OUTDOOR AMUSEMENTS.

[In this department, as the head indicates, we propose to make record of current sporting events. Communications to the paper concerning such matters should be addressed to the "Outdoor Amusement Department"]

AMUSING GUN PRACTICE.—The mania fo breaking glass balls has finally reached San Luis Obispo, and our readers need not be surprised if a rival to Carver and Ruth is developed right here. One of our young sports the other day received an invoice of glass balls and the necessary trap for propelling the same into the air. A party promptly organized and went out quietly for a little practice at ball shooting. The trap was properly staked down, the balls unpacked and the guns loaded. An attendant manipulated the trap, and when the first sport—whom we will call "Cap." for short—got himself in position, the spring was touched and a glass globe, about the size of an orange, shot upward a distance of about 100 feet. The ball had not got twenty feet from the trap before "Cap." blazed away, and missed the ball just as easy as anything. Then one after another each took a shot, and the ball was as sound as when first bought. This business was carried on until the ammunition was entirely exhausted, when the "Cap." accidentally hit one of the balls and broke it into a thousand or more pieces. The other members of the party became disgusted, and laying aside their guns commenced throwing stones and clods of dirt at the balls, and they made some very nice shots. The result of the tournament was four balls for the "Cap." The party returned to town very much pleased with their first attempt at ball shooting. The 1,000 balls are likely to last through the season if no accident occurs. They are comparatively safe from danger from the shots of the local marksmen.—[San Luis Obispo Tribune.

ARCHERY REFORM NECESSARY.—The necessity for a Pacific Coast Archery Association is imperative. An alliance with the National Archery Association would be of very little service to our archery clubs on this coast, as few could afford to send on a team to compete at the annual meetings. It would be well at the commencement of the new year to call a meeting to be composed of representatives of the various archery clubs and organize such an association, by whose rules all matches should be shot, and who would arrange about nine rounds, prizes, etc.—[Pacific Life.

CLUB NAMES.—There seems to be a sad lack of originality in regard to selecting names for archery clubs. For example, there is the Oakland Bow Club, the Capital Bow Club and the California Bow Club. The Oaklanders were originally the Bow Club, but since their patent has been infringed upon, they have been compelled for protection to tag on the Oakland. The Gilroy people have found a good name, and call their organization the Lockesley Club. Although there is a Highland Park Archery Club in Chicago, Captain Ireland of East Oakland has taken the same name for his club.—[Pacific Life.

SUCCESSFUL HUNTERS.—The hunting party consisting of Messrs. Farnham, Greeves, Williams and Hilton returned in the sloop Liberty yesterday noon, after a week's hunting trip up the Sacramento river. They went as far as Rio Vista and remained there two days, and came down to Suisun bay and remained there the rest of the time. The hunters went for a good time, and they have had it. The number of ducks slaughtered was immense, the sloop being well loaded down with them.—[Vallejo Chronicle, January 3d.

GUN BARRELS.—Gun barrels of superior quality are made out of the stub iron obtained from old horse-shoe nails. The stubs, after having been freed from all rust and dirt by being brightened in a tumbling-box, are combined with from 12 to 50 per cent. of steel in blocks of the same size as the stubs. The combined metals are puddled, hammered, heated, tilted and rolled into ribbons to be wound in coils around mandrels, heated to a welding heat, and finished by a hammer on the anvil.

ROBIN SHOOTING.—Two hunters of San Francisco, not wishing to tire themselves or get their boots muddy, went in for mild sport recently, in an orchard at Menlo Park, where they killed 103 robins on the wing in a few hours. These birds are more numerous in the bay counties than ever before known. Marin county, especially, is crowded with them. They are not very noble game, but they give as good sport as dove shooting, and just now a good bag is an assured thing for any one who can poke a gun at all.

THE QUAIL.—The Chico *Enterprise* says: "The nine dozen quail recently sent to Sturgeon, Mo., by C. White have arrived safely at their destination. Mr. Welch, of that place, has written that the advent of these lively birds caused quite an excitement in his town, and that they had been greatly admired. Owing to unfavorable weather the partridges had not been secured to return the exchange, but they would be caught in a few days and sent forward without delay."

SUCCESSFUL MATCH.—The turkey and target shooting match at the Creedmoor grounds yesterday was well attended, and some very good shooting was done. Peter Klink killed three turkeys, L. C. Kersey three, C. W. Richardson one, S. P. Baker one, L. E. Bahney two, D. Schoenfeld one and W. Polley two. The last mentioned made the best score at a target, short range, and L. C. Kersey the best long range score.—[Red Bluff Cause, January 2d.

BALL CHALLENGE.—Some time since the Lafayette *Courier* published a challenge to put the Fenton family, of Yamhill, against any family in the State as base-ballists. The Roseburg *Star* has accepted the challenge, and names the Mensor family, of Jacksonville. The preliminaries are being arranged, and a great deal of talk can be expected.

SNAKE ITEM.—Mr. Hazleton, a resident of Cottonwood, came across a camp of Chinamen who were cutting lumber, and who were excited over the discovery in a hollow tree of thirteen rattlesnakes, varying in size from one to three feet, which had sought the hollow tree as a place of security for the winter. A number were killed at once and their rattles secured as trophies.

WILD CATS.—About two weeks ago Edward Brooks killed a large wild cat over on Grant's ranch, and on last Saturday he killed another on the ranch of Mr. Hooper. Both were treed by his dogs, and then he shot them. The Brooks dogs are said to be the keenest on "varmints" of any in the country.—[Russian River Flag.

BEAR KILLER.—Wallace Hendrick, who is in charge of the Truett-Zaber sheep ranch, near the Geysers, found about three weeks ago that a bear was making away with his stock. He therefore set a steel trap and caught a brown bear weighing 400 pounds. Wallace is well qualified as a shepherd, truly.—[Healdsburg Flag.

DEER CAUGHT.—Yesterday afternoon some gentlemen standing on the dock at Kalama noticed a deer floating down the river on a cake of ice. A boat was lowered, and as it approached the deer the frightened animal jumped into the water, but was soon caught by the horns and towed ashore.—[Portland Oregonian, December 27th.

PRESENTATION OF A GUN.—The Winchester Repeating Arms Company has recently made a present of a handsome rifle to Mrs. Ruth, whose reputation for shooting is scarcely less than her husband's. The rifle is an exceedingly neat weapon, with pistol grip and shotgun butt. It is very finely finished, and with it the lady intends to astonish the world.

GETTING READY.—Warren E. Smith, the Halifax oarsman, who during the season has twice defeated Evan Morris, the ex-champion oarsman of the United States, will work in the gymnasium until spring. He will then challenge any man in the world (backed by the Halifax Association) to row five miles for $1,000 a side.

SKATING.—The Lakeview (Oregon) *Herald* says that Goose lake is frozen over, and skating parties are numerous. The ice on the slough is reported strong enough to bear up a team and load.

VALLEJO RIFLES.—The Vallejo Rifles met in their new armory on Tuesday night for the first time. Their new quarters are far superior to the hall formerly occupied by the company.

DEATH ON 'EM.—Peter Cornelius and Lige Smith, of Myrtle creek, Oregon, in a four days' hunt, recently killed one cougar, four bear, five wild cats and four deer.

BALL.—The Shasta Base Ball Club ball was a fine success, the turn-out being much larger than was anticipated.

RABBITS.—Indians brought 400 rabbits in one batch into Reno, Nev., the other day.

FISH STORIES.—*Forest and Stream* has opened a fish story department, and the "whoppers" therein fairly turn one dizzy. Here is a mild sample: "Some years ago while angling in the Mohawk, using a small minnow for bait, the fish were not biting freely and I fell asleep in the boat, leaving my line set. When I awoke I thought I would draw it in and rebait. I took hold of it and could not pull it in readily, but after hard tugging brought it to the boat, when I found, as I supposed, a ten-pound pike fast. After I had landed him in the boat I could not see my hook, so I opened him, when I discovered that an eel about six inches long had taken the minnow; a chub had taken the eel; a bass had taken the chub; the pike had taken the bass. In the pike were eight small eels, ten dace, twenty-seven fresh-water lobsters and four good-sized frogs. You must shake this dose freely before taking."

RARE SHOOTING.—Frank H. Lord has again performed a feat of marksmanship worthy of notice. On the evening of the 18th December, at Conlin's shooting gallery, New York, while favoring a number of his friends with an exhibition of his skill in quick shooting with pistol at a moving object, he hit, in twelve shots, six swinging three-quarter-inch bullets, at the word of command, distance twelve paces. This style of shooting is a new venture with him, which fact makes his brilliant score all the more remarkable. Unexcelled as Mr. Lord's previous records in pistol shooting have been, his skill continues to approach nearer and nearer to absolute perfection.

CHAMPIONSHIP.—December 26th young Eugene Bogardus shot for and won the championship of America at glass-ball shooting with the rifle. The contest was at Bogardus' (the father) shooting-school, New York. Dr. Talbot was the other contestant. There was no throwing up of the balls by a trained assistant. The prize was a gold badge offered by the Winchester Repeating Arms Company. Eugene broke 77 and missed 23. Talbot broke 15 and missed 85.

BASE BALL THROW.—An exchange says that John Hatfield's great throw of a base ball of 401 feet on the Union Grounds, Williamsburg, some years ago, has been outdone by an Australian aboriginal cricketer named Billy, who threw a cricket ball on the Sydney cricket grounds 420 feet, unaided by the wind.

TAKE CARE.—Hunters in the tules should be careful when discharging guns that no one is in range. A day or two ago, near Napa, a duck hunter received a charge of shot in various parts of his body, fired by parties a short distance off, while hid in the tules. Fortunately no serious results followed.

RACE-COURSE.—The preliminary steps have been taken for the construction of a race-course at Monterey. The undertaking will involve a large expenditure of money; but from the character of those moving in the matter, all the appointments will be of the finest description.

MALLARDS.—Thomas Fredrickson has been killing from 90 to 120 mallards a day, this season, near Rio Vista. He has hunted for the market for seasons, but this is the best he has ever had.

WOODPECKER.—A female pileated woodpecker (*Hiplotomus pileatus*) has been captured in Canada. The species is rare in the north.

FROG YARN.—Dr. A. K. Fisher, Sing Sing, asserts that in a large frog he caught he found a full-fledged oriole. In another he found three field mice.

YACHTING.—A committee has been appointed to further consider the subject of the formation of a National Yacht Racing Association.

CANOE CLUB.—A movement is on foot to form a National Canoe Club, and the promise is flattering for it.

CHALLENGE.—E. C. Holske has issued a challenge, from Boston, to walk any man in America from 25 to 50 miles for from $250 to $500 a side.

WINNER.—At the Napa shooting-match, on Christmas Day, F. Bassford took the club's silver cup.

FOX HUNT.—The fox hunters of Nashville had a grand fox chase by day in Christmas week.

RETIRED.—Charles Hallock has retired from the editorial chair of *Forest and Stream*.

DEAD.—John Hargreane, the well known Philadelphia cricketer, is dead.

DEER.—Deer are plenty in the neighborhood of Peavine.

COYOTES.—Coyotes are killed within the precincts of Mammoth City, California.

SCARCE.—Game was very scarce the past season in the Indian territory.

THE WONDERS OF LONDON.

I know not any greater marvel in modern or English civilization (said Lord Carnarvon at a recent meeting of the Cutlers' Company of London) than the picture which London presents. I look to the vast accumulation of wealth, and remember that when old Marshal Blucher rode through the streets of London after the Battle of Waterloo he said it was the finest town he had ever seen to plunder and to loot; and since his day London has become not only the great shop, but the great counting-house of the world. I look at its splendid buildings, not only in the city, for in the West End we are beginning to rival you. I see them rising on every side, the work not merely of municipal magnificence, but also of private enterprise. I look to its population, and I see the population not of a town, but of a great country—a population equal almost to that of Scotland, and I venture to say, with all respect to Scotland, nearly as intelligent. [Laughter.] I remember in one of the interesting essays written now some years ago by the great philosopher and historian, Mr. Hume, he hazards the conjecture that no great town will probably ever exceed 700,000 inhabitants, and he then goes on to illustrate this by quoting the cases of Paris, Constantinople and London. Well, a very few years comparatively since Mr. Hume's time, and we have a population that is very nearly 4,000,000. I look and I ask, was there ever so wonderful a sight as the order and the perfect security for life and property which is maintained in this great place? You have criminal classes all around you—men who are professionally engaged in breaking the law; yet a mere handful of police is sufficient to maintain the peace. You have a Court and a Legislature resident in this great metropolis, and yet your Parliament sits in undisturbed security. Paris—we all admire her quickness, her wit; her attractions—finds that her Parliament could not sit within her walls, and even the wise founders of the United States Constitution recognized the necessity of placing their Parliament at Washington rather than at New York. And if you were to look still further and contemplate for one moment the marvelous provisions which exist for the continual feeding and nurture of the people of this vast district, you would acknowledge that there is hardly anything in the history of modern civilization which is more remarkable. You live in Rome, and catch Roman fever; you live in Constantinople, and a third of the city is burnt between the time you go to bed and the time you get up. You live in that great center of civilization, Paris, and in one twelvemonth you have two sieges, famine, and civil war. In the great towns of America you hear tales of municipal corruption which makes your hair stand on end. In London we have a wonderful picture, with many shades, some dark and some bright, but on the whole a picture which represents the attainment of great ends—a great administrative government on the one hand, and also a spontaneous government which springs out of the free will, and energy, and capacity of a self-governing nation, which, no doubt, constantly commits grave faults and betrays great failings, but which in the end, I believe, is the best machinery that has ever been devised for human success and human happiness.

THE PHANTOM OF A DREAM.

Thro' veils of cloud, a moment drawn apart,
Dimly I see the grand old mountains rise,
And, all its windings followed by my heart,
The river sleeping 'neath the quiet skies—
I hear the bird-calls and the swift replies
Of mates, home flying thr ' the sunset light;
And all the songs which Nature, motherwise,
Croons as she soothes her children for the night.

* * * * * * *

Tho' never by my feet its grasses stirred,
Its woodland music never filled my ear,
It haunts my dreams like some remembered word,
Some old familiar landscape, known and dear,
My thought flies toward it, as a tired bird
Beating thro' fog seeks clearer atmosphere.
—[Florence Eva Vickery.

Cheyenne has organized a telephone exchange, with a capital stock of $5,000.

SCIENCE FAIRY LAND.

How to Amuse and Instruct both Old and Young by a few Simple Scientific Experiments.

[NUMBER THREE.]

TWENTIETH EXPERIMENT.—Into a glass filled with spirits of wine a quantity of cotton wool many times the bulk of the alcohol may, if care is used, be pushed without causing a drop to overflow. Or into a flask full of water powdered sugar may be sifted gently to considerable quantity. Why? Because the cotton wool is matter which, if compressed, may be placed in a very small bulk, which would not in compressed form cause the spirits to overflow from the flask. It is therefore not a contradiction of the rule that two things cannot occupy the same space at once. As to the sugar, that is difficult to explain and understand. The ultimate, or smallest particles or atoms of bodies only, are impenetrable, and we may believe they are not in close contact with each other. To explain, fill a tumbler with marbles, and you will see spaces between them—for they are round—and only the extremes of the curves touch. Now, you can pour in and shake down a quantity of rape seed, and still the tumbler is not full. Now, the seeds being round, still leave spaces between them, and so you can put in fine sand and shake it between the seeds, as the sand-grains are round. If you could get anything finer, you could with ease work it between the sand-grains. If you suppose the marbles to be the water, and the rape seed to be the sugar, you will see how it is the glass holds the sugar—though already full of water. The particles of one body may thus enter into the spaces left between those of another, without increasing its volume.

TWENTY-FIRST EXPERIMENT.—You say a vessel is empty when you pour out of it all the water or apparent substance it contains. Fill two glasses with water. Place each in an empty pan. Lay an orange on the surface of the water of one of them. Take a cylindrical glass, open at one end, (a fruit or candy jar will do well). Make a small hole through the closed end. Place your finger over the hole and endeavor, by inverting the glass over the orange and pressing upon the surface of the water, to make it enter the glass cylinder. The resistance of the air will cause the water to overflow into the pan and the orange will not enter, but try it on the other vessel, leaving the hole open, and you will find the orange will enter the glass and the air will rush out of the hole. This makes clear to the young mind how it is that air and all gases fill space the same as other things do, and only are displaced by being crowded out of the way.

TWENTY-SECOND EXPERIMENT.—Centrifugal force may be illustrated by spinning a parasol in the hand. As it revolves it will open, illustrating that power which drives a revolving body from the center, and is called centrifugal force. Boys will find a fine illustration of centrifugal force by suspending a broad tin can, broader at top than bottom, by three strings, which, being filled with water and the strings twisted and then released, revolves rapidly. The water will be seen to fly from the edges of the can in a circle of spray. The rolling of a hoop, the spinning of a top, etc., illustrate the fact that the force of gravitation (by which every particle attracts every other particle) is overcome by centrifugal force which imparts to the revolving body a motion in the direction of a tangent (*tango*, to touch) to a circle.

TWENTY-THIRD EXPERIMENT.—Illustrate the manner of the occurrence of simple eclipses by passing a small spherical body between the rays of a toy magic lantern and a large spherical body; as an apple and a nut, suspended by strings. Suppose your spectator to be on the apple at the point where the shadow falls, looking toward the lantern, representing the sun, and his sight being intercepted by the moon passing between him and the sun, he may be presumed to understand why the moon appears black. By moving the small globe here and there it can be shown why eclipses are only visible at certain points on the earth, because it would take fifty globes as large as the moon to make one equal in size to the earth, and hence the shadow of the moon is necessarily small and cannot obscure the whole hemisphere of the earth turned toward it. This illustrates an eclipse of the sun, and gives the appearance of a black body or screen passing over the face of the sun. An eclipse of the moon may be illustrated by causing the earth sphere to pass between the light and the moon sphere, when the shadow of the earth will darken the moon. It will be easy to show to the child by this means why an eclipse of the moon can be seen from more points on the earth than is possible in an eclipse of the sun. The difference between an annular and total eclipse will be hereafter explained.

TWENTY FOURTH EXPERIMENT.—The attraction of cohesion is an invisible force. Cast lead into two pieces like weights and scrape the ends nicely and evenly, taking care not to touch the surfaces with the fingers. Press the scraped surfaces together with a slight grinding motion, and the two pieces will cohere or cling together so that one may be lifted by lifting the other, and will, if suspended, for some time retain their positions. This is not caused by pressure of the air, for they will cohere in a vacuum, i. e., in a space from which the air has all been drawn by an air pump. Break the attachment forcibly and examine one of the surfaces, and you will see but a limited number of points, like pin points, where the cohesion occurred. Glass, when melted, is a soft and liquid mass, but when cooled becomes hard and firm, the particles clinging together by the attractive force of cohesion. If you cannot cast the leaden weights above mentioned take a bit of bar lead, to be had at any grocery store, nearly, and cut off two pieces cleanly and use them for the experiment. Next take four inches of the bar, dexterously shave off a thick shaving, and press part of its face upon the planed surface of the large piece, and you will be able (so powerful is the cohesion) to lift the larger by the smaller piece. Cut an apple through with a sharp knife and then press the surfaces together, and the two pieces will cohere. So, too, with an incised or cut wound, if the edges of the flesh are put together and so held a few moments, cohesion occurs. Should you cut off the top of your finger you can place back the severed part, and by cohesion it will adhere and grow fast very soon. The art of plating copper with silver which is afterwards gilt, and then drawn out into flattened wire for the manufacture of gold lace, usually called bullion, is a wonderful example of the power of cohesion, the cohesion of the particles of gold, of which a single grain may be extended over the finest plate-wire 345 feet in length. Thus the tenacity of metals is but the power of cohesion of the metallic particles.

TWENTY-FIFTH EXPERIMENT.—Take a piece of tin, some 12 inches long and 6 inches broad. Lay its ends on two blocks. Thus suspended a few ounces of weight bends it down to the ground. But roll it up in a tight roll and you may suspend very many pounds from it without its yielding a particle. This illustrates the strength of cellular construction. On this plan the Great Eastern steamship was built, she having, up to the water-mark, an inner and outer metal shell of three-quarter-inch plate, placed three feet ten inches apart, and between them, at intervals of six feet, run horizontal webs of iron plates, which convert the whole into a series of continuous cells or iron boxes.

TWENTY-SIXTH EXPERIMENT.—Pour water into a glass and its surface will not be level but cupped at the edges, making the surface slightly hollowed like a saucer. This is caused by what is termed capillary attraction. If the glass vessel is reduced to such a size that it becomes a very small tube, the water in it will not run out, being retained by capillary attraction, as against the force of gravitation, which tends to draw the water to the earth. Place a lump of sugar in a saucer with a little water on the bottom, and you will see the water rise with the sugar. Suspend a towel in water and you will see the fluid ascend the cloth. It will even pass up brick walls, and this is why many walls are damp, as they take up moisture from the air. All woods have capillary tubes, and hence nearly all woods float, because these fine tubes contain air. These tubes take up the water, it rises by capillary attraction into them, and hence the wood swells when you fill a tub or bucket, and the vessel once leaky soon becomes water-tight. Hard leather annointed with oil becomes soft because the pores take up the oil by capillary attraction if the leather is first dampened, for the water soon evaporates, but the oil does not, and enters the open pores or little tubes by the same attraction which opened them to the water at first. Blotting paper illustrates capillary attraction well. The melted tallow by this attraction ascends the wick of the candle and gives food to the flame.

TWENTY-SEVENTH EXPERIMENT.—Take a stick of sealing wax or a bit of glass tube, perfectly dry; rub with a warm piece of flannel and it will be found to attract bits of paper, straw or other light materials. Now as soon as these substances are endowed with the same force a repellent action takes place. Paste some gilt discs the size of a quarter on either end of a straw, which suspend at the center by a silk thread fastened to the ceiling or any convenient support. The paste best for the purpose is shellac varnish. Now, with the frequently-rubbed rod you can cause the straw to rotate or dip by approaching the rod to the discs. This illustrates frictional electricity, which is one of the five well-ascertained sources of electricity. Take two plates or squares, one of copper and one of zinc; solder a copper wire to each. Place the plates opposite each other (not touching) in a vessel containing water acidulated with a small quantity of sulphuric acid (which handle carefully, as it is a poison, and will burn and destroy the skin or clothing, and the fumes of which stifle). Now bring the wires in contact, and a current of electricity passes which may be tasted, or even felt. But to ascertain if the current passes, bend a covered copper wire several times about a magnetic needle, leaving the long coil (like a flattened napkin ring) large enough for the needle to move easily on its pivot. This makes a galvanometer. Now connect the wires with the extremities of the coil, and if a current of electricity is circulating the needle will be deflected or pushed aside according to the direction of the current. This illustrates electricity generated by chemical action, which is the second well-ascertained source. For the third, heat and twist together a bit of platinum and silver wire so as to form one length. Attach the silver end to one extremity of the galvanometer and the platinum end to the other, and no effect on the needle will be noted, but apply a spirit lamp to the junction of the silver and platinum wires and the needle will be deflected. It is hardly probable platinum wire can be had for general experiment in homes, but in large cities it can be had. The needle can be taken from any cheap compass, and suspended on a pivot fastened into a small block of dry wood. The fourth and fifth sources of electricity cannot easily be illustrated at home. In the next article instruction will be given how to make an electroscope, with which a number of pleasing experiments may be performed.

AN UNFINISHED TALE.

Mr. Harkins laid down his knife and fork at the supper table and said to his wife and daughter:

"I've got something to say, and I want you folks to pay strict attention, because I don't want to tell the story over three or four times, as I generally have to do."

It had been Harkins' experience that when he started to tell anything he always had to tell it over again, and he was getting tired of it.

Mrs. H. bristled up at once, and intimated that she would like to know the time when he couldn't talk and they wouldn't listen.

The daughter thought pa was acting shamefully.

"Ma and me always listen," she added.

"Well," said Harkins, catching his wife's eye, "Mrs. Browbeaker was in from the country to-day, and her four children were with her—"

"That girl has made the tea too strong," interrupted Mrs. Harkins, going out to the kitchen to get some hot water.

"Had her four children with her," continued Harkins to his daughter. "They came in the old family carriage and came to my office. Mrs. B. said she thought it was time her husband was making his will, and asked me—"

"Who's that that has made his will?" interrupted Mrs. Harkins, as she returned from the kitchen.

"Mr. Browbeaker, ma," said the daughter.

"Who said Browbeaker had made his will?" asked Harkins, glaring at his daughter.

"Why didn't you say so, pa?"

"I said Mrs. Browbeaker asked me if it wasn't time he was making a will. That's about as near as you women ever come to anything."

"Why, was Mrs. Browbeaker in town to-day?" said Mrs. Harkins.

"Land of Goshen, woman! didn't I tell you she was?" exclaimed Harkins.

"James," said Mrs. Harkins, speaking to the oldest boy, "you must go out to Mrs. Browbeaker's to-morrow. I want that recipe of hers for pickling. She promised it to me long ago."

"I says to Mrs. Browbeaker," continued Harkins, "that I thought her husband was good for a good many years yet, however—"

"Ma," said the daughter, "that summer silk of mine is torn. I wish you would mend it."

"I told you two or three days ago that you shouldn't wear that dress. You are the most careless child I ever saw—"

"However," continued Harkins, "I told her, however, it might be well for him to draw up the document. There's no telling when death will overtake us."

"Why, who is dead now, Mr. Harkins?" asked Mrs. H.

"Nobody. I war telling you about Browbeaker."

"Oh, yes, what did you say he came to town for?"

"I didn't say he came to town," snapped Harkins. "I said Mrs. B. and the children were in."

"Well, you needn't to snap a body's head off," replied Mrs. Harkins, bristling up. "You said that when I was out. What bill is this she wants to collect?"

"I said," replied Harkins, with a frown, "I said that she was here to see about her husband making a will."

"When was she here?"

"This morning."

"Oh!"

"Mrs. Browbeaker agreed with me," said Harkins, taking up the thread of his narrative, "and said she had noticed of late that Mr. B. showed signs of failing health. He was getting white, and his constitution was never of the strongest. She asked me to invite Browbeaker to run into the office some time—"

Here Mrs. Harkins, who had been keeping up a conversation with the daughter about the singing of the church choir, chirruped:

"La, me, what does he want to run for office for?"

"Well, I'm gormed," said Harkins, thrusting his hands deep into his pants' pockets, stretching his legs out under the table and staring indignantly, "who under the canopy said anything about running for office? I said 'run into my office;' but that's near enough—close as you ever get to anything. By George! it was only the other day I introduced you to Rev. Mr. Lambkin, and in ten minutes you were calling him 'Dr. Sheepskin.' You can't even quote that old Pinafore gag, 'hardly ever,' correctly. You—you—by jings!" and, finding he couldn't do justice to the subject, he relapsed, with his chin on his bosom and his ears down below his collar.

And then it would have made the ancient martyrs ashamed of themselves to see the air of patience and resignation these women put on as they talked of the blue blood in their veins, and cited the plebeian stock from which the Harkinses sprang, and guessed they had been around, and seen something in their lives, and allowed it was a pity if they couldn't speak above a whisper when the head of the family was around.—[Iowa State Register.

IT is in accordance with the fitness of things that a cradle should be a necessary implement of husband-ry.

THERE is a great difference in milk-maids. The milk made in the country is not the same as the milk made in the city.

EDISON'S LIGHT.

WHAT A REPORTER SAW DURING A VISIT TO MENLO PARK.

The Appearance of the Light—Its Cost and Adaptation to Chandeliers and Gas Fixtures.

A reporter of the New York *Evening Post* called on Thomas A. Edison at Menlo Park December 30th, on the day settled upon for the first public display of the new lamp. In an inclosure stand four buildings, a two-story office building of brick, a machine shop of wood, a furnace room and a chemical laboratory. The office is like any business office, part being railed off for bookkeepers—the employment of more than one hundred men on the premises necessitating thorough system. Having sent in his card the reporter was ushered up into the second story apartment, a library used by Edison as a reception-room. The reporter found Edison here, a tall, pale, close-shaven man, with deep-set eyes and the overworked look of one who is accustomed to pass night after night in experiments, as he sometimes does. The reporter was handed over to Mr. Batchelor, Edison's assistant, and the man who knows more about the Edison light than any other man except the inventor himself.

THE LIGHT.

"There you see the light as we have had it burning for twenty-one days," said this gentleman, pointing to the chandeliers, in which were eight glass bulbs about the size of an egg, one attached apparently to each gas-burner. Inside of each bulb was an incandescent thread in the shape of a horse-shoe. The light given out was about equal to that of a three-foot gas-burner. "You gentlemen of the press usually come here with a dozen or so of newspaper articles proving that the lamp cannot burn, and that if it does it cannot last more than twenty minutes, and that if it does last more than twenty minutes the idea is stolen from some one else. There are lamps that have been burning night and day, with about five minutes' stoppage—owing to an accident to the generating machinery—for twenty-one days. As the average use of a gas-burner even in winter is not more than six hours a day, this represents a service of about three months' ordinary usage."

During the whole of the reporter's visit it was impressed upon him that neither Mr. Edison nor his assistants asserted the complete success of their lamp. It was as yet an experiment, a point which the public is inclined to overlook. If the lamps burned steadily for six months, then it would be time to exult. For all that Edison knows, the lamps may fail to-morrow. No one has been more surprised at their endurance than he himself.

THE CARBONIZED HORSE-SHOES.

First the reporter was taken to the furnace-room where the cardboard horse-shoes are carbonized. For months Edison has been working on platinum as a fit substitute for the incandescent thread. He discovered, by accident, about six weeks ago that carbonized cardboard would do as well, and since then has directed all his energies to finding the best carboard for this use and the best way of preparing it. Two thousand samples of card were tried, and fine bristol board was found most satisfactory. A die cuts out little horseshoes about an inch and a half in diameter, or about twice the size of the jeweled pins of that shape. Three of these are placed, with tissue paper between each, in a matrix or box of iron, and the box is heated to a white heat in a charcoal furnace. In about twenty minutes the iron plates show signs of melting and then are withdrawn. A dozen of the carbonized shoes lay on the table. In baking they had been reduced about one-third and were nothing but black threads, rather frail but stout enough to allow of careful handling with pincers. From the furnace the horseshoes go into the next room, where they are attached to platinum wires about an inch long intended to carry the current. Each wire terminates at the horseshoe in a little clamp in which the ends of the horseshoe are caught.

THE GLASS LAMP.

Then they are ready for the glass-blower, a man brought over from the works in Germany, where the Geissler tubes are made, and specially adroit at dealing with vacuum tubes. It is necessary that the carbon shall be inclosed in a glass vessel from which the air is completely exhausted. Otherwise when the current is sent through there would be a flash, and the carbon would fall to pieces. The glass-blower takes a glass bulb open at the top and heats the bottom over a spirit lamp. When it is about to melt he plunges the two platinum wires attached to the carbon through the melting glass. The horseshoe remains inside the bulb with its two wires projecting through the bottom. These wires are fourteen-thousandths of an inch in diameter. It has been objected by critics that the difference in the coefficiency of expansion and contraction between platinum and glass would open a loophole at the thin point of entrance of the wires and allow the air, pressing on the outside with a pressure of fourteen pounds to the square inch, to get in and destroy the vacuum. Edison says, on the other hand, that Geissler tubes, constructed very much in the same way, have been known to maintain a vacuum for twenty years, and that the difference in expansion between platinum and glass is exceedingly small. At any rate, so far, the lamps have maintained a better vacuum than is obtained in a Geisler tube, with perfect success. The glassblower now draws the open top of the bulb into a narrow tube, and the lamp is taken to have the air exhausted. This is accomplished in half an hour by Edison's ingenious modification of the ordinary Geisler pump. By the usual methods it would require a day to exhaust the air from each of these lamps. By the present process only one-millionth of the air remains at the end of twenty minutes. The air is, of course, exhausted by the tube left open at the top of the bulb. When the mercury test shows that all the air is exhausted a spirit-lamp is held under this tube, and as soon as the glass becomes soft the atmospheric pressure on the outside closes the tube, and the lamp is finished. About thirty lamps a day are now made at Menlo Park. At wholesale the cost for each lamp will not exceed twenty-five cents, and may be less. If now an electric current is passed through the platinum wires leading into the lamp, the horseshoe becomes instantly incandescent and sends out a white light very similar to that thrown out by iron at a white heat. The platinum is the only metal which would not melt in so great a heat.

THE GENERATING MACHINE AND METER.

The generating machines which Edison uses at Menlo Park are modifications of the Gramme magneto-electro machine. He has several of his own design, and is busy constructing more. Each machine takes up about two square feet of floor room only, and is capable of furnishing electricity to fifty lamps. It requires about six-horse power to run each machine. Edison's plan for practical working in New York city is to have one central station for every eight or ten city blocks. A powerful engine will run as many of these generating machines as are required. He estimates that one good-sized cellar will contain the whole "plant" for furnishing the light to several blocks of a hundred houses each. The lamps will be placed on circuits of fifty lamps each. The meter for measuring the electricity used by each consumer consists of a bath of copper salts, into which will run a wire carrying say one-fiftieth of the current passing into the house. According to the intensity and duration of the current the deposit of copper in the bath will be greater or less, and will determine exactly the amount of electricity used. No method has yet been devised to enable the consumer to see for himself how much electricity he is using. He will have to trust to the company's honesty.

COST OF PUTTING IN LAMPS AND RUNNING THEM.

The lamps fit into the sockets from which ordinary gas-burners have been unscrewed, the wires being run through the gas-pipes if advisable. The lamps will cost a quarter of a dollar, and the cost for wires for each light in a house about as much more. It is estimated that one horse-power will furnish eight lights equal to eight gas-burners. The average cost in this city of one horse-power is about one cent an hour; therefore each light will cost about one-eighth of a cent an hour, or for an evening of four hours half a cent. When the company gets to work this estimate may be modified slightly. Edison is confident that he can give light for one-fifth of the price charged for gas. Beside lighting, the current can be made to run any small machine. The reporter saw a sewing-machine worked admirably by the current from one lamp. One turn of a screw causes the carbon to glow with light; another turn, and the light disappears, but the sewing-machine at the other end of the room starts off vigorously. The cost of running a sewing-machine will be about 2 cents a day. Edison's motor, which will be introduced into all houses where such power is wanted in connection with electric lighting, will cost about $14.

As fast as the lamps are finished they are lighted and kept going continuously. The light is soft, steady, pleasant to the eye and does not seem to heat the lamp injuriously. It was thought that possibly the turning off and on of the current might affect the carbon. A boy was set to work turning off and on one current until he had done so ten thousand times, equal to the necessary manipulation during thirty years' service. Every hour that the lamps continue to burn, the probability of the success of this new Edison light becomes more decided. As the reporter was leaving he asked Mr. Bachelor if he would sell any of his stock at $4,000 for a $100 share. Mr. Bachelor said that he would not. On the way to the station the reporter saw some workmen connecting several street lamps with the wires. He also stopped at one house where he saw that the wires went in, and was kindly shown the new light in the dining-room and parlor. It had been in since Christmas Day and worked to perfection. "No smell, no heat, no matches, no noise, no trouble. One turn of a screw and we have a better light than gas," said the lady of the house.

WITHOUT AND WITHIN.

My coachman, in the moonlight there,
Looks through the sidelight of the door;
I hear him with his brethren swear,
As I could do—but only more.

Flattening his nose against the pane,
He envies me my brilliant lot;
Breathes on his aching fists in vain,
And dooms me to a place more hot.

He sees me into supper go,
A silken wonder by my side,
Bare arms, bare shoulders, and a row
Of flounces for the door too wide.

He thinks how happy is my arm
'Neath its white gloved and jeweled load,
And wishes me some dreadful harm,
Hearing the merry corks explode.

Meanwhile I only curse the bore
Of hunting still the same old coon,
And envy him outside the door
In golden quiets of the moon.

The winter wind is not so cold
As the bright smile he sees me win,
Nor the host's oldest wine so old
As our poor gabble's sour and thin.

I envy him the ungyved prance
By which his freezing feet he warms,
And drag my lady's chain and dance
The galley slave of dreary forms.

Oh! could he have my share of din,
And I his quiet—past a doubt
'Twould still be one man bored within
And just another bored without.
—[J. R. Lowell.

"RECORD-UNION."

Mention by Contemporaries of the Pacific Coast.

It is thought by many that the town designated as C——, in E. W. Hayden's prize Christmas story in the RECORD-UNION, is meant for Colfax, but there is no great gravel mines in that vicinity.—[Placer Argus.

WELL COMPILED.—Carson *Appeal*: The New Year's RECORD-UNION was a well compiled edition and considerably larger than most others.

A BIG BOOK.—St. Helena *Star*: The holiday number of the SACRAMENTO RECORD-UNION is received. It is a magnificent paper, and a big book in itself. It excels, we believe, any other publication in the State.

QUADRUPLE.—Grass Valley *Union*: The RECORD-UNION issued a quadruple sheet on New Year's day, filled with statistical and other information, principally relating to the business, industries and events transpiring in that city for the year 1879.

RARE TREAT.—Folsom *Telegraph*: The New Year's edition of the RECORD-UNION afforded its readers a rare treat. With its selection, contributions and illustrations it came to the homes and firesides of its many patrons as a welcome visitant indeed.

THE WINNER.—Petaluma *Argus*: E. W. Hayden, of Reno, Nevada, won the RECORD-UNION prize of $50 for the best Christmas story. It is named "John Sheridan's Mistake," and was published in the RECORD-UNION of December 25th.

UP TO STANDARD.—Oakland *Times*: The New Year's number of the RECORD-UNION is up to its high standard of former years. It contains a large amount of exact information relative to the nation, the State and the city of its publication, which will be valuable for reference.

AT THE HEAD.—Marysville *Appeal*: The New Year's RECORD-UNION—a quadruple sheet—is an instance of enterprise never before equaled in California. The publishers of the RECORD-UNION eclipsed themselves, and evidently mean to stand at the head of journalism on this coast.

AN ENTERPRISING JOURNAL.—Stockton *Herald*: The New Year's number of the SACRAMENTO RECORD-UNION is received. It is an excellent paper, fully up to the standard of the former holiday numbers of that enterprising journal, and sets before the world in an attractive form the features of the Capital city.

PRIZE STORIES.—Stockton *Herald*: "John Sheridan's Mistake" is the title of a Christmas story written by E. W. Hayden for the RECORD-UNION. We see that the RECORD-UNION promises its readers a story from the hands of B. L. Farjeon, the well-known English novelist, which is to be cabled across the Atlantic.

VALUABLE.—Haywards Weekly *Journal*: The holiday number of the SACRAMENTO RECORD-UNION is one of the most