## GIRL, 20 YEARS OLD, STUDIES FOR DEGREE AS DOCTOR OF PHILOSOPHY AT COLUMBIA

Miss Esther Lee Gould Already Is Bachelor and Master of Arts and Spent One Year as School Principal; She Likes to Dance and Swim and Paddle Canoe, But Entered College at Age of 13.







iss ESTHER LEE GOULD is tail. In 1918, still with her hair in 'Quadrille' take walks of five miles acquired the degree of bachelor of arts. The large many distance in the degree of bachelor of arts. The large many distance is distanced in the degree of bachelor of arts. The large many distanced in the degree of bachelor of arts. and master of arts, has been principal of a grade school for a year and has become a candidate for a school. She is proficient in Latin. Ph. D. degree at Columbia. She said Greek, German, French, Italian and

(By the Associated Press.)

and none of the defects and possess

ing several worth-while character-

names for old varieties are as common as freekles on a red-headed boy, but in the past, according to the Harvard biologists, the new things in the

plant world have been more or less accidental. Crosses, they say, have been made indiscriminately, trusting

to providence that something good

would turn up, and occasionally providence has come to the rescue.

Many Varieties Studied.

wrappers was made, and the characteristics demanded by growers, manufacturers and consumers were set down as cold-bloomedly as a build-

house. Existing varieties were then examined in the f'eld and in the

warehouse with the minutest care, seeking those which when combined

Why these varieties were selected and how the scheme was carried out is a long and technical story. Suffice it to say that a knowledge of the

principles of inheritance was the ba-

ais. Through these principles the work could be carried out with no greater loss of time and with as

much certainty of reaching the end in view as that of a chemist in pro-ducing a new tooth-paste. The re-

Good Qualities Retained.

"The Round Tip," said Professor East today, "has the large leaf and the close arrangement of leaves char-acteristic of the broad-leaf variety,

The leaves grow upright, as do those of the Sumatra, thus eliminating the

less from torn leaves, which so often

matra and Broadleaf.

sult was the Round Tip.

would plan the requirements for a

In this case a study of cigar leaf

equips her dog with a pedometer.

Gould.

just like any normal girl. She was born at Grand Pre. At the age of 13 she entered college, wearing a pig-TOBACCO PLANT CREATION OF HARVARD FARMER EXPERT Cigar Wrapper Plant Developed Having Desirable Qualities of Several

AMBRIDGE, Mass., April 16.— broader than the Sumatra, and so in-What is claimed to be the first creases the yield of cigar wrappers. results. plant actually made to order, ac- Since the Broadleaf is too thick and cording to specifications listed in ad- has too pronounced a flavor for most for the Connecticut agric ltural ex- bacco was made intermediate in these periment station at New Haven, Conn. respects. Finally, the Round Tip de-The new plant, known as Round velops six or seven more leaves than Tip, is a cigar wrapper tobacco, com- the old varieties, possesses a wonbining, it is claimed, the desirable derfut root system, making it stand animals and plants, and the bearing qualities of several existing varieties up under winds that lay other to- of the results on the upbuilding of accos low, and has a resistance to nations.

root rot which came to it by accident, istics unknown in the older varieties.

It was produced by a scientific application of the laws of heredity, with the investigation of which Professor Dr. Donald F. Jones, a former pupil

ears' test, and has been reported on by some forty-odd planters.

"Crops of 2800 pounds per acre.
double the yield of ordinary varieties, have been obtained under
exceptional conditions, and on the average 2000 pounds may be confidently expected. But what pleases us most is that by this experiment we have demonstrated that the true fundamental principles of plant breeding which we have spent years in studying can be applied to a specific problem with such useful

Miss Rose Mints and her pet dog

Miss Allsa Mellon, the 19-year-old

Professor East holds the chair of experimental plant morphology at the Bussey institution, the department of ology. He is the author of several volumes of technical papers on heredity, and in collaboration with Dr. Jones published a work on the effects of "Inbreeding and Outbreeding" in

Potato Flour Mills Possible. East has been identified for many st Harvard, who is now connected are being formulated by the potato years.

New varieties of plants are not particularly rare, it is said, and new lieularly rare, it is said, and new lieularly rare, it is said, and new lieularly rare.

Existing Varieties and None of Their Defects. the other parent. The leaf is even wance, has been developed by Pro-fessor Edward M. East of Harvard thin and has no flavor, the new to-search and instruction in applied bi-

EDMONTON, Alta.-Plans for the

## CHESS AND CHECKERS

E. H. BRYANT, Editor Contributions solicited. Portland Chess and Checker club, Washington building, room 101, southeast corner Washington and Pourth streets. Mail contributions to 143 East Thirty-fifth street. PROBLEM NO. 1059.

By F. A. L. Kuskop.

This took first prize in a Melbourne tourney, and we take it from a copy of the defunct Western Chess and Checker Bulletin. If you project yourself whole-heartedly into this you will enjoy the mental symmastics required to solve it. BLACK-THIRTEEN PIECES.



WHITE-TWELVE PIECES. White mates in two moves. White-King on KB3, queen on KR, oks on QB4 and QB6, bishop on KKt8, knights on KBS and Q7, pawns on KR4. loss from torn leaves, which so often Black-King on Qi, queen on KB2, rooks results from the dropping leaves of on QB2 and QB7, bishop on KR, knights

on Q and Q8, pawns on KR4, KKt4, KB4 Q6, QKt2 and QKt7. PROBLEM NO. 1980.

By Godfrey Heathcote.
cond prize. Melbourne tourney.

BLACK—THIRTEEN PIECES



White to mate in two moves.

White-King on QKt7, queen on QH2, rooks on K8 and KR4, bishop on QKt8, knight on Kt5.

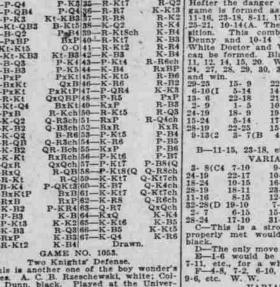
Black-King on Q4, rooks on Q6 and QR4, bishops on KR8 and QR8, knights on QKt8 and QR2 pawns on KKt3, K6, Q2, Q7, QKt4 and QR5.

PROBLEM NO. 1061. By P. H. Williams.
Black—King on QB4, rook on QB5, snight on QKt5, pawns on KB7 and QB2; five pieces.

White king on K6, queen on KB, knights on Q4 and QB2, pawns on K3, QR4 and QR5; seven pieces.

White to move and mate in two.

Chess in prison cells. San Quentin, Ca alling out the moves from their adjaces



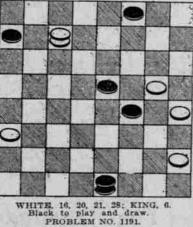
tive of his country in England. Her brother, the Marquis de Buenavista, is the first secretary of the Peruvian embassy in Washington, and the present president of Peru, Augusto B. Leguia, is her cousin.

A—R-Kt2 K-B4 Drawn.

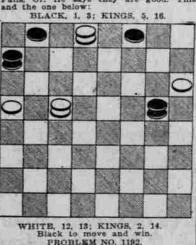
Two Knights' Defense.
This is another one of the boy wonder's sames. A. C. B. Ræschewski, white: Colonel Dunn, black. Played at the University club, Pebruary 10, 1921. Simultaneous exhibition:

Checkers.

PROBLEM NO. 1190. BLACK, 3, 5, 15, 19; KING, 31.



Contributed by Jack Frost, Klamath Palls, Or. He says they are good. This and the one below: BLACK, 1. 3; KINGS, 5, 16.



Black to move and win.
PROBLEM NO. 1192.
By James Wyllie.
Black, 1, 3, 13; kings, 23, 24. White
10, 21, 22, 32; king, 9. White to play
win. PROBLEM NO. 1193.

2 Q.R. K.BT; B. Q.RS, mate. Although simple, full of stratesy—C. S. Rorer.

Problem No. 1934—Key, R.-K.

Problem No. 1934—Key, R.-K.

Problem No. 1935—Key, B. Black OK. The Bushington of Kingston, Jamatea—C. S. Solutions have been received from the composer of Kingston, Jamatea—C. S. Solutions have been received from the composer of Kingston, Jamatea—C. S. Solutions have been received from the composer of Kingston, Jamatea—C. S. Solutions from the composer of Kingston, Jamatea—C. S. Solution strains of the composer of Kingston, Jamatea—C. S. Solution strains of the composer of Kingston, Jamatea—C. S. Solution strains of the composer of Kingston, Jamatea—C. S. Solution strains of the composer o

djacent (Alagoria (Alagori

VARIATION 1. 9-14 10- 7 16-19 28-16 12-28 7- 3 15-18 31-26 22-32(E - 7-3 28-23 26-19 1-6 7-2 5-9 19-13 2 - 8(C4 7-10 9-14 22-32(E - 18-22 12-19 22-17 10-7 7-3 25-18 18-24 10-15 16-19 28-23 14-26 12-28 19 18-24 10-15 16-19 28-23 14-26 12-28 19 18-15 12-28 1-6 4-8 13-28(D 19-10 7-3 7-2 7-10 2-7 6-15 15-18 5-9 8-11 28-24 17-10 31-26 19-15 W. W. C. This is a strong move and if not properly met would lead to a win for black.

D—The only move to win.

E—1-6 would be met with 3-7, 5-9(F, 7-11, etc., for a white win.

F—4-8, 7-2, 6-10, 2-6, 10-15, 6-9, 8-11. 9-6, etc. W. W.

| Nation | N

RPxP .K-K3 B-Q5 B-K4 P-B4 PxP BxKt K-B3

9-13(I 31-22 18-9 7-10 8-14 22-18 26-22 11-16 14-17(6 32-28 21-14 13-17 10-26 18-14 17-22 14-10 22-26 7-3 26-30 3-7 30-26 Carried over in the next issue

LEBANON AFTER SAWMILL

Hammond Lumber Company Seeks Site for Large Plant.

LEBANON, Or., April 16 .- (Special.) -The indications are promising for Lebanon or vicinity to get one of the large sawmills of Oregon. The Hammond Lumber company recently had two routes surveyed from the Woodburn-Springfield branch of the Southern Pacific company to its large body of fir timber on the Crabtree river. 20 miles east of Lebanon. The company has been looking for a site for

timber in Oregon, which contains hundreds of millions of feet of timber. It is said that there is enough timber in the Crabtree basin to supply a dahlias Before setting, drive a strong pointment by choosing good varieties true or three sites are available pere for a sawmill and the matter of a location is now in the hands of the industrial committee of the Lebanon Commercial club to confer with the Hammond people with the hope that they will locate the mill at this city.

LANE TO GET ROAD FUNDS Forest Service to Co-operate in

Several Projects. EUGENE, Or., April 16 .- (Special.) -The forest service will co-operate with the Lane county court and sev-eral road districts in the western part eral road districts in the western part of the county in road work this summer on a 50-50 basis, according to R. S. Shelley, supervisor of the Siuslaw national forest, who conferred with district forest officials in Portland a few days ago.

A 10-mill tax has been levied by the paters for work on the Deadwood.

the voters for work on the Deadwo Five Rivers road and this will yield between \$2700 and \$3000. With a sum to match that amount, good headway on the project is expected to be made.

A 10-mill tax also has been levied in the Indian creek district and a

By W. J. Wood. Waukegan, Ill.

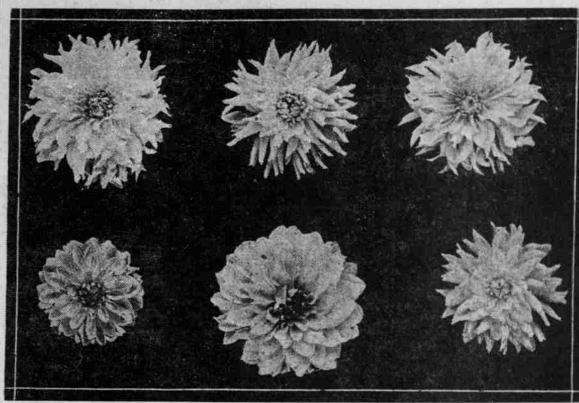
There is everything necessary for your entertainment in this composition. Do not attempt to do anything else while working at it. Stop talking and set down to biz. Black, I. 5, 14, 17, 18, 26, 28; kings. 4, 29. White, 6, 11, 13, 23, 24, 25, 27; kings, 2, 10. White to piay and win.

SOLUTIONS.

Problem No. 1182—Black, 3, 20, 21; kings, 25, 26, 27, 28. White, 10, 11, 15, 23, 32; kings, 2, 9, 19. White to win: 10-6, 27-18, 11-7, 18-11, 32-7, 3-19, 27-24, 28-19, 2-7, 11-2, 9-13, 2-9, gonian. Main 7079, Automatic 560-95.

## DAHLIA, WITH AMAZING RANGE OF COLOR, IS CLOSE RIVAL OF ROSE IN PORTLAND

Flower Is Much Easier to Grow Than Choicer Varieties of Chrysanthemums, Resembles Them in Shape but Far Surpasses in Blending of Colors.



SOME GOOD DAHLIAS (NOT THE SIX REPRESENTATIVE TYPES MENTIONED IN THE TEXT).

6-2 detracts nothing from the rose, for 7-11 it blooms at a time when roses are 12-7 not at their best.
7-11 The dahli has an amazing range 7-11 and the old stiff "hand-

of color, and the old stiff "hand-made" air which characterized the bloom of 30 years ago has almost entirely disappeared. Now we have mums, which do not do very well here in Portland. The amateur can depend upon securing something in the way of bloom from the dahlia if he gives it any care at all, though it amply repays the gardener for good care.

Careful Study Advised.

so is a sun-loving plant; some of the single varieties do well in the shade, but unless these are to be grown different the next season. The cultural directions for growing from seed are G-4-8, 22-18, 14-17, 21-14, 10-17, 19-15, exclusively there is little use to attempt to grow dahlas if they must be given a shady location. They will 21-17, 9-18, 17-14, 13-17, 14-9, 5-14, 18-9, 17-21, 9-6, 22-25, 31-26, W. W.—S. W. Carter.

VARIATION 4.

4-8(8 18-15 8-11(H 25-22) VARIATION 4.

4. 8(8 18-13 8-11(H 25-22 12-19 14-17 15-14 15-24 12-26 11-16(5 21-14 17-22 15-24 12-26 11-16(5 21-14 17-22 15-24 12-26 11-16(5 21-14 17-22 15-24 15-24 12-26 11-16(5 21-14 17-22 15-24 long as possible in the spring, but ings with some standard solution when it is applied the soil should nicotine will eradicate the pest should nicotine will be appli

Nitrate of soda or bone meal can be applied after the shoots are well up. Ten pounds of nitrate will answer for a space 10x25 feet. Discretion should be used in applying fertilizer, however; too much will result in luxuriant foliage with inferior, scatter-visiting the dahla farms or the shows ing blooms on weak stems.

Planting Time Discussed. Here in Portland the planting time is from April 20 to May 20. Too early planting will produce blooms early in the summer—the dahlia is a fall-blooming flower and should be timed to come into bloom then, instead of a large mill, and the rumdr is current here that the mill will go in at or near the city.

It is said that the logging road will be 20 miles in length and will tap one of the finest bodies of standing one of the finest bodies of standing ble. If planting is too early the timber in Oregon which contains the supply severage to be said that the logging road will be about a standard one of the finest bodies of standing ble. If planting is too early the timber in Oregon which contains ble. If planting is too early the young shoots are very apt to be severely damaged by frost.

There is a knack in planting ginner will save money and disap-

188-190 FRONT STREET

Some Good Dahlias (Not the Six representative types men tioned in the text).

Sheba Childs hargreaves.

The dahlia is essentially a modern flower; it is one of the triumphs of the horticultural art. In sheep the tuber on a slant, with the sandy deserts of Central American the sandy deserts of Central American the sandy deserts of Central American to the magnificent blooming bush as we know it today. The plant takes its name, dahlia, from the Swedish botanist Dahl, who introduced it.

The dahlia is a close rival of the rose, even here with us in Portland, where the rose grows to such perfection. This is as it should be, for while we will always give first place in which to grow other lovely flowers which are especially suited to our climate. In fact, the carefully suited to our climate. In fact, the carefully which to grow other lovely flowers which are especially suited to our climate. In fact, the carefully which to grow other lovely flowers which are especially suited to our climate. In fact, the carefully which to grow other lovely flowers which are especially suited to our climate. In fact, the carefully which to grow other lovely flowers which are especially suited to our climate. In fact, the carefully which to grow other lovely flowers which are capeally suited to our climate. In fact, the carefully which to grow other lovely flowers which are capeally suited to our climate. In fact, the carefully which we cultivate in our parks and home gardens add distinctin and individuality to the city. The dahlia the tubers are perfectly dry before storing. Store with most earth. If on examining the clump apart, The eyes are to be found around the neck where the tuber fastened to the climate. In fact, the carefully which we cultivate in our parks and home gardens add distinctin and individuality to the city. The dahlia the control of the control our climate. In fact, the carefully which we control the few days in warm water, or cover with most earth. If on examining the clump apart, The eyes are to be found around t

Shoots Should Be Cut.

entirely disappeared. Now we have great irregular ragged blooms which resemble the chrysanthemum in shape but far surpasses it when it comes to the blending of colors. The dahlia is much easier to grow than the choicer varieties of chrysanthelargest one, though some growers bloom, allow two or three shoots to remain. trical head. Tubers should be allowed ample room, at least four feet apart each way is not too much space.
It is not generally known that the

Growing conditions should be carefully studied before planning to grow either flowers or vegetables. The dahlia is a native of the desert and so is a sun-loving plant; some of the so is a sun-loving plant; some of the takes two or more seasons to establish doors and transfer to the open ground at about the time tomatoes are set

Insect pests do not trouble very times attacks the buds; it sucks the sap and emits a poison which kills the foliage; two or three good spraynicotine will eradicate the pest should

Dahlins Not Satisfactory.

It is not supposed that dahlias are unusual seasons, until the dry seasons sets in haugust.

The dahlia is an aristocratic member of the potato family, and any soit that will grow good potatoes can be depended upon to grow good dahlias, but they prefer a soil which contain some sand and, of course, need fertilizer to produce fine blooms. Well-rotted cow manure, say, a shovelful to each plant, is a good fertilizer, but rabbit manure or dried ground blood makes the blooms that are drooping may be restored by this method also. The water brightens rich in color and of heavier texture. Nitrate of soda or bone meal can be There are six main types of very satisfactory as cut flowers, but if the blooms are gathered in the early morning and after stripping off

There are six main types of dahlias—Show, collarette, peony, ane-mone, cactus and decorative. The bein the fall and have the tubers de livered in the spring. The descrip tions in the catalogues give but little idea of the real beauty of the blooms. It does not seem wise to give a list of named varieties for the choice ! There are dozens of standard sorts, any of which are beautiful.

THE KIND THAT GROW!

"YOU CAN'T KEEP THEM

PORTLAND, OREGON

IN THE GROUND."

tedious, but it is well worth the effort, as he energy is all thrown When the shoots are five or six into one fine flower, rather than inches above the ground; it is best to being diverted and lost in buds cut off below the surface all but the which have no chance to produce a

Hawaii Ranks Twentieth. HONOLULU., T. H .- Hawaii stands tories with respect to the amount of customs receipts collected and paid to the federal government during the fiscal year ending June 30, 1920, acshoots that are cut off will root very cording to figures compiled by Gov-readily, thus increasing choics varie-ties. Dahilas may also be grown from and miscellaneous revenue the terriseed; it is in this way that new varie- tory stands 39th. Customs receipts

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