Tom Tit's Tricks

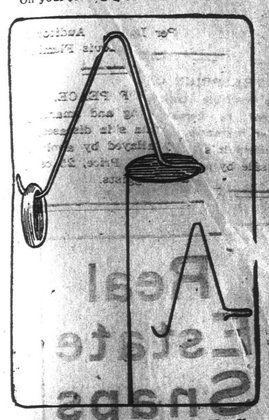
I HAVE a really curious and surprising experiment to tell you about today, boys and girls.

Take a piece of thin wire or a hairpin and bend it into the shape indicated on the right of this picture.

In the sharp bend you have given the one end of the wire firmly fix a coin, and on the hook at the other hang a ring.

Now, take a darning needle, stick the head of it into the smaller end of a well-formed cork, set the cork on a flat surface and then rest the coin on top of the needle.

On your letting go, it would, of course,



Balanced on the Point of a Needle

seem that the wire, ring and coin would immediately fall over. But that is where the surprise comes in!

Instead of falling over, the weight of the whole apparatus adjusts itself on the needle point and finds a position of perfect equilibrium, and there it rests for an indefinite time.

Suppose you then give a gentle touch that sets it into motion. Even then it will not fall over, but will apparently swing around on the needle point as a pivot, and you can keep it moving as long as you please.

Try this experiment. It will interest your friends as much as yourself.

Now I shall tell you of a perfectly safe wager you can make if you wish, or you can exhibit this as a trick.

Make a proposition that you will fill a glass with water and place it on a table in such a manner that your friend cannot move it to another place without spilling the whole of its contents.

The way to do it is as follows: Fill a glass with water, and having laid over it a piece of paper which covers the water and the edges of the glass, place the palm of your hand on the paper and, taking up the glass with the other hand, turn it upside down very quickly, and place it on a perfectly flat part of the table.

Then gently, very gently, withdraw the paper. The water in the glass will remain in it, since the air cannot enter, and your friend cannot move it any way without allowing the air to enter, and consequently spilling the water.

You see, do you not, how safely you can make a wager on the success of this performance?

Upside Down at the Bottom of the Sea

A CAPITAL diving story is told in an English school paper by a man signing himself "An Amateur Diver."

I believe (says he) by some remarkable process of nature every third male person is born a diver. Whitstable is the place where most divers grow, and where I caught the temptation to go a-diving myself.

I mentioned my desire to one or two old divers, but met with leers and suspicion. But Whitstable never produced a diver that could put me off. I bought a diving dress, and got permission to go down and amuse myself on a sunken coasting vessel lying off shore a little distance.

It was a noble diving suit, and the new india rubber squeaked musically as I moved, and smelt very refreshing. There was a shield-shaped plate, rather like a label on a decanter, hanging on my chest, and a noble metal collar—about thirty-two the size would have been, on the usual scale.

I had also a very fetching red night-cap, while my helmet was a terror to all beholders. I don't mind confessing to a certain amount of discomfort while they were buttoning me up in this dress—partly due to a vivid imagination. The helmet made me think of the people in the story who put hot pots on the heads of strangers, and I seemed stifling at once.

All Ready for the Descent.

There wasn't much comfort to be got out of the leaden shoes—try a pair for yourself and see—but when all was ready I made a shift to get overboard and to crawl slowly down the ladder.

It was not a great deal of the outer world that I could see through my windows, and I hung on to that ladder with something of a desperate clutch. When at last the water stretched away level around my windows, then, I confess, I hesitated for a moment. But I made the next step with a certain involuntary blink, and I was under water.

All the heaviness—or most of it—had gone out of my feet, and all my movements partook of a curiously easy, yet slowish character after all. At the top of my helmet the air escape valve bubbled merrily, and I tried to think of myself as a plumed knight striding among the fishes. You do think of the silliest things on certain cheerful occasions.

It was not as long as it seemed before I was on the wreck, and down below in the nearest hold. Regular professionals had already been at work, and access to different parts of the ship had been made easy.

Now, the hold in this hold were an immense number of barrels, stood on end and packed tightly together—barrels of oil, to judge from externals.

I tried to move one, but plainly they were all jammed tightly together, and not one would budge.

I took the light axe, with which I had provided myself, using it alternately as wedge and lever, and at last felt the barrel move. I had certainly loosened it, and I pulled up the axe with the intention of trying to lift the barrel, when suddenly I was impelled in an awful convulsion, as of many earthquakes in a free fight!

The world was a mob of bouncing oil barrels, which hit me everywhere as I bounded in intricate somersaults, and finally found myself staggering at the bottom of the hold, and staving at the roof, whereunto all the barrels were sticking like baloons, absolutely blocking up the hatchway above me.

What was this? Some demoniac practical joke of fiends inhabiting this awful green sea about me? Were

A Mob of Bouncing Barrels

they grinning atoms from the corners of the hold? Or, had some vast revolution in the ways of Nature taken place in a second, and the law of gravity been reversed? It was not at all warm down there, but I perspired violently.

Then a motion flashed upon me. Those barrels must have been empty. Jammed together, they stayed below, of course, but once the jam was loosened, they would fly at once toward the surface.

Gloomy Thoughts of a Fool.

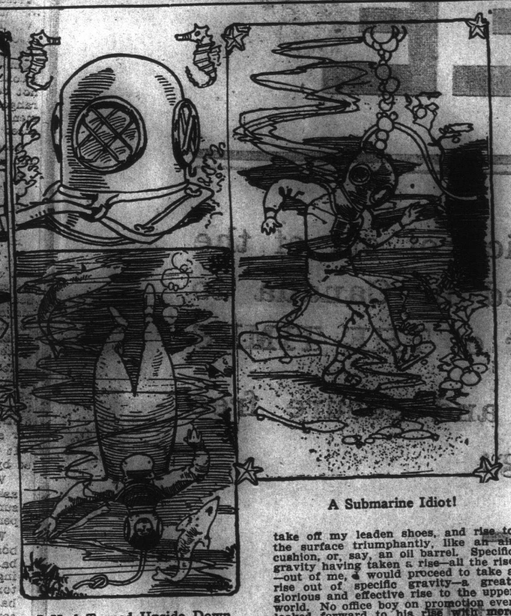
Then I thought more. I had been an ass. Of course, those barrels would do as they had done, even were they full of oil. Oil floats on water, as everybody should know. They might be either full or empty, it didn't matter a bit. I had forgotten that I was moving in a different element from the air I was used to, where barrels of oil did not rise up and fly into space without warning.

Obviously, I had made a fool of myself; but I had some comfort in the reflection that there was nobody about to see it. Then it came upon me suddenly that I would rather have some one there after all. For I was helpless. Those horrible barrels were having another jam in the hatchway now, and my retreat was cut off entirely.

Here I was, like a rat in a cage, boxed in on every side. My communication cord and my air pipe led up between the barrels to outer safety; but what of that? Why did I ever make a submarine idiot of myself, and go rummaging about, where I had no business, at the end of a rubber gas pipe? If I could have dated myself back an hour at that moment, I believe I should have changed my mind about going in for this amusement.

I made an effort, pulled myself together, and determined on heroic measures. My axe lay near, and, with a little groping, I found it. I would hew my way out of this difficulty through the side of the vessel. I turned on the inoffensive timbers on one side, and hacked away viciously—with, I really fancy, a certain touch of that wild, western, unholy joy that any one feels who is smashing somebody's else property with no prospect of having to pay for it. Every boy who cracks a window near an empty house will understand the feeling I mean—especially if the empty house has a large conservatory.

The timbers were certainly stout. The work was a bit curious to the senses—the axe feeling to work with a dead more dash and so than the arm that directed it. At any rate, the exercise was pretty hard. Any millionaire in want of an excellent, healthy and expensive exercise should try chopping his way through the sides of ships—it will do him a world of good, and will



A Submarine Idiot!

I Had Turned Upside Down

be as expensive as anybody could possibly desire. After a while I found that I had well started a plank, and, once through, chopping away round the hole was not so difficult. Still, when I had made a hole big enough to get through, I did not feel by any means as fresh as I had when first that horrible copper pot was screwed down over my head.

I squeezed through the hole and at the first step I had ever made on the sea bottom, I came a complicated cropper over my communication cord, I got up, but as I stepped clear of the cord, a frightful conviction seized my mind that I was a bigger fool than I had ever given myself credit for being.

What in the world was the good of getting out through the side of the vessel, when that communication cord—my only means of signaling—and that airpipe—my only means of submarine life—led up through the boat itself and among those horrid oil barrels? Awful! Awful! I sat down helplessly on a broken rock and stared blankly through my windows. To weep would have been more bravado, with so much salt water already about me.

IMPOSSIBLE TO SIGNAL

I tried to signal with the communication cord, but it was caught somewhere in that congregation of oil barrels. It seemed to me all up, except myself, who was all down, with no prospect of ever rising in the world again. Shadowy forms came and went in the water about me, and I speculated desperately in how long or how short a time these sea creatures would be having a dinner party, with me as the chief attraction. I wondered, casually, whether the india rubber would agree with them, and hoped that it would not. Then I wondered what they would take for the indigestion, and I thought they would probably take each other—it's their way, I believe.

I was wandering on in this way, when an inspiration seized me—a great inspiration. I should have called out "Eureka!" as did the venerable discoverer of that principle of specific gravity that had lately (literally) taken a rise out of me, if I had thought of it, but I didn't, which was fortunate, because it was rather a chestnut after all.

This was my notion—a desperate one, but still one with hope in it. I would shut off the air-escape valve on my helmet, so that the air being pumped in would inflate my india rubber dress like a bladder. Then I could cut my air-pipe and communication cord, stuffing the pipe and tying it as best I could, take off my leaden shoes, and rise to the surface triumphantly, like an air cushion, or, say, an oil barrel. Specific gravity having taken a rise—all the rise—out of me, a would proceed to take a rise out of specific gravity—a great, glorious and effective rise to the upper world. No office boy on promotion ever looked forward to his rise with more hope than I to mine. It was a desperate expedient certainly, but what else could I do?

I took off one leaden shoe and loosened the other, ready to kick away, I shut off the escape valve. I cut the cord with my axe on the rock I had been sitting on, and then, when the air had blown out my dress to most compliant proportions, I took the decisive stroke. I chopped through the air-pipe. I stuffed it as well as possible, and tied it in some sort of a knot—it was very stiff—in a great hurry, and then I kicked off the leaden shoe.

Everything Upside Down.

Never, never, never shall I forget the result of my forlorn dodge. I kicked off the shoe, as I have said, and, in an instant, the whole universe of waters turned upside down and swirled away beyond my head. In sober fact I had turned upside down—as I might have known I should.

Of course, the moment my leaden shoes went, down came my copper head-pot, being my heaviest part, and up went my feet. I had a pretty quick rise, certainly, but I prefer not to recall my feelings during the rush. I can quite understand now why a rise in the world makes some people giddy. All that I had before felt of amazement and horror, I now felt multiplied by fifty and squeezed into about two seconds, so that they felt like ten hours. Up through that awful water and those moving shadows I went, feeling that I was in reality held still like a man in a nightmare.

When at last I stopped, I felt that it was but a matter of moments, and the air would leak away through that cut pipe, and I should go down again, still head under, for the last time, to die in that grisly combination of mackintosh and copper kettle; also I felt choking, stifling, when—something had me roughly by the ankle, and I was dragged, a wretched rag of misplaced ambition, into a boat. The appearance of my legs sticking out above water caused intense amusement among the boat's crew, a circumstance which probably ought to have gratified me, although it didn't.

GOT ENOUGH OF DIVING

I have little more to add, except that I shudder to this day whenever I see an acrobat standing on his head, because it is so reminiful. But, if anybody is thinking of going in for diving, by way of pleasant enjoyment, I shall be delighted to treat with him for the sale and purchase of a most desirable diving dress in unsoiled condition, cut in the most fashionable style, with a fine hating copper helmet and commodious collar, and a neat label for the chest. The shoes will not be included in the bargain, having been inadvertently left in a damp place.

How Paper Was Invented

JUST think if some one had not invented paper! There could be no such thing as Polly Evans' Story Paper for Boys and Girls!

Hundreds of years ago there was no paper! We couldn't get on without it in these days, could we? We are always wanting it—to write upon, to wrap things up in; and last, but not least, to print our books and newspapers on.

It was a clever little Japanese gentleman who first invented it. This little man was a merchant, and as he had ever so many parcels to send out from his shop every week, he found the silk in which he always wrapped them a rather expensive item.

He was always thinking and puzzling his brains to try and invent something that would be cheaper.

One day while he was walking in his garden he came across a wasps' nest, and he noticed how wonderfully it was made—how the clever wasps had used some kind of wood, softened it into a thin paste with their jaws, and, after carefully shaping it, had left it to dry.

"If wasps can do a thing like this," thought the little gentleman to himself, "why can't I? If I could get some kind of wood, form it into a pulp by means of river water, wouldn't the result be something like the fabric of the wasps' nest. I'll try, anyway, and see what I can do. It would save myself and other people quite a lot of money if my experiment succeeded."

The little Japanese gentleman tried, and succeeded, too, in putting into practice the lesson that the wasps had taught him.

So, that's the way paper was invented—years and years ago out in far Japan.

A Daring Feat

YOU have heard of intrepid steeple-climbers, of course. Never a year passes that the newspapers do not publish a tale about some steeple-climber or other having made a particularly dangerous ascent in safety.

But, have you ever heard of anyone attempting the daring feat pictured here—standing ON ONE'S HEAD on top of a steeple?

This was done by an Englishman whose business is laying down slate roofs. He has become so accustomed to dizzy heights that he thinks nothing of such performances as this.

Standing on his head on the top of a steeple; a daring slater's feat, rivaling those of the professional gymnast.

Careless Molly and Careful Sue

HERE is Careless Molly,
And there is Careful Sue.

Look at the two
Girls' hair,
Look at the clothes
They wear—
How nice and kempt
Miss Sue appears,
But what a fright
From toes to ears
The other is; she says
She thinks it's folly
To be so prim and neat
She can't be jolly
Like her brother Jim;
But he'd be proud,
I think, and say,
"My sister," out real loud,
Not of Careless Molly,
But of dear Miss Careful Sue.

CARELESS MOLLY

CAREFUL SUE

Goose Puzzle.

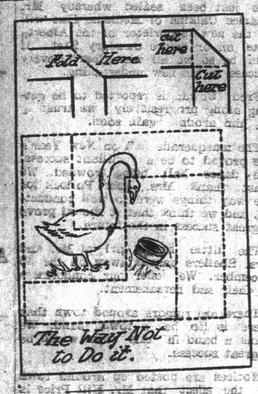
Here is a very interesting puzzle. A picture on the cross-shaped section of cardboard, when put together, shows a goose approaching a vessel of water. The problem is: HOW CAN YOU MAKE THE PICTURE TOGETHER PERFECTLY, MAKING ONLY TWO CUTS WITH YOUR SCISSORS AND WITHOUT THROWING ASIDE A SINGLE BIT OF THE CARDBOARD?

At first it seems easy enough. Your first idea would be to fold the cross, then make two cuts and put the pieces together as shown in the second picture.

But, doing it this way, you have to throw aside the square piece in the centre of the cross. That will not do. The rule requires that not one bit of the cardboard shall be thrown aside.

What is the correct solution of the puzzle?

See if you can discover it



Cracker Contest

WE BOUGHT a quart of those elephant crackers and emptied them into a dish and placed the dish on a table at one end of the room. Then while mamma held her watch one of us took a table knife and tried to see how many crackers we could manage to get on the knife without any help from our other hand, and then to see if we could carry the crackers on the knife all the way across the room and put them into another dish, and all within a minute by the watch. Each one was given one minute, and the one who succeeded in getting the most crackers into the dish across the room won the prize.

Bow and Arrow Stunt

TAKE a tub of water and set afloat in it a number of red, yellow and green apples. Let the guests take turns shooting with a bow and arrow at the apples. Whoever fires an arrow into a red apple will have good health; a yellow apple means plenty of money; a green apple means good luck.

Candles for Months

PLACE twelve lighted candles on the floor at intervals of two or three feet and name them for the twelve months.

Let each person in turn jump over the candles, one at a time. If any candle goes out that will be the month the person's wedding will occur.

Do You Know This Game?

IT IS called a game of Milking Pails, and is very jolly.

A number of children form a line, holding each others' hands, and act as the sons and daughters. Another child or a grown person acts as the mother, standing in front of the line, while it sings to her, swinging hands.

The words are as follows:

Children—
Mary's gone a-milking,
Mother, mother,
Mary's gone a-milking,
Gentle, sweet mother o' mine.

Mother—
Take your pails and go after her,
Children, children;
Take your pails and go after her,
Gentle, sweet children o' mine.

Then the following verses, with the refrain:

Children—Buy me a new pair of milking pails,
Mother, mother, etc.
Mother—Where's the money to come from?
Children, children, etc.
Children—Sell my father's featherbed, etc.
Mother—What's your father to sleep on? etc.
Children—Put him in the trundle bed, etc.
Mother—What are the children to sleep on? etc.
Children—Put them in the pig-sty, etc.
Mother—What are the pigs to lie in? etc.
Children—Put them in the washing tubs, etc.
Mother—What am I to wash in? etc.
Children—Wash in your thimble, etc.
Mother—Thimble won't hold your father's shirt, etc.
Children—Wash in the river, etc.
Mother—Suppose the clothes should blow away? etc.
Children—Set a man to watch them, etc.
Mother—Suppose the man should go to sleep? etc.
Children—Take a boat and go after him, etc.
Mother—Suppose the boat should be upset? etc.
Children—Then that would be an end of you, etc.

When the children have sung the last verse the mother swoops down upon them to seize and beat whom she can catch.

The first one caught must act as mother in the next game.

The children should advance and retire in rhythm with the music as they sing their verses, and the mother should sway her body rhythmically as she

Amusement.

"I'd Rather be Slapped Nor Notic'"

Hospital Talk

A SICK little girl who had spent many weeks in a hospital and unconsciously picked up many phrases commonly used by the nurses and doctors was telling her doctor about the death of her little brother which had occurred just before her own illness befell her.

"It was all along of eatin' too much ice cream and ginger nuts," she narrated, with unction to the doctor. Then she smiled beautifully. "It was a beautiful death, doctor," she wound up piously.

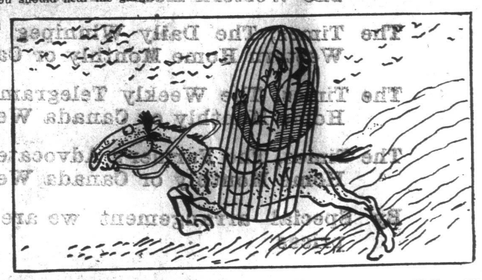
His Praying Was Nothing!

A little boy was on his knees recently at night, and auntie, staying in the house, was present.

"It is a pleasure," she said to him afterward, "to hear you saying your prayers so well, you speak earnestly and seriously, and mean what you say and care about it."

"Ah!" he answered, "ah! but, auntie, you should hear me gargle!"

I—Henrico is no longer afraid to ride the bucking bronco his brother brought him from Texas—



II—For he has invented a safety cage which protects him beautifully while Snorting Bill is rearing and kicking.

True Story About Hugh

HUGH'S father was a switchman. He went to work early in the morning and stayed all day at the railway tracks. Hugh took him his lunch at noon.

There was a long bridge over the river which ran near the place where Hugh's father worked. At first Hugh, who is only 10 years old, was afraid to walk across the ties, and see the river running beneath, but after a while he thought it fun to see how quickly he could cross the bridge.

One day he has taken his father's lunch, and, after his father had eaten, Hugh started back home, swinging the big tin dinner pail.

What was that smoke that Hugh saw a little way ahead? It seemed to come from the railway bridge.

"Fire, father," cried Hugh, "the bridge is on fire."

"Run, Hugh," answered his father. "Get some water from the river! I cannot leave the switch to help you. Be as quick as you can."

Hugh slid down the railway embankment to the river. In a moment the cover was off and Hugh had a brimming pailful of water.

He climbed up the bank, holding the pail as carefully as he could. But his shoes sank into the gravel, and the water slopped over the top of the pail. But Hugh reached the top of the bank, stepped quickly upon the bridge and poured the water upon the blaze. Then he ran down to the river to refill his pail.

He could hear the flames snap and crackle above him and he wondered how many times he must go back and forth before he could put them out. The pail had sometimes seemed large to Hugh when he brought his father's dinner, but now as he looked at the leaping flames it seemed very small. Again he clambered up the bank, poured as much water as he could carry on the flames and went back for more.

The sweat stood out on his forehead, his back ached and his shoes were filled with gravel, but he did not stop. He could see his father standing near the switch watching him.

"Take another pailful, Hugh," his father call f.om far down the track. "you will have the fire put out soon."

Hugh could not count the times that he dipped his pail in the running water and climbed the steep bank. But with each trip the red and yellow flames grew smaller and the black charred spot on the bridge grew larger.

At last the fire disappeared and the smoke drifted away. With his empty pail Hugh trudged back to his father at the switch.

"Well done, Hugh," said his father, "you have saved the bridge from burning. I am proud of you. Go home, now, and rest."

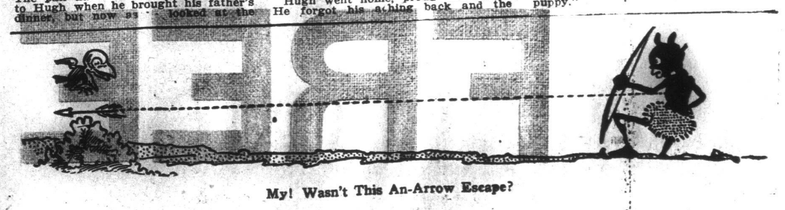
Hugh went home, proud and happy. He forgot his aching back and the gravel in his shoes.

Now when he walks the ties over the river he feels as if it was his bridge he is on, because he saved it from burning.—The Little Chronicle.

An Owl Stole a Puppy

A CONNECTICUT paper, mentioning the purchase of a fine Gordon puppy by a gentleman named Haas, added: "On Thursday he went away to work, leaving the puppy shut up in the barn. He did not get back till 5 o'clock in the evening, and while he was putting out his horses the puppy ran out in the barnyard.

"In a few minutes Haas heard a yelping piteously. Thinking that one of the colts had either kicked it or stepped on it, he ran out just in time to see a huge horned owl flying off with the puppy in his claws. He ran after him, hallooing, but the owl swooped off through an orchard, and this was the last he has since seen of his Gordon puppy."



My! Wasn't This An-Arrow Escape?