

THE PACIFIC CABLE

America Now Has Its Opportunity to Take a Hand in the Traffic Beneath the Seas.

WASHING OUT WEAK STOMACHS.

Shortsightedness Not an Indication of Intellectual Activity, but Rather of Bad Schooling.

A TWENTY-FOUR-HOUR CLOCK DIAL.

Compressed Leather Being Used as a Material for Brakes on Railroads.

Cure for a Plague of Insects.

The wholesale destruction of insects through the use of large floods of light from an electric arc has long been the hobby of various persons who have observed the number of moths and other insects which at certain times of the year pay the penalty of their inability to yield the fascination of the bright speck of light from the electric lamp.

To Clean Silver Filigree.

A ready mode of cleaning silver filigree articles by dipping it in a solution of cyanide of potassium. This, however, is a dangerous liquid to have much around, and a solution of potassium cyanide is a very poisonous substance.

Leather Brake Shoes.

A company has been formed in New South Wales for the purpose of exploiting the manufacture of railway brake shoes from compressed leather.

Protection for Retailers.

A novel idea has been presented to the English trade to meet the competition from manufacturers who have stores for retailing their goods in London.

Artificial Rubies.

About three years ago two French chemists succeeded in producing rubies artificially. The process is now being improved upon.

The Ideal in Photography.

Catharine Weed Earles, in a recent paper, advocated the maintenance of high ideals in photographic work, and showed the legitimate limits of the art.

Blowers for War Ships.

An industry which promises to attain very considerable dimensions is the manufacture of the electric blower, which, started not many months ago, is now rapidly growing.

New Cure for Gout.

On the authority of the *Matin*, of Paris, it is stated that Mr. Edison has discovered a new cure for gout, which consists in the simultaneous use of uric acid and electricity.

Stopping Machinery.

A most ingenious application of electricity has been made in a machine for stopping machinery. The principle of this process is that the frames must not be allowed to work even for a moment, with one or more of the rollers broken, otherwise the yarn would become irregular, and to avoid all risk of this all manner of valuable complicated appliances have been devised.

Communicating With Light Houses.

Now that the subject of submarine telephone cables, and their future possibilities, is being so freely discussed, it is interesting to know that the cable which has been laid by the pilot station at Helsingfors, Finland, and a light house and one-half miles from the coast, for telephonic communication, is working perfectly.

Cutting the Diamond.

The operation of cutting the diamond comprises three phases: splitting, shaving and polishing. All crystals possess the quality of easily cracking in certain directions in the same plane.

Transmitting Pictures Electrically.

Not many months ago a new system of sending pictures by telegraph was described in the *Scientific American*. The principle of this process was the division of the picture to be sent into squares, each square being numbered to correspond to the position of the picture, and to be used at a distant point from the transmitting station by the number communicated.

Speed in Railway Travel.

Prof. Thurston, in discussing the possibilities of a future railway, states that he has a conviction that where railways are carrying large numbers of passengers on short routes, as on elevated roads—where, if ever, we may expect a future railway, the electric motor, or some advance even on that latest mode of invention and engineering, must come into use.

Very Likely.

From Kansas, the mighty mother of alliances, comes news of the formation of a Grand Lodge of the Knights of Reciprocity, the Plumed Knights of Reciprocity, we suppose.

They Might Be Inoculated.

The bacillus of lockjaw is said to have been discovered, but it is the lockjaw that is the trouble, not the bacillus. The bacillus is a germ which is found in the soil, and it is the germ which is the trouble, not the bacillus.

CHRISTMAS THOUGHTS

Message of the Angel That Came Nineteen Hundred Years Ago

TO THE WATCHING SHEPHERDS.

No Greater Event Has Been Announced in the History of the World.

IT MEANS SALVATION FOR THE RACE

"Unto you is born this day a Savior."

That was the message of the angel, as out of the shining glory of the Lord he came, above the fields of Bethlehem, where shepherds watched their flocks. That was the good tidings of great joy, so strange, so wonderful, so filled with blessing and happiness, that the shepherds, who had been startled suddenly, there stood beside a multitude of the heavenly host, praising God and saying, "Glory to God in the highest, and on earth peace, good will towards men."

THE BELLARY KITCHEN.

An Experiment at Evanston, Ind., Not Working Satisfactorily.

IT'S A FAMILY DAY.

We want to give a little notice for a little while all other associations which gather about the day. There is the joy in all our hearts of love one for another. There are our homes, with Christmas gifts in them and the joy of the family, and most rightly and blessedly so. But let us put all that out of our minds for a little space and let us think about the message that Christ was born that He might save us.

A CAVE DEEP IN THE EARTH.

Knives and the Remains of a Prehistoric Race Found in It.

THE TROUGHT OF GOOD FRIDAY.

Now there is one part of the Christian doctrine which we call the atonement. I would say that it is the very central and essential part. It includes all else which we call the doctrine of the atonement. It is the heart of the doctrine, and it is the heart of the Christian faith.

ABUSING THE STOMACH.

The Country Men Use Themselves Much Better Than Those of Cities.

GIVE NAME AND ADDRESS.

The beneficent institutions of Lima, though not numerous, are certainly very creditable. Prominent among them is the "Caja de Beneficencia," which was established in the year 1820, and has since that time been engaged in the general guardianship and supervision of all the public charities.

THE FEMALE MILK PEDDLER.

Here comes one of the sights of Lima, a female milk peddler, who sits astride her mule, with a large milk pail hanging on each side of the saddle. The "milk men" in petticoats neither to a horn nor ring a bell as do their northern brethren, but riding freely, as they are, they would have thrust a penny through their cheek and felt abundantly repaid by their increase of beauty.

TRINIDAD'S FUTURE.

Trinidad, on the eve of an era of great prosperity, is wonderful natural resources in coal, iron, silver, limestone, cement, fire clay, etc., are attracting the attention of capitalists. For further information address Trinidad, Trinidad, Trinidad.

PICTURES OF STARS.

How the Dome of the Heavens is Reproduced on the Plates.

LONG EXPOSURES ARE REQUIRED.

The Telescope Must Move to Compensate for the Earth's Motion.

STORIES ABOUT LICK OBSERVATORY

Prof. James E. Keeler, who is connected with the Lick Observatory in California, gave an interesting lecture at the rooms of the Camera Club in New York the other evening, upon astronomical photography. He said that astronomical photography presented great difficulties, and that more knowledge of astronomy was required than of photography by the observer; in other words, that the ratio between the two was about three parts of astronomy to one part of photography.

NEWSPAPERS OF PERU.

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SOMETHING ABOUT THE PROCESS.

When the photographer wished to do some of his work, he would first be made to move the big telescope so that a lens could be capped over the end. It is necessary to put on a different lens for photographic purposes, and the apparatus is made to go into a black room of fashion, as the smaller star images will not appear till the developing work is done.

PHOTOGRAPHING THE PLANETS.

The photographs of the planets are more difficult to secure, owing to the refraction in the atmosphere. The exposure of Jupiter's moons, however, has been made by Prof. Keeler, and this winter pictures of Mars will be taken. Prof. Keeler showed pictures of the planets and the moon, as well as drawings to illustrate the difference between the two.

IT'S A VERY TEDIOUS WORK.

The exposures for planets are short—that of a sun spot taken in Paris was about a lightning-like as possible, the shutter being actuated by the strongest kind of a spring. The exposure for the moon takes about a quarter of a second, and that for Jupiter about four seconds.

STOP AT THE HOLLANDEN, IN CLEVELAND, AMERICAN AND EUROPEAN PLAN.

MADAME A. RUPPERT

Complexion Specialist.

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READABLES.

The Senators Now Sit Where Once Heretics Were Tortured.

CONGRESS MEETS IN ST. MARK'S.

OWNS THRIVE ON THE HOUSE TOPS

THE NATIONAL CONGRESS MEETS.

The National Congress has convened in the long, narrow hall of the old building which was the chapel of St. Mark's University, the very oldest temple of learning in the Western World, in Washington.

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