

MACHINE BESTS MEN AT CHESS

Device That Protests When Human Opponent Cheats.

IT HAS SENSITIVE ORGANS.

Automatic Apparatus Constructed So That Competitor Is Obligated to Play Strictly According to Rules of the Game—When These Are Violated Lighted Lamp Gives Warning.

Is the day near at hand when science will be able to create a human being? This question may well be asked when one considers the latest invention of that king of automat inventors, Senor Torres y Quevedo, member of the Spanish Academy of Sciences. Senor Torres caused a sensation some thirty years ago by inventing a machine which would solve algebraic equations. Then he invented a balloon which would direct itself and could attain a speed as great as the fastest Zeppelins. The latest product of this wonderful laboratory, says a Paris dispatch to the New York Sun, is a machine which plays chess and which seems actually to accomplish the work of a human brain. Senor Torres thus describes his own invention:

"It is true that the game which the automat plays is not very complicated, but, nevertheless, for its opponent to win he must know how to play. The automat uses the white king against the black king and the black king. Its game is won in advance, but it must follow a certain course which leads it up to the finish.

On the Watch For Fraud.

"When the automat's opponent moves the black king the automat begins by seeing if the movement conforms with the rules of the game. If not it protests by lighting a lamp. If the move is according to the rules the automat, taking into account the position of the three pieces, decides what is the best move and then makes it. Thus the game continues until the automat has checkmated the black king.

"If the automat's opponent should make a mistake, as I said before, the automat protests by lighting a lamp. But it will tolerate only three mistakes. Then all its lights go out, and you may move your pieces as much as you want—the automat has finished. If you wish to begin a new game you invite the automat by a special movement to play another game. If it accepts it will turn out all its lights, place its pieces on the board in their original positions, then wait for you to make the first move.

"The old automats, the most celebrated of which were those of Vaucanson, imitated the appearance and the movements of man. Today this idea has been abandoned, and intricate machines, which look like nothing but machines, have taken their places. The self directing torpedo is a good example of an automat. The difficulty does not lie in the work of its mechanism, but in the determination of the movement to be executed. The machine deduces this movement from indicators by purely mechanical means. This, as in the calculating machines, is the brainwork of the man that the machine accomplishes.

Sensitive Mechanism.

"It is not to be denied that automats can have sensitive organs—monometers, thermometers, compasses, etc.—permitting them to recognize the circumstances which determine their movements, but science refuses to admit that they can possess the analogue of a brain. But I believe I have shown that this possibility theoretically does not offer the least doubt. Automats can be made as complicated as one may wish.

"I believe that there is no limit in this domain and that theoretically at least the time will come when all factory operations, even those which demand the intervention of engineers, can be executed automatically."

BALDHEADED MATES BEST?

Club of Smooth Pates Meets Rebuff at Start of Inquiry.

The Baldhead Club of America, headquarters at Winsted, Conn., which holds its next banquet Oct. 29, is seeking information on "Why do baldheads make the best husbands?"

A woman who signed herself "The Hair Man's Wife" wrote as follows: "I presume the members of that Baldhead association who are to banquet in Winsted will try to make it appear that they are the most model husbands. My husband is not baldheaded, and no woman could ask for a better husband.

"But I have a baldheaded brother-in-law and my sister assures me confidentially that he is conceited and thinks more of his own personal appearance and comfort than he does of hers. My answer to your question, 'Why do baldheads make the best husbands?' is 'Because they don't.'"

Rings Bell to Keep the Crows Away.

In order to keep the crows away Cyrus Dunham of Skowhegan, Me., has hung a bell in an apple tree close to the cornfield and attached a string to it that runs to the house through his bedroom window. In the morning, about daybreak, when the crows begin to visit the field, Dunham pulls the string, and the result is satisfactory.

A GARDEN SANDWICH.

By JACK DUNAWAY.

There's a race on in the garden,
An' the plants are in for fair,
All a-surgin' an' a-scrabblin',
Each intent on winnin' there.

First the mustard mustered courage,
Hintin' that they have a race,
Said the lettuce, "Let us try it,"
An' the beanstalk set the pace.

Then the pea come poddin' out there
In its swiftest, quickest way,
An' the pop corn popped into it,
Thinkin' fer to take the day.

The potato vine started runnin',
An' the turnip turned up too,
An' the beet then beat the record,
"Twas a simple thing to do.

Till it realized that something
Was a-crowdin' on its tread,
While the spud, whose eyes were
Open,

Saw the cabbage make a head.

NEW SOIL ACIDITY TEST.

It is Expected to Prove a Better Way Than Use of Litmus Paper.

What is expected to prove a more positive test for soil acidity than the common litmus paper test, and one which, because of the cheap and harmless chemicals used in its operation, will be within the reach of the ordinary farmer, has been devised by E. Traug, instructor in the department of soils, college of agriculture of the University of Wisconsin.

The new test, it is believed, will be of especial benefit to county representatives and to field agents of the state soils laboratory, owing to the fact that it is simple to operate and approximate quantitative results can be secured in from ten to fifteen minutes.

The new method consists of the addition to a sample of soil to be examined of zinc sulphide with small amounts of calcium chloride and water and boiling the mixture in a flask held over a small flame, preferably an alcohol lamp. Commercial lead acetate paper, which can be purchased at the drug store, when held in the fumes of the mixture for a few minutes will turn from light brown to a shiny black, according to the degree of acidity present in the soil. The natural color of the lead acetate paper is white, hence the discoloration can be plainly seen and will more accurately gauge the acidity in a soil than will the litmus paper test now in use in many sections.

The chemicals are perfectly safe for the layman to handle, and the complete apparatus, including flask and burner, ordinarily will not cost more than \$2.

A Dahlia Hint.

This is the season to cut back dahlia stalks. Cut down stem and leave two leaves, one on each side from the ground. Cutting back forces branches and gives root strength. Of course it delays the bloom, but what results you get later in vigorous growth and abundance of flowers well repays for the loss of summer bloom.

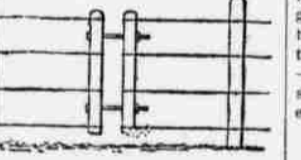
Late August and fall flowers are matured better than those in the hot, dry weather. Cut the stalk with a sharp knife. Mulch the soil by working grass cuttings into it and give the top a good, healthy dressing.

Such a mulch prevents baked soil. Besides, it holds moisture between rains. Catch rainwater in a bucket or barrel and use it to water your plants. It gives more nourishment than the spigot variety. Cow manure water forces a strong growth, and when fed to dahlias just at the time buds form the flowers will come stronger.

Dried blood spread upon the top soil acts as a fertilizer and gives color to the bloom.

For Tightening Fences.

In spite of the best care wire fences will become more or less slack after being up some time. The device shown herewith will take up this slack in a few minutes. It consists of two stout



pieces of wood, to which the wires are firmly fastened, and two long bolts with long threads. The bolts pass through the wood and are tightened as occasion may require. Several of these tighteners may be placed in long lines of fence wherever it is convenient to put them.

ORCHARD AND GARDEN.

Don't permit any fruit to ripen on berry plants set this season, except on fall bearing strawberries.

Experienced growers do not pick berries for market when the fruit is wet, and they keep the crates in a cool place, out of the sun.

Three years of spraying, pruning and cultivation will bring an orchard that you are ashamed of into a condition that you will be proud of.

Surplus suckers in blackberry or red raspberry patches should be treated just like weeds, leaving only enough shoots for next year's fruiting.

The benefits of spraying are no longer questioned by progressive fruit growers. There may be seasons when it is not absolutely necessary, but no one can tell when the pressures of that season will be experienced. As a safeguard for the quantity and quality of the fruit spraying is certainly indispensable.

MEALS SAME DAY 2,000 MILES APART

Breakfast in Newfoundland, Dinner in Ireland.

IF 100 MILE SPEED IS KEPT UP

Alexander Graham Bell Says Aeroplane That Could Support Itself Two Miles Up Might Cross Ocean in Thirteen Hours—New Facts About the Flying Boat America.

The possibility of a transatlantic ocean flight in a heavier than air machine in thirteen hours is pointed out in a communication to the National Geographic society, at Washington, from Dr. Alexander Graham Bell, inventor of the telephone and former president of the society.

"The distance from Newfoundland to Ireland is less than 2,000 miles," says Dr. Bell. "This means that if you go at 100 miles an hour you will cross the Atlantic in twenty hours—less than a day. We already have machines that could cross the ocean if their engines can keep going for twenty hours. Of course, these are exceptional machines, but even the ordinary machines of today make fifty miles an hour with ease.

"Now, a flying machine flies faster as you go higher up, because the rarer air offers less resistance to the motion, while the propeller gives the same push with the same power, whatever the elevation. As you get into the rarer air the propeller spins around faster. A fifty mile an hour machine flying two miles high in the air—and we have machines that have gone twice as high as that—will fly much faster than fifty miles an hour. Then at an elevation of two miles high in the air there is a constant wind blowing in the general direction of Europe having a velocity anywhere from twenty-five to fifty miles an hour.

America to Europe in a Day.

"As a net result of all these things there can be little doubt that any ordinary machine that is able to support itself in the air at an elevation of two miles high will attain a speed of at least 100 miles an hour in the direction of Europe, and that means going from America to Europe in a single day. Calculation shows that, taking all these circumstances into consideration, our best machines should be able to cross the Atlantic in thirteen hours. I hardly dare say it aloud for publication. It is sufficiently startling to know that it is not only possible, but probable, that the passage may be made in a single day. But if, as I imagine, it can be done in thirteen hours you may take an early breakfast in Newfoundland and a late dinner in Ireland the same night."

Here is a general description of the Rodman Wanamaker transatlantic flying boat, the America, in which Lieutenant Porte will attempt to cross the ocean:

Length over all, thirty-four feet; length of hull, thirty feet; width of hull, four feet; depth of hull, six feet; length of cabin, seven feet; height of cabin, five feet; width of cabin, four feet; spread upper wing, seventy-four feet; spread lower wing, forty-six feet. Weight, empty, approximately 3,000 pounds; weight, full loaded, 5,000 pounds. Speed, from sixty-two to sixty-five miles per hour in still air. To this add or subtract speed of wind machine is traveling with or against.

Within sight of the operators are the aviation instruments, tachometers, to show the speed of the two motors; aneroids, to show the altitude of the machine; wind speed gauge, showing speed of the machine through the air; inclinometers, showing the lateral and longitudinal flying angles; fuel and oil gauges, showing contents of tanks. In the after part of the cabin are Lieutenant Porte's navigation instruments—his sextant, chart table, gages for showing drift, speed over the water, etc.

Description of the America's Wings.

The wings of the flying boat are composed of seven sections—a center panel of 10 by 7 feet above the power plant, four main sections (two upper and two lower) approximately 18 by 7 feet and two overhangs on the upper surface measuring 15 by 7 feet each. The shape of the wings is known as the N. P. L. wing section, which, after experiments at the national physical laboratory, Teddington, England, was considered most efficient for this work. The wing frames are built up solidly of ash and spruce, covered with a heavy ribbed silk, which is coated with a special water and fireproof material.

The aerial rudder for turning from left to right has a depth of five feet and a length of four and one-half feet. The flippers, or rudders for steering up or down, are located on either side of the main rudder, and their dimensions are 6 by 4½ feet.

Two propellers, one to each motor, are bolted direct to the motor shafts. They turn at a maximum speed of 1,250 to 1,300 revolutions per minute.

Steps "Rubbering" at Postcards. In the weekly bulletin issued by Postmaster Fay of San Francisco there was an announcement that "hereafter five demerits will be imposed where it is shown that a distributor is wasting time looking at the pictures on postcards or perusing the correspondence on the reverse side of the postcards."

The Dream Fisherman

He drew a fly across a stream—
His heart of hope was full—
And as it split a ripple's gleam
He felt a sudden pull.

A start, a tug, a vigorous rush—
His languor all was gone.
The world its noisiness seemed to hush,
For, lo, the fight was on!

He listened to the singing reel,
He braced himself, and still
Beneath his fingers he could feel
The keen and welcome thrill.

He took no chance; he used great care;
He frowned; he grinned with glee.
His hopes ran high; he faced despair—
What would the outcome be?

Then just as from the water came
The shining, dripping prize
The boss approached his desk and glared
With stern and searching eyes.

The clerk bent down like other men
To labor close and drear,
But thrilled because he'd caught again
That fish he'll catch next year!

—Chicago News.

KILL RATS BY THOUSANDS; WHOLE CITY IN ODD CRUSADE

Nets, Traps, Clubs and Poison Used to Exterminate Rodents at New Orleans.

There is the biggest death to all rats campaign going forward in New Orleans that has ever been planned against any American rodents. It will persist until every one of the pests that carry bubonic plague has been exterminated.

More than 50,000 rats and mice were killed in a surprisingly short time. The price for capturing mice alive is 10 cents a head. Thousands of men and boys, black and white, have been chasing up and down the river front with nets, traps, clubs, fire, poison and almost every conceivable sort of weapon.

Only two well defined cases of the plague have been discovered so far. These were in the lodging house and are said to have come from Cuba. For four blocks around this house there has been instituted the strictest quarantine. All moving pictures and amusement galleries are closed and street cars are not allowed to stop in the restricted district. Nor are those who live in it allowed to go visiting or to attend any public assemblage.

Many of the leading business houses of New Orleans are helping the city authorities to enforce the sanitary regulations. A list of strict city ordinances has been prepared and will be enforced. They are:

Prohibition of human occupation of insanitary structures. The rat proofing of all buildings and basements. The requiring of screens for all bakeries and restaurants. Every residence and place where food is served must be provided with garbage cans and scavenger service. Prevention of the dumping of garbage within the city limits. Prohibiting the sale of vegetables grown within 1,000 feet of sewer outlets.

RALLY TO SAVE REDWOODS.

Gifford Pinchot and Others Start Fund to Create National Park.

Launching a movement to purchase a tract of 20,000 acres of the finest virgin redwood timber, opened to sale by the termination of protracted litigation, Gifford Pinchot, ex-chief of the United States forest service; Congressman Kent of California and Charles Willis Ward, both prominent timber owners, have each contributed \$25,000 to a popular subscription fund.

The purpose of the movement, as set forth by C. L. Greyson in "Recreation and Outdoor World," really goes much deeper than appears in the announcement that this tract of timber is to be purchased and turned over to the national government to be maintained as a national forest and training school in forestry. It literally amounts to an organized attempt to save the commercial redwood, the oldest and most remarkable growth of merchantable timber on the globe, from disappearing from the face of the earth, as it promises to do in less than fifty years' time if the present rate of cutting continues, etc.

LENT \$519,000,000 ON FARMS.

Seventeen Life Insurance Companies Gave Aid in Forty-two of the States.

Seventeen United States life insurance companies carry in farm loans the total of more than \$519,000,000. This data, the first authentic statement of the extent of loans on farms by insurance companies, was obtained by the Banker-Farmer, published by the agricultural commission of the American Bankers' association at Champaign, Ill.

This great volume of money is distributed among forty-two states and Porto Rico. The only states not listed being Delaware, Maryland, Massachusetts, New Hampshire, Nevada and Rhode Island. Iowa leads with \$100,000,000 invested, and Kansas, Missouri, Nebraska, Illinois and Indiana are next in order.

Would Standardize Trunks.

Freak trunks, embellished with conical protruberances, slant sides and unusual tops, soon may be unpopular among the best trunk society. The American Association of General Baggage Agents will urge the interstate commerce commission to consider a plan for the standardization of trunks, both as to size and construction. The baggage men want a limit of forty-five inches placed as the largest dimension of a trunk, with the further provision that the trunk must be square or rectangular.

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Week-End Fares to All Points and Sunday
Excursion Fares from Albany and Corvallis.



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Leave Albany, daily except Sunday.....1:00 P. M.
Leave Corvallis, daily.....8:00 A. M.
Leave Corvallis, daily except Sunday.....1:40 P. M.
Connections made at Albany and Corvallis with S. P. trains.
Special Excursion Train will leave Newport every Sunday evening at 6:00 p. m., arrive Corvallis 10:15 p. m., Albany 10:45 p. m.

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When there's a birthday or wedding cake to bake, or refreshments for reception or party to provide, take no chances—
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