SCHOOL AND CHURCH.

—The Rev. Mortimer T. Jeffries, of West Chester, Pa., has been elected to the American Church at Dresden, Germany.

—The boys of the Boston public schools are instructed in military drill, and annually have a street parade, with a review by the Mayor.

—A Methodist Ecumenical Council is in prospect for August, 1881, in the city of London, the United States to be represented by 200 delegates.

—Mr. Moody has become so deeply interested in the work of educating the Indian women of Indian Territory that he has offered to provide for the free education of ten or twelve of them at the new seminary at Northfield, Mass.

—A girl was subject to ostracism in the high school at Fitchburg, Mass., because she would not dress for class day in the uniform costume worn by the rest. The school committee will provide penalties for such cruelties hereafter.

—When the eloquent Bishop Simpson, of the Methodist church, first entered the ministry he was, from his bashfulness, almost unable to speak; but he sought to forget himself, to be simple, and to impress the truth upon his hearers. He is now in his seventieth year.

—The Rev. James White, President of the Seventh Day Adventists, has resigned on account of age. He congratulates the Church on its progress, but incidentally remarks that he has worn himself out for only twelve dollars a week in money, though he expects a greater reward hereafter.

—New York City has twenty-six Presbyterian churches—exactly the number it had thirty years ago, when the population was half a million souls. The *Interior* tells us that there are nine fewer Presbyterian churches in Chicago than there were ten years ago, while Cincinnati is in a worse condition than it was thirty years ago.

—The numerous teachers and preachers sent out by Father Taylor to South America have held a conference at Valparaiso, and organized "The South American Evangelical Association." These missionaries and teachers receive only their outfit and passage money on leaving this country, and are expected to maintain themselves in the field. Mr. Taylor says all the men are classical, and nearly all theological graduates.

Family Hotels.

The fondness of Americans for living at hotels has often been commented on by Europeans, particularly by Englishmen, who rarely stay at a hotel except when traveling and who almost never make it a home. While our national habit, as it has been called, has been greatly exaggerated, there is no doubt that we are more addicted than any Old World people to hotel life, owing to various conditions which do not exist abroad. Our hotel life is better ordered than it used to be. Within two or three years a new kind of hotel, known as the private family hotel, has sprung up in this city, and has proved so popular that it is certain to multiply. Hotels of this stamp are new to the country and as unlike our great teeming caravansaries as they well can be and retain the same name. They receive no transient people; their rooms are divided into suites, usually rented by the year, and often furnished by the occupant. There is a regular restaurant, at which the patrons take their meals (each family, or set, at a small table, always reserved), paying a fixed price, generally fourteen dollars a week for each person. The suites for one or two commonly consist of a parlor, or sitting-room, a bed-chamber and bath-room; but they are larger, of course, when intended for a family. Most of the patrons are married couples who have no children, or whose children have grown up or are away at school, though some families with small children like these hotels as well as private houses, and say they have the same advantages. There are at present six or seven family hotels here, all in or near Fifth Avenue, and they are so much approved that they are continually full, except, of course, in summer, when their renters are out of town. They seem destined to become a favorite mode of living. They are not cheap; nothing good or desirable ever is cheap, but they are not very dear, as these things go. They are rather less expensive than the great hotels would be, and have far more comfort for anybody who cares for quiet. Persons that have tried housekeeping year after year have adopted the family hotel and prefer the change. There are so many difficulties in the way of home-making in this city, notwithstanding that they are materially less than they have been, that the new sort of hotel may be regarded as one of the repeated essays toward improvement. The chief trouble here is the cost of living, especially of rent. Persons who have liberal incomes or earnings are relieved from any number of household cares. But those dependent on ordinary salaries have of necessity a constant struggle.—*N. Y. Times.*

Robert Raikes---How Sunday-Schools Were Founded One Hundred Years Ago.

Not quite a century has passed since the editor of the Gloucester (Eng.) *Journal* started the first little Sunday-school for the instruction of the children of the poor of his native town, and today in Saxon lands over five million children will gather in schools that owe their existence directly to him, the father and founder of the present system. The history of the Sunday-school movement may be said to begin with the successful establishment, by Raikes father, of the Gloucester *Journal*, one of the oldest and long one of the most influential of provincial newspapers; for it was on this paper that Raikes, who had served his time in his father's printing office, acquired his interest in public affairs and his habit of concerning himself in matters relating to the well-being of the community in which he lived. The morals of Gloucester appear at that point to have been in anything but a satisfactory condition. The abuses of its prison attracted the special attention of Howard, and it is clear that the failure of the stern systems of repression then in use—the cruelties of prison life, the frequent whipping of malefactors through the public streets—to improve the habits of the criminal class was the immediate cause of the peculiar interest which Raikes took in the question of the instruction of the poor. On the death of his father, in 1757, Robert became proprietor and editor of the paper and in its pages these subjects were frequently prominent. Raikes's own account of the commencement of the movement is simple and direct, like all his writing. Having been struck with concern, as he says, in one of his walks in the city at seeing a group of children wretchedly ragged at play in the streets, and also by the description which a woman on the spot gave him of the scenes of noise and riot which took place in the streets on Sundays, he inquired of his informant "whether there were any decent, well-disposed women in the neighborhood who kept schools for teaching to read. I presently," he continues, "was directed to four. To those I applied, and made an agreement with them to receive as many children as I should send upon the Sunday. The women," he adds, "seemed pleased with the proposal." It was at the house of a Mr. King in St. Catherine street that the first Gloucester Sunday-school was started, in the month of July, 1780, and it is this humble beginning which is to be celebrated in July next, just 100 years after the event. The second school was immediately afterwards established by Raikes in his own parish at the corner of Greyfriars and Southgate street. The third school is believed to have been established by Mr. Stock, and several others were quickly started in other parts of the city. The teachers in these early schools were most of them paid for their labors at the rate of one shilling per Sunday. The good service rendered by them in teaching so many children to read can only perhaps be appreciated by considering the wretchedly imperfect and partial nature of the systems—if systems they can be called for the instruction of the poor in those days. The progress made from this small beginning was really marvelous. Only five years after the setting up of the little school in St. Catherine street Dr. Glasse observed that there were already 250,000 children at Sunday-schools throughout the kingdom and that the system, having already extended to Ireland, was about to be introduced into the colonies. This extraordinary growth seems to have been in great part due to Raikes's statements and appeals in the Gloucester *Journal*. In 1788 the Court ladies at Windsor were reported as passing their Sundays in teaching the poorest children. Raikes, being in that town about this time, was sent for by Queen Charlotte, and he has in a private note to a friend recorded the interest which the Queen evinced in the movement. The famous Mrs. Trimmer and Hannah More rendered great service with their pens. Raikes meanwhile went steadily on his way, promoting new schools in his own neighborhood and elsewhere. The idea of conducting Sunday-schools by unpaid teachers is said to have originated in a meeting of zealous Wesleyans. Wesley says that as early as 1785 the masters in the school at Bolton gave their services gratuitously, and a few years later the same practice became general in Stockport. Every succeeding year added to the number of unpaid teachers, the Nonconformist churches being especially ready to recognize the advantages of voluntary Sunday-school labor, and thus by degrees paid teachers were entirely superseded and gratuitous instruction became the universal rule.

The children attending Raike's Sunday-schools appear to have been, almost without exception, without previous training of any kind. His conditions were simply "clean faces, clean hands and hair combed"—tattered garments and shoeless feet being no disqualification. The duty of the instructor was to teach them their letters, practice them in spelling, and hear them read. In a private letter to Colonel Townley, Raikes says: "It is now about three years since we began, and I wish you were here to see the effect." "The going among them," he says in the same letter, "doing them little kindnesses, distributing trifling rewards, and ingratiating myself with them, have given me an ascendancy greater than I ever could have imagined, for I am told by their mistresses that they are very much afraid of my displeasure.'" In another interesting passage Raikes says: "You will understand that these children are from six years old to fourteen. Boys and girls above this age who have been totally undisciplined are generally too refractory for this government. A reformation in society seems to me to be only practicable by establishing notions of duty and practical habits of order and decorum at an early age." It is pleasant to observe that with the disappearance of ignorance, rags and naked feet began to be less frequent. Raikes retired from business at the age of sixty-seven, but his interest in this movement continued to be unabated. He died on the 5th of April, 1811, at the age of seventy-five, leaving a large family. Robert Raikes seems to have been a man of liberal views, with no disposition to discourage but rather to foster innocent amusements. Music was always an important feature in the annual Sunday-school festivals in his days, and in one of his articles he defends against a censorious correspondent his practice of publishing in his paper notices of dramatic performances and other such amusements which took place at intervals in Gloucester. He is described as "rather tall, somewhat portly, of fair complexion and most benevolent expression of countenance." This is borne out by his portrait, in which he appears dressed, after the fashion of the day, in blue coat, buff waistcoat, drab kerseymere breeches, white stockings and low shoes. In the diary of Miss Burney, the author of "Evelina," will be found some interesting reference to Raikes, though the vivacity and earnestness of the Gloucester editor seem to have been hardly to the taste of that courtly lady. —*N. Y. World.*

—It is said that a good Colorado potato-bug destroyer can be made with mandrake root dried for a week or more in the shade. Put one quarter bushel in a barrel, fill with water and let it stand for two days, stirring now and then; strain the liquid through a cloth into a garden sprinkler; sprinkle toward sunset only those plants on which the young brood hatch and before they scatter to adjacent plants.

Wonderful Birds, Beasts and Reptiles.

New Zealand is, or rather was, the home of these wonderful and gigantic birds called moas by the natives, and *dinoris giganteus* and *dinornis elephantopis* by scientists, which reach way back into the post-pliocene period (the birds, not the scientists), belonging to the quaternary epoch towards the close or end of the glacial period, and which have become extinct within the memory of man. The bird is spoken of in the traditions of the natives, and the last living moa is said by them to have lived in Poverty Bay District, in the North Island, and when resting to have stood on one foot with its beak always turned to the quarter in which the wind blew. The feathers of the bird were said to be very beautiful and to have been used for ornament by the native chieftains. There are fourteen species of this bird of which the fossil remains have been discovered (many more may be found in the future); all are now extinct. The largest of these is the *dinornis giganteus* (huge bird), probably twelve feet high, possibly fifteen or sixteen feet. The tibia, or thigh bone, has been found nearly a yard long and as thick as that of a horse; and an egg was also found, still well preserved, over a foot long and nine inches in diameter, which would hold two gallons. These birds are all wingless, with two enormously powerful hind limbs (the forward limbs or wings being rudimentary), adapted for running. The *dinornis elephantopis* was of even heavier build, had toe bones as large as those of an elephant (three toes on each foot), their feet were big enough to fill those mysterious three-toed footprints of the triastic sandstone in the Connecticut Valley, which have caused so much wonder, for nothing could be found to fill them in the formation in which they were imprinted. They stood out in bold relief, only a three-toed footprint, and nothing more. It is known that these birds have become extinct at a comparatively recent date, because bones have been found with feathers attached and with pieces of horny skin sticking to the legs. The dodo, a clumsy old fellow of about fifty pounds weight, has died out within the last two centuries, and the apteryx, a bird like itself and no other, is fast leaving us. The apteryx is the highest representative of the warm blooded class of animals that lived in New Zealand before the introduction of man. (The term "introduction of man" is Professor Owen's, and you will notice now cautious he is. It is such a vexed question how, when and where man first came upon the earth, that the learned Professor handles it carefully.) In Madagascar the remains of a bird larger than any of these have been lately discovered, also wingless—the *apiornis maximus* (tall bird.) With the bones have been found eggs three times as large as an ostrich egg. Two other species, similar but smaller, have been found so closely resembling the New Zealand *dinornis* that some geologists say that these two regions, now so far apart (1,000 miles) were once united, forming one immense continent. These birds could not fly and unless there were two separate creations how could they have got there? There are some objections, it appears to me, to this theory, viz: snakes, large and small, abound in Madagascar while there are none in New Zealand; crocodiles, scorpions, centipedes and lizards make the former place agreeable and pleasant to ramble in; the reverse is true of the latter. New Zealand is remarkably healthy and Madagascar is remarkably unhealthy, etc.

But to return to my big bird. In a history of Madagascar, taken principally from materials and papers sent here by missionaries to that island in the early part of this century, it is said: "A bird of the ostrich kind is reported to frequent the most desert places of the island," and adds "that the story which Marco Paulo refers to may not be without foundation." The story is briefly this: "The people of the island report that at certain seasons of the year an extraordinary bird comes from the southern regions, and that it was so large and strong that it could seize an elephant in its talons, lift it in the air and dash it to the ground in order to kill it and eat it. The quill part of the feathers was said to be two hand breadths' wide." The people call this bird the "Rukh." So much for Marco Paulo. Now, in an Arab or a Persian dictionary, "Rukh" is defined as the name of a monstrous bird which was powerful enough to carry off a rhinoceros, and the editor of "Marco Paulo" said that "the existence of such a bird was universally credited in the East." Now, it is proved by these recent discoveries that such a monstrous bird did really exist, though not so large as the fables say, and the elephant story would, of course, be exaggerated, though if our own eagle can carry off a lamb or a child to his inaccessible nest, I do not see why a so much larger bird could not carry off a proportionately larger animal, and this same *epiornis maximus* probably furnished or was the original roc of Sinbad the Sailor, so that there is most likely, at least so far as the bird is concerned, a grain of truth in that fanciful and fascinating narrative. We now know, at any rate, that a bird did exist large enough and strong enough to have carried Sinbad a long distance.

The rocks of Madagascar are chiefly primitive, huge masses of granite and syenite, pure quartz, large blocks of exquisite rose-colored quartz, chalcedony, marble, also sandstone and limestone, some volcanic rocks and coral. One writer speaks of finding a piece of limestone containing a fossil which he supposed to be a flattened serpent; it was probably one of the coiled ammonites which used to be taken for serpents.

The animals of the post pliocene were very numerous and often immense. First, there were marsupials or kangaroo-like forms only of great size. Think of a jumping, kangaroo-like creature with a head between three and four feet long, and the rest in proportion. Another branch of this family is supposed to be related to that peculiar animal called the native devil of Van Dieman's Land, only much larger, one tooth being two and a quarter inches around. Australia claims the most old-fashioned animals—animals nearer old types. "The animals and plants both have an aspect like the Eocene tertiary, and very low forms of man exist on that part of the globe," while the natives of New Zealand, only two miles away, are unusually intelligent, well developed physically and and quite poetical in their ideas. Many birds with long tongues, enabling them to suck honey from flowers with deep cups, have died out since the advent of bees, introduced by white people—the bees lie concealed in the flowers and sting the birds. The natives say they are being crowded out by civilization in like manner.

There were also in these times gigantic sloths, ant-eaters and armadillos. Fancy a sloth eighteen feet long, with a thigh bone three times as thick as an elephant's, and with forefeet a yard long and the toes armed with strong, curved claws. It has been shown as far as may be, that this huge creature sat upon its haunches and stiff tail, and grasped the limb of a tree with its powerful arms and either tore it up by the roots or wrenched off the branches and fed upon the twigs and leaves. There were armadillos more than nine feet long (the utmost length of a modern armadillo is about three feet and the modern animal has an advantage over its giant predecessor in having jointed bands in its shell so that it can roll itself up). Other animals were the woolly rhinoceros, Irish elk, with wide branching horns, ten feet from tip to tip, deer, a horse, (you see we are coming near to man, only a few thousand years), the urus, or wild bull, which lasted till after man came and down to the twelfth century, and the European bison, or auochs, which played with the mastodons and mammoths, and still lives; though there is only one place where it can be found, and that is in the province of Lithuania in Europe, where it is preserved by protective laws. In this country the Rocky Mountain sheep, sometimes called big horn from its immense horns, is now rarely seen and then only in the wildest and most inaccessible spots.

The bones of man have also been found in some cave deposits of the post-pliocene, but at what time he made his appearance is still a matter of conjecture. In Asia, also, sometimes called "the cradle of the human race," a great many bones of extinct animals have been found, also fossil ferns, corals, etc. It is very singular how in all parts of the world nature has, as it were, many duplicate leaves, giving a clue to many mysteries; now, for instance, in this part of Michigan carboniferous limestone crops out, and sometimes we find fragments containing crinoidal stems (stems of stone lilies), and in many other portions of the globe this same limestone is found with its peculiar fossils. Of course, wherever it is found it shows that the rocks belonged to the same age in the history of the earth; that is, were formed during the same epoch.—*Mrs. S. H. Ballard, Grand Rapids, Mich., in N. Y. Graphic.*

Wonders of the Heliograph.

The heliograph does not require the route to be kept open. The line of communication cannot be cut, for the simple reason that the signaling takes place over the heads of the enemy and the stations required are few and far between. A ten-inch mirror, and this is the diameter of the ordinary field heliograph, is capable of reflecting the sun's rays in the form of a bright spot, or flare, to a distance of fifty miles, the signal at this interval being recognizable without the aid of a glass. That is to say, two trained sappers, each provided with a mirror, can readily speak to one another, supposing the sun is shining, with an interval of fifty miles between them, providing their stations are sufficiently high and no rising ground intervenes to stop the rays. The adjustment of the military heliograph is a very simple matter. An army leaves its base where a heliograph station is located, and after traveling some miles desires to communicate with the stay-at-homes. A hill in the locality is chosen and a sapper ascends with his heliograph, which is simply a stand bearing a mirror swung like the ordinary toilet looking-glass, except that besides swinging horizontally it is also pivoted so as to move vertically as well. Behind the mirror, in the very center, a little of the quicksilver has been removed, so that the sapper can go behind his instrument and look through a tiny hole in it towards the station he desires to signal. Having sighted the station by adjusting the mirror, he next proceeds to set up in front of the heliograph a rod, and upon this rod is a movable stud. This stud is manipulated like the foresight of a rifle, and the sapper, again standing behind his instrument, directs the adjustment of this stud until the hole in the mirror, the stud and the distant station are in line. The heliograph is then ready to work, and in order to flash signals so that they may be seen at a distance the sapper has only to take care that his mirror reflects the sunshine on the stud just in front of him. He may then be quite sure that his distant brothers can see them too.—*London Telegraph.*

Drinking Ice Water.

There is no more doubt that drinking ice-water arrests digestion than there is that a refrigerator would arrest perspiration. It drives from the stomach its natural heat, suspends the flow of gastric juice and shocks and weakens the delicate organs with which it comes in contact. An able writer on human diseases says habitual ice-water drinkers are usually very flabby about the region of the stomach. They complain that their food lies heavy on that patient organ. They taste their dinner for hours after it is bolted. They cultivate the use of stimulants to aid digestion. If they are intelligent, they read upon food and what the physiologist has to say about it—how long it takes cabbage, and pork, and beef, and potatoes and other meats and esculents, to go through the process of assimilation. They roar at new bread, hot cakes and fried meat, imagining these to have been the cause of their maladies. But the icewater goes down all the same, and finally friends are called in to take a farewell look at one whom a mysterious Providence has called to a clime where, as far as is known, ice-water is not used. The number of immortal beings who go hence, to return no more, on account of an injudicious use of ice-water, can hardly be estimated.—*Baltimore Sun.*

For Young Readers.

BLUE VIOLETS.

Listen! No; you can not hear them;
Never do they make a sound,
All these thousand sweet blue flowers
Starting up from out the ground.

Scattered are they up the hill-side,
Hidden in the woodland nooks,
Sprinkled over sunny meadows,
Nestled close by sparkling brooks.

Where, I wonder, have they sprung from?
Do they live in worlds below?
Have they slept the livelong winter
Underneath the soft white snow?

Ah! if only they had voices,
What strange stories they might tell
Of the land where winsome fairies
With the flowers love to dwell!

Oh, you dainty wee blue flowers!
Brightest roses June may bring,
But they can not match your sweetness,
Gentle messengers of spring.

—*Harper's Young People.*

THE GIANT THAT EATS STRAW PUDDING.

I am a good-sized boy, about as large, I should think, as Jack was when he "hitched his hatchet" in the bean stalk and went up to see the Giant. I live with my mother in a little house eight miles from Santa Cruz in California. Every time we go to town we go through Soquel, and every time we go through Soquel we go by a block of wooden buildings that have been shut up and deserted for a long time.

Some bad boys broke every pane of glass in the windows, and that made me think of a man with his eyes put out; excepting I mostly thought of a ruined castle. I did not like it so still and lonesome there, but my mother said:

"Never mind, I have heard that Old Giant Machine is coming there to live, and they say he eats straw pudding and spits brown paper all day long."

"Oh, dear, dear!" says I; "Isn't that good! I always wanted to see a giant, and now I'll have a chance. Will he let us in, do you suppose?"

"Yes, indeed; he has ever so many men working for him, and they sell the paper to the butchers to wrap around our beefsteak."

The next time we went by the deserted castle the doors were wide open, and I could hear the sound of saws, planes and hammers, and could see the workmen passing back and forth, preparing the rooms for Old Giant Machine. He had ever so many men at work for him. Some were building a flume from away up the Soquel Creek to carry water down to the castle. Some were at the chair-factory, three miles away, preparing two great redwood tanks, ten feet across their tops, to make the Giant's pudding in.

Other men were hauling straw from all about the country and making stacks and stacks, some fifty feet long and some a hundred feet long. They put roofs over the stacks to keep the rain off.

The roofs were made of boards, not shingles; but the best one was made of shakes.

Shakes are something like shingles, only a good deal longer.

Oh, but I didn't tell you—there were some more men cutting, hauling and piling up cords and cords of wood to heat the Giant's furnace.

Well, it kept growing more and more like a real fairy story, for one morning we came riding along, and as quick as we got in sight of the castle I saw the smoke coming out of the smoke stack. I didn't tell you about the smoke stack, either—it is as much as twenty or forty feet high, I should think, but I can't measure very well when a thing goes up in the air like that.

We heard a rumbling and rattling and a thud, thud, that just about seemed to shake the ground, and I says to my mother:

"He's come!"

"Yes, the Old Giant has come; shall we go and see him?" she asked, laughing.

"Hitch my horses and down I go! Hitch my horses and down I go!" I said. I couldn't say "up I go," because it's down hill to the castle door.

There were plenty of men hurrying about, but they let us walk right in without trying to stop us. I looked around quick for the Giant.

"There is Old Giant Machine," said my mother. "He is second cousin to Old Giant Weaver, who made the cloth for your coat."

"Well, he's a pretty good Giant," I said, "though he don't look just precisely and exactly as I thought he would; but he makes a dreadful grumbling and groaning, and the paper flies out of his mouth fast enough for anything. How much comes out in a day, I wonder?"

"Five thousand pounds," said one of the men, "or about forty feet every minute."

"How much straw do you have to feed it?" I asked.

"It takes in about 6,000 pounds a day now, but we shall have to feed it more when it gets in good working order."

"We would like to see how you prepare the straw from the beginning," said my mother.

"All right," said the man, "Come this way."

Then he took us to the other end of the building, up a short flight of stairs, and there was one of the immense redwood tanks half full of straw.

"Now, Jack, listen!" said my mother.

So I listened with all my might, and I can tell you just pretty near every word the man said.

"This straw is well saturated with a mixture of lime and water, and here it remains for eighteen hours, during which time steam is forced in, so as to penetrate the whole mass and aid in the bleaching process."

He talked a good deal like the panoroma man up in Santa Cruz.

"How much wood do you burn in a day?" my mother asked him.

"Not a great deal, only four cords, two cords in twelve hours," said he. "Now come this way, and you will see where the straw goes next, through this cylinder, where it is washed by a continual stream of water. Those bent teeth force it through as the cylinder revolves.

"Next the straw is pitched into these two vats where for six hours it is ground till reduced to a pulp."

"Where is the machinery that reduces it to a pulp?" asked mother.

The man went to a wooden cover shaped like a half cylinder; it was three or four feet wide and painted green; it was in the center of the vat and extended half way across it. The vats were painted green, too, and were about three feet high, ten feet long and seven feet wide, or pretty nearly that. He lifted some slats at the bottom of the cover, and showed us what looked like a roller with knives set in all around it; they were about three feet long, I should think, but we couldn't see it very well because of the fine straw and the cover.

"The straw being forced between these rollers and plates of steel bars, over and over, for six hours, gets so fine you could not tell what it was made of if you did not know beforehand. The straw in this vat has been in only three hours, but it has been in the other one the full time."

We went to the other vat full of pulp, which looked to me like hasty pudding when it just begins to thicken, only it was not so yellow, but just as fine.

"This is now ready to make paper," said he, "and to make room for more straw here, it is conveyed to the basement, where it is continually stirred until we want to draw it up to supply the machine. Would you like to go down?"

So down stairs we went, and there was the other great redwood tank; it was so high we had to go up some steps at its side to look over the top. And there at last was the Giant's pudding! Oh, such an immense pudding, nothing but a giant could ever make away with it. Over it was a long cross-bar revolving horizontally with paddles—pudding sticks, I should call them—fastened in it so as to keep the mush stirring all the time.

"This pulp," said the man, "can now be drawn up at any time and emptied into a trough under a circular cylinder made of wire cloth. I will show you."

Then we went up into the room we first entered, and there was the pulp or straw pudding the Giant was going to eat in the trough under the cylinder.

"This cylinder is thirty-six inches in diameter. As it revolves its lower side goes into the pulp, which clings to it as you see; there are suction pipes inside which carry off all surplus water," the man explained. "Rolling above this cylinder, so as to come in contact with it, is this thick flannel cloth, over forty inches wide, which catches the pulp evenly on its surface, comes up over this roller, passes between these pressing rollers and begins to look like wet brown paper.

"Next it comes to these six drying cylinders, each three feet in diameter, and all heated to different degrees of temperature. When it has passed around all these cylinders it is dry enough to leave the cloth and come out by itself a web of brown paper. It passes between these small calender rolls, and then on through these larger calender, or finishing rolls, which gives it a smooth and somewhat glossy appearance."

The calender rolls were about a foot in diameter, as smooth, hard and shiny as my mother's flat-irons; and the paper looked about as nice as her aprons do when they are freshly starched and ironed.

"From these rolls," continued the man, "the paper is drawn over this reel, and from that up to the cutting machine, where it first meets these scissors on each side, which trim it perfectly straight and even, then it comes to this revolving knife or shears, which cuts it off as you see."

I watched it a little while, and every time the paper had rolled through thirty inches, down would come the blade and cut it off, while almost in the same instant another blade cut it through the center and it fell in two sheets thirty inches long and twenty wide.

"How long does it take for the pulp out there to go through the machine and come out at this end finished paper?" asked my mother.

"About two minutes."

"Why, that is as quick as Aladdin's lamp could do it!" I said, and I did think it was as wonderful as a fairy story at last.

"Now, Jack, can you remember how it is all done?" asked my mother.

"I think so; let's see," says I. "This is the paper to wrap around our beefsteak. This is the Giant that makes the paper to wrap around our beefsteak. This is the pudding that feeds the Giant that makes the paper to wrap around our beefsteak. This is the straw that forms the pudding that feeds the Giant that makes the paper to wrap around our beefsteak This is the engine that grinds the straw that forms the pudding that feeds the Giant that makes the paper to wrap around our beefsteak. This is the steam that turns the engine that grinds the straw that forms the pudding that feeds the Giant that makes the paper to wrap around our beefsteak. This is the water that changes to steam that turns the engine that grinds the straw that forms the pudding that feeds the Giant that makes the paper to wrap around our beefsteak. This is the furnace that heats the water that changes to steam that turns the engine that grinds the straw that forms the pudding that feeds the Giant that makes the paper to wrap around our beefsteak. This is the wood that burns in the furnace that heats the water that changes to steam that turns the engine that grinds the straw that forms the pudding that feeds the Giant that makes the paper to wrap around our beefsteak."

"Very well, Jack," said mother. "Now we will go."

"Unhitch the horses and off we go," I said; and off we went, but the Giant is there yet, eating his straw pudding all day long.—*L. J. Dakin, in N. Y. Tribune.*

—The water power of Genesee Falls, N. Y., is to be utilized for mechanical purposes in Rochester. The plan is the same proposed at Niagara, whence the power was to be conveyed to Buffalo by pipes, in the form of condensed air; but it was found that, owing to the distance, the cost would reach $2,000,000, and so Rochester was chosen for a less expensive test. The water is made to fall at intervals into perpendicular pipes, in the bottom of which its weight condenses a quantity of air. The expectation is that steam power will be entirely dispensed with in that city, except on railroads, and that electricity will be so cheaply generated as to displace gas.