

CARS COOLED BY AIR

Have Compressors That Are Driven by the Motion of the Wheels in Front.

In recent years there have been vast improvements in the methods of refrigerating railway cars for the transportation of perishable goods such as fruits, vegetables, eggs and meats. The first step in the refrigerating cars on wheels consists of one of the largest items of expense in the handling of perishable goods. Whenever trains carrying refrigerating cars arrive at certain designated stations they are halted for the fitting of the ice chests of the cold storage cars.

EXPENSIVE SAWS

Have Diamond Pointed Teeth and Are Used in Cutting Slabs of Slate.

Probably the most expensive saws in use anywhere in the world are those in the factories of Pennsylvania, where articles are manufactured of slate. In one of these factories there are 300 horizontal saws, 12 feet in length, each of which is furnished with 75 cutting diamonds, each saw being worth \$5,000.

The most valuable state deposits in the world are found in the central part of the state. In the neighborhood of the Pennsylvania quarries there are houses whose walls are entirely of slate. The blocks of which they are made are smoothly sawed, and are most substantial.

When slate is blasted in the quarries the rough slabs are taken to the sheds of the "splitters." The stone forms naturally the layers, and the "splitter" following the grain, or "ribbing," with his large chisel separates the blocks into strips. Then these strips are passed through a trimming machine, where, by blows of a heavy knife they are cut into rectangular "shingles," ready to be used for roofing purposes.

When slate is cut up for use in other ways the procedure differs. The huge horizontal saw, with its scores of diamonds, is called into play; it is lowered upon one of the blocks of slate by a derrick. The workmen play a stream of water upon the slate to keep it cool, and wash the dust from the cut. After sawing the block is planed by being moved back and forth by machinery under a firmly-fixed chisel. It is afterward polished much as marble and granite are. The value of the slate quarries run into the millions.

Jupiter's Atmosphere

Owing to the high gravitation, the atmosphere of such planets as Jupiter and Saturn is very dense, and so loaded with opaque particles that we cannot see through it to the body of the planet within. But though the body is beyond our scrutiny we can infer that it is very hot, even at the surface; for if the solar system is formed, as is generally believed, by condensation of the heat of condensation must be proportionately greater and longer retained in a large world than in a small one. Thus, for the purpose of life on these great planets, the energy radiating from within may be available and, indeed, may largely exceed the energy received from the sun at so great a distance.

Aerial Camera

Probably no living artist makes such a liberal use of photography as an aid to his art as Mr. Linley Sambourne, the well-known Punch draughtsman. In a single Louis Seize cabinet he has no fewer than 10,000 photographs of every description of military uniform, and there is at least an equal number of camera studies of every conceivable subject likely to be of use. From an elephant to a hospital nurse. Many of these have been taken by Mr. Sambourne himself, who is an expert with the camera.

RUSSIA'S COWED NOBILITY

The Greatest of Them Are Completely at the Mercy of the Police Authorities.

"Privileges! Of course we have our privileges," a Russian noble exclaimed bitterly some time ago. "Were I sent to prison my food would cost the state ten kopecks a day, whereas if I were a peasant it would cost only five. That is the sort of privileges we have, and much good they do us. I often have a good laugh, now that I can read your journals, you give such thrilling accounts of the oppression to which our students and peasants are subjected, and lavish on them such warm sympathy, but it seems never even to occur to you that we are in the same boat as they—just as much oppressed, just as much in need of sympathy. Some of you even go so far as to depict us as the oppressors, and tell what trouble the czar and his ministers have to prevent our playing the tyrant. We play the tyrant indeed, bound hand and foot as we are, at the mercy of every petty official! Do you know we may be forced to leave our homes at a moment's notice any day, and go just where the police choose to send us, even though it be to Siberia? I had to obtain the permission of the police before I could leave Russia last week, and I may be summoned back by them at any moment. If I refuse to go they may seize my wife and children. And yet you talk of our privileges and reproach us with our lack of loyalty! What does the czar do for us that we should be loyal to him?"

What this Russian said that day in Paris many another of his kind would say in Russia without scruple if he dared, for one of the most curious features of Russian society in these latter days is the smoldering wrath with which the nobility as a class regard the czar, says the Philadelphia Ledger. In other countries the nobles as a rule stand nearer to the sovereign than the rest of his subjects, and are in closer personal relations with him. In Russia, however, it is quite otherwise. There the position that elsewhere is held by the nobles is held by the technicians, or official class, which is made up of folk of all sorts and conditions. The imperial ministers are as often as not quite self-made men—two of the czar's present ministers began life very low indeed and are married to wives who began it even lower. It is the same with the gendarmes and other police forces—one of the highest and most dreaded officials among them is the son of a foundling. And these people practically monopolize power and influence in the state, to the detriment, of course, of the nobility.

Much of the bitterness with which the Russian nobles regard both the czar and his government is undoubtedly due to the fact that they feel themselves in a false position owing to the power which, as they maintain, ought to be in their hands, instead of in the hands of men who are for the most part their social inferiors. The technicians practically stand between them and their sovereign, for their only means of approaching him is through them. This state of things they naturally resent bitterly and with even better right. Not only are the technicians installed in the place which elsewhere is held by the nobles, but they wield a power over the nobles such as elsewhere is wielded by no one class ever another.

That complaint, "We are at the mercy of every petty police official," was not uttered idly; in Russia rich and poor alike, even the great nobles, are as a point of fact—completely at the mercy of the police. And they know it. It is brought home to them, indeed, at every turn. Why, if any three of them stand talking together for a few minutes in the streets they may, if the police choose, be led off straight to prison. As for their letters, the police have the legal right, should they care to use it, to open and read them one and all before they are delivered. They have the legal right, too, to sit in judgment on any book that passes through the post and decide whether or not it is suitable reading for the person to whom it is addressed.

I once witnessed a very significant little scene in Russia. In the house where I was staying a ring was heard at the hall door one night quite late, and after a moment's delay the butler appeared, white and trembling in every limb. He uttered only one word, the Russian for a gendarme, and as they heard it the same old look of fear came into the eyes of every man and woman in that room. These people, it must be noted, were all case loving and law abiding, of the class, indeed, that would as soon have thought of jumping into the Nova as of meddling with politics. Politics in Russia spells danger. None the less, the mere fact of there being a gendarme at the door was evidently a sore shock to their nerves.

The Russian nobles are certainly in a most painful position; still, whether the blame of this can justly be cast either on the czar or his ancestors is another question. They themselves have not a single doubt on the subject; all their troubles date from the day when Alexander II, by freeing the serfs, robbed them alike of their prestige and their wealth, they declare.

Simply Arranged. In certain parts of Siam a girl who reaches a certain age without marrying is labeled, and placed in a privileged class under the special care of the king, who binds himself to find a husband for them all. A prisoner in any of the Siamese jails may gain his pardon and release by marrying one of the ineligible class. Whether he is already married or not is not of great consequence, for in Siam a man is not restricted to one wife.

NOVELS WRITTEN TO ORDER

Publishing Houses Now Employ Writers Who Turn Them Out on Short Notice.

The task of putting into readable shape stirring tales about Jesse James, Alkali Pete, Gentleman Jim, Wild Bill, the Gold King, the Boy Detective, and other heroes whose exploits thrill small boys is not done by writers of the same heroic and fire-eating type as the characters portrayed. Men who write such stories, says the Chicago Inter Ocean, need principally a fertile imagination, a capacity for hard work, and the ability to turn out thousands of words of readable stuff a day to make them successful.

They have never reached imperiled maidens, tracked Indians and murderers over deserts and mountain trails, or recovered lost fortunes. Many of them have never seen a live Indian or cowboy, have a bare speaking acquaintance with the detectives at headquarters, and carry no six-shooters in their back pockets. More than one dime-novel publishing firm has made a fortune at the business of providing literature for Young America, and that in the days when they paid a writer from \$75 to \$250 for a story. Things are done differently now.

Each dime-novel publishing house employs a staff of writers, who receive a regular salary. Besides the staff of regular contributors, persons who can be depended upon to turn in a fixed amount of copy every week, each publishing house has a list of workers who can write a story to order and at short notice. When a regular writer falls ill or takes a vacation, or when some special event happens which makes a foundation for a plot for a popular novel, one of these special writers is communicated with and is offered to furnish a story on three or four days' notice. Inspiration forms a small part of the dime-novel writer's stock in trade, for nearly all his stories are written to order. In these cases the writer follows a plot suggested by the publisher, and does not even select the title.

THE HOLY GRAIL

One of the Few Sacred Relics That Have Received the Sanction of the Sovereign Pontiff.

Genoa has no cathedral and is singularly lacking in fine churches, but is rich in religious relics, writes William E. Curtis, in the Chicago Record-Herald. The Church of San Lorenzo is famous for containing the remains of John the Baptist and possessing the holy grail, the cup from which Christ and his disciples drank at the last supper, and which was so long and so eagerly sought for and fought for by King Arthur and his Knights of the Round Table, and later by the heroes of the crusades. Tennyson and Lowell tell the story in better words than I can frame. The cup, which was supposed to be a solid emerald about four inches high and holding the contents of an ordinary claret glass, was finally found at Caesarea, on the coast of Palestine, by a brave Knight Templar and brought to Genoa, where it was entrusted to the charge of the local chapter of Templars, and upon its dissolution, was deposited in the reliquary of San Lorenzo. Napoleon stole it, as he did so many other valuable and interesting articles, such as the Columbus autograph, and carried it to Paris, where it was exhibited in the secular museum of the Louvre among ordinary articles, to the horror and scandal of the church, as it was considered one of the most sacred objects in existence. The spear that pierced the Saviour's side and the handkerchief with which St. Veronica wiped His perspiring face as He staggered under the weight of the cross are not more precious. While it was in Paris the holy grail was broken, and it was then discovered that it was made of ordinary glass. A piece that was knocked out of the cup is still kept in the Louvre, and the mutilated goblet was returned to Genoa in 1823.

This is one of the few holy relics of the Saviour which has the formal sanction of the sovereign pontiff and the college of cardinals, and is also supported by historic evidence. Most of the others in the churches of Rome and elsewhere have not been officially recognized. There is no positive evidence that it was used at the last supper—you might as well say that there is no proof that it was not used on that occasion; but millions of people are convinced that this cup was handled by the Saviour and the apostles, and was even polluted by the touch of Judas, and we might as well accept their verdict. It is the only cup that makes such pretensions.

Progress in the East. The nomadic Tartars, or at least the most intelligent among them, are stated to be becoming quite modernized. Outside an odd tent of the community can be seen a barometer, or thermometer, while many possess cheap alarm clocks and watches. All of these are kept for use and not ornament. For luxuries they carry tinned commodities about with them, and are provided with openers for the tins.

The New Cook. "Maria, I want a chicken smothered in gravy for dinner." "Cook—if you want it killed in as cruel a way as that ye'll have to do it yourself, mum!"—Comic Cuts.

EARLY NEWSPAPER WORK

As Described by One Who Had Served in Different Departments of the Service.

"So much," said the retired literary man, continuing, as he talked, the wrapping up of a pair of coupon shears which he was about to send out to be sharpened—"so much depends"—this, relates the New York Sun, as he laid the now completely wrapped up bundle on one side of his desk and settled back comfortably in his chair—"so much depends on the point of view."

"In my younger days, before I had come to devote myself solely to strictly literary pursuits, I worked for a time on a newspaper as a reporter. And I was, I hope, a pretty good reporter; never failed, anyway, to get the facts; but often I was grieved by the way in which my copy was handled.

"Sometimes it was cut and slashed in a way that was all but disheartening, and sometimes I would find sentences and even paragraphs, or the whole story itself, rewritten; and this wounded me more deeply than all else. Why couldn't they let my copy alone?"

"One night the office suddenly found itself shy—pardon the expression, young gentlemen, but such was the fact—of a copy reader; and when they had looked around to see whom they could get to sit in I was the only man available. And so I got my first chance at hacking copy.

"In the first batch of stuff thrown over on my desk was a little story of my own that I had written and turned in earlier in the day. I don't suppose it could have been intended that this should come to me, but here it was, and I picked it up and read it with a curious interest. I was looking at one of my own stories now from a new point of view, from the point of view of the copy reader.

"And, young gentlemen, it was rotten, simply rotten. It had a weak and unattractive beginning, and a lame ending, and it was all muddled up in the middle."

"The facts were in it, but yet in its written form the story was no good. It was not the work of a man who had come into the office with his work all planned out in his mind and with his opening sentence decided upon, ready to sit down and start the story off with a rush and to keep it a-bombing clear and strong to a stirring finish, but it was the work of a man who had put down his facts in 'most any sort of way and with a great surplusage of words and with blind sentences scattered here and there which he hadn't even tried to straighten out, but had let go just as they were. It was a mixed up, jumbled, disconnected story, that didn't read true anywhere, as the writer himself must really have known, but which he had turned in just as it was, nevertheless, expecting that somehow it would come out all right in the paper."

"It was, bum, if you will pardon me again, young gentlemen—bum; the bummiest line of copy that anybody ever put blue pencil to; and I made a railroad switchyard of every page of it and then threw it all on the floor and wrote a clear, simple, straightforward paragraph embodying the facts, or I came as near to that as I could at that stage of the game, and let it go at that. And from that time on I ceased to wonder at why they couldn't let my copy alone."

"As a matter of fact, that was not only my first, but it was my only night at a copy desk; but from that brief experience of copy reading I learned that to get my stuff past the copy desk I must make good and workmanlike copy; a lesson that proved of great value."

The Roman She-Wolf. An extraordinary scene was witnessed in the Roman capital a few days ago. It is the whim of the municipal council to keep there a she-wolf as a memorial of the tradition of Romulus and Remus, and the other day a cat, noticing that some scraps of meat had been left uneaten in the wolf's cage, made a dash for them, only to be pounced upon herself. A fearful struggle ensued, puffy, though badly hurt, making a game fight for life. The keeper, seeking to make a diversion in her favor, attacked the wolf, which only growled savagely and held fast to the cat. Then the keeper remembering the tendency of wolves to devour each other, at favorable moments, let loose the wolf's adolescent cub. They, however, instead of attacking the mother, joined against the common enemy, and each one seizing different limbs, simply wrenched the cat's body to pieces in a few seconds. About 100 spectators witnessed the scene.—London Globe.

Regularly Every Year. One of the most beautiful sights in the world is the annual migration of butterflies across the Isthmus of Panama. Where they come from or whether they go to no one knows, and though many distinguished naturalists have attempted to solve the problem it is still as strange a mystery as it was to the first European traveler who observed it. Towards the end of June a few scattered specimens are discovered flitting out to sea, and as the days go by the number increases, until about the middle of July the sky is occasionally almost obscured by myriads of these frail insects.

Secret-Service Men. A close observer who visited the office of the secret service agents in the federal building the other day said to a group of his friends: "I can tell a secret service man wherever and whenever I see one." "How?" asked the crowd. "Because he wears a ring on his thumb," was the reply. "I saw half a dozen in the post office to-day and each one wore a ring on the thumb of his right hand."—New York Press.

BIG PORTO RICAN FAMILIES

They Have Lots of Children There and Can't Bear to Lose Any of Them.

"The Porto Ricans are yet wondering why President Roosevelt gave them a suicide warning," said a former official of the customs service at San Juan, reports the New York Sun. "They say that if the president lived in Porto Rico he would have no occasion to talk about the danger to the state from small families."

"The fact is, Porto Ricans, rich and poor alike, seem to strive to raise the largest families possible. The people worship their children, and the children look up to their parents with love and reverence. Families of ten, 15, 18 or 20 children are so common as to excite no comment. I know one woman in San Juan who has 24 children, and they are all living."

"She is the wife of a rich planter, and is, contrary to the general rule with Porto Rican women, a good business manager and aids her husband in the management of his business affairs, besides looking after her household. These double cares would kill the average American woman, but the Porto Rican woman is happy and contented and doesn't look a year over 30."

"The wife of a relative of mine, a rich planter, had 14 children, but she lost one of them. The death of a child in a Porto Rican family, no matter how large the family may be, is a blow so stunning that the parents carry their grief to their graves."

"When this one died the sorrow of the parents was intense. The father owned a newspaper in San Juan, but he refused even to open the door of his office for a month, and then he could do no work. Finally he had to go abroad for six months in an effort to forget his grief."

"While in Europe he ordered a marble tomb, with a beautiful white marble angel surmounting it, in which to place the child's remains. Now, although the little one has been dead several years, the father goes regularly twice a week to the cemetery and remains several hours each time."

"The mother trudges every day to the cemetery, taking with her each time a bunch of fresh flowers to place on the child's tomb. They dress it black, and will remain in mourning, I think, till death."

"This is not an isolated instance of parental devotion, because on every Sunday or feast day you may go to the beautiful San Juan cemetery and see hundreds of people sitting by the graves of children."

"I recall a striking instance of a widow's love for the memory of her husband. The San Juan municipality owns the cemetery and charges a rental for the reposition of the bodies. The rent for the first three years has to be paid in advance, and if the regular rent is not paid after the expiration of the three years the bones of the dead are, without warning, thrown out of the niches where the coffins rest."

"It chanced that through an error the widow failed to pay again after the three years had expired, and when she went to the cemetery one day she discovered to her dismay that the bones of her husband had been taken from their niche and cast into a pile of bones of hundreds of other dead. There was no way by which the bones could be identified and recovered."

"The widow had had a great mausoleum built for the remains of her husband, and rather than have nothing in the vault to remind her of his name, she caused all the bones in the pile, comprising the remains of hundreds of people, to be gathered up and placed in the mausoleum, being well satisfied that among the great mass of bones in the place were those of her husband. This woman makes regular visits to the cemetery and offers up prayers over that great mausoleum full of bones for the repose of her husband's soul."

Hawaii's Barking Sands. The barking sands are found where the sand has accumulated on the seaboard in great heaps, some of which are 30 or more feet high. These peculiar sands are not common. Some of them are found at Naha on the east side of the Red sea in Arabia, and several large ones in the Hawaiian Islands. Scientists have made some study of these musical sands, but they have not yet discovered the cause of the sounds. These sands are called "barking" because at times they resemble the barking of an animal; at other times they produce a loud humming sound which can be heard at a considerable distance. It is thought by some that the movement of the winds over the vast sand heaps causes a vibration of the particles just as the movement of the winds produces sound in the branches of trees. The native Hawaiians attribute these strange noises to the incantations of demons and evil spirits.—Southern Workman.

The Mango in Porto Rico. The department of agriculture is informed that the climate of Porto Rico is favorable for the cultivation of what has sometimes been called the finest of tropical fruits, the mango. But although mangoes abound in the island, they are seedling trees, and the fruit is inferior to that of the famous Bombay mango, which is a grafted tree. It is believed that fine mangoes could be grown in abundance in Porto Rico by importing the best grafts, and that the industry can be developed into an important one as soon as the excellence of the fruit becomes known in the United States.

He Had Him There. Bobby—Father! Father—What is it, my boy? Bobby—Which one of the twins do you think looks the most alike?—Puck.

STRANGE SOMNAMBULISM

Hawaiian Boy the Hero of a Most Remarkable Adventure While Asleep.

A queer case of somnambulism occurred lately near Honolulu, on the island of Kauai, Hawaii. William Williams, aged 12 years, disappeared from his home one morning early. When he did not return for breakfast, nor later in the forenoon, his parents became anxious, and search was made for him. After some time, says a San Francisco report, a native found him lying in the shadow of a great boulder in a place very difficult of access.

When the native saw him he gave a shout, partly to announce to the other searchers that the boy was found and partly to awaken the boy, who seemed fast asleep. The shout awoke the boy suddenly, and seeing the native's black eyes staring at him, as he afterward explained, he thought a wild pig, numbers of which are found in the region, was about to attack him.

To escape the boy climbed a tall coconut tree growing 100 yards away, and as he did not respond nor come down when called to, the native climbed up after him, but was kept at bay by the boy with a 12-inch knife. Finally his father came and spoke to him, and then he came down, still in a dazed condition, nor did he fully recover consciousness until he had been taken home and put to bed.

He then had but a very dim consciousness of his experience. All the circumstances indicate that he had, risen from bed early in the morning, put on his working clothes, taken three books which had been presented to him under his arm, and a long knife used in cutting ferns, and started for the woods, where he cut a quantity of ferns and carried them to where he was found by the native. When started by the shout of the latter he still kept his books under his arm and his knife in his hand, and climbed the coconut palm to the very top a distance of 10 or 15 feet, a most difficult feat to perform, even to the natives with their hands empty and their arms free.

The boy was never known to walk in his sleep before, but it is supposed to have been suffering from nervousness, following an attack of dengue fever. The boy had never climbed a coconut palm before.

SMUGGLERS AT MANILA

Japanese Immigrants Try to Get in Durable Goods Among Personal Effects.

Smuggling cases are coming in thick and fast at the custom house nowadays. The latest attempts that have been rendered abortive are to smuggle tobacco and human hair, and a quantity of both commodities, which, according to the information in the possession of the customs authorities are smuggled, was lately found by special agents in a store at No. 36 Calle Anil, Sampaloc, which was searched for these very same goods, says the Manila Times.

The information has been in the possession of the customs people for some time that the Japanese immigrants were fully as industrious in trying to beat the customs as were their neighbors the Chinese. Two large consignments of Japanese passengers came in recently, some 120 on the Yama Maru, and another large number on the Hongkong Maru, and in searching their baggage some hundred pounds of tobacco were found, and a mattress of human hair, and a quantity of human hair, being used for wigs and wigs, was classed among the luxuries, and pays an import duty of 50 cents gold a hectogram, or five dollars in gold a kilo. The tobacco is of a variety much in use among the Japanese population of Manila. The method of smuggling it was simple. Nearly every newcomer of the Japanese had a box or two of it in his baggage. Had there been only one of these such cases the tobacco would have been passed in as personal effects, but the universal presence of it in the trunks, chests, bags and boxes led to the belief that the information received in advance of the attempt was correct. The information is that the owner of the tobacco distributed it among his countrymen, hoping that in such small quantities it would come in unnoticed. If successful, he would have avoided a duty of \$2.50 gold a kilo.

The Midway Islands. As cable stations the Midway Islands and Guam have a unique interest for the people of the United States. The former are two small islands situated half way between the California and China coasts. They are surrounded by a coral reef about 16 miles in circumference, which protects the islands from the sea. A rift in the reef admits vessels of 16 feet draught into a deep and safe harbor. There it was that the Wandering Minstrel was wrecked in 1857. Captain Walker, his wife and crew, lived for 14 months on the islands, subsisting on fish and the eggs of sea birds, until they were rescued. The islands have been placed under the jurisdiction of the navy department, and Lieutenant Commander Hugh Rodman, U. S. N., has been appointed governor.—From "The Mid-Pacific Cable," by John Goldhammer, in Four-Track News.

Desert of Gobi. The desert of Gobi occupies a considerable portion of central Mongolia, but it is not a true desert, supporting as it does nearly all kinds of animal and vegetable life and forming no small part of the pasturage of that greatest grazing country of the old world.