mr. Gilpin, in his "Forest Scenery," says that tradition says that the tradition of the country traces this tree half way up the Christian era. This tree was naturally the pride of the villagers in the district, and according to the annals of the neighborhood received its name of Fairlop in this way: The farmer on whose estate the tree grew wanted to lop off a branch. The villagers objected. The farmer, however, in lieu of the branch agreed to give the parishioners a bean feast annually. This was agreed to, and the annual fair was called Fairlop. This tree fell some years ago, and I think its wood was made into a pulpit. The fair was held until a few years ago, and still called Fairlop feast. As the site of the fair is only a few miles from London, it is fully patronized by the light-fingered gentry, card sharps, and thimble riggers. The writer remembers visiting this fair some years ago. The finest "turn-out" on the road was the car of the licensed victualers. This was in the shape of a boat, and drawn by six horses.

The oak shown at the Havre exhibition is said to be 400 years old—a small age for an oak, as will be seen from the ages of those alluded to above. Some of the best

poets have sung the praise of the oak, singing its usefulness and longevity. Dryden says:

The monarch oak, the patriarch of the trees,  
Starts rising up by slow degrees.  
Three centuries he grows, and three he stays  
In state supreme, and in three more decays."

In these days of iron ships, armor-plated hulls, and steel yachts we are apt to forget the service done by our old wooden ships. Pope sang of the oak, saying:

"Let India boast her plants, nor envy we  
The weeping amber and the balmy tree,  
While by our oaks the precious loads are borne."

K. Y. STEPHENSON.

PHOTOGRAPHIC NOTES.

*Photo. Plates for Colored Objects.*—1. For the production of colored objects (paintings) containing red, also views at sunset with yellow clouds, I recommend the azaline bath.

Azaline, solution in alcohol (1 to 2,500) .....	20 c. c.
Ammonia .....	2 "
Water .....	80 "

Bathe one minute and then dry. Exposure through aurantia glass (flowed with aurantia collodion with three per mille aurantia) three to four times as long as wet. Development as usual. These plates, with good emulsion, will keep for eight weeks.

2. For landscapes with much green and blue (water, moisture in the atmosphere), the erythrosin silver bath.

Erythrosin, solution in water (1 to 1,000) .....	50 c. c.
Silver solution (1 to 1,000) .....	50 "
Ammonia .....	2 "
Water .....	100 "

Filter. The plates are bathed for one minute and then dried. They will not keep longer than eight days, are twice as sensitive as the ordinary ones, and give also excellent results without the yellow glass, but they are not red-sensitive.

Developer.

SOLUTION I.

Sulphite sodium .....	100 grammes.
Pyro .....	14 "
Distilled water .....	500 c. c.

SOLUTION II.

Carbonate sodium .....	50 grammes.
Distilled water .....	1,000 c. c.

Mix one volume No. I with two volumes No. II.

—H. W. Vogel, *Anthony's Bulletin*.

*Intensifying Negatives.*—M. G. Cassebaum says that negatives can be evenly and vigorously intensified in the following way. First steep the plate in a faint acid solution, then soak it in the following bath:

Nitric acid .....	part.
Water .....	960 parts.
Chrome alum .....	48 "

Rinse the plate well, then treat it in the following way. Prepare:

A.	
Gallic acid .....	120 parts.
Alcohol .....	480 "

B.	
Nitrate of silver .....	30 parts.
Water .....	480 "

Mix 30 parts of each of the above solutions, then add thereto 480 parts of water; cover the plate with the solution and leave it therein until the required density is obtained. Then wash.

*Waxing Prints.*—Dr. Eder gives a brilliant surface to prints upon albumenized paper by treating them with:

White wax .....	100 parts.
Dammar varnish .....	4 "
Rectified essence of turpentine .....	100 "

To preserve the solution it is put into a well-dried bottle, and when it thickens by evaporation a little more rectified turpentine is added.—*Revue Photographique de la Societe Francaise des Archives Photographiques, Historiques et Monumentales.*

*Removing Silver Spots from Negatives.*—The negative is soaked for five minutes in pure water, then in:

Iodide of potassium .....	1 part.
Distilled water .....	24 parts.

It is left in the above bath for about ten minutes. When the spots are old ones, the plate may be left in the bath for half an hour. It is next placed in a bath of:

Cyanide of potassium .....	1 part.
Distilled water .....	16 parts.

It is then carefully rubbed with a little cotton wool until the place formerly occupied by the spot is uniform in appearance with the rest of the picture. When the spots are very old indeed, the solutions may be stronger, and the plate left in them for a longer time.—*Photo. Rundschau.*

*Bleaching Bromide Paper Prints.*—Mr. F. C. Beach, in a paper read before the recent photographers' convention, Chicago, says: The following solution will bleach out either an unfixd or fixd bromide print in about five minutes' time. Continual movement of the solution over the surface materially helped the bleaching action.

Bromide of copper solution .....	1/4 ounce.
Hyposulphite of soda .....	100 grains.
Alcohol .....	1 ounce.
Water .....	2 ounces.

The alcohol is added to prevent the ink from spreading.

The bromide of copper solution is very easily made. The following is the usual formula. Make two solutions, as follows:

Bromide of potassium .....	120 grains.
Water .....	4 ounces.
Sulphate of copper .....	120 grains.
Water .....	4 ounces.

Mix the two and we have a bluish bromide of copper solution.

An English Provisional Patent Does not Antedate an American Patent of Subsequent Date.

Judge Acheson recently filed an opinion in the United States Circuit Court, Pennsylvania, in the case of Emerson, Smith & Co. vs. Ernst T. Lippert, on a plea to the bill of complaint.

The defendant in his plea denies the complainants' right to maintain their suit in equity against him because a patent for the same invention had been granted in Great Britain prior to the granting of the patent in the United States upon which suit is brought, and that the act of Congress under which the patent in suit was granted provides that no patent shall be declared invalid by reason of its having been first patented in a foreign country, provided the patent shall expire at the same time with the foreign patent, or if patented in more than one foreign country, it shall expire with the one having the shortest term.

James E. Emerson, one of the complainants, made application in the United States for a patent for an improvement in saws on May 31, 1871, and upon this application a patent dated February 6, 1872, for the term of seventeen years, was granted to him. On October 12, 1871, Joseph E. Holmes, as agent for Emerson, made application in England for a patent for the same invention, and filed in the office of the Commissioner of Patents of Great Britain a provisional specification, and a patent was granted to Holmes, sealed April 3, 1872, and dated October 12, 1871. The complete specification was filed April 12, 1872, the same having been subscribed by the patentee on March 22, 1872.

The act regulating the granting of English patents provides that the applicant for a patent may file with his petition either a provisional specification—simply describing the nature of the invention—or a complete specification. If a complete specification is filed, the invention is protected for a term of six months, and the applicant is clothed with like powers and privileges as if the patent had been issued. But where a provisional specification is filed, it is to be referred to the law officer, who, if satisfied, will give a certificate of allowance to be filed with the commissioner of patents, whereupon, for a period of six months, provisional protection is secured, and within six months after application, upon the warrant of the law officer, a patent is to be granted, and may be sealed and bear date as of the day of the actual sealing or any other day of application or date of sealing, provided a complete specification has been filed, but no proceedings at law or equity shall be had for infringement committed before the same was actually granted.

The question before the court was whether before the granting of the United States patent the invention had been patented in Great Britain, within the meaning of the 25th section of the Act of Congress of 1870.

The court holds that the invention had not been patented in Great Britain before it had in the United States. The filing of the provisional specification merely secured temporary provisional protection within the narrow limits of saving any patent to be thereafter granted from prejudice by reason of the intermediate use and publication of the invention. That before the sealing of the English patent Holmes was not invested with any of the rights or privileges of a patentee. Nor is it any moment that the English patent was dated as of October 12, 1871. That date was an arbitrary one, and gave to the instrument no retrospective operation, and the life of the United States patent, issued before the sealing of the foreign patent, is not to be abridged by the antedating of the latter. The plea is therefore overruled.—*From Pittsburg Chronicle-Telegraph, Aug. 16, 1887.*

Effects of Snow on Marble.

The results of the examination of snow taken from different places in Munich and its neighborhood, by Mr. Sendtner, says the *Pharmaceutical Journal* (London), would seem to indicate not only that snow has a considerable faculty for absorbing sulphurous acid from the atmosphere, but that the absorption goes on continuously for some time. Mr. Sendtner ascertained that, on one day when snow fell, sulphurous and sulphuric acids were present in it in fairly equal portions, but on the second day almost all the sulphurous acid had been ozonized to sulphuric acid. In the vicinity of chimneys and gas works the absorption would, of course, be greater. This great absorptive power toward sulphurous and sulphuric acids is considered of great practical interest, as explaining the destructive influence of snow upon marble statuary.