

# The Automobile

## TAKE CARE OF AUTO FENDERS.

An auto with shabby fenders looks like a man with worn-out shoes, dirty and unpressed clothing, or without a collar and tie. Auto fenders become ugly through neglect. They receive scratches and bumps, get out of shape, and become full of holes because of rust. It is not unusual to see auto fenders rusted through.

Rust usually begins its work underneath. Flying stone and gravel, caked mud and vibration all serve to remove the paint or enamel. The oxidation of the metal, or rust, sets in at once. The unobservant man does not know about this destructive work until all of the metal is eaten away from the film of paint or enamel on top.

Automobile fenders should be carefully washed occasionally and all spots from which the original paint or enamel has been removed, painted. If you have a collision and damage a fender, hammer out the dents and paint the scratched places as soon as possible. The fender will look better and at the same time rust will be prevented.

## OILING THE SPRINGS.

It is only recently that the necessity for oiling automobile and truck

springs has become known. The difference in riding on oiled and on rusty springs is very pronounced indeed. In oiling springs, however, one difficulty is encountered. Dust will adhere to the sides of oiled springs and finally work between the leaves themselves. Also, when muddy roads are encountered, mud will be thrown on the springs; it will dry, and then absorb all the oil on springs.

To overcome this difficulty, wrap the springs of the car with adhesive tape. The springs are first thoroughly washed and dried. Then the jack is placed under the frame of the car and the body is raised. This allows the weight of the axles and wheels to pull down on the springs and thus separate the leaves so that grease can easily be inserted with a putty knife.

After the springs are greased, the weight of the car should be placed on the wheels again. The leaves of the springs will come together and push out surplus grease. This should be wiped off, after which the springs may be wrapped with the tape. Wrap carefully, allowing plenty of lap. If the tape will not stick well at the beginning or at the end, use shellac to hold the ends in place. Coat the entire wrapping with shellac after the job is finished.

## Building Paired from Common Clay.

Brickmaking was one of man's earliest pursuits. Babylon was acquainted with the art; and it is recorded that the Israelites baked bricks from clay mixed with chopped straw.

Nowadays, for ordinary building purposes, red bricks are in greatest demand. These are produced from many kinds of clay.

In the first place, the rough clay is sent from the "pit" to the top of the plant. Here it is ground to powder, and passes through a fine sieve to the floor below. The powdered clay is then fed into the brick-press, where it is watered to a workable plasticity, emerging eventually pressed to a perfectly formed, solid brick.

The color is now dark grey. Not until after heating does the brick become red. Redness is due to the presence of iron compounds in the clay, which when burned transform to free ferric oxide.

The bricks are placed in the kiln chamber, which is then built up. Hot air is allowed to enter so that a thorough drying is effected. After drying, the hot air is withdrawn.

Fire is next introduced. Burning usually takes a week. During that time, firing is maintained day and night through feed-holes in the kiln top.

Not all materials, however, can be treated in this simple fashion. Highly plastic clays require molding, and many elaborate preparations are necessary. Among these are "weathering," and the addition of non-plastic matter to reduce shrinkage. Crushing, grinding and pugging are also essential preliminaries.

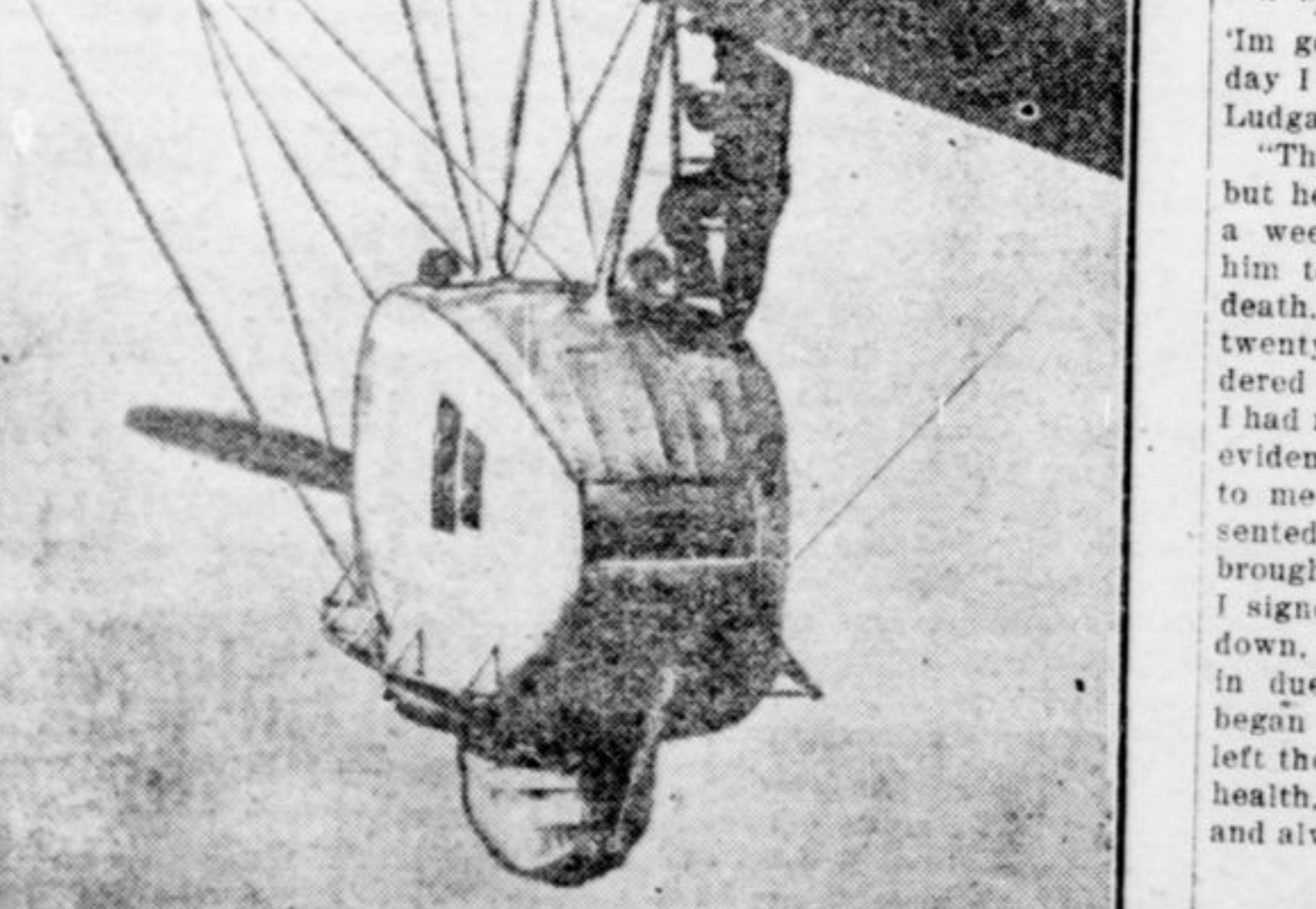
A brick's quality should be such that it will not absorb too much water from the slightest crack, and the edges square.

## Taking Every Precaution.

On going into the playground one day, the schoolmaster found one of his small pupils sitting on another, who was lying prostrate on the ground.

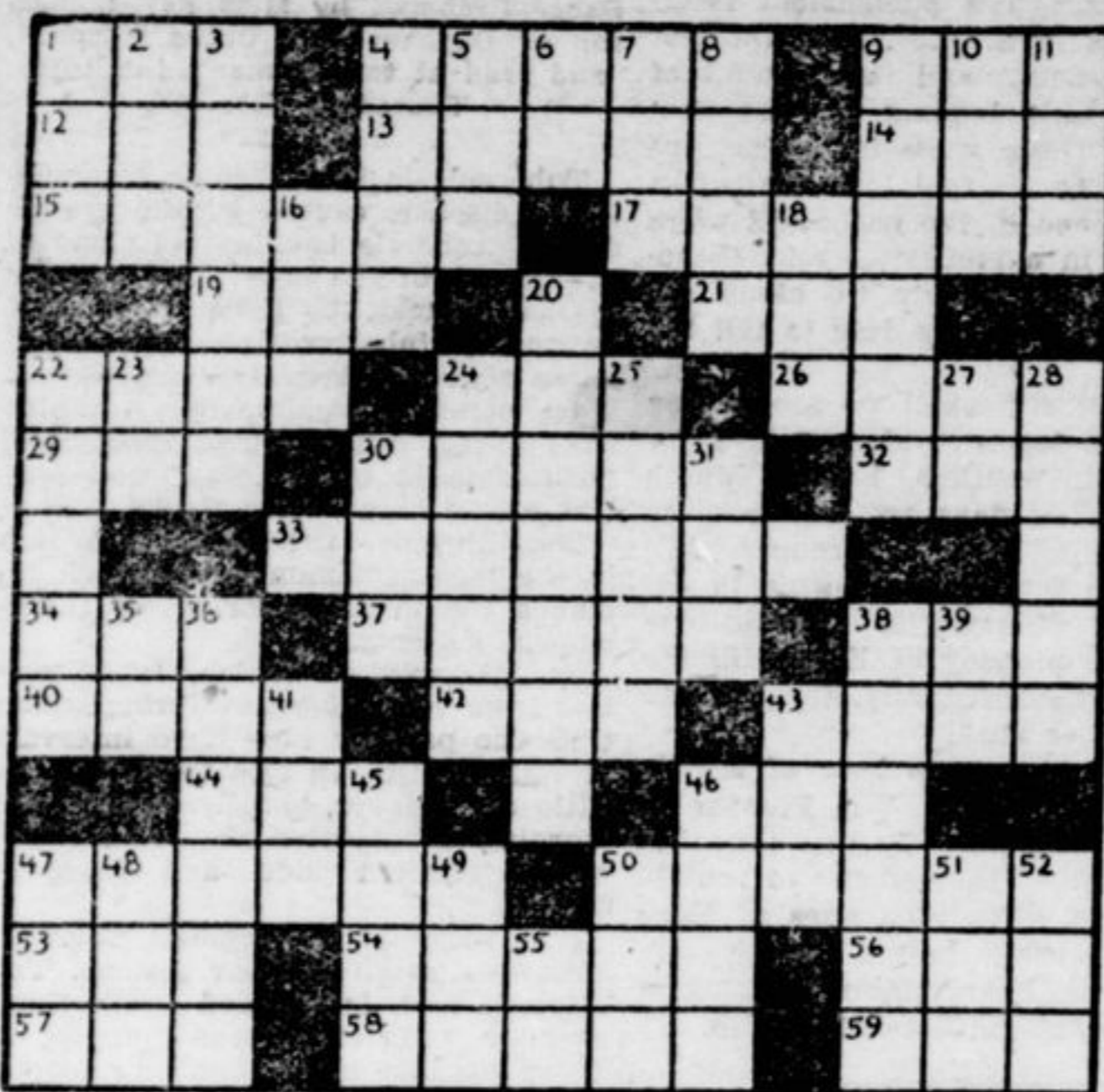
"O Hille," he said, "haven't I always told you to count a hundred before you give way to temper. And here I find you sitting on Tommie's head. What have you to say?"

"The child looked solemnly up at him. "I'm counting the hundred, sir," he said. "I really am, but I'm sitting on his head so that he'll be here when I've done counting."



W. E. Richardson, who was in charge of the aerial photography unit on the dirigible Los Angeles, climbs down from the great gas bag to one of the engine cabins from which he took pictures of the eclipse.

# CROSS-WORD PUZZLE



SUGGESTIONS FOR SOLVING CROSS-WORD PUZZLES  
Start out by filling in the words of which you feel reasonably sure. These will give you a clue to other words crossing them, and they in turn to still others. A letter belongs in each white space, words starting at the numbered squares and running either horizontally or vertically or both.

- HORIZONTAL**
- 1—A dole
  - 4—To take oath
  - 9—Article
  - 12—In the past
  - 13—Handle of an axe
  - 14—An element
  - 15—A watersprite
  - 17—A feast day
  - 19—To drink with the tongue
  - 21—A division of land
  - 22—To surflet
  - 24—A cleaning implement
  - 26—Curved
  - 29—Not elevated
  - 30—Bravery
  - 32—Fish eggs
  - 33—Friendly
  - 34—To plant
  - 37—To twist violently
  - 38—An animal
  - 40—A fish
  - 42—Still
  - 43—The two
  - 44—Tear
  - 46—A place to sleep
  - 47—A mark
  - 50—Warmed
  - 51—Rage
  - 53—Soothed
  - 54—Metal-bearing rock
  - 57—Writing implement
  - 58—Lying flat
  - 59—Novel
- VERTICAL**
- 1—A tree
  - 2—Number of years
  - 3—To pursue
  - 4—Large boat
  - 5—Tiny
  - 6—A letter
  - 7—Hall
  - 8—Genuine
  - 9—Loose hanging rag
  - 10—Hasten
  - 11—To make a mistake
  - 16—Compensation
  - 18—Convulsive cry
  - 20—defendant
  - 22—Group of pupils
  - 23—An exclamation
  - 24—To join
  - 25—The end
  - 27—Negative
  - 28—Used for chewing
  - 30—A pledge
  - 31—A bit of cloth
  - 35—An exclamation
  - 36—Home of an animal
  - 38—Agricultural product
  - 39—Close by
  - 41—To excavate
  - 43—A serpent
  - 45—To look slyly
  - 46—To look
  - 47—A gratuity
  - 48—Existing
  - 49—Material for calking
  - 50—A fowl
  - 51—Beforehand
  - 52—Preparation
  - 55—in this manner

## A Leg For Sale.

In a lively book of reminiscences, Thirty Years at Bow Street, Mr. William T. Evans tells an amusing story that he heard from an old man who lived in Bow Street in the rear of the police courts, with whom the author often had a bit of conversation.

"When I was a young fellow," said the old man, "I started to walk from Covent Garden to the Angel at Islington. There were fields in those days where you now see nothing except mensesly. I could run and jump at that time as well as anyone in London, and so when I came to a stile I did not trouble to climb over. In trying the jump it, however, I miscalculated the distance and came an awful cropper. Who picked me up I don't know. When I regained consciousness I found myself in a hospital. I was in awful pain, for I had hurt my leg badly. I was in the hospital for weeks."

"During that time I was visited by some of the most famous surgeons in London. My case puzzled them considerably, and I heard them say that there had been nothing like it before. Among the people interested in my leg was an old doctor who had a good practice in the region of the Strand. On one of his visits he said, 'I should like to have your leg.'"

"Oh, would you?" said I. "I want it myself if you have no objection."

"I understand that," said the doctor, "but I should like to see your leg when you have done with it. There has been nothing like it before, and I don't think you will want it for very long."

"Thank you for nothing," said I. "I'm going to get better, and the very day I leave this place I'll walk you to Ludgate Hill for anything you like."

"The old doctor did not take me on, but he pestered me to or three times a week to sign a paper authorizing him to have my injured leg on my death. He even offered to give me twenty pounds if I would sign. I pondered long over his proposal. You see I had nothing else to do, and, as it was evident that my leg would be no use to me after my death, I finally consented to his terms. The doctor brought me a paper one morning, and I signed it. He gave me ten pounds down, and I was to have the balance in due time. From that moment I began to mend and soon afterwards left the hospital in comparatively good health, though I was slightly lame and always shaly.

**A Warning.**  
Asylum Visitor—"The patient in the padded cell has a most remarkable vocabulary. Most of the words he uses are marked rare or obsolete in the dictionaries."

Doctor—"Poor fellow! He got that way trying to solve cross word puzzles."

## One Hundred Years Old, 86 Years in French Family

Eighty-six years of service in the same family is the record which Victoire Desrumeaux, a domestic, celebrated on the occasion of her 100th birthday, says a Paris despatch. The French papers are losing no opportunity to comment on this remarkable example of fidelity in view of the modern custom of maids and cooks changing their positions almost monthly—often merely for the sake of the change.

**Birds' Eggs as Jewelry.**  
Necklaces of wild birds' eggs are now being made. The eggs are paired for size, and after blowing are treated by a chemical process and the insides filled with a light-weighted composition to give them solidity. As the shells all have different markings, novel effects are produced. The prices vary from \$25 to \$5000 and more.

# Avalanches in Switzerland

By John A. Cass.

The Swiss people call them "laou-wine," and they are sometimes so called in English; as when in one of his poems Lord Byron spoke of the mountains as place, "Where roar the thundering lawine," though he probably meant no more than the snow avalanches which are frequently seen in summer by the traveler.

The word has a broader meaning, however, and includes those enormous masses of earth and rock which not infrequently become loosened from the cliffs and descend into the valleys, carrying death and destruction far and wide.

In some parts of the country avalanches of either sort are so likely to occur at any time that the people guard against them by planting extensive forests on the hillsides, and in some cases strong bulwarks of masonry have been erected between the towns and the mountains.

Despite all precautions, however, it is not unusual for lives to be lost and single houses to be destroyed, and there are cases on record where even the villages have been buried beyond all possibility of excavation.

On the Bernina Pass, a great highway which leads from Switzerland to Italy, the traveler still has his attention directed to the spot where, many years ago, a village named Mille Morti was buried by an avalanche of earth and rock from the slope of a neighboring mountain. Very little is known concerning the disaster, for it is one of those sad cases where neither man nor child escaped to tell the story.

On the road from the Italian lakes into Switzerland by the great Maloja Pass one sees the site of a catastrophe even more appalling than that already mentioned; more appalling because more extensive.

The village of Plurs must have been very pleasant for a situation, for in front of it a mountain torrent kept up its unceasing roar, while at a little distance in the background rose the high cliffs of Mont Conto. It must have been a prosperous town, too, for early in the seventeenth century it sheltered a population of twenty-four hundred and thirty souls. In the autumn of 1618 it was noticed that masses of earth and rock fell with unusual frequency, and a number of fissures were seen to form and widen in the mountain. But the people, disregarding these admonitions, continued their usual pursuits till one night a terrific landslide buried them and their possessions beneath a pile of debris more than sixty feet deep.

So utter was the destruction that no attempt has ever been made at excavation, and the spot is now covered with a beautiful grove of chestnut trees, among whose branches the nimble squirrels play, and at the foot of which boys and girls now search for nuts.

Another example, not so destructive to life and property, but more striking, from its having twice happened in the same place, may be noticed in the valley which leads to the village of Zermatt. Here, in 1737, a little town of one hundred and forty houses was completely destroyed by an avalanche of snow from the Weisshorn Mountain.

Years passed, and the snow had all melted, the debris had been cleared away, and another and larger village was built on the same spot. Here the people lived in peace and safety, and perhaps quite forgotten the first disaster, when suddenly, one afternoon, in 1819, another avalanche of ice and snow from the same mountain came down upon them, burying one hundred and eighteen houses, together with many people. The house of the village pastor stood a little apart from the others, and so escaped destruction; but such an enormous quantity of snow was lodged in his garden that it did not entirely disappear till two years later.

Returning now to the region of Eastern Switzerland, we find another case quite unlike any that have yet been mentioned.

Many years ago, what was known as the Forcola Pass, the little town of Le Rovine stood at the foot of the towering mountain. It contained about three hundred inhabitants, who were occupied as cattle-herders and farmers, besides carrying on quite a business in the way of entertaining people who were obliged to pass that way. They had, however, come to have a bad reputation, and were supposed to be capable of almost any crime. Travelers who were obliged to spend the night here were provided with only the meaneast food, but were compelled to pay for it the most exorbitant prices.

Indeed, the catalogue of evil deeds of which the people of the town were guilty was a long one, and it is said that they were frequently warned that some terrible judgment would be sent upon them unless they reformed. Be that as it may, it is certain that on June 13, 1486, an earthquake shook the mountains violently, and a fearful avalanche buried the town, with all its inhabitants, in one common grave.

But the most remarkable instance of such disasters yet remains to be spoken of.

In the very centre of Switzerland, not far from the famous city of Lucerne, is a tract of country bearing the general name of Goldau. It included several villages, whose situations were of extreme beauty, for in front of them lay the charming little Lake of Lowertz, and behind them rose the Rossberg Mountain to a height of more than five thousand feet.

This mountain consists of layers of conglomerate rock, made up of rounded limestone mixed with flinty pebbles imbedded in a sort of calcareous cement, alternating with layers of sand three or four feet in thickness. Not infrequently these sand-beds become disintegrated by the action of water percolating through them, and masses of rock deprived of their support in this way, are occasionally precipitated into the valley. It was this on a large scale that caused the disaster.

# Natural Resources Bulletin.

The Natural Resources Intelligence Service of the Dept. of the Interior at Ottawa says:

Canada's total imports from the United States last year amounted to \$524,611,087, of which mineral products, including the three classifications, iron and its products, non-ferrous metals, and non-metallic minerals, were valued at \$267,719,854. This was made up largely of coal and oil, with their products, which were valued at \$183,739,970, coal being responsible for \$65,909,953 of this total. The exports of these three classes of mineral products to the United States amounted to \$74,107,767, which is made up practically of raw materials, or on which but comparatively little manufacturing has been done.

The forests of Canada, however, have made up for the deficiency of the mineral trade. Imports of wood and paper from the United States last year amounted to \$22,365,792, while exports were valued at \$220,087,614. Of the latter newspaper paper was valued at \$90,990,711, and unmanufactured woods, including logs, laths, planks and boards, shingles, square timber, railroad ties, spoolwood and pulpwood amounted to \$112,886,017. Pulpwood exports alone were 1,330,200 cords, valued at \$13,536,058.

Canada's forests are more than carrying their share of her foreign trade on the credit side. The strain is telling, however, and, with the tremendous toll being taken by fires, our timber reserves are being depleted. More thought is being given to forest fire dangers, and it is necessary if we are to save this valuable asset.

## Palaces of Princes and Nobles in India Wired for Electricity

Electricity has become so popular in India, particularly among the rulers and State officials, that contracting companies there are hiring scores of electrical workers in England and placing huge orders for goods with English manufacturers. Most of the palaces of Indian princes and nobles are entirely lighted by electricity and many villages, even in the remote parts of the country, have electric street lights and some of the stores are lighted by the same method.

Native leaders who have visited European states are largely responsible for this wide introduction of electricity.

A plant has recently been established at Chamu, 10,000 feet up in the Himalayas, which supplies power to some 250 towns in the vicinity and is entirely operated by a native staff. The Raj Sahib of Wankar employed English engineers to outline his palace with electric lights and the hundreds of lights may now be seen at night for several miles. This ruler also has placed on the roof of his palace a powerful searchlight, with which he can illuminate the surrounding hillsides.

Electric fans, as may be supposed, are being rapidly introduced among the natives.

## Paris Laborer Finds \$2,500 Hidden in Old Stove

Pierre Dame, a day laborer, noticed one day in a small shop an old, broken iron stove, says a Paris despatch. Perhaps it was cold on that particular morning, but at any event Pierre had the idea that he could buy that stove for very little, fix it up and be suitably prepared to withstand the rigors of a hard winter. He went into the shop, and for 10 francs, which is something more than fifty cents, made his purchase.

But as he was about to lift the stove into a wagon, with the help of the shopkeeper, something rolled from out the stove and with a metallic ring fell on the sidewalk. He hurriedly picked it up. It was an old, encrusted gold coin. After a moment's hesitation he dove into the stove, and to his delighted surprise found hidden away a bag filled with similar coins which, on analysis, were found to be ancient French pieces of gold amounting to the comfortable total of 50,000 francs, perhaps \$2,500.

Naturally there was quite a discussion as to ownership, both Pierre and the shopkeeper claiming title to the discovered treasure, but French law settled the argument in favor of the man who owned the stove by right of purchase. And so to-day Pierre is richer by 50,000 francs because of that moment's inspiration which led him to buy an old, broken stove.

## Romance.

Dwellers near Sherwood Forest, in Nottinghamshire, are aroused to militant protest by the scheme to put a railway through the glades and down where Robin Hood and his merry men defied the law. Rural England, enshrining his fame in song and story, has bestowed on Robin an affection denied to circumspect and august respectability by the same instinct that has led us in America to make heroes of bold, bad men of the West. Robin made his place in legend and romance because he was an epic figure of the struggle between oppressed and oppressor, between the common man and the vested interest.

The hoot of locomotives and clank and roar of cars along steel rails would be a poor exchange for that lovely, ghostly retinue that still follows in the moonlight Robin Hood's immortal chivalry.

# A Woodpecker Family's Troubles.

A farmer of New York State used to tell the following story to illustrate both the intelligence of birds and their sharp limitations.

Behind the horse barn on his father's farm was a steep declivity to which he had built a fence to keep the little above the level of the road. The fence was made of logs and was so close to the barn that the door of the barn blocked the entrance to the woodpecker's nest, which of that time was a family of fledglings.

The next morning Amos, who was what had happened and called brother's attention to it. The bird, as John described what they saw, then frantically at work just as the faller lifted a log and threw it into the half-decayed tree. The brothers debated whether they should help or not, but the woodpecker, making such good progress that he finally decided not to interfere. He strongly suspected that the log was confined in the excavation of her young; for nothing of the sort either.

Later in the day the woodpecker called from the barn and did not return till after midnight. Next morning they discovered the troubles of the woodpecker had had taken a new turn. The bird had settled down six or eight inches and now was working again in the crotch. The obstruction to original opening was thus removed and they saw the female fly out and presently return with food for her brood.

As they watched, John happened to notice a flutter behind the log on the further side of the tree. "Gosh," the barn loft where they could see over the limb the brood saw the male bird was caught in some way, evidently by the setting of the log while he had been at work directly beneath it.

Here was a situation that called for assistance, though it could not be rendered easily. After some debate they hurried an extensive ladder, lowered it part way down the hill and ran it up till the top rested just below the crotch. Then with Amos standing the bottom, John climbed till he could grasp the log and look over.

The woodpecker evidently had been on the preceding afternoon, and they were away, for the woodpecker, which was caught behind the limb by its tailfeathers and the tip of one wing, had struggled till it was almost exhausted. By cutting away the bark round the crotch with his jackknife John quickly freed it, and it fluttered nimbly to another tree.

The woodpecker made repeated swoops at him during this time. There was no evidence that she had tried to aid her mate, though she could have set him at liberty by five minutes of peck work. Yet she had faithfully fed her young, which, as John discovered by a glance into the hole, were unharmed. Why had she not come to the male bird's assistance as he had to help? Mr. Aston's theory is that neither had consciously sought to help the other, but that the instinct to protect their young explains the actions of both.

## Siberia's Sun Flower.

Travelers in Siberia tell of the wonderful flower that grows there, and which blooms only in January, when the winter is at its height. The blossom has something of the character of a "morning glory," lasting only a single day.

The flower, when it opens, is bell-shaped, its petals of the same color as the leaves, and half an inch in width. On the third day the stamens of the anthers, which are five in number, show minute, glistening specks, veritable vegetable diamonds about the size of a pin's head. These are the seed of the flower.

A Russian took a number of the seeds to St. Petersburg. They were placed in a pot of snow and frozen earth. On the coldest day of the following January the miraculous flower burst through its icy covering and displayed its beauties to the wondering scientists. The plant has been very appropriately named "the snow flower."

## Not Exactly.

The musical evening was in full swing. A lovely little girl had just finished singing "My little home is Devonshire."

The hostess was surprised to see a man in a distant corner of the drawing-room visibly affected. Tears stood in his eyes, and he shook his head restlessly.

"Four M. Smith!" she said sympathetically. "I'm afraid that song recalled memories to you. Are you a Devonshire man?"

"No, I'm just a musician," was the mournful reply.

An opera to be produced in Fragras includes parts for foxes, beavers, and other animals, while there will be a ballet of spiders and butterflies.