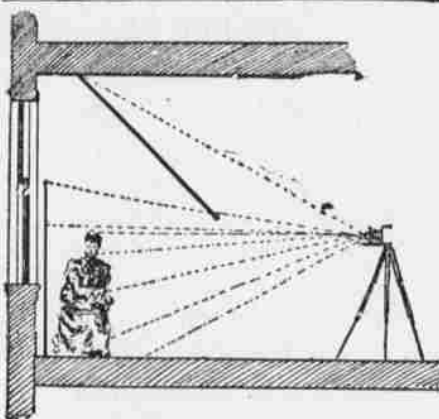


PORTRAITS AT HOME.

Suggestions for Handling the Light—Two Simple Screens.

Although all kinds of interior work are much more difficult than outdoor work for amateur photographers, owing to the difficulty of managing the light, nearly every one who has a camera tries the former sooner or later. It is not at all uncommon to begin on por-



PORTRAIT PHOTOGRAPHY.

traits, which require a good deal of experience and technical knowledge. In the gallery of an artist one usually finds that the studio is provided with a skylight. The amateur is rarely able to command one. However, in a recent issue "The Mechanic Arts Magazine" made some excellent suggestions on this point.

It was recommended that an ordinary side window be shaded up to a height of about five feet from the floor by means of bookbinders' board. This can be cut to fit the window casing. In front of the binders' board should be hung cambric, of whatever hue, gray or black is preferred for a background. Some subjects require a light one and some a dark one. Hence the material should be hung in such a way that it can be changed readily. In order to get a good supply of light from above a reflecting screen is provided. It should consist of white cloth—a sheet, for instance. Beginning at a distance of eighteen inches from the side wall, one edge of the sheet should be fastened to the ceiling. The lower edge of the cloth should be stiffened with a strip of wood, like a sail. Then the screen ought to be inclined away from the window at an angle of about 45 degrees. Another screen, hung from the ceiling or mounted on feet at one side of the sitter, out of range of the camera, will assist in lighting one side of the face more than the other in a full face picture and in illuminating the face for a profile view. The magazine here referred to goes on to say:

"Where the photograph is to be a full-length figure or a three-quarter full length, care must be exercised that the upper part of the subject is not more strongly lighted than the draperies nearer the floor. It is well, on this account, to spread on the floor a white sheet or a number of newspapers, so that the light may be reflected upward against the lower part of the figure."

"Where a person has light curly or fluffy hair it is best to illuminate the hair brilliantly by setting the top screen about as shown in the illustration and then arrange the side screen to reflect light on the face in an upward direction, so that as far as possible its stronger shadows may be softened and too much contrast prevented."

RUBBER HEELS ON HORSESHOES

Cushion that Lessens the Pounding on the Animal's Feet.

The cushion principle has been so successfully applied to vehicles that efforts are being made to utilize it as a means of saving the horse's joints by devising some sort of a horseshoe which will relieve the animal of the many rapidly succeeding shocks as he pounds the hard roads with his hoofs. Elias A. Powers of Chicago has recently patented a shoe having rubber heels.



RUBBER-HEELED HORSESHOE.

which is said to afford the animal relief. The shoes are made recessed at the ends for the purpose of receiving broad rubber heels, which not only take up the force of the blow as the foot strikes the ground, but also acts as a protection for the frog of the foot, which is exceedingly sensitive. The rubber blocks are interchangeable and are held firmly in place by means of a pin passing through the shoe.

When a girl's engagement to an out-of-town man is reported, it is first said that she is to marry a king. As time progresses, the girl's mother confesses that the young man is a prince. It leaks out later that he works on a salary, and has to work Saturday nights, and later, just before the wedding, no one is surprised at learning that he is a clerk, and gives dancing lessons on the side to make a living.

HOMESPUN PHILOSOPHY.

Observations of Commonplace Things by the Atchison Globe Man.

If you can't possibly do a certain thing, try to do it, and people will admire you for being "ambitious."

This rule can always be depended upon: a gossip will be just as bad as the listener will permit him to be.

Strawberry shot cake is a good deal like a glove affair; pleasant at the time, but disagreeable in its after effects.

Every man has so many umbrellas stolen from him that he feels justified in walking off with every umbrella he sees.

When a man disappears, the first thing that is said is that his wife is distracted, and that they never quarreled.

Very few married women admire the bass voice in singing; a bass voice suggests the tones in which a husband scolds.

The only advantage in being any one's best friend is that you hear his real opinion of people, which is never flattering.

It is easy to carry a good thing too far. People have contempt for a man who does nothing but look after his patriotism.

We suppose that if ever the modest shrinking violet got married, it would be transformed into an aggressive Canada thistle.

What has become of the old-fashioned woman who didn't think she was treating her guests right if they ever stopped eating?

We have this kind of a memory: we can remember the correct spelling of "cantaloupe" only as long as the cantaloupe season lasts.

When a man is invited to dinner at some time in the future, without a date being set, he reflects that he has been fooled that way before.

We can't imagine how any man who has ever had a stomach pump used on him, can hold his head up again and feel any respect for himself.

There are various ideas of a good time, but when the uniform rank of a negro lodge comes to town, and gives a parade, we begin having a good time.

When a woman admits to another woman that she occasionally finds a bedbug in her house, it indicates that she reposes the greatest confidence in her.

People who do not get many telegrams regard it as a part of their duty to look worried and sigh when they have read a telegram, no matter what its contents.

We have often wondered that women do not have their kitchen dresses made as low-necked as their party dresses. It would certainly be cooler in working over a hot stove.

You are always hearing people abused who are cold and clammy. They should be admired more. Cold and clammy people never thaw out, and tell their secrets.

We don't see why girls are sent abroad for a number of years to study art, when canvassers come through town every few weeks who will teach how to enlarge and color portraits in two lessons.

A CUBAN RAILWAY.

Differs in Many Respects from Roads in the United States.

When one wishes to leave Havana by rail to see something of the real Cuba—say, to take a trip to Pinar del Rio or to Cienfuegos—he must get up very early. The through trains leave at 6 o'clock in the morning. I asked the chief engineer of the railroad to Pinar del Rio why so early a start was made for a town only 109 miles away, and he said it was so as to get back the same day.

The American traveler is not only likely to grumble when he is compelled to hurry to the station in the thick gloom of the early morning, but when he reaches the station and finds that he must pay about 5 cents a mile in gold, and from 7 to 8 cents a mile in Spanish silver, to ride in the back-breaking cars known as first-class carriages, and that for an ordinary trunk he must pay about half fare, he is inclined to scoff at the primitive mode of travel, and to long for the luxury of even stage-coach journeying on a Western mountain road. The amazing amount of computation by the ticket agent before he sells a ticket, the smoky lamps, the three preliminary tootings by the engine before the train starts, the final ringing of a bell by the baggage-master as a signal that the train really is going, the crowded condition of the aisles, choked with luggage for which the passengers do not care to pay toll, and every man in the train, from the conductor down to the barefooted brakemen, smoking tobacco of varying degrees of excellence—all this is likely to weary the American traveler used to the luxury of Pullman cars. A few hard jolts bring up to the imagination the prospect of a miserable trip, and one is inclined at the very outset to rail at the crudities of travel by cars in the island of Cuba. —Franklin Matthews, in Harper's Weekly.

No man ever lived who improved half of his opportunities.

HUNTER'S HUGE TELESCOPE.

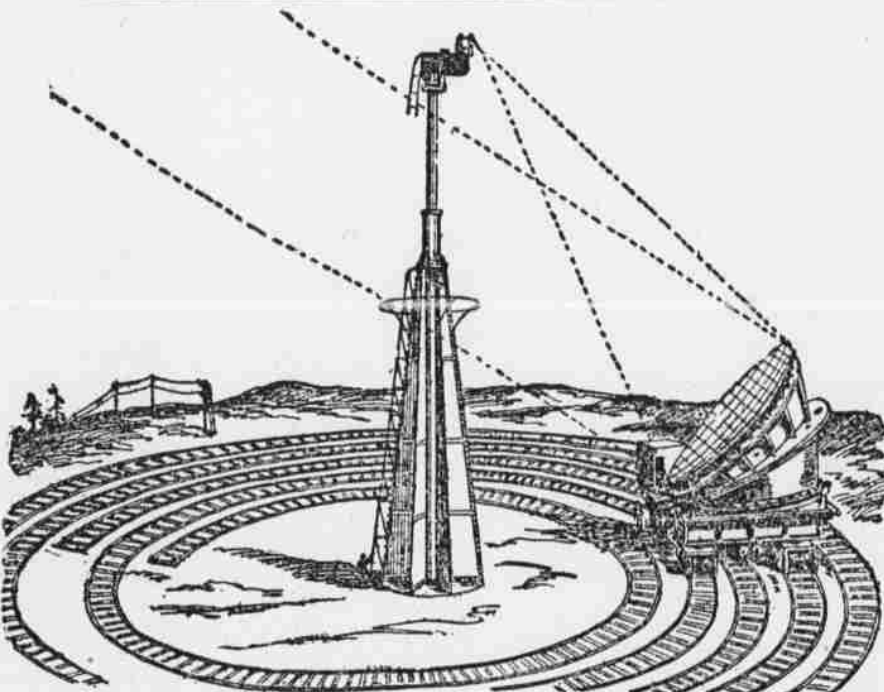
Philadelphia Inventor Who Says He Can Reveal Mars' Secrets.

Rudolph M. Hunter claims that he has invented a telescope with which he can see the cities of Mars, if such exist, and even the beings that inhabit that planet. That such a telescope would cost much money is a natural inference. The telescope, according to the statement of the inventor, should primarily be a national affair, and the achievements that would result therefore redound to the glory of the country as well as to the individual scientist. According to the inventor it is simply a question of supplying lenses in sufficient quantities to bring close to earth the wonders of the heavens. Where other telescopes consist of one lens of the refractory kind measured simply by inches, this Philadelphia inventor proposes to use any amount of lenses placed together in the

can always keep the object in view. In following a star or planet for any given time he has simply to change the platform adjustment instead of adjusting the reflector. I speak advisedly when I state emphatically that this telescope as proposed by me will do work utterly impossible for any other telescope to reach. An ordinary telescope of the largest size, let us say, with a lens 40 inches in diameter, would have an area of 1,260 inches to receive the parallel rays which are condensed into the eye piece. In the telescope in question the area would be 500,184 square inches. In other words, the magnifying capacity would be 500 times as great. That the moon is a dead planet has perhaps been demonstrated through telescopes in use.

HOMES OF THE VIRGIN MARY.

Title Given from the Sultan Through William II. to the Pope. A memorable incident of the German



THE WORLD'S GREATEST TELESCOPE.

form of a reflector, as shown distinctly in the accompanying picture. By this means a lens can be obtained of any desired size and the sectional reflectors can be so ground and adjusted as to make one compact whole.

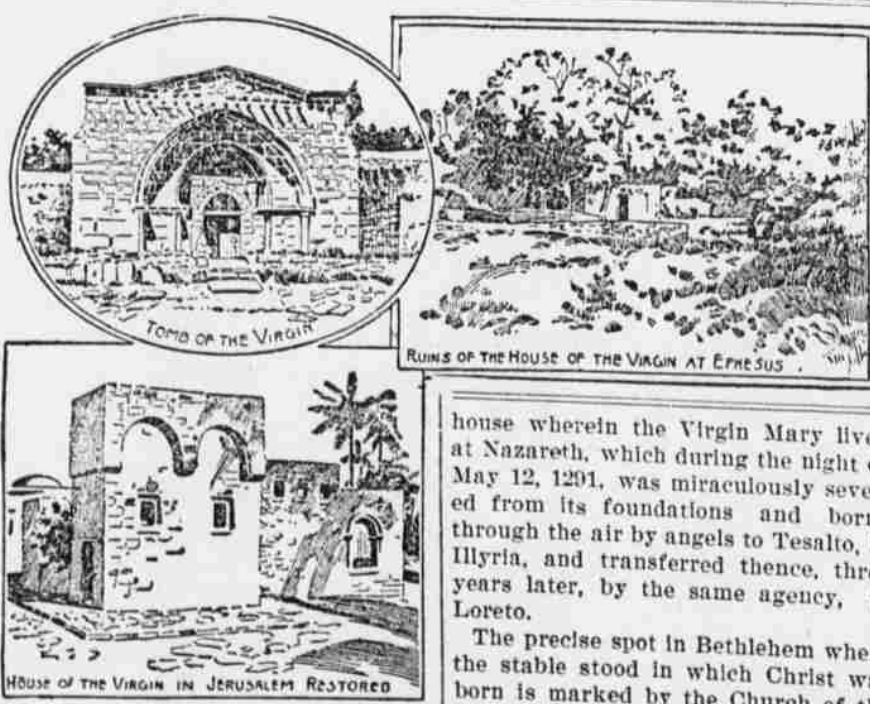
The greatest drawback to lens manufacturing so far has been the inability of the grinders to produce a surface large enough for doing the work intended. Gradually the disks have grown larger, it is true, but the best authorities are confident that the limit has been reached and the great lenses at the Yerkes and other large observatories are the climax in that particular kind of lens construction. The illustration shows a lens 70 feet in diameter and the enormous reflector has a magnifying power 500 times greater than any known telescope of to-day.

"I propose to build a telescope of such magnitude that nothing need any longer be mysterious as far as the planets are concerned," said the inventor; "or, rather, it would be for the government of the country to stand behind an enterprise that is to be of untold benefit to the nation and to man. I have no desire to gain a profit from my invention. The great reflector as you see it in the illustration will be supported at an angle upon an immense platform. This platform rests on trucks that move on a circular or rather spiral like track. The object of the track? Simply the manner in which the operator will be able to focus his enormous instrument. By moving the platform along the track one way or the other the distance from the operator in the tower can be lengthened or lessened. Hydraulic power devices will change the angle of the reflector in whatever direction desired. Electrical power is to be the means of moving the reflector.

Kaiser's last week in Jerusalem was the presentation to him by the Sultan of a small lot of ground reputed to be the site of the Virgin Mary's home in that city. The Kaiser turned the lot over to the Pope, to be held in trust for the Catholics of Germany. This lot is not, as some newspapers have asserted, a vacant one. A two-story establishment devoted to business purposes has stood there for the last two centuries. This will probably be torn down, and a chapel or church will be erected upon it. The attendant excavations may reveal something to confirm or deny the tradition that here the Virgin Mary lived with her son during the last three years of His life.

There are many spots in the Holy Land which are associated with the Mother of God. She was a native of Nazareth, Christ was born to her at Bethlehem, he was brought up under her care at Nazareth. Later the family domicile was transferred to Jerusalem. After the crucifixion, according to the legend, Mary fled with St. John, the Evangelist, to Ephesus, where John, the beloved disciple, built her a house, in which she spent her last days.

In Nazareth is still pointed out the remains of what is claimed to be the erstwhile home of the Holy Family. This is now a portion of the Latin convent, a large square building enclosed by a wall. A chapel known as the Church of the Annunciation rises over the spot, but underneath the church are shown the kitchen, parlor and bedroom of the Virgin and the workshop of Joseph. It is a little difficult to reconcile these details with the other legend of the Santa Casa, or Holy House of Loreto, in Italy. The Santa Casa is reputed to be the veritable



house wherein the Virgin Mary lived at Nazareth, which during the night of May 12, 1291, was miraculously severed from its foundations and borne through the air by angels to Tsalto, in Illyria, and transferred thence, three years later, by the same agency, to Loreto.

The precise spot in Bethlehem where the stable stood in which Christ was born is marked by the Church of the Nativity, originally built, according to tradition, in the year 330, by Emperor Constantine. Thus the cycle of tradition in regard to the spots consecrated by the presence of Christ as infant, boy and man was completed at a very early date. But the legend which took up the story of the Virgin's life after the death of Christ had no domiciliary witness to its truth until, on July 29, 1891, the last home of the Virgin was discovered under the ruins of the ancient city of Ephesus, in Asia Minor.

There's nothing that bores a man who is in love more than a crowd.



Over 8,000,000 loaves of bread are consumed daily in Greater New York. The trusts now in existence in America have an aggregate capitalization of \$2,788,773,900.

British trades union printers have taken a decided stand against firms who print the Bible but refuse to pay living wages.

The largest sewing machine in the world is in operation in Leeds, Eng. It weighs 6,500 pounds and sews cotton belting.

A plan is being arranged to establish in the mills at Olneyville, R. I., the system for small savings similar to that in the public schools.

The Dutch fishermen kill the fish caught as soon as they reach the shore, while the French fishermen leave their booty to die of suffocation.

A ship building firm in Belfast, Ireland, has received instructions from a Liverpool company for the construction of a cargo steamer to be 680 feet long and 75 feet of beam.

A new kind of cloth is being made in Lyons from the down of geese, ducks and geese. Seven hundred and fifty grains of feathers make rather more than a square yard of light waterproof cloth.

The silk industry in the United States assuming gigantic proportions. Thirty years ago the value of silk produced in the United States was less than \$1,000,000. Last year it exceeded \$87,000,000.

The glassworkers have set aside \$1,250 a year to send representatives to awmakin bodies, and the miners, machinists and telegraphers have also made provision to keep members in governing bodies.

At Sheffield a single machine will turn out 5,000 finished knives per day, and it can be adapted for either table or pocket cutlery, razors—hollow or straight—sheep shears; indeed, for almost any kind of tools.

The combination policy of the Vanderbilts on the Lake Shore and Michigan Central railways and the changes and consolidations on the Vanderbilt system between New York and Chicago is expected to result in laying off 5,000 men.

During the last twelve months the Parsian shambles received 21,607 horses for slaughter, 52 mules and 31 donkeys. Only one mule, 310 donkeys and 734 horses were condemned as unfit for human food. Prime cuts of horse brought 18 cents per pound, while the most inferior kinds sold for 10 cents per pound.

During 1897 there were 3,015 separate fatal accidents in and about all the mines and quarries, more than 20 feet deep, in the United Kingdom, involving the loss of 1,102 lives, showing, on comparison with the previous year, an increase of eleven in the number of accidents, and a decrease of 67.86 in the number of lives lost.

An apparatus has been invented for recording the work of firemen in the stoke room of steamships. It not only tells the fireman what he ought to do regarding the raising of steam, but accurately registers the character and amount of work. It is, in fact, a regular tell-tale, which knocks revolution gauges out of use.

Judge Holmes of the District Court of Des Moines, Iowa, has handed down an opinion in the case of George S. Hughes against the Des Moines Typographical Union. It favors the latter, holding Hughes cannot recover damages from the union for being kept out of employment because its members refuse to work in the same office with him, he being a non-union man. Hughes had sued for \$5,000 damages.

Farmer R. Cross of Hammond, N. Y., has received letters patent on a paper hanging machine, which experts say will revolutionize that branch of the interior decorator's art. The principal features claimed for the new device are that it will paper a given wall or ceiling in less than half the time usually required under the ordinary method. The machine trims, pastes and hangs paper direct from the roll at any point or angle. In appearance it resembles a carpet sweeping machine, and as it weighs only seven pounds is easily handled and manipulated.

The Origin of Scalping.

At the annual meeting of the Baltimore Folk Lore Society Miss Alice G. Fletcher gave an interesting contribution in a paper entitled "The Significance of the Scalp Lock; A Study of the Omaha Tribe." The Omaha Indians, like many other tribes, have peculiar ideas regarding a continuity of life and a kind of spiritual link between animate and inanimate objects. They believe a piece of any article connects them with the entirety. The hair is thought to have a close connection with life, and one possessing it may work his will upon whoever or whatever the hair belonged to. From this idea came the custom of scalping enemies. —Boston Evening Transcript.

The motorman on an electric car is a nonconductor.