

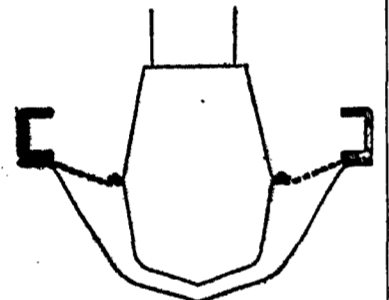
POPULAR MECHANICS

Mounting Largest Telescope.

The last annual report of the Mount Wilson observatory states that all the larger parts of the mounting for the 100 inch reflector, which will be much the largest telescope in the world, will probably be assembled at the Fore River shops, where they have been constructed, in time to permit shipment to Pasadena via the Panama canal early this year, says the Scientific American.

The Pigment Lithopone. Lithopone is produced by mixing solutions of zinc sulphate and barium sulphide. The resulting precipitate consists of zinc sulphide and barium sulphide. It is filtered off, heated to a high temperature and dropped into water, whereby it is thoroughly disintegrated. It is washed and filtered again and ground. All of these operations require a good deal of care and attention to produce a satisfactory pigment. Lithopone is very stable and is probably the whitest pigment known, being very widely used in high grade enamels. Exposed to light and dampness it darkens, but will often regain its whiteness again. It is therefore not suited to outside use by itself, but needs to have a large amount of some stable pigment combined with it.—Engineering Magazine.

Improved Automobile Sod Pan. The usual type of sod pan used in automobile construction is fastened to the frame side members of the car and placed under the engine crank case. A shown by the full line in the sketch says Popular Mechanics. This is not only a very heavy and expensive construction, but the pan often jars loose and must be removed from the chassis.



when being cleaned. The sod pan substituted is shown by the dotted lines and simply consists of metal sheets fastened on one side to the flange of the lower crank case and on the other to the frame side members of the chassis. This construction is cheap, very light and can easily be cleaned. The lower part of the crank case is exposed, but the dirt collected on it can be easily removed without disturbing the sod pan.

New Teltite Spark Plug. A novel type of spark plug for internal combustion engines has been invented by a British company, says the Scientific American. The plug has a tubular central electrode, which carries a block of quartz serving the purpose of a window through which one can observe the "color" of the explosion in the combustion chamber. A dark purple spark shows the mixture to be correct; a light blue or white explosion signifies that it is too weak, while a red color indicates too rich a mixture. By simply detaching the quartz "window" and substituting a milled nut the plug is transformed into a "priming" plug, through which gasoline can be injected directly into the combustion chamber.

Fish Oil in Paints. Menhaden, or fish oil, is used in special paints which are required to stand heat and light, as on smokestacks. Such a paint is considerably more expensive than a linseed oil paint, so it can be seen that menhaden oil is a valuable aid and not an adulterant as is often claimed. Proper treatment of the oil is very expensive, as the loss by evaporation is large and certain volatile products are formed which are very offensive to the workmen. Mixed with linseed oil it is used to some extent for making waterproof paints for various purposes and seems to give good satisfaction.—Engineering Magazine.

Inflation of Automobile Tires. It is no doubt a fact that more tires are ruined through under inflation than from all other causes combined, says Automobile Dealer. If one would keep his tires inflated to a pressure of eight or twenty pounds to every inch of cross section of the tire he would be quite free from blowouts. Even during the hot weather this pressure should be maintained, as it has been conclusively proved that the extra pressure caused by friction is so small it need not be considered. But care must be taken to see that the tubes are of the best quality, for in reality, the tube is the "heart" of the tire.

TERRA COTTA.

The Ancient Greeks Used It, as Did Also Michelangelo.

Terra cotta means literally baked earth. It is usually employed as though it meant only architectural ornaments made of baked clay. Yet Michelangelo made statues of it, the Japanese use it cleverly painted as "imitation bronze" for busts, the Persians had terra cotta dolls with movable legs fastened by wooden pegs. In the trade today pieces of clay work for architectural ornament over eight inches square are called terra cotta. Under that size they are called ornamental brick.

The famous Della Robbia ware of Italy was of terra cotta covered with opaque enamel and painted. England used it much. From the time of Henry VIII it was popular in large buildings, and since Queen Anne's day it has been used for ornamenting smaller houses.

CONDORS ROOST HIGH.

They Perch at an Altitude of 15,000 Feet Above the Sea.

There is a splendid specimen of the male condor in a glass case in the bird room of the Children's museum in Brooklyn. Though he stands three and one-half feet high, the spread of his wings is nine feet.

The condors live throughout the Andes, principally in Chile and Peru. Their favorite haunts are the level of perpetual snow," writes Miss Anna B. Gallup in the Museum News. "During a portion of the year condors roost in the trees on the lower mountain slopes, but in the breeding season (the summer months of November and December they retire to the most broken and terrific precipices, 10,000 to 15,000 feet above the sea level, where no other creature could dwell. There on a ledge or shelf of rock the female lays two white eggs nearly four inches in length. Sometimes she places a few sticks around them, perhaps to keep them from rolling out of place.

"After about seven weeks, in February or early in March, the young hatch, entirely covered with soft white down, that afterward turns to a brown color.

Trapping Baboons.

Hagenbeck in his book says that baboons are caught in traps made much like the traps of savages. Food is put into the traps, and once the baboons go inside a trapdoor closes behind them. Outside baboons make a great deal of noise and urge the prisoners to escape. When the trappers come the captured baboons are terror stricken and try to force their heads through the walls of the traps. One baboon was caught three times in the same trap, and several when turned loose got back into the same trap a second time. When the baboons are carried away all their comrades thereabout climb into trees and scream out to the prisoners, who answer in sad, mournful voices. On one occasion some big Arabian baboons were trapped, when 2,000 or 3,000 baboons hurled themselves upon the trappers, who had hard work to save themselves with firearms and clubs. As the trappers were forced back the victorious baboons tore up the trap and turned loose the captured baboons.

Raindrops.

Drops of rain vary in their size perhaps from a twenty-fifth to a quarter of an inch in diameter. In parting from the clouds they precipitate their descent till the increasing resistance opposed by the air becomes equal to their weight, when they continue to fall with uniform velocity. This velocity is therefore in a certain ratio to the diameter of the drops, hence thunder and other showers in which the drops are large pour down faster than a drizzling rain. A drop of the twenty-fifth part of an inch in falling through the air would when it had arrived at its uniform velocity acquire a celerity of only eleven and a half feet per second, while one of a quarter of an inch would have a velocity of thirty-three and a half feet.

Wily Tailor.

Louis XVIII, complimenting Tailor and one day upon his abilities, asked him how he had contrived first to get into the directory and finally Bonaparte. The wily diplomat replied, with charming simplicity "Really, sire, I have had nothing to do with this. There is something inexplicable about me which brings ill luck on the governments that neglect me."

Wanted, a Carver.

"You say your son belongs to a corn club?" "Yes, raised a fine crop last year." "That ain't the kind of corn expert I want to consult. I want to know what to do for the pesky things."—Pittsburgh Post.

Willing to Do That.

"So your grocer refuses to give you credit for another thing?" "Not exactly; he says he'll give me credit for any cash I pay on account."—Boston Transcript.

It is a good plan neither to borrow nor lend where trouble is concerned.—New York Times.

A Gentlemanly Burglar

By EUNICE BLAKE

Mrs. George Ingersoll was awakened in the night by a sound on the floor below. Starting up in bed, she exclaimed sharply: "What's that?" Her husband having been awakened listened for a few moments, then asked impatiently: "Well, what is it?" "Burglars!" "Nonsense!" "I'm certain of it."

There was another sound, which was this time heard by Mr. Ingersoll. He got out of bed, and, putting on his trousers, opened the door, went out into the hall and turned on the electric light, illuminating the figure of a man. The fellow put his finger to his lips at the same time throwing open his coat and displaying a policeman's badge. Stepping up to Ingersoll, he whispered: "Turn out that light quick."

Ingersoll turned the button. He did not need any explanation, for it was plain that there was something wrong on the premises and a cop was at work with a view to righting it. Nevertheless he asked in a whisper: "What's the matter?"

"We got wind today that Handy Andy, this wook who is going about getting into houses and leaving polite notes after taking the valuables, was intending to do you tonight and we've laid a trap for him."

"You'd better look out. I've read a lot in the papers about that fellow. He's mighty slippery; he may get you in a trap."

"Never fear for that. I've got the house surrounded."

"I don't hear anything below," said the owner of the premises after listening a few moments.

"True enough, he's laying low. It's too bad you turned on that light. He may have been frightened. But it makes no great difference, for as soon as he leaves the house he will step into the arms of one of my men. I would advise you to go back to your room, to bed for that matter. I'm Inspector Haynes. Perhaps you've heard of me. I much prefer to handle this matter without any interference."

"Oh, yes, I've heard of Inspector Haynes. Every one knows about him." By this time Inspector Haynes had gently pushed Ingersoll to the door through which he had come from his bedroom and, opening it, urged him in. As soon as this was accomplished he shut the door.

"What is it?" asked Mrs. Ingersoll nervously.

"Hush!" Ingersoll went to the bed, treading softly, and sat down on it; then, putting his lips near his wife's ear, he whispered:

"Handy Andy is in the house!" "Oh, heavens!"

"But this will be his last burglary. He won't be leaving any more notes intended to ladies' pin cushions. Who do you suppose I found in the hall?"

"Who?" "Inspector Haynes."

"Inspector Haynes! How came he in the house?"

"Got wind of Handy Andy's intended raid and has laid a trap for him."

"You don't mean it! I hope he'll escape that is, without any of the silver or my jewels."

"What do you mean?" "Why, judging by what has appeared in the papers this Handy Andy is perfectly fascinating. Some say that he's a real gentleman."

"A gentleman! How can a burglar be a gentleman?"

"Why, don't you know that some of the highwaymen in England a couple of hundred years ago were gentlemen? I've read a lot about them. They say Handy Andy writes beautiful poetry."

At that moment there was a sound below, which the imagination of Mr. Ingersoll interpreted to mean a scuffle.

"They're getting him," he said.

"Poor fellow," exclaimed Mrs. Ingersoll sympathetically.

There was a tread as of a man leaving the house and walking across the front porch, then the footsteps died away in the distance.

"My jewels are locked in the top bureau drawer in the guest room," said Mrs. Ingersoll. "I'm going to see if they're all right."

"I'll go with you," said her husband.

They went to the guest room and turned on a light. The drawer in question stood open, and the jewels were gone. On the lace cover of the dresser was a bit of paper on which was scrawled in pencil:

My Dear Friends: Pardon me for disturbing you during the night, it grieves me to have awakened any lady there may be on the premises. All is vanity. That the wearer of these jewels may be no longer vain I will take them away with me. So I am.

(Alias Inspector Haynes)

"Oh, my goodness gracious!" exclaimed Mrs. Ingersoll.

"Stung, by thunder," cried her husband.

Mr. Ingersoll went downstairs, where he found that what silver had been left on the sideboard for daily use had been taken and a polite note left regretting the necessity for its appropriation.

"If we must lose our valuables," said Mrs. Ingersoll, "it's nice to have them taken by so gentlemanly a burglar."

Handy Andy not long after this was captured by a neat stratagem which was perfected by the real Inspector Haynes and after serving a part of a long term died in prison.

A STORY THAT VARIES.

The Bride Who Got into a Chest and Was Found Dead There.

There is a story more or less diffused of a young bride on her wedding day playing the game of hide and seek and concealing herself in one of those ancient carved chests of large size. After she had got in the lid closed, and she found herself unable to raise it again, for it fastened with a spring, and she was shut in. Search was made for her in every quarter but the right one, and great perplexity and dismay were caused by her disappearance. It was not till years after, when chance led to the opening of the chest, that the body of the young bride was discovered and the mystery of her disappearance solved.

The story is found in so many places that it may be questioned whether it is true of any one of them. Rogers tells of a palace in Modena. The chest in which the poor bride was found is shown at Branshill, in Hampshire, the residence of Sir John Cope. Another similar chest, with precisely the same story attached to it, was long shown at Marwell Old Hall, between Winchester and Bishop's Waltham.

The folk tale of Catekin or Peau d'Anne represents the girl flying with her bridal dress from a marriage that is repugnant to her, and as this tale is found all over Europe it may have metamorphosed itself into that of the bride who got into a chest and died there.—Cornhill Magazine.

BLUNDERING REPORTERS.

Mistakes That Mangled the Speakers' Words and Feelings.

"Drunkness is folly" earnestly exclaimed Bishop Magee in the house of lords on a celebrated occasion. How horrified was the prelate to read in the papers next morning that he had given utterance to the very bacchanalian sentiment, "Drunkness is jolly!"

Lord Salisbury was a master phrasemaker, but one of his best points was spotted when a careless reporter turned his reference to "manacles and Mantoba" into the meaningless "manacles and men at the bar."

Sir William Harcourt was badly misquoted once. "Great is Diana of the Ephesians!" he exclaimed upon the platform, but one paper had it: "Great Dinah! What a farce is this!"

Lack of knowledge of familiar quotations is a prolific source of misreporting. For instance, a speaker once made use of the well known lines from Milton's "L'Allegro":

But come, thou goddess, fair and free, In heaven ye set Euphrosyne.

The brilliant reporter deputed to "take him down" was in despair. He could not make head or tail of this mysterious utterance. But, following the sound as far as possible, he seized his pen and produced the following gem:

But come, thou goddess, fair and free, In heaven she cropt and frose her knee. The speaker was taken down in more senses than one.—London Answers.

Golf in the Old Days.

Centuries back golf was a pastime of the royal family, though then usually played in Scotland. The Stuart family was very fond of the game, and the first English club was established at Blackheath in 1608 by James I. His eldest son, Henry, frequently played and on one occasion nearly struck by accident his tutor with a club, whereupon he coolly remarked, "Had I done so I had but paid my debts." Charles I. was playing golf when he received the news of the Irish rebellion. James, duke of York, afterward James II, was another ardent player. Golf is frequently mentioned in ancient Scottish records, and in the sixteenth century was prohibited because it interfered with the practice of archery. Strutt considered it the most ancient game at ball requiring a bat.—London Standard.

Puss and the Weather.

The cat is an excellent barometer. When you see a cat wetting its paw in its mouth and then rubbing it energetically over the upper part of its ear, you may feel pretty certain that rain is coming. This action is puss's method of relieving the uncomfortable feeling in its ears caused by the change in the atmospheric pressure which precedes a storm. If the unpleasant feeling in the ear were due to a foreign substance, then the cat would scratch the ear with its hind foot. But when puss scrubs its ear with its saliva moistened by its tongue rain is impending.

He Knew Mrs. Meek.

Mrs. Gotham I met Mr. Meek and his wife on the street today.

Mr. Gotham Oh, did you? Meek is clever, isn't he?

"Clever? Why, he never opened his mouth!"

"That's why he's clever."—Yonkers Statesman.

Economy.

Mrs. Homespun—What'll we contribute to the minister's donation party?

Farmer Taterspun—Waal, I dunno. Hanner Taters is way up, pork is way up, fowl is way up. We'll save money by giving him money.—St. Paul Dispatch.

Unsettled.

"I hear that they belong to the early settlers."

"Well, you wouldn't think so if you could see the bill collectors climbing their front steps."—Judge.

An Empty Dream.

Bobby—Say, sis, what's a "empty dream?" Dotty—One you have when you've been sent to bed without any supper.—Cleveland Leader.

How an Aeronaut Was Captured

By MARTHA V. MONROE

Lieutenant Ben Harbeson of the United States aeroplane corps was called to the telephone.

"Well?" "Mr. Harbeson?"

"Yes, I'm Harbeson."

"I'm Colonel Carrington. I've called you up to say that Jack is anxious to go up with you for a flight."

"What Jack?" "My Jack."

The colonel was laboring under a delusion that Harbeson had been at his quarters and was familiar with his family. The truth was that the lieutenant had never been at headquarters long enough to make their acquaintance. There was a pause in the dialogue, Carrington expecting that his subordinate would offer to take Jack up with him, the lieutenant shrinking from the responsibility. Of course, the former had no authority to command the latter to do such a thing; he must volunteer.

"How old is Jack?" asked Harbeson.

"Eighteen."

"Nervy?" "Very."

"Well, I'm going up this afternoon for a short trip. I don't mind taking a passenger."

"Thank you. What time?" "Three o'clock."

There were two goodbyes and two receivers were hung up. Harbeson went away muttering to himself. He disliked to take any one up with him that he did not know and as to whose nerve he was ignorant. Indeed, he would have positively refused the request had it not been made by his commanding officer. As it was he could not very well refuse. He only hoped the boy would not get frightened or dizzy and bring about an accident.

Shortly before 3 o'clock Harbeson superintended the rolling of his machine from the sheds on to the level ground from which he proposed to make his start and was examining its parts to see if everything was secure when he saw a girl open the gate and come tripping over the turf toward him. She came up with a smile and saluted Harbeson in a very friendly manner.

"It's awfully good of you to take me up with you, Mr. Harbeson," she said.

"Take you up with me?" replied the lieutenant wonderingly.

"Why, yes," rejoined the girl, somewhat taken aback at his asking the question and his manner. "Didn't papa arrange it with you?"

"Colonel Carrington telephoned me that his son Jack wished to go up."

"I'm Jack," rejoined the girl, laughing. "My name's Jacquelin. Everybody calls me Jack."

Here was a dilemma. If he took the girl up with him and she should become panic stricken she might cling to him like a drowning person and be the cause of the death of both of them. If he sent her away he might offend his commander. He stood irresolute for a moment, then gave in to the girl, who was dainty and pretty as a shepherdess on the mimic stage.

After a few more minutes of search for weak parts in his machine Harbeson mounted to his seat, the girl climbed to the empty one beside him, there was a burring and a whirring, and the machine lifted on an inclined plane. Miss Carrington from the first showed no more sign of appreciation of danger than if she had been sitting in an auto.

"Isn't it nice?" Harbeson was not yet an expert at driving an aeroplane and understood perfectly that any mismanagement on his part would cause a tragedy. He was not displeased that his companion was insensible to the danger so long as nothing unusual occurred. She chattered like a magpie, calling his attention to this and to that, just as though the sensation was as new to him as to her.

Presently there came a gust of wind that turned the aeroplane on its beam. Harbeson paled, while Jack caught her breath. But the moment the machine righted itself she clapped her hands delightedly, exclaiming:

"Wasn't that just too lovely for anything! Do it again."

Harbeson, whose heart was beating like a settled drum, made no reply that could be heard, though he remarked to himself that if ever there was a fool it was the girl beside him. Nevertheless, despite the shock he had received he almost smiled and could not help thinking that Jack was a very delightful fool.

The weather was a trifle gusty when they started, and in the upper air they found it more so. After having been nearly capsized Harbeson started to return. He was caught in another gust so severe that Miss Jack was this time suddenly made aware that she was likely to be spilled from a thousand feet up in the air.

Both her fair arms went around the lieutenant's neck.

Fortunately the machine righted itself. Miss Carrington suddenly became aware that she was embracing a man she had not seen an hour before. She released him and covered her face with her hands.

Harbeson is now a captain and one of the most experienced aero men in the United States service. He says that he never intended to marry and probably never would have married had he not been nearly strangled a thousand feet up in the air by a girl.

His wife's reply to the allegation is: "No such thing."

THE DARDANELLES.

A Strait Famous in Mythology as Well as in History.

The Dardanelles and the Hellespont are names for the same thing. At its narrowest place the strait is less than a mile wide. On one side is Asia, and on the other is Europe.

The strait is famous in mythology. The pre-Christian incursions of barbarians into Europe often were halted there.

Xerxes and Alexander ferried across. One determined to destroy the civilization of Greece and the other to diffuse Grecian culture over the whole world.

Crusaders went back and forth over the strait. The Roman empire of the east crumbled. It even after the Mohammedans had established themselves at Adrianople.

By treaty and by consent and by her situation Turkey was given control of this strait.

Strange to say, in modern times the first ship of war that ever passed through saw the flag of America. Balbridge ran by the guns of the forts and unfurled the stars and stripes in front of Constantinople, and in that city he and the American crew were elaborately entertained.

For many centuries Russia has looked with eager eyes for the control of the shores along this strait—Memphis Commercial Appeal.

HER ABSENT BOY.

When a Mother's Lot is One of Wistful, Weary Waiting.

It's mighty hard to be a mother of sons in Homburg. I worked in the post-office for a year once—handed out mail—and I got to know just exactly what most of the mothers in town wanted. I could please them with a new magazine and mystify them with a circular or a business letter.

But if I wanted to light them up until they took the shadows out of the corners as they went out I would give them a letter from a son way off somewhere making good. The best of them didn't write any too often. Once a week is pretty regular, I suppose, from the other end, but you should see the mother begin to come in hungry again the second day after her letter came.

And when a boy came home successful and prosperous and his proud mother towed him down Main street it used to go to my heart to see the wistful looks of the woman friends.

There is hardly a family in Homburg of the right age which hasn't a grown-up son off at war somewhere—fighting failure. It's grand when they win, but I hate to think of some boys who haven't come back.—George Fitch in American Magazine.

Just Like Eve's Apple.

A fruit supposed to bear the mark of Eve's teeth is one of the many botanical curiosities of Ceylon. The tree on which it grows is known by the significant name of "the forbidden fruit," or "Eve's apple tree." The blossom has a very pleasant scent, but the really remarkable feature of the tree, the one to which it owes its name, is the fruit.

It is beautiful and hangs from the tree in a peculiar manner. Orange on the outside and deep crimson within, each fruit has the appearance of having had a piece bitten out of it. This fact, together with its poisonous quality, led the Mohammedans to represent it as the forbidden fruit of the garden of Eden and to warn men against its noxious properties. The mark upon the fruit is attributed to Eve.

The Elgin Marbles.

The adventures of the Elgin marbles, now in the British museum, began in 1803, when they were wrecked at Cerigo on their way from Greece to England. It took the owners three years and a vast sum of money to fish up the Parthenon relics. It is believed that Turkish vandals who would probably have made an end of even these had the earl not rescued them in time. The house of commons voted £36,000 for their purchase, so that the enterprising peer lost heavily in cash and suffered from a public indignation against his alleged "randallism, rapacity and dishonesty," as well as from Byron's "Curse of Minerva."—London Chronicle.

Grip of the Bulldog.

It is a commonly accepted belief that nothing short of being pried loose will induce a bulldog to give up his grip on another dog or on an intruder, but this is a mistake. A little household ammonia poured on him as near his nose as circumstances will allow will make him let go immediately. The fumes of ammonia are so overpowering that a dog cannot possibly maintain his grip and his breath at the same time.

Her Business.

"It's no use trying to steal a march on that pretty girl at the glove counter."

"Why not?" "She has a way of making every one show one's hand."—Atlanta Constitution.

Enger For Revenge.

Stage Manager—You are to hit the hero with this club in the last act. Villain—I don't think I can wait that long. He called me a ham.—Rocky Mountain News.

The Difficulty.

"Tom out of work again? Why, I thought he had a steady job?" "Oh, the job was steady. The trouble is Tom wasn't."—Boston Transcript.

The first bond of society is marriage; the next our children.—Cicero.