

Soap Bubbles Used to Measure Stresses on Parts of Airplanes

Milwaukee.—Engineers are blowing bubbles in their studies to test the strength of airplane construction. G.W. Traylor, a research engineer, speaking before the faculty conference of the University of Wisconsin's engineering college here recently, explained how the use of this soap film over specially designed holes enabled scientists to compute stresses in airplane parts.

One of the principal difficulties in using the soap film method for investigating torsional stresses, as described by Mr. Traylor, was that the ordinary soap bubble is a fragile thing totally unable to stand the wear and tear of a hard day's work. Persistent effort is called for in the production of a soap film that will last for a number of continuous measurements.

A hole of the size and shape of the cross-section of the airplane part which is to be studied is cut in a

metal plate. Over this hole is swept a film of soap by sweep of the type of brew. Then the film is blown up slightly by a current of pure air. Ordinary human breath would destroy the film within too short a period of time.

The next step is to measure the slopes and contours of the bubble. This is a delicate and tedious process similar to the work which is done by a land surveyor in gathering field data and mapping topography.

When the step is completed the investigator has data from which he can compute the stresses that will be produced in the airplane part by the loads and twisting it will suffer in service. The soap film is not loaded or twisted; it so happens that there is a curious analogy between the contours of the bubble and the stresses in the airplane part whose cross-section it represents.

Typhoid Could Be Stamped Right Out

No One Need Suffer from Typhoid Fever

This is one of a series of weekly health articles sponsored by the Canadian Social Hygiene Council.

One of the saddest, stupidest, and most unnecessary wastages of human life to be found in all of Canada is the annual toll taken by typhoid fever. So simple that you picked up your newspaper the day, and read that a human being was at work in the community who had downed innocent people in the streets. Suppose that every day this year a person had killed three people, that would be a bad thing. And eventually, still he had killed over a thousand people.

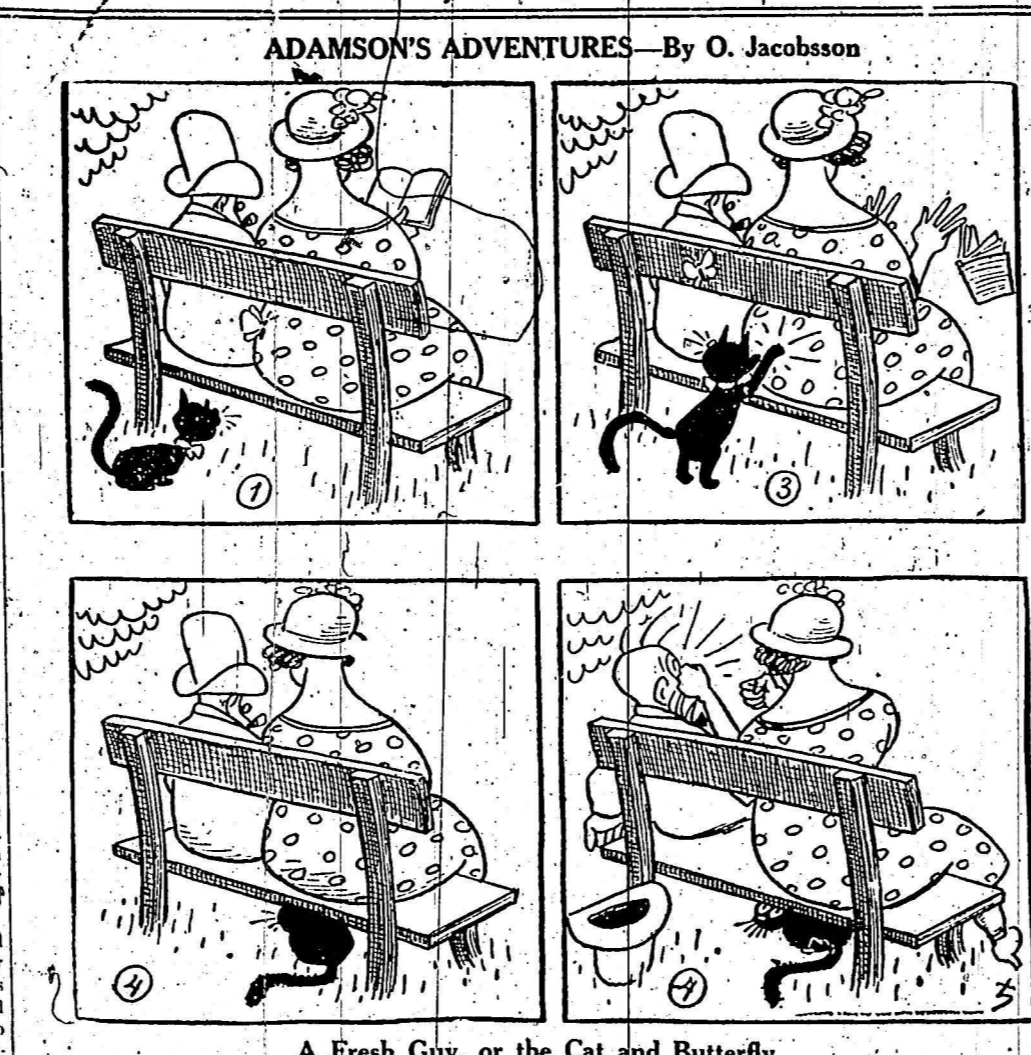
Wouldn't the whole of Canada be in a fever of excitement? Wouldn't the whole country spend millions of dollars to get rid of the typhoid fever? Suppose that you picked up your newspaper the day, and read that a human being was at work in the community who had downed innocent people in the streets. Suppose that every day this year a person had killed three people, that would be a bad thing. And eventually, still he had killed over a thousand people.

Spain Up-to-Date Has Bootleggers

The action that the world is a pretty small place after all evidently holds true not only in regard to distance but to some customs as well. A Madrid newspaper ran a news item recently which impressed the fact that America is not the only home of bootleggers.

The item reads: "Jorge Kolreger, aged 29 years, went aboard a French ship lying in the harbor at Barcelona and was offered the opportunity to purchase contraband tobacco. He refused and alleges that in the midst of the ensuing discussion he was overpowered and bound. The police, went aboard the ship, where they were informed that no such incident had occurred. Search revealed no contraband."

As the news item suggests, strips coming from foreign parts, probably without knowledge of their masters, even carry English or American cigarettes as the case may be. Smugglers obtained in this manner are cheaper than those bought through the monopoly. One man boasts that his postman keeps him supplied with tobacco smuggled in this manner, and business houses, sometimes, have their workers canvassed by vendors. This indicates that people in other lands are just as willing buyers of contraband and that enterprising bootleggers and officials are just as numerous in one part of the world as another. Which is not to say that the business is done on a wholesale basis, as in the case of liquor in the United States, but nothing is done that way here.



A Fresh Guy, or the Cat and Butterfly.

The Cry of the Little Brothers

The Good St. Francis of Assisi called all animals his little brothers and sisters.

We are the little brothers. Homeless in cold and heat, Four-footed little beggars, Raining the city streets.

Snatching a bone from the gutter, Creeping thru alleys dreary, Stoned and sworn at and beaten, Our hearts consumed with fear.

You pride yourselves on the beauty Of your libraries, schools and halls; Yet we are dying by thousands In covert you never see.

You boast of your mental progress, Of your libraries, schools and halls; But we who are dumb decry you, As we creep beneath your walls.

You sit in your tinsel parlors, And weep over a milk can; Our woes are the woes of the voiceless.

Our griefs are unheeded in song. You say that the same God made us. When before His throne you come, Shall you clear yourself in His presence On the plea that He made us dumb?

Are your hearts too hard to listen To a starving kitten's cries? Or too gay for the patient pleading In a dog's beseeching eyes.

Behold us, your little brothers, Starving, beaten, oppressed, Stretch out a hand to help us, That we may have food and rest.

To you have we remained neglected, Too long have we likened with you. The mercy you hope and pray for, You can grant us now and here. —Eldred Dreyer Barry.

Girls Grab Your Measuring Tapes

Washington.—A woman's waist, that mysterious line so fascinating to poets and lovers since time began, has at last been definitely designated by Uncle Sam himself.

Acting as referee for a group of pattern makers, the Bureau of Standards of the United States Department of Commerce has decided that a woman's waist line is just seven inches above her hips.

Here is the new set of proper measurements which will be put out by the pattern makers (all measurements in inches):

Women: Bust: 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100.

Waist: 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100.

Hip: 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101.

Misses: Bust: 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100.

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Hip: 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101.

Pygmies Still Live In Darkest Africa

Paris.—There still are plenty of pygmies in the interior of Africa, Mrs. Carl Kieley, who is the noted American explorer, reported upon her return here recently after a year's exploration among the little peoples with camera and typewriter.

Mrs. Kieley said that the legend of the pygmies disappearing was not true. They still live in the interior of Africa, but the art of making themselves all but invisible.

She said she found many villages of the little people and the size of normal 10-year-old children. They live in tiny huts made of mud and which they crush. They move away at the slightest alarm and constantly are shifting from one food source to another.

Certainly a whip is not evidence, but the people laugh at the animal's fear. If caught, they are taken to the coast and sold as slaves. They are going through the streets on the "suspension" of some net fixed in their hair. They are never caught a dog's tail. They have the habit of hanging when a dog barks and never a dog barks unless it is a dog's tail.

The explorer said that the pygmies are much darker than the "niggers." Due to wearing less clothes, a woman's mean temperature next to her skin is 87.2 degrees Fahrenheit, while a man's is 86.6 degrees.

The Rev. Father V. P. Barnicle, missionary, returning from Nigeria, defended the lack of clothes by the natives. "It is not immoral for them to be nude," he said.

Red and Yellow Lighted Rooms Repellant to Common Housefly

That common house flies have an instinctive aversion to red or yellow light, which was recently discovered by experts at St. Helens, England, is attracting considerable attention among entomologists in Great Britain.

Experimental rooms with windows made of red, white, yellow, blue and other colored glasses were set up by the experimenters, who, in collaboration with Professor R. N. Collard, of Liverpool University, were carrying on this work. It was found that flies gathered much more numerous in the ordinary white light admitted by the white windows than in light of any other color. Blue and green glass made only a small difference and the insects invaded rooms of this colored

Science Explodes The Whip Hand

The family, like that every living cell in the human body wears out and is replaced by another every seven years has no scientific support. In a series of calculations, reported in the Quarterly Review of Biology, Dr. Edward F. Adolph of the University of Rochester demonstrates that some cells in the body may last for life. Various elements in the body are subject to a more or less constant change, but the rate of change varies with the different elements. For example, water is changed on an average of every three weeks; salt, every 22 days; potassium, an element believed to act as a regulator of the activity of many kinds of living cells, on an average is turned over about every 72 days. Magnesium, which is believed to act in the regulation of vital activities, is changed every 162 days; nitrogen, a fundamental element in the muscles, is turned over on an average of 290 days; iron, an essential of the blood, in about 300 days; and phosphorus and lime, both found in the bones, change less rapidly. About 500 days are required for the former, and 2,300 days for the latter.

Cuckoo - Cuckoo!

Some Quaint Facts About This Lazy Bird

A schoolboy once defined the cuckoo as the bird that does not lay its own eggs. Cuckoos do lay their own eggs, of course, but most of them refuse to hatch them.

Of 17 European species of cuckoo found in Australia only one, the colonial, or swamp parrot, of Northern Australia, makes a nest and sits on the eggs. All the others put their eggs in the nest of some other bird, which incubates them and feeds the young.

Cuckoos are not selfish birds. In Southern Australia and in Tasmania all the cuckoos go to the same place to lay their eggs. However, the cuckoos do not stay in the same place. They migrate from place to place.

Thrilling Take-off Occurs in Forest

One of the most thrilling take-offs that has ever been accomplished recently was accomplished recently by Charles Kingsford Smith, the Australian pilot who flew from London to Australia in 1928. His plane was shot at by a German bomber while a forced landing in the Bay of Biscay, New South Wales, it seemed to everyone that the ship could have to be dismantled. Smith hit upon another idea. He tried to get the plane to a tree and used the trunk as a support. When the machine hit the ground and started to roll, a farmer was startled and with an axe, in a flash, cut the trunk of the tree. The plane was saved.

Ground Work Essential

Have the old boys been to bed yet? Remember that the night has not yet passed. A short while ago he opened his bedroom window and put out his hand. "Officer," he called, "the light is just going to bed, too."

Science Explodes Another Fable

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Hints for the Dog Days

Striking suggestions from the daily press on how to keep cool in the torrid months:

1. Mrs. Mossa King, of Los Angeles, was locked up in an icebox for three days by her husband. This chilled her love, and she sued him for divorce.

2. Prohibition Commissioner Fehlowitz, of the Chicago district, advises the public that nobody has ever been prosecuted for making a home brew for home use.

3. Professor G. B. Dunn, of Seattle, claims that "hot manures" are much colder than the "pips." Due to wearing less clothes, a woman's mean temperature next to her skin is 87.2 degrees Fahrenheit, while a man's is 86.6 degrees.

4. The Rev. Father V. P. Barnicle, missionary, returning from Nigeria, defended the lack of clothes by the natives. "It is not immoral for them to be nude," he said.

Soviet Russia Cows Wear Spectacles

Soviet Russia has originated many novel social and economic experiments, but perhaps it has never before tried to do anything quite so unusual as to make cows wear spectacles.

The purpose of this experiment has no connection with the ancient joke about the cattle raiser who put green spectacles on his cows so that they would eat sawdust and believe it to be grass. The new invention has a serious purpose—to defend the eyesight of the cows against storms.

George Retter, well-known veterinarian, has related in his memoirs that at an Army and Navy Club dinner, Willie Collier, the actor, arose to speak after a dreary hour's eulogy by a general. Collier's entire speech was: "Ladies and gentlemen: Now I know what they mean by the army and navy forever." Which is somewhat longer than Will Lachy's witty speech before an amateur dramatic society after a two-hour introduction by the chairman, who wound up by saying: "The guest of honor will now give us his address." Lachy arose and said: "My address is the Lamb's Club." Then he sat down.

Forgotten Rubens Found

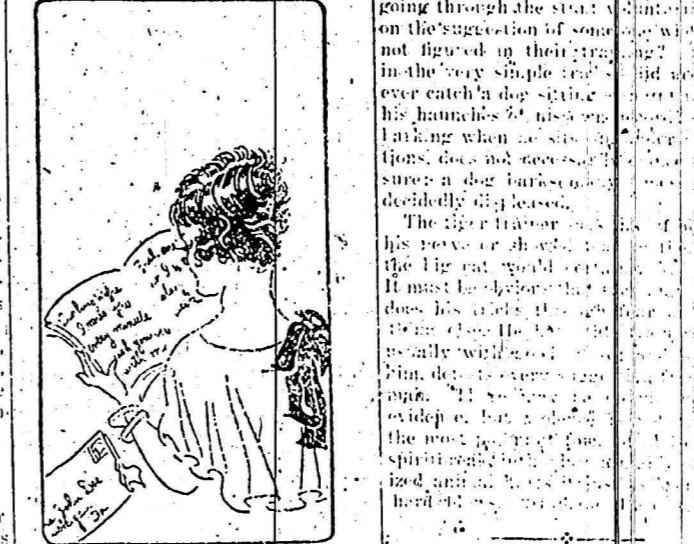
Vienna.—A forgotten early work of Rubens has been discovered among a number of other paintings in the cellar of the Austrian Historical Museum and is being sold by the director, Dr. Gustave Gnekke. The picture, a portrait of Philip II of Spain, has been more than 100 years in Austria, having been left to the old Austrian imperial family and forgotten.

A wasp has nothing to say, but its action is right to the point.

Gender Guards Home

Martinsburg, Mo.—A giant gender given to Dr. U. S. G. Arnold of this city 10 years ago as part payment for his services, is his household pet and guardian of his automobile.

The humble gray-gown is rated with unusual intelligence and protects the doctor's car from its perch next to the doctor on the front seat while he is busy making a round of calls.—The Humane Reporter.



"A fiction writer is my husband away on a vacation corresponding with his wife."

Donkeys!

An unknown writer sent a play to Dumas, asking the dramatist to collaborate with him. Dumas wrote back in a rage. "How dare you propose to put together a horse and an ass." By the return post came the author's reply. "How dare you call me a horse!"

Dumas was so much impressed by this reply that he asked for the play again.

A writer says that every man should keep ten roller studs. And when he has lost them all, there's always a sporting chance of finding at least some of them in the dust bag of the household vacuum cleaner.

MUTT AND JEFF—By BUD FISHER

WELL, BOYS, IT'S SIX A.M. AND I GOT TO GET SOME SLEEP!

IT WAS TOLD TO LOOK FOR SUSPICIOUS CHARACTERS—AND YOU LOOK LIKE BOTH OF THEM!

THIS OFFICER PICKS YOU UP AT SIX IN THE MORNING AND YOU DARE TO TELL ME YOU ARE GOING TO WORK IN A BROADCASTING STATION!!

SURE, I TELL BEDTIME STORIES TO POKER PLAYERS!

Amos and Andy - and Mutt.

They are the army of death, and if the worst control of the situation they will cause death, just as sure as can be it weren't for the fact that there is another army trying to save the victim's life, every person who gets two or three typhoid germs into his system would be beyond saving.

What is this other army, that is trying to save the patient's life? You may well ask. This other army—this army that is on our side—consists of little bodies, or white blood cells or phagocytes, as the doctors call them, that are put into our bodies by nature for the sole purpose of fighting with the army of disease germs that attack us every day. They are on duty day and night. They never sleep, or rest. They are constantly on the watch, so that they can fight the battle for us.

The patient gets the typhoid germs through his mouth, by means of the food he has eaten or the fluid he has swallowed. All of a sudden, the defending army finds that the typhoid

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