THE OLD, OLD STORY.

If I had told her in the spring
The old, old story briefly,
When the sparrow and robin began to sing
And the plowing was over chiefly.

But haste makes waste, and the story sweet,
I reasoned, will keep through the sowing;
Till I drop the corn and plant the wheat,
And give them a chance for growing.

Had I even told the tale of June,
When the wind through the grass was blowing,
Instead of thinking it rather too soon,
And waiting till after the mowing.

Or had I hinted out under the stars
That I knew a story worth hearing,
Lingering to put up the pasture bars,
Nor waited to do the shearing.

Now the barn is full, and so is the bin,
But I've grown wise without glory,
Since love is the crop not gathered in,
For my neighbor told her the story.

A MEMORABLE GAME.

Fifty years ago, in Mehemet Ali's time, Suleiman Pasha, a naturalized Frenchman, was commander-in-chief of the Egyptian artillery, and universally acknowledged to be the best chess player in Cairo. As a soldier he stood in high favor with the court as well as with the people; for in the war waged by the Sultan of Turkey against Mehemet Ali in 1839, the Egyptians owed their victory in the notable battle of Nisib to the prompt decision and strategy of Suleiman Pasha. The Egyptian army had already taken to flight, carrying its commander, the heroic Ibrahim Pasha, away with it, when suddenly, as if by magic, the battle took a favorable turn, changing the fleeing masses into pursuers, who succeeded in completely vanquishing the Turkish troops. This blow proved fatal to Mahmund, the unhappy Sultan, whose supreme power hitherto had been unquestioned. He took the loss of his brave army so much to heart that he died of grief barely a week afterward.

When peace had succeeded war, Suleiman Pasha returned to the city of the caliphs to enjoy there his favorite pastime of chess. Punctually every afternoon he made his appearance in a cafe situated on the banks of the Nile, where, on the terrace, under the shade of mighty palm trees, a seat was specially reserved for him, and there he fought a daily battle with the venerable Ulema, Reshid Aga. The field upon which the battle was fought was the sixty-four black and white squares of the chessboard, where ivory armies strove with each other, each trying hard to decoy the other into some hidden trap. They only ceased when the evening twilight descended, and when the cry of the muezzin from the minaret of the mosque called the faithful to prayers, to resume it again the next day, and to continue for weeks and months until one of the combatants was defeated. But it was never the Pasha who was beaten, though Reshid Aga was not only highly considered on account of his great learning, but also farfamed for his masterly playing of chess.

The two masters were generally surrounded by all the best players of Cairo, who followed their moves with eager and attentive looks. One afternoon, while Suleiman Pasha was waiting for Reshid Aga, a stranger stepped up to him and addressed him, as follows: "Pasha, may I propose a game of chess to thee?"

The persons who as usual had gathered round the latter were so much startled by this unexpected proposal that their chibouks nearly dropped from their grasp, while a gray-bearded Cadi was almost choked in the act of gulping down his Mocha. For who could be so daring as to venture to challenge the conqueror of Reshid Aga?

Suleiman Pasha, however, only casting a searching look upon the stranger, quietly replied: "I am at thy service. What is the stake thou art accustomed to play for?"

"For nothing the first time; for a great stake the next. But it is for thee, Pasha, to name the stake now."

"A hundred ducats won't be too much, then?" Suleiman Pasha replied, again looking inquiringly at the stranger, whose face remained quite unmoved while he calmly took his place.

The board was brought and lots were cast for colors; the Pasha drew black, the stranger white.

A great crowd of enthusiastic spectators soon gathered round the players. After the first moves it was clear to all that they had a master player before them. The ivory figures seemed to grow into life in the hands of the stranger; it was as if real soldiers moved on the white and black squares, blindly obeying the commands of their leaders. Suleiman Pasha also soon became aware of the crushing power of his adversary; he felt as if the grip of an iron fist held him in bonds. In vain he tried to shake off his opponent; vain was his sacrifice of knight and castle; the stranger's power did not seem to weaken a bit. The Pasha sat in deep, earnest thought; opposite to him the stranger, calm, but with a proud look, like the marble statue of a commander-in-chief.

A gleam of joy spread suddenly over the Pasha's features; he saw the chance for a capital move, and, quite excited, he placed his queen right in front of his opponent's queen. A murmur of discontent arose among the spectators; the game seemed lost for the Pasha; he must have overlooked that his queen was left unprotected. The face of Reshid Aga, who also looked on, beamed with pleasure; at a glance he had thoroughly mastered the combination of his friend. The stranger took a much longer time to consider than usual before he slowly lifted his lean hand.

"No doubt he will take the queen," the spectators whispered to each other.

"Then he will be mate in eight moves," Reshid Aga said, gleefully rubbing his hands.

"Then if he does not take her?"

"Then he will lose his own."

For a moment the stranger appeared undecided; but suddenly like lightning his hand descended on the board. Quietly and calmly he moved one of his pawns a square ahead.

All looked surprised at each other, muttering: "To lose the queen is losing the game!" while Suleiman Pasha, smiling triumphantly, removed the hostile queen from the board.

The onlookers, who mostly sided with the Pasha, breathed as if they had been relieved from a heavy load. In their opinion the game was decided, for White could not hold out without the queen. Several of them were already on the point of withdrawing, when they were suddenly startled by the clear ringing voice of the stranger, who called out: "Mate in twelve moves."

Suleiman Pasha's looks grew dark—the smile died on his lips. A change had suddenly overcast the features of Reshid Aga; almost beside himself, he jumped on a seat to follow the game from a more elevated point, while the spectators, barely daring to draw breath, counted the moves as they followed each other.

With masterly skill White now led his force into the field, encircling the hostile king in a powerful grasp and keeping him within an iron ring. At the tenth move the Pasha tried to break through the blockade by sacrificing his queen, but in vain. White declined to accept the sacrifice, and moved his knight with "Check to the king." Eleventh move! The spectators, whose excitement now reached fever heat, saw that their Pasha, never before vanquished, would be checkmated the next move. Suleiman's king was compelled to withdraw into a corner, and with the twelfth move, as he predicted, the stranger pronounced "Checkmate!"

A murmur of admiration was heard from the spectators, while the Pasha sat there with bent head, as if trying to search in his memory, when suddenly, as if a thought had flashed upon him, he turned upon the stranger. "Once already in my life," he said, "I have seen chess played in the manner in which thou hast played to-day. The masterly moves are not unknown to me, but I was unable to resist them. The game, however, which was then played before my eyes was a great deal more beautiful even than to-day. Guns of the heaviest calibre represented the castles, fleet cavalry were the knights, and in place of the pawns well-armed infantry formed the vanguard. And when the guns on the one side thundered their 'Check' to the other, the ground beneath our feet seemed to shake, as if burning lava was thrown from a volcano.

"At that time we stood opposed to an army of 150,000 men, a terrible number, which, led by the genius of a single man, threatened to crush us completely. And this man, whose genius made our brave soldiers take to flight, and whom it was impossible to withstand, was a son of the cold North. It was only to the recklessness of Hafiz Pasha, the Turkish Commander-in-Chief, who envied the youthful genius, his brilliant success, and who, though fully warned, wildly pursued the Egyptians, that we owed the victory of Nisib, which otherwise we never should have gained."

The Pasha stopped, and casting a long and penetrating look on his adversary, suddenly cried out enthusiastically: "Stranger, thy incomparable play of to-day recalls to my memory afresh the game of chess at Nisib and its skilful player. Only one man can play like that, and that man is—Col. Moltke!"

"Thou hast hit it, Pasha," the stranger calmly replied. "My name is Moltke."

This indeed was Count von Moltke. While a young man he went to the East, and was in the service of Sultan Mahmoud from 1835 to 1839. He was present at the battle of Nisib, when, as above said, the Turkish commander-in-chief, jealous of the great abilities of the young soldier, refused to follow Moltke's advice, and so lost the battle.—Chambers Jounal.

NIGHTS WITH THE COYOTES.

The Desperate Straits of Two Men on the Plains in Early Days.

A Barry (Mo.) correspondent of the Kansas City Times writes: Sitting around the stove at the railroad station one cold day, whiling away the time telling stories of wild adventures, one old fellow—I forget his name—asked: "Did you ever see a coyote?" And at once a half dozen chorused: "Let's have it."

"Well," he said, as he knocked the ashes from his pipe and filled it from a huge twist of aromatic "long green," "it was in 1850. I had started early in the spring to the land of gold and glittering generalities, hard tack and bear meat, with three ox teams loaded with goods supposed to be suited to the mining trade, consisting of heavy boots, miners' jackets, dried fruit, tobacco, cigars, cards and whiskey, and was pretty well loaded. At Forts Kearney and Laramie I disposed of some extra weight and at Salt Lake disposed of a lot of dry goods I had carried along to trade to the Mormon merchants. After laying in a supply of flour at $25 a 100 and resting our stock we struck out over Thousand Springs valley to the head of Humboldt river, following it down to the 'Big Meadows,' where we made hay for our cattle and took in water, preparatory to crossing the great desert between the 'sinks' of Humboldt and Carson rivers. Finally we are in the midst of a trackless waste and water worth $1 a pint, dead mules and oxen enough to fence a lane clear across it and a million dollars' worth of outfits scattered all the way, not a mouthful of grub of any kind except what was in our wagons and with 10,000 coyotes howling and yelping worse than a legion of devils. The only living things to be seen were owls, prairie dogs, rattlesnakes and coyotes.

"It was right in the middle of this wild, barren, sandy desert, surrounded by the whole coyote family, with one day's rations of grub and water, that we had to double teams and leave one of our wagons while the others attempted to reach grass and water on the Carson that Morton and I were left to guard the last wagon.

"After supper, which we were careful enough to have over before night, the music and dancing began. The owls screeched, snakes rattled, prairie dogs barked, and 10,000 coyotes set up their howl. Nearer and nearer they came—round and round they trotted—and we were forced to flee to our wagon for safety. Under and around they trotted, growling, whining and yelping, every one making the night more hideous by seeming to make a dozen of himself just to see how much of pandemonium he could scare up.

"What a night! and still another we must stay. The first was bad enough, but on the second one the animals returned with reinforcements. They leaped upon the front of the wagons, which we had barricaded the best we could, and we had to fight them with our pistols and guns, and a desperate fight it was. First one and then the other would punch them back. Morton killed one as it leaped into the front of the wagon, and as it fell back a dozen grabbed and devoured it in less time than I can tell it. This only made them ten times more ferocious and it became a fight of life and death to both of us. One after another leaped at us, snapping, snarling and determined to have us for a picnic supper. Morton had a foot snapped off, I had a hand badly torn and was nearly stripped of clothing. Both our guns were broken and we were about to yield the fight when daylight broke up the game. They decamped. I bound up Morton's leg with some old rags and then finished our last ration and sat down to wait for the returning teams, upon which depended our lives. At 10 o'clock they hove in sight and there was more rejoicing in that solitary wagon than I can tell. We made it safe through in due time. Morton finally went to Valparaiso and died. I gathered up a hundred thousand and—here I am in a way station as ticket agent on the C. K. C. & T. railway.

"Boy's it's over forty years since that awful night, but I shudder every time I think of it. The cold chills are running down my back now. Please pass that flask."

A Truly Polite Highwayman.

"I was held up once in a way that I admired. No force, no serious shock to the nervous system and no affected courtesy. I've been in a good many different conflies and heard or read of all the different methods, but for the quiet and quick transaction of business of that nature without any unnecessary trimmings, commend me to the man who got my watch.

"He was sauntering along the street ahead of me, quietly humming a tune. He wasn't keeping in the shadow of the buildings and he wasn't doing anything else that was suspicious. He was just sauntering along with his arms folded on his breast. I was walking faster, and so I had to overtake and pass him. I passed him on the left—that is, I started to pass him on that side. When I got even with him he said:

"'I say!'

"It was said quietly and didn't even startle me. None of this absurd courtesy, nothing sensational in it. Of course I looked towards him and I saw the tip of a revolver resting on the crook of his left elbow. His arms were still folded, but I had an idea that his right hand was on the other end of the revolver.

"'Just take it easy,' he added.

"So I sauntered along with him and at his suggestion transferred my watch and money to his pockets. Then he said:

"'Go on and don't look back.'

"And I went on and didn't look back, but I have always considered him a man who could do a job with neatness and despatch and without unnecessary trouble and excitement. That wouldn't have hurt a man with heart disease."—Chicago Tribune.

An Agile Statesman.

We have heard of Congressmen driven up a tree, as it were, but seldom of their own accord. The rare sight of one deliberately climbing up a tree was afforded the neighbors of Congressman Milliken last week. He wanted the top of his fruit trees cut. So, with all the energy of getting an appropriation bill, he climbed the tree and wielded the tools as vigorously as Tom Reed flourished the gavel. Congressman Milliken is a typical Maine man of the self-made stamp. He tell with great pride that his mother is still the possessor of a set of dishes which he purchased for her when only twelve years of age with money he earned cutting hoop-poles.—Belfast (Me.) Age.

A Pair of Fools.

The man who rocks the boat is cut off the same piece as the man who didn't know it was loaded. The latter gets in his work of killing off the human family all the year around, but the former can only accomplish his mission during the summer season. He starts in early, though, and keeps it up until the ice begins to form, unless, as sometimes fortunately happens, he falls himself a victim to his own foolhardiness. In this case, however, his place is quickly supplied, as the class is never all drowned. The law does not seem to be able to reach him, and he is beyond the ordinary rules of common sense. He is one of the obnoxious products that help to spoil the pleasures of summer.—Indianapolis News.

LOBSTERS AND CRABS.

Some Facts About the Creatures That Carry Their Jaws at Arm's Length.

"Once upon a time," said an expert in matters crustacean, "there were crabs and lobsters in existence for which the modern fisherman would have gone a-hunting with the most approved weapons and caution. For example, in times antediluvian there was a lobster which had a body eight feet long and could stretch twelve feet with its formidable arms. Positive knowledge of this giant of long ago is conveyed by geological research. It must have contained meat enough to make a salad for a regiment of soldiers. In those days of long ago everything grew to enormous dimensions, whether animal or vegetable. Frogs were big and active enough to leap at one hop from the Treasury building to the Capitol, and other creatures particularly those of a destructive sort, were in proportion.

"Only a few little specimens are left to illustrate the giant crustacean forms of that ancient epoch. It is known how crabs and lobsters are hatched from eggs, resembling upon birth nothing so much as the animalcules shown by the microscope in a drop of ditch water. They are as unlike the shellfish they are to become in mature life as a grub is unlike a butterfly. In the case of the crab the egg clusters are attached beneath the animal after extrusion, while with the lobster they become fastened to the tail, which by its fanning motion increases the stream of oxygenated air through and among the ova.

"From the eggs of the lobster are hatched creatures not in the least resembling their parents—little fellows that swim with leather-like locomotive organs near the surface of the water. At the end of six weeks they develop legs, unless, as is highly probable, they have previously been devoured by fishes or other enemies, becoming thereupon small lobsters of familiar shape. Having reached this stage of growth, the young lobsters become walking animals, and, sinking to the bottom, immediately seek hiding places to protect them from their foes.

"The first experiments in the adaptation of knowledge on this subject to the artificial propagation of lobsters were made simply in glass jars with sea water that was changed daily. Even under these primitive conditions the newly hatched fry thrived and grew to be of some size and healthy. Any one who desires to rear lobsters by hand can accomplish the purpose most quickly by keeping the spawn-bearing females in suitable ponds or tanks until the young come out. In raising the animals on a large scale, however, it would be best to separate the eggs from the lobster and spread them upon trays, allowing the water to percolate among them, as is done with salmon eggs.

"There is no reason apparent, wherefore the same success should not be obtained with lobsters as has been achieved with salmon, which have been made to swarm once more by myriads in streams depopulated by imprudent fishing. Already the lobsters on the North Atlantic coast are rapidly vanishing and unless measures are soon taken for supplying their place by artificial propagation, there will be none left. Apparently, however, it will be entirely practicable to turn out upon the depleted grounds many millions of young lobsters yearly as soon as proper plants for this object have been established. One thing in favor of lobster raising, as to cheapness, is that they prefer food that is partly decomposed, and the waste food of the towns, now thrown away, might be most usefully employed by the lobster hatcheries. Stale fish is esteemed by lobsters an especial delicacy.

"For the purpose of a lobster farm rocky ground should be choosen, because that is their natural haunt and there they find suitable places to hide. Inasmuch as they do not walk abroad very much, but are addicted rather to adopt a home and keep it, except when making excursions in search of food, the water farmer who sows the pasture lands of the sea with a crop of lobsters on the Pacific coast, and the efforts so far made to carry them across the continent for transplantation have failed chiefly because the creatures have died on the way.

"There are many curious points about crabs and lobsters. Every one of either genus is provided with a big claw for crushing and a small claw adapted by its shape for cutting as scissors do. With these two claws they tear the food they capture into fragments and feed themselves literally 'from hand to mouth.' But there is every reason to suppose that the claws are intended quite as much for fighting as for eating purposes, inasmuch as such powerful hands are not needed for devouring the soft food they prefer. Crabs particularly are fighting animals; in fact, they will fight anything. I have seen a crab, in conflict with a lobster, catch the latter over the fore part of the head, where the shell is the hardest, and crush it in by one effort. And it rather bears out my idea that the claws of these creatures are particularly weapons of war; that the moment one of them receives severe injury in a claw it drops it off by voluntary amputation, severing its connection with the body at the shoulder by an act of its own will. It seems to me probable that if the claw was necessary for feeding nature would rather seek to cure an injury to it than let the animal discard it altogether.

"The species of crab which is most conspicuously a fighter is the hermit crab. Its first idea of independent life is to eat a harmless whelk and occupy its shell, its next notion is to give battle to every crab of the same persuasion as itself that it comes across. Altogether hermit crabs are undoubtedly the most quarrelsome creatures in existence."—Washington Star.

The Irish Shamrock.

In Ireland only one shamrock is known. It is an indigenous species of clover, which trails along the ground among the grass in meadows. The trefoil leaves are not more than one-fourth the size of the smallest clover I have seen in America, and are pure green in color, without any of the brown shading of white and pink clovers. The creeping stem is hard and fibrous, and is difficult to dislodge from the earth. On St. Patrick's Day the true shamrock has to be searched out among the grass, for, though comparatively plentiful at that season, it grows close to the ground. Later it bears a tiny "whitey-brown" blossom. The information that shamrakh is the Arabic for trefoil may be of service to those interested in the origin o the Irish race. The word could have been introduced by the Mileslans, or it may furnish an argument in support of the contention that one of the lost ten tribes of Israel settled in Ireland, which has been revived by the publication of a recent book.—Notes and Queries.

The Lesson Was Lost on Him.

"Remember boys," said the teacher, who being still new at the business, knew not what else to say to make an impression, "that in the bright lexicon of youth there's no such word as fail." After a few minutes a boy from Boston raised his hand. "Well, what is it, Socrates?" asked the teacher.

"I was merely going to suggest," replied the youngster, as he cleaned his spectacles with his hankerchief, "that if such is the case it would be advisable to write to the publishers of that lexicon and call their attention to the omission."—Montreal Star.

Against the Electric Light.

The London Queen speaks with some interest of the general introduction of electrical lights in homes, but draws attention to that singular affliction somewhat similar to a sunstroke which has been known to be produced by a powerful electric light. This, however, is only one reason why electricity is not desirable in the home. The chief objection to it lies in the nature of the light itself. It is too glaring, and all the objections that are urged against gas may be urged against it in the home. It is not a pleasant light to read by. It is mechanical and inartistic for home use, thought suitable pre-eminently for lighting public places, halls, theatres and drygoods stores, where it is desirable to have the strongest light that we can find.—N. Y. Tribune.

EDISON'S GREATEST.

HIS WONDERFUL NEW MACHINE CALLED THE KINETOGRAPH.

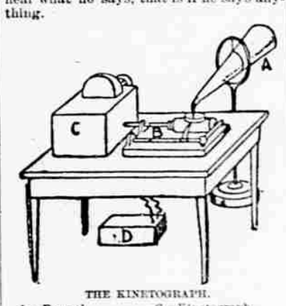
It Will Reproduce the Scenes, Voices and Movements of an Opera in Your Parlor—Photographs Taken at the Rate of Forty-Six a Second.

RECENTLY EDISON WENT TO Chicago. While there some one who was interested in the world's fair asked him if he was going to get up some electric novelty to place on exhibition at the big exposition. "I have a machine projected," replied Edison, "but the details are not perfected yet. My intention is to have such a happy combination of electricity and photography that a man can sit in his own parlor and see reproduced on a screen the forms of the players in an opera produced on a distant stage, and as he sees their movements he will hear the sound of their voices as they talk or sing or laugh. When the machine is perfected, which it will be long before it can be exhibited at the fair, each little muscle of the singer's face will be seen to work, his facial expression with its every change will be exactly reproduced, and the stride and positions will be natural and will vary as do those of the person himself.

"That is only one part of what the machine will do. To the sporting fraternity I can say that before long it will be possible to apply this system to prize fights and boxing exhibitions. The whole scene, with the comments of the spectators, the talk of the seconds, the noise of the blows and so on, will be faithfully transferred."

When the interview was published here a couple of weeks ago people laughed again and said Edison had been having fun with a Chicago reporter. Yesterday morning a Sun reporter found Mr. Edison at the laboratory and showed him a copy of the Chicago interview. Edison read it and laughed.

"Yes, it is true," he said. "You can sit in your parlor and look at a big screen and see Chauncey Depew come out just as if he was introducing Stanley at the Metropolitan opera house. He will walk up to the front of the stage and bow and smile and take a drink of water and start off with his oration. Every time your eyes see him open his mouth your ears will hear what he says, that is if he says anything.



THE KINETOGRAPH.

A.—Funnel. C.—Kinetograph.
B.—Phonograph. D.—Electric battery.

"Just the same way with an opera. You watch the screen and see a picture of the stage, full size. Marie Jansen comes out and sings 'and the band will play a charming waltzing minuet,' and then she dances around and the audience applauds. Maybe DeWolf Hopper comes in and cracks a joke, or Digby Bell wakes up from his twenty-five years' sleep and asks if the New Yorks have won a game yet."

"How do you expect to do all that, Mr. Edison?"

"If it is desired to reproduce an opera or a play I will get the company to give a dress rehearsal for me. I place back of the orchestra on a table a compound machine consisting of a phonograph and a kinetograph, with a capacity of thirty minutes' continuous work. The orchestra plays, the curtain rises and the opera begins. Both machines work simultaneously, one recording sound and the other taking photographs, recording motion at the rate of forty-six peotographs per second. Afterward the photographic strip is developed and replaced in the machine, a projecting lens is substituted for the photographic lens and the reproducing part of the phonograph is adjusted. Then, by means of a calcium light, the effect is reproduced lifesize on a white curtain, reproducing to the audience the original scene with all its sounds and all the motions of the actors exactly as in the original scene.

The phonograph which Mr. Edison will use in his compound motion and sound reproducer will be an improvement on the phonographs now in common use. He said yesterday that he had now in use about 500 phonographs of which he was taking constant observations. The result of all these observations he will embody in the improved phonograph to be used with the kinetograph.

The kinetograph is nothing more nor less than a photograph camera arranged in a new way to do new work. Its name implies its use. The name is derived from the Greek words meaning "to move" and "to write," and the machine literally furnishes a complete record of all the motions made before it. It photographs action. As Edison says: "The kinetograph does for the eye what the phonograph does for the ear." In this small box camera Mr. Edison places a roll of gelatine film about three-fourths of an inch wide and of any length desired. The interior of the camera is of course arranged on a plan similar to that on which the ordinary roll cameras are made. The gelatine strip is unrolled from one spindle and rerolled from another, and in passing from the first spindle to the second is carried before the lens of the camera. The shutters of the camera are arranged to be worked by the shaft attached to the cylinder of the phonograph. This shaft also works the spindles which carry the rolls of film.

The mechanism of this camera is so arranged that when the shutters open the spindles stop and the gelatine film is fixed before the lens. In less than the forty-sixth part of a second the photograph is taken, the shutters snap, the spindles turn and the gelatine slip moves on for a new photograph. The arrangement is so complete that forty-six perfect photographs are taken in one second.

"The trouble with all attempts heretofore made to reproduce action and motion by photographs," said Edison, "was that the photographs could not be taken in series with sufficient rapidity to catch accurately the motion it was desired to reproduce. Hemment, the man who photographs running horses in the thousandth part of one second, had the idea, but he failed because he could take only half a dozen photographs at a time. All these photographs, if reproduced in a series, would have shown a jerky and imperfect motion. My idea was to take a series of instantaneous photographs of motions so rapidly that in the reproduction the photographic representatives become resolved into a pure motion, instead of a series of jerks. The kinetograph takes a series of forty-six photographs in one second and keeps up as long as desired. It starts, moves, stops, uncloses the shutter, takes a photograph, closes the shutter, and starts on, forty-six times a second. The result when reproduced is a pure motion.

To illustrate what he had to say, Mr. Edison took one of the rolls of gelatin film which had been through the kinetograph and showed it to the reporter. On it was photographed one of the boys in his laboratory. The photographs were about half an inch square and were taken in the film at intervals of about one inch. They represented the boy in the act of taking off his hat and bowing. Between the first view and the last of the series the complete motion of removing the hat and making the bow was clearly discernible, but between any two consecutive views there was no apparent change in the position of the boy's arm or head. In the first view the boy's hand was at his side, gradually it was raised toward his head, and his head inclined forward. Then the hat was removed and the bow completed, after which the hat was replaced.

"To reproduce perfectly a complete record of pure motion," continued Mr. Edison, "it is necessary that the photographs should be taken at the rate of forty-six per second. Any smaller number would show irregularities and a break in the motion. There was a machine made awhile ago to print pictures of an object in motion, but it would not work fast enough. It produced an imperfect and jerky motion, like this," and he illustrated by raising his arm in a series of short jerks to his shoulder.

"How did I find out that forty-six photographs must be taken every second? Well, I've been experimenting with this thing for a long time. Now I've got it. That is, I've got the germ, or base principle. When you get your base principle right then its only a question of time and a matter of details about completing the machine. The details can all be worked out after you get the germs. Come upstairs and see the germ work.

He ran up stairs with the step of a boy and easily headed the procession to the spot where the "germ" was expected to prove that the reproduction of motion by photography was an established fact. It is a question which part of the kinetograph Edison himself regards as the greatest part of his invention, the arrangement for taking the photographs or the contrivance for reproducing them. It was the reproducing contrivance which he showed to the reporter as the "germ."

To outward appearance the "germ" is nothing but a pine box, which looks very much as if it might have been originally intended as a packing case for shoes or boots. It stood on end in front of a lathe, and the open top was nearest to the lathe. In the upper end was cut a hole about an inch in diameter, and in this hole was set a lens. On the bottom of the box was arranged a series of wheels and spindles. A role of gelatine film was placed on a spindle on one side of the bottom. The end of the gelatine strip was then carried over one of the wheels and past the lens in the hole in the top of the box to another spindle on the other side of the box bottom and fastened. A small belt ran from the lathe to the shaft, on which was set the spindle, to which the end of the gelatine film was fastened. When the motor was turned on the roll of gelatine strip was transferred from the first spindle to the second, and in the transfer passed under the lens. The photographs on the slip came out perfectly. As the "germ" was worked fast or slow the reproduction showed a pure motion or series of jerks. When it was run at the highest speed the reporter saw a young fellow waving his hands and touching his hat. Sometimes he laughed or shook his head or twisted his body and wriggled around. The slip could be seen to be in rapid motion, but the figure was always in front of the lens, tossing his arms and shaking his head and laughing. Every motion was natural and perfect and it needed but the projecting lens and the larger screen to see the whole figure accurately produced, and to be able to distinguish every feature and to recognize the action of all the muscles of the face.—N. Y. Sun.

FORCE IN THINKING.

A Person Can Think a Hole Through an Inch Board.

A writer in an electrical journal has proposed to measure thought by means of the heat developed within the brain acting upon a thermopile. The proposition was received in some quarters with considerable scepticism. The thing, however, can easily be done. Not long ago, a celebrated electrician stated that he could "think a hole through an inch board," and by connecting a drill so that it could be actuated by the current produced he actually did it.

A. E. Dolbear, writing on this subject, says that the experiment, far from being new or impracticable, was carried out in this country more than twenty years ago by Dr. Lombard, Harvard College. A thermopile was connected with a delicate astatic galvanometer, and a person selected for the test. The individual was placed in a reclining posture, and the thermopile touches his head. A certain place was found where temperature changes in the skull were more quickly apparent than elsewhere, and the instrument was fixed at that place. So long as the subject remained mentally passive the galvanometer needle remained quietly at zero, but as soon as a word was spoken to attract his attention, the needle would at once be deflected, though no muscle had moved.

It is now proposed to measure the relative strengths of various mental efforts, as for instance, working out problems in mental arithmetic or geometry, reading English, Latin, German, or any other language, in all of which processes it will be easy to ascertain by the movements of the needle the respective degrees of effort made by the person experimented upon. In this connection it may be mentioned that Charles Dickens remarked that the mental effort involved in learning shorthand was equal to that of learning several languages. This humorous idea can now be put to an exact test.—Pittsburg Despatch.

About Cow Bells.

The bell seen on a cow's neck looks like a very ordinary article, but in reality it is different from any other kind of bell in use, and is made especially for the purpose. There are several thousand sold annually in this country, and ninety per cent, if not more of them, are made at Collinsville, where the industry has assumed quite important proportions, shipments of cow-bells going to Mexico and Canada, and even much more distant points. The demand from Western ranches used to be very large, and it is still heavy, for not only is there a bell-carrier or two in most herds, but there is almost always a reliable, slow-going old mare in a horse or mule herd, her location being indicated at an immense distance by the bell, and the presence of the younger animals around her being assured. The cow-bell has a covering of copper, and used to be quite an expensive article, but of late years improvements in machinery and reduced cost of material have brought the price down to about a fourth of the old standard. There is little sale in large towns now to what there used to be before stock laws were so rigidly enforced. St. Louis Globe Democrat.

Experience of a Modern Jonah.

The bark Guy C. Cess, with a cargo of $500,000 worth of tea, dropped anchor here forty-four days from Yokohama and long overdue, says the San Francisco Examiner. The voyage was very rough. She has 14,576 packages of tea for Chicago. Captain William Mallette tells a story of one of the most remarkable occurrences since the time of Josiah, the prophet.

When fifteen days out, Tom Hiskaiski, a Japanese sailor, during a gale, mounted to the topsail to reef it. A lurch of the vessel threw him headlang into the sea, and he was seen to suddenly disappear. The lifeboat was put out but when it was returning to the vessel a whale was seen to rise to the surface. They then suspected what had become of the sailor, and the whale seemed to be in great distress.

Suddenly, after a violent convulsion, Hiskaiski was thrown from the whale's mouth, and a crest of a wave landed him upon the deck of the Cess. He was unconscious and badly injured. Careful nursing brought him around, and he is now in a normal condition. Captain Mallette vouches for the truth of this story.

One Horse Power.

When men first begin to become familiar with the methods of measuring mechanical power, they often speculate on where the breed of horses is to be found that can keep at work raising 33,000 pounds one foot per minute, or the equivalent, which is more familiar to some mechanics, of raising 330 pounds 100 feet per minute. Since 33,000 pounds raised one foot per minute is called one horse power, it is natural that people should think the engineers who established that unit of measurement based it on what horses could really do. But the horse that can do this work does not exist. The horse-power unit was established by James Watt about a century ago, and the figures were fixed in a curious way. Watt found that the average horse of his district could raise 22,000 pounds one foot per minute. At that time Watt was employed in the manufacture of engines, and customers were so hard to find that all kinds of artificial inducements were necessary to induce power users to buy steam engines. As a method of encouraging them Watt offered to sell engines reckoning 33,000 foot pounds to a horse power. And thus he was the means of giving a false unit to one of the most important measurements in the world.—Rider and Driver.

A Millionaire Bunko-Steerer.

I object to millionaires masquerading. They will do it. Jay Gould, the last time he declined to converse with me on the platform of his private car, wore a shabby and shiny coat that most of his employees would decline contemptuously. But Jay Gould usually has a hedge of servitors about him who make known his dignity betimes.

A friendly Pittsburger warned me on my arrival to keep an eye open for bunko-steerers, who he said were rather numerous. It has been my experience that by some subtle instinct the bunko-steerer seems to be able to identify a newspaper man, no matter how guileless his appearance, and I hoped but did not expect to be tackled by one of the gold brick and lottery ticket gentlemen. That very afternoon, as I emerged from an interview with a hotel clerk, an erect, elderly man with gray hair and a nicely trimmed mustache, walked up to me and, just touching his hat politely, addressed me as "Mr. Stephens, I believe." He looked so thoroughly respectable, albeit his clothes were a trifle rusty, that I was off my guard and simply replied that my name was not Stephens.

"Excuse me, sir!" replied the old gentleman, "I took you for an old friend's son, your name is ——!"

He was so polite and so venerable looking that I never thought of confidence men or their tricks, and I gave him my name. He bowed, apologized for making the mistake and went away. As he disappeared in the crowd, it struck me that I had been incautious, but I forgot all about the old man in the excitement of a hunt for a trunk which an enterprising expressman had carried away.

The episode came back to me vividly when a very well-dressed young man, with a good deal of showy jewelry, engaged me in conversation an hour or two later, and before I knew it had discovered what town I hailed from, and was airing his acquaintance with Pittsburg and its people, including two police judges, by the way, with a great show of friendliness. Before things got really interesting I was called away, and I never had the chance to discover the character of the bejewelled young man who had such a love for Pittsburg. I suspected the old man, however, of having prepared the way for the other fellow, and for several days I watched him and privately decided that he was a hoary-headed sharper of the most dangerous kind. It was a Western friend who gave me my next surprise. He was talking to me when an old man I took for a bunko-steerer passed us, and I tentatively vented my suspicions. My Western friend laughed heartily.

"I shall have to tell M—— that" said he; "I guess he's never been accused of bunko yet. He doesn't look much like a man worth $5,000,000 or $6,000,000, either, I'll admit, but everybody in Minneapolis knows that's about the size of old M——'s pile."—Hot Springs Cor. Pittsburg Dispatch.

Freezing Out the Ants.

The inhabitants of cold climates have little idea of the fierceness of the conflict which has been carried on from time immemorial between man and the ant tribe, and can hardly appreciate the extraordinary capacity shown by those tireless insects in their depredations upon the human race. In the tropics no satisfactory remedy has yet been devised by which the balance of advantage, always largely in favor of the ant as against man, can be overcome, and the insignificant-looking insect, by force of numbers, industry, and perseverence, is master of the situation.

Even in more temperate regions, like some parts of our Southern States, ants are troublesome enemies, and the suggestion made in the November issue of the Tropical Agriculturist, published at Colombo, in Ceylon, may be worth trying in some parts of this country. The suggestion is that ants may be frozen out of existence by means of a cask of the freezing mixture used by engineers in excavating in quicksands fixed over the entrance of the nest, the other entrances being closed with clay, with a tube placed in the hole also well packed with clay. The pressure from the head of liquid would, it is claimed, be sufficient to drive the freezing mixture down into the furthest recesses of the ant's galleries, which would almost instantly become lined with solid ice, or, at all events, would be made so cold that no ant, however tenacious of life it might be, could not long survive the exposure.

These freezing mixtures are not very expensive, and, as our contemporary suggests, it is possible that the progress of science has here achieved a victory in the interest of man for which so many generations have contended in vain.—Garden and Forest.

In Tangiers.

The Arab shop is a mere box in the wall without any windows, neither does it bear any name or number. The shop door is raised some distance higher than the street, and when this is open in the morning the merchant jumps in and squats down on a cushion within easy distance of his goods. Here he attends to his customers, who stand outside in the street and examines his wares.

The notary and scribe sit in an open place and their clients are attended to in public. We have never heard what a lawyer's fees are for a consultation in this country, but we know a charge is made for drawing up public documents, such sum depending upon the character of the work required to be done. Justice is delivered by the Governor in the gate, as it was in olden times. We do not mean by this that justice is administered as we understand it in England. No; it is carried out after the Moorish fashion, bribery forming the chief feature. Tangiers is the nearest town to Europe of all the Moorish ports, and certainly the most important. It was once under the Crown of Portugal, afterward that of England; but 200 years ago it was abandoned to the Moors, and has remained in their hands ever since, leaving no trace of Christian occupation. It has no architectural adornment worth a passing notice.—Blackwood's Magazine.

Struck the Combination.

A curious contretemps somewhat disturbed the equanimity of preacher and congregation at St. Michael's, Folkestone, England, a little while ago. The organ in that church is provided with kettledrums, which are brought into action by the organist pressing against an electric knob fixed to the back of his seat. This arrangement was not explained to a strange organist, who had no sooner leaned back to hear the sermon comfortably than a strange uproar began in the recesses of the instrument. Looking up in astonishment, the unsuspecting artist only pressed the knob the harder, and faster and more furious became the action of the drums. This went on for a considerable time, till somebody with presence of mind rushed up and explained the secret.

Proving Mr. Darwin's Theory.

"Do brutes have a language?" asked the president of the Millville Literary Circle at a recent meeting.

"Do they?" replied the secretary; "you ought to hear my husband when he loses his collar-button."—N. Y. Recorder.

Noah's Misfortune.

A Sunday school teacher not a thousand miles from a certain church in Detroit, has a wife with a rich father, who is a very convenient article to go housekeeping on. Not many Sundays ago he asked the worst boy in his class what he knew about the flood.

"The Johnstown flood?" queried the boy.

"No, no," in a vexed tone; "I mean Noah's flood."

"Flood of what?" asked the boy.

"Water, of course."

"Oh-h," said the boy in doubtful acknowledgment of his information.

"Yes; Noah's flood when he lived for forty days on water."

"Nothing but water?" queried the boy, wonderingly.

"That's all. It was water everywhere."

"And he lived on it all that time?"

"Yes."

"Well, old Noah didn't have any rich father-in-law, did he?"

On the following Sabbath the boy occupied a place in a class of older scholars.—Detroit Free Press.

His Whereabouts.

Mr. Bingo—"I met a polite ticket-agent to-day."

Mrs. Bingo—"Where was he?"

Mr. Bingo—"In a dime museum."

Flowers On a Glacier.

In 1888 Mr. John W. Kelly discovered on the northeast coast of Alaska, emptying into the Arctic Ocean, just above Cape Lisburne, a new river, which has been named the Pitmegea River. The river and its narrow valley are very winding, and the natives say they can ascend it for a distance of forty miles. This stream has not previously appeared on the charts. Mr. Kelly ascended the river for a distance of twenty-five miles, where he found a large glacier, emptying into the river. The glacier faces southward and receives the full benefit of the sunlight during the short polar summer. Gales have deposited on the glacier particles of soil and seeds of pl