



# DAKOTA FLYER

Erling Nasset  
Division of  
Aeronautics 12-47

Sec. 562 P.L. 88

Vol. I

Mott, North Dakota September

No. 11

## MISSOURI SLOPE U-CONTROL MODEL PLANE CONTEST SEPT. 27 & 28



Part of the Bismarck model plane club and models- seated left to right June Berger, Harvey Larson, Art May—Standing, Steve Scheafer, Bill Dibenki, president of the club. At the time the photo was taken some members were on vacation. (Photo by Art May)

### Air Reservists Hold Meeting At Bismarck

Air Reservists meet recently to elect officers and organize their Squadron unit. William Seigel, Mandan, former AAF Captain was elected Squadron Commander. He will be in charge of handling all literature, conducting all meetings and arranging for Reservists to get planes to Wold Chamberlain each month.

Capt. Reed and Major Piner, from Wold Chamberlain, 195th Troup Carrier Squadron spoke to the Reservists, and conveyed all the necessary information about forming their squadron.

A C-47 will be regularly scheduled to Bismarck and Fargo twice a month in order for all Reservists to get in their flying time.

Ground School classes will have to be conducted regularly to maintain proficiency.

Tentative plans of the Reserve Unit in North Dakota will be to try and arrange for planes to be based at the Bismarck Municipal airport.

### Model Builders Meet At Bismarck

The Missouri Slope Airplane Modellers Ass'n plan to hold a U-Control model contest at Bismarck Sept. 27th and 28th.

Tentative plans are being made to make this the best contest ever held in North Dakota. Builders of this type model are urged to get in touch with one of the contest directors at an early date. Applications are being passed out by various clubs in the 3 adjoining states. Anyone interested can get an application form by writing to Bismarck.

The city of Bismarck is opening up vacated barracks at the Bismarck Municipal airport for all those wishing to sleep there. Blankets must be furnished by each individual. All classes are slated in the prize list. AMA Rules will be followed, although membership in the AMA, or any club is not essential. The idea of

(Continued from Page 7)

### Valley City Dedicates Municipal Airport

Sunday August 24, an estimated 10,000 people saw the opening ceremonies of the Valley City Municipal airport at Valley City, North Dakota.

In an address to the thousands of spectators North Dakota's Governor Fred Aandahl gave a brief history of the Valley City airport as it was seven years ago, and conveyed his interest to the splendid development of our North Dakota airports, like Valley City.

A Squadron of P-51s piloted by members of the National Guard Fighter Squadron from Hector Field, Fargo flew over the field in assimilated bombing and strafing. Displayed formation flying in the fighters.

The featured event of the day was "Doans Flying Circus", with Johnny Vasey flying his Stearman Johnny is a well known aerobatic flier in the mid-west. Also were Bill Fisher, flying a Rosoparakeet, Marion Cole, Carl Ruppert, parachute jumper, Low White, in a Drunk Aet. Steve Whitmen landed at Valley flying his clipped wing P-63 which he will enter in the Cleveland Air

Races this year. The program was successful, Valley City and people throughout North Dakota are proud of one more airport.

### Change of Office Of Dakota Flyer

The office of the Dakota Flyer has been changed. The former offices at Wyman Field, Mott, North Dakota, are now located at Bismarck Municipal airport, Bismarck, North Dakota.

The tentative plans for the office will be permanently located at Bismarck, which will enable a centrally located office for the area of North and South Dakota which the paper serves most extensively.

Write and address all news releases, advertising and subscriptions to: Dakota Flyer, Box 1023, Bismarck, North Dakota.

### Registration of Airmen And Aircraft

Registration of airmen and aircraft must be accomplished between August 1 and October 1, 1947. Aircraft will be registered for 50 percent of the basic fee and airmen will register for \$1.00.



**AIR COMMUTER HEADS FOR HOME**—Lt. James N. Ray, Bismarck, N. D., reserve officer in the army air corps, gets a send-off from Capt. R. C. Woodard, operations officer, 137 AAF base unit, as he leaves Wold-Chamberlain field for Robbinsdale airport, where he will park his plane each night for the next two weeks. Lt. Ray, who has rented a cabin near Robbinsdale, will commute by air to his daily job on active duty at Wold-Chamberlain. (Courtesy of Minneapolis Tribune)



FARMERS HAVE IDEAL AIRPORT



JEWEL DOAN

Jewel Doan and his son Jewel Jr., Flying Farmers located 6 miles south and 1 mile east of McKenzie, North Dakota put their airplanes to a very practical use. Jewel Sr. says, "Aviation on our farms has become one of our greatest assets". The airplane has proven dividends for this farm family.



JOHN DOAN

Above is pictured the men, also shown is John Doan, Jewel Sr's brother. John flew his Ercoupe from Sacramento, California out here recently. He has flown this trip for the past several years, he enjoys spending the harvest and hunting season in the Dakota's. Uses his private plane for transportation. The camera caught a familiar expression which most pilots convey after looking at a silvered prop!

Jewel and his son learned to fly a year ago from Bill Marks, Bismarck instructor. They own an Aeronca Chief and a Cessna. The Doans airport is conveniently lo-

cated to the farm buildings. They have well kept runways seeded with crested wheat grass, they have perfect flying from their airport the year around.

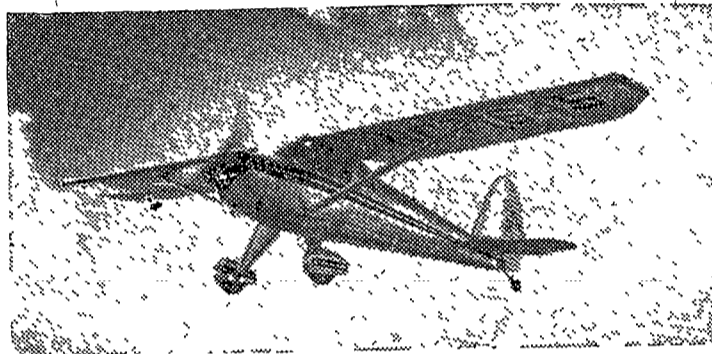
The Doan's use their plane mostly for trips to nearby cities for repairs that are needed immediately, trips that couldn't be taken by auto because of the time the plane is used. Without any more than two days time lost. The Doan family are setting an excellent example for those busy



JEWEL DOAN, JR.

farmers and ranchers in their area, and in the entire state of North Dakota Jewel Doan is also a member of the North Dakota Flying Farmers and Ranchers association.

Get The Most For Your Money



WITH *Silvair* by Luscombe

The only all metal light plane!  
 Lowest maintenance and depreciation with Luscomb's patented all metal wing!  
 Deep inner spring seats for the greatest Comfort!  
 Cruising speed over 110 mph—cruising Range over 600 miles!  
 Rugged construction—safety zone cabin!  
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 A time proven aircraft—no CAA Service bulletins against it!

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 MINNESOTA AND NORTH DAKOTA  
 by GENERAL AIR, INC.

HOLMEN FIELD

ST. PAUL, MINN.

PLANE QUIZ

A 70 per cent score on this quiz is excellent. Sixty per cent is good. ANSWERS ON PAGE 7

1. Bomb bays of a new U. S. bomber have space equal to that of (a) two; (b) four; (c) eight freight cars.



2. The XS-1, first U. S. plane designed for speeds above 1,000 m.p.h. has a range of (a) 500; (b) 750; (c) 100 miles.

3. Twenty-five years ago about 1,300 U. S. civilians knew how to pilot planes. By 1947, however, there were (a) 25,000; (b) 85,000; (c) 400,000 civil pilots in the U. S.

4. Twenty years ago a military plane could be developed from scratch for 15-\$20,000. Today a new combat plane will cost from (a) 15 to 20 million; (b) one to five million; (c) seven to 10 million.

5. Present world speed record is 616 mph. This is (a) 10 times; (b) 15 times; (c) more than 20 times

faster than the first Wright plane in 1903.

6. Of all the Jap ships sent to the bottom in World War II, (a) 36 per cent; (b) 29 per cent; (c) 51 per cent were sunk by our naval and military planes.

7. True - False. All planes in combat during World War II were designed before we went to war.

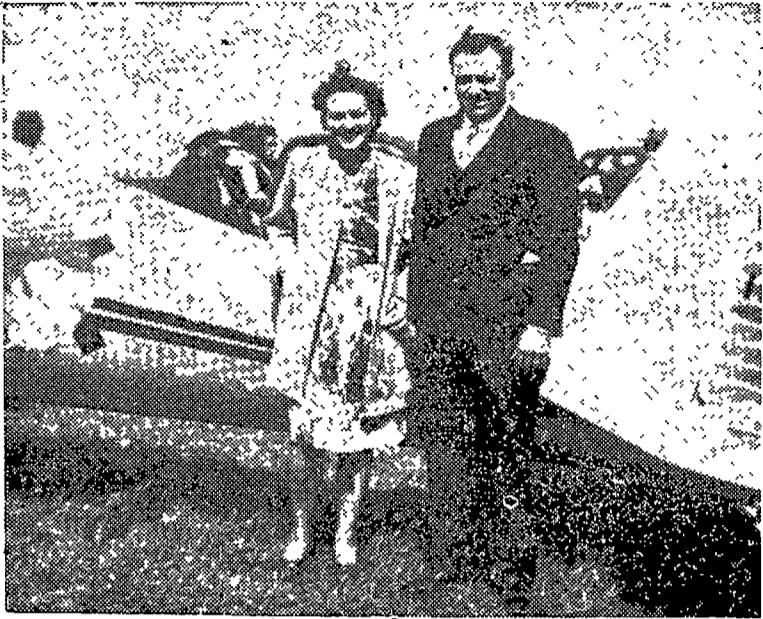
8. During 1946, (a) 8,000,000; (b) 6,500,000; (c) more than 14,000,000 passengers traveled by air transport in the U. S.

9. Since 1939, hourly wages in the aircraft industry have increased (a) 62 per cent; (b) 50 per cent; (c) nearly 90 per cent.

10. True - False. Aircraft engines once required complete overhaul every 100 to 220 hours but today they can run up to 1,000 hours between overhauls.



**Missionary Uses Plane**



Rev. and Mrs. Dittmer

The airplane has taken its place in Alaska among the Eskimos. It is replacing the slow trudging sleds driven by dog teams. This winter Rev. Dittmer of Casselton, North Dakota, will move across barren country in western Alaska in his duties as Moravian church missionary to the Eskimos.

Arthur Dittmer, member of the N. D. flying farmers, flew to Texas and purchased a new 85 hp Luscomb. It was donated by friends and relatives of Cass county.

The plane was dedicated July 20 at a service near the Goshen Moravian church at Durbin and the following day Rev. Dittmer took off from the landing strip at the Arthur Dittmer farm on his way to Alaska, and another five years of missionary work before receiving a furlough.

Rev. Dittmer has spent the last year in the United States on furlough after seven years of missionary work among the Eskimos. During this time he has address-

ed various groups in many states on important Eskimo problems, and their ways and modes of living.

When he came to Alaska, he made plans to build a motor-toboggan to cover the 150 mile-square area of Bethel, Alaska. But friends and relatives donated the new Luscomb, the pastor's choice, so that he could cover the distance quickly and economically.

Rev. Dittmer has been interested in flying for many years. He began pilot training while a student at the Moravian college and theological seminary at Bethlehem, Pa. During his year's furlough, he was required to make up flying time to get his private license renewed, that was after the plane was presented him as a surprise.

Rev. Dittmer was anxious to return to his missionary duties. Mrs. Dittmer, and daughter, Margaret Ann, who was born in Alaska and their son, Phillip, Jr. will join him shortly.

**Towns To Request Aid For 1948**

Communities that contemplate requesting Federal aid for establishing or improving a municipal airport in the next year are to indicate their interest to CAA District Airport Engineer Jandacek at Bismarck within the next few days. This is necessary as the 1948 revision of the National Airport plan for North Dakota is now being prepared by the CAA in cooperation with the North Dakota Aeronautics Commission. To receive aid a community must be on the current National Airport Plan. This plan is the opinion of the State Aeronautics Commission and the CAA as to the development of public airports justifiable from the aeronautical standpoint and estimated to be required in the next three years in North Dakota.

**To Build Airports Notify Administrator**

It will be necessary for anybody who wants to establish an airport to notify the Administrator of Civil Aeronautics. Regulations of the Administrator, Part 525, have been amended as follows:

525.10 Construction of Landing Areas. Any person who engages in the construction of a landing area, as defined in 525.3, any boundary of which will be within 5 miles of the nearest boundary of an existing landing area shall give notice thereof to the Administrator of Civil Aeronautics.

The basis and purpose of this amendment is that the construction of a landing area within 5 miles of an existing landing area may constitute a hazard to the navigation of aircraft in air commerce, unless proper notice of such construction is given to all airmen and the traffic pattern for such landing area is coordinated with that of the existing landing area. To accomplish such notice and coordination, the Administrator of Civil Aeronautics must be notified of the construction of any landing area and any boundary of which will be located within 5 miles of an existing landing area.

**WE WELCOME**

Your Photographs and News Stories  
—The Publisher

**ENJOY CANADIAN FISHING TRIP**



Left to Right: Tom Bowen, Irvin Krinke, Jack Watts Read about the interesting flight to Canada, story on page four.

You Are Assured Of A Square Deal

at

**Bismarck Aviation Center**

**STINSON**

**AERONCA**

NEW OR USED

AIRPLANES

Airplane Repairs

All Type of Student Instruction

HANGARS, NORTH END OF FIELD

Bismarck,

North Dakota

Sleep Well Eat Well

**The Butts House**  
Mott, North Dakota

"My Home In Sunny Mott"

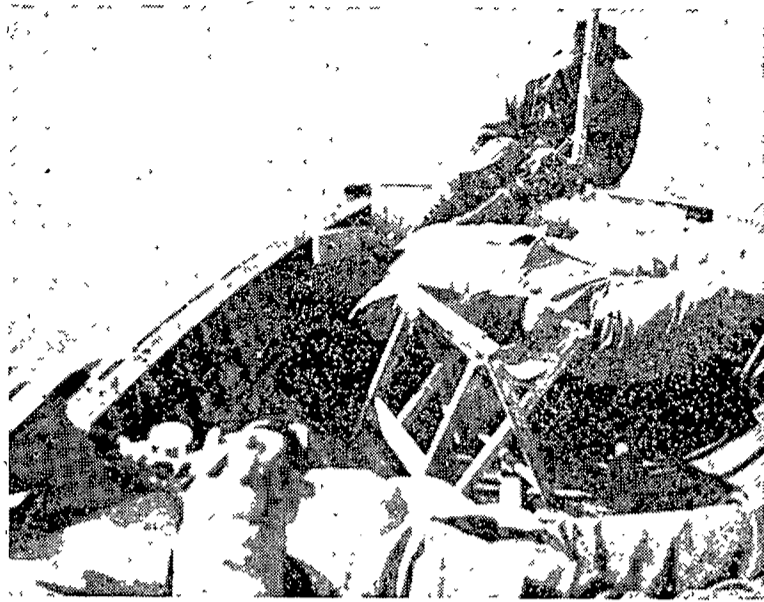
**CITY CAB CO.**

PHONE 1316

BISMARCK, N. DAK.

"IN ALTITUDE THERE IS SAFETY"

**BISMARCK MEN ENJOY FISHING TRIP AT LAKE ATIKAMEG**



In June 1947, Jack Watts, instructor, Capital Aviation Corp. Bismarck; Tommy Bowen, commercial pilot, F. A. McDonna, Bismarck insuranceman; and Ervin Krinke, service manager for Universal Motor, flew to the Pas, Manitoba, Canada, for weekend of fishing.

The boys landed their Stinson at The Pas airport, five hours and

five minutes after leaving Bismarck. The only other means of transportation into this area, other than air, is by rail. The Pas is located at the end of the highway.

Lake Atikameg was just breaking up in June. The railroad is built on top of the frozen lake.

The population of The Pas is leasurly up in the front of the approximately 4600. It is a fishing

and fur trading center. There are about 18 automobiles, they said.

With the lake just breaking up, the frosty air made flying with fur lined fishing attire comfortable.

Lake Trout was said to be plentiful. The above photograph looks as though it wasn't hard catching them! Jack Watts sits boat and lazily watches the line.

Tommy and McDonna catch a quick nap. Also in the picture Krinke, a happy fisherman, had 500 pounds of delicious lake trout which he brought back to Bismarck. Not so happy is Tommy and McDonna, in the foreground wistfully looking at a broken thermos bottle, which contained all their good old american made COFFEE!

**Atlantic Flown 91,000 Times**

The Atlantic has been crossed by air approximately 91,000 times since "Lundy" made his solo flight to Paris 20 years ago, according to data compiled by "Planes."

Most of the crossings were made during World War II, when thousands of planes were flown across for delivery to the Allies. The total represents flights between Europe, North America, South America and Africa. It includes both passenger

and ferrying flights. "Planes" checked all available records of U. S. scheduled airlines, the Army's Air Transport Command, the Naval Air Transport service, and the RAF and RCAF.

In contrast to the wild jubilation greeting Lindberg's May 1927 hop, no eyebrows will be raised this summer as airlines fly more than 150 flights weekly across the Atlantic.

Twenty-five years ago there were no international airlines. In 1946, however, 1,040,000 Americans made trips abroad by air

"FLAT TURNS INVITE STALLS AND SPINS" (Alerons installed for reason! Use Them!)

**HERB'S CAFE**

THE FINEST OF ITS KIND IN THE NORTHWEST

Open from 6 a.m. to 12 p.m.

THE FINEST FOOD SERVED AS YOU LIKE IT

**HERB LEUPP,**  
OPERATOR  
WASHBURN, N. DAK.

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DEALERS FOR

**Aeronca — Bellanca & Sea-Bee**

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AERONCA "CHAMPION"  
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LEMMON, SOUTH DAKOTA

*"Fly Safely"*

THE MOST DESIRABLE OF ALL FEATURES IN A LIGHT AIRPLANE IS "SAFETY" — ONLY ONE LIGHT PLANE IN THE AIR TODAY HAS BEEN DESIGNED THROUGHOUT FOR SAFETY. STABILITY HAS BEEN DEVELOPED TO THE POINT THAT AN ACCIDENTAL STALL OR SPIN IS PRACTICALLY AN IMPOSSIBILITY.

WHAT IS IT?

*The New ("Funk")*

WHO HAS IT?

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Bismarck,

North Dakota

**WELCOME!**

**BENZ AIR SERVICE**

Lyle Benz, Mgr.

Hazen,  
G.I. Flight School

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Sales & Service

Let us Rebuild And Maintain Your AIRCRAFT!

Licensed A. & E.  
Sub Dealers for:

**AERONCA AND STINSON**  
YOUR PERSONAL PLANE

DROP IN AT A FRIENDLY PORT!

FLIES FOR OIL COMPANY

PEACETIME SAFETY "MINIMUMS" vs. 1948 BUDGET PROVISIONS (ANNUAL PROCUREMENT)

5780 PLANES

Needed to back up U.S. guarantees until world peace established

3000 PLANES

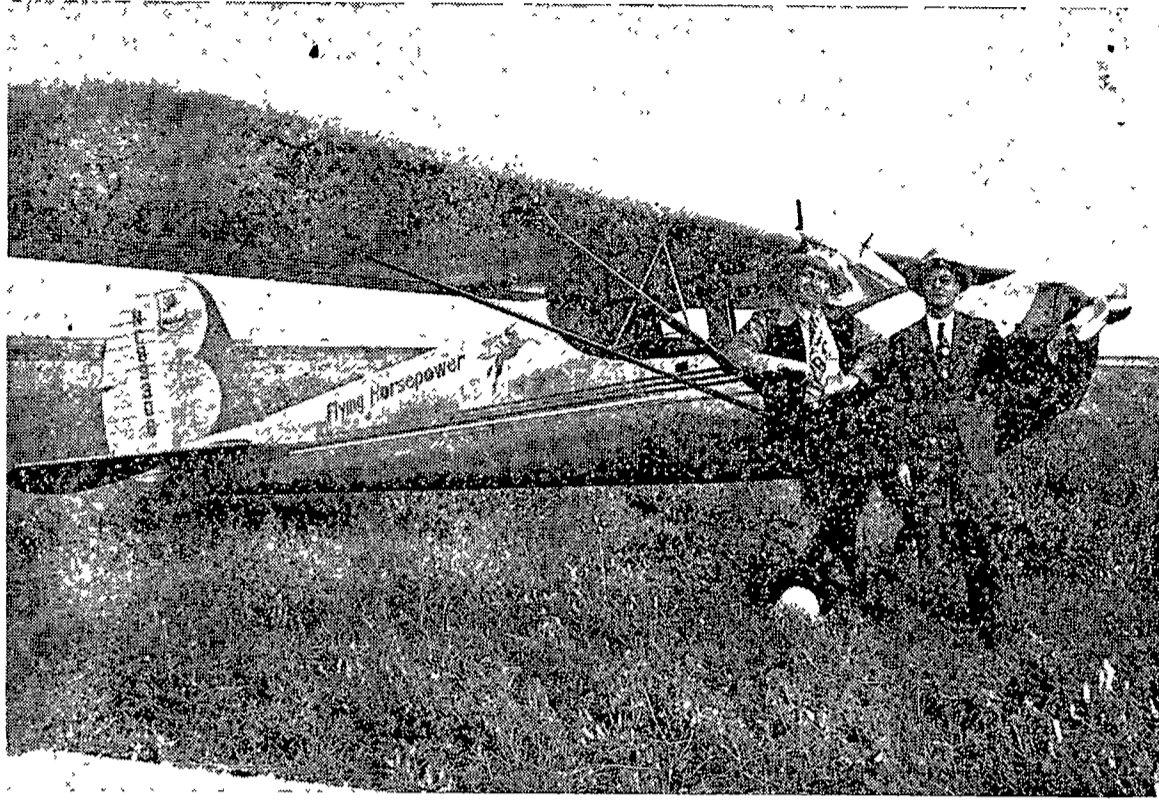
Needed after world peace assured

1324 PLANES

Quantity provided by 1948 Budget

(Congress Proposed to Go Upward)

RECOMMENDATIONS OF GOVERNMENT'S OFFICIAL AIR COORDINATING COMMITTEE



O. S. TRUESDELL

Pictured above is O. S. Truesdell, with whom flying is a business as well as a pleasure

Since his release from the armed services, Mr. Truesdell has been contacting airports in North and South Dakota in his capacity

as Sales Representative for Socony Vacuum Oil Company.

Mr. Truesdell meets with small town community clubs, and airport personnell in view of establishing an airport for their town. He says, "The Dakota's need more

landing strips adjacent their towns, because of the great number of pilots flying"

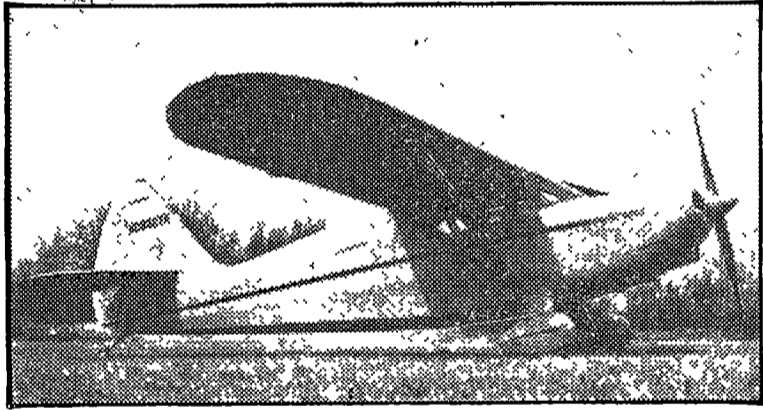
Mr. Truesdell was with the Air Transport Command during the war. Now he enjoys his own personal light plane

82 year old Senator Capper, the oldest member of congress, is learning to fly His instructor

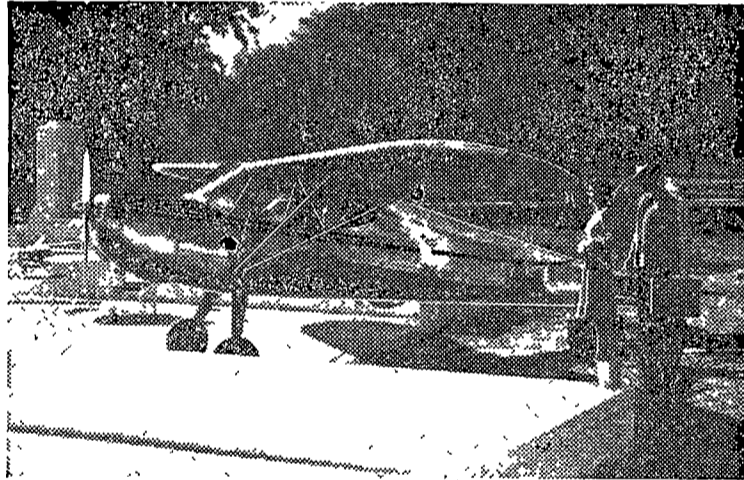
is Miss Pearl Robinson, chief instructor for the Congressional Flying Club

To avoid a second-hand air power, 25 per cent of military planes should be replaced each year

Stinson's New Utility Plane



ONE OF THE first Stinson Flying Station Wagons to come off the production lines in Wayne, Michigan, near Detroit, is shown above. It is America's first multi-purpose personal plane. The Stinson Flying Station Wagon can be used either as a 4-place passenger ship or as a cargo carrier. Powered by a six-cylinder 165-horsepower engine, the Flying Station Wagon takes off in 590 feet (fully loaded), and climbs at 755 feet per minute. The cruising speed is 125 miles an hour.

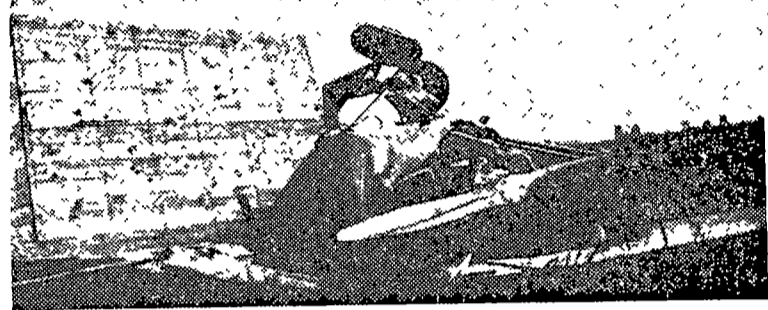


After spending an enjoyable week-end at the Lost Valley Ranch at Bandera, Texas, this couple is preparing to fly their new 1947 Cessna to their home a few hundred miles away. The trim, two-place, metal Cessna makes heretofore annual trips to your favorite vacation spot a week-end possibility. The Cessna 140 pictured above cruises well over 100 m.p.h. and carries 80 lbs. of luggage, ample for two people for as long as two weeks. The deluxe 140 with starter, generator, flaps and luxurious interior sells for \$3245 FOB Wichita, Kansas. The Cessna 120 is virtually the same plane less starter, generator, flaps, and with less expensive interior appointments and sells for \$2695 FOB Wichita. Both of these models are on display at Sax Aviation Co, Dickinson, N D

**Wind Destroys 13 Planes In Recent Storm**



Landon, N. Dak. Photos show 13 demolished airplanes at the Langdon airport. Hangars were completely destroyed in a recent tornado which struck that area. (Courtesy Fargo Form)



**CAA Office Moved To Minot**

The CAA Airports Branch Office, located above the Five Hall in Bismarck, will be moved to the Federal Building in Minot after September 15, 1947. This was necessary because the City Fire Hall is to undergo extensive remodeling soon. Fortunately, very desirable office space has been acquired in the Post Office at Minot and activities administered by this office will be from there.

The primary purpose of the Airports Branch District Office is the administration of the Federal Airport Act which offers, during a 7 year period, ending June 30, 1953, aid to any community in the establishment and or improvement of an approximate 50-50 basis. In addition, the services of airport

engineers, who are specialists in their own right, on the district staff, are available to any individual, city, or other agency in connection with local airport problems at no cost to them.

**How To Expand Plane Output Is Big Problem**

Worried, lest our nation face a future emergency with paper planes as in pre-Pearl Harbor days and our troops trained with wooden guns, government policy makers currently are wrestling with a \$64 question of "industrial expansability."

Experience shows the biggest bottleneck in mobilizing our air forces is delivery of equipment, (Continued on Page 7)

**SPECIAL - - SPECIAL**

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EXCELLENT CONDITION

LANDING LIGHTS-FUSELAGE TANK

AERONCA TAL — \$1150.00

JUST MAJORED & RECOVERED

1946 AERONCA CHIEF — \$1950.00

EXCELLENT CONDITION

STINSON JR. — \$1250.00

FOUR PLACE—JUST RELICENSED

P-T 26 — \$1650

VERY GOOD CONDITION

BT-13 — \$850

RUNS PERFECT

CUB CRUISER — \$1600

ENGINE JUST TOPPED — BEECH ROBBIE PROP

CUB COUPE — \$2000. WITH HANGAR

COMPLETELY REBUILT & RECOVERED

CONDITION ABSOLUTLY PERFECT

YOUR CHOICE OF EXCELLENT PLANES

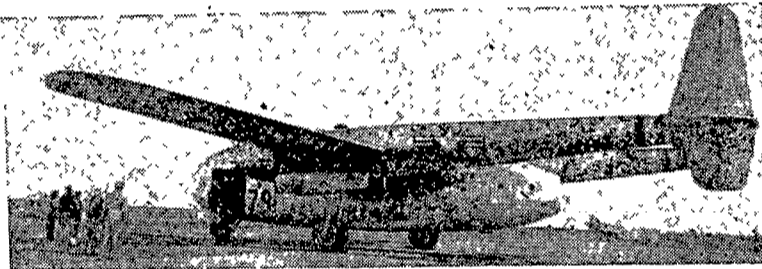
WRITE:

**DAKOTA FLYERS**

**WYMAN FEILD**

MOTT,

NORTH DAKOTA



The above picture shows a picture of the Army's C-42 Fairchild Packet. The photo was taken at the Hector airport, Fargo recently, while enroute to the coast.

**FILL ALL YOUR AIRCRAFT NEEDS**

at... **CAPITAL AVIATION CORP.**

Municipal Airport  
Bismarck, North Dakota

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# Classified Ads

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THE CLOSING-DATE FOR ALL ADS 20TH OF EACH MONTH

**FOR SALE—1941 CUB CRUISER.** PT 26 completely equipped for instrument and night flight operation 75 hours since major overhaul and wreath 100 hr inspection. Airplane in excellent condition. Price \$1600 Lake Region Flying Service, Inc, Bell airport — Devils Lake, North Dakota.

## Model Builders Meet At Bismarck

(Continued from Page 1)

this contest is to encourage model building in the middle west. The prize list will come from donations by Bismarck and Mandan merchants, who are decidedly in favor of this model building movement.

The Missouri Slope Airplane Modelers Ass'n was formed by Art May and Harvey Larson of Bismarck in March 1947. Art May is an old time model builder, and seeing the possibilities of such a club, got together with Harvey Larson and started a few models themselves to stimulate interest. All towns in the slope area were contacted. The idea was to have the Bismarck group be the governing club while the smaller towns were to have smaller group clubs of their own. The response was not as good as expected. However, May and Larson went ahead, and meetings were held at Bismarck every two weeks through the winter and spring at the Bismarck high school. George Schaumberg, city recreational director, was contacted, and through help from him, models were flown in the Bismarck Memorial building early this spring on Sundays. After the boys cracked-up some of their planes, learning to fly, the city built the boys a ring, regulation size, in Tatly Park. The ring now is in process of being black-topped which will make a first class flying circle open for anyone interested in the art and hobby of model plane flying.

This meet will be an annual affair. A Dutch Lunch will be served on Saturday and Sunday, and a banquet on Sunday evening. Cash prizes will be awarded winning contestants.

The flying will be done on a runway at the Bismarck Municipal port. Planes are being made for 3 circles to be open at one time. Models built by any group may be flown in the open classes, and a special flying scale class has been planned, other than usual agenda.

Flying will be from 7 a.m. Saturday until 7 p.m. Sunday. If flying is not permissible outside, planes will be flown in the large hangar.

It is necessary to have entries in early so necessary arrangements can be made for accommodations.

The event is sponsored by the Bismarck Air Scout troupe, under the leadership of Harrison Monk. All entries may be sent to: Arthur May Missouri Slope Airplane Model Builders ass'n, 908 2nd Street, or to Harvey Larson, secy. 908 2nd Street, and to Harrison Monk, Scoutmaster, Air Scouts, 901 Avenue E

## How To Expand Plane Output

(Continued from Page 6)

not recruiting and training personnel. Industrial expansability, therefore, is the key to adequate security at low cost.

One of the principal problems is the strain on management when technical leadership has to be spread out. The World War nucleus of 6,000 people trained in engineering supervision event-

ually was spread over an employment of more than 2,000,000. Starting from 16 plants, this talent was sprinkled among 46 plants. Much time was lost and costs mounted because experience was spread so thinly.

### "For Want of a Nail"

Another time-consuming difficulty is that of speedily expanding the chain of suppliers for materials and parts. Ordinarily 85 per cent of a plane is produced right in the shops of the peacetime aircraft industry. During World War II, 45 per cent of the processing was farmed out. Unless suppliers, by practicing production, are kept abreast with the aircraft industry, they cannot deliver when needed. Fast, efficient production depends on flow of castings, forgings and other processed materials from suppliers to the producer.

### Keep Factories Ready

One of the most troublesome problems, created by a trickle of output, is that hand-made planes must be completely re-designed for mass production. When Pearl Harbor struck, we had just one model ready for production. It cost \$5,000,000 to re-design one heavy bomber model for mass output. Largely for this reason, President Roosevelt's 50,000-plane goal, announced in 1940, was not reached until 1943.

The principle behind industrial expansability is as simple as the fact that an idling engine guar-

DAKOTA FLYER

Published monthly at the office of the Mott Pioneer Press, Mott, North Dakota

GENEVA SCHOW  
Owner-Editor

### SUBSCRIPTION & ADVERTISING RATES

SUBSCRIPTION RATES —  
\$2.00 . . . . . Per Year.

### ANSWERS TO PLANES QUIZ FOUND ON PAGE 2

1. (b).
2. (c).
3. (c) In addition, 170,000 student pilots were certificated in 1946.
4. (c).
5. (c) The Wright brothers hit about 30 mph. in first plane.
6. (c).
7. True. Original B-29 development contract was let in 1935.
8. (c).
9. (c).
10. True.

### "CHECK MOVEMENTS OF ALL CONTROLS BEFORE TAKE-OFF"

antees quicker get-away. Only by keeping factories moving can top-speed plane production be reached in an emergency.

Tear out application blank and mail to a contest director

## MISSOURI SLOPE U-CONTROL CONTEST 27 & 28 SEPT. 1947 BISMARCK MUNICIPAL AIRPORT

NAME \_\_\_\_\_ AGE \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
TYPES OF MODELS (NUMBER) \_\_\_\_\_  
FLYING SCALE \_\_\_\_\_  
SPEED \_\_\_\_\_  
STUNT \_\_\_\_\_

AMA Rules will be observed. No entry fee. Mail application to

Missouri Slope Airplane Modelers Assc.  
**ARTHUR J. MAY**   **HARRISON MONK**  
**HARVEY C. LARSON**   **Scout Master, Air Scouts**  
908 Second Street   901 Avenue E  
Bismarck, North Dakota                                     Bismarck, North Dakota  
**FREE HOUSING AND SHOP FACILITIES**

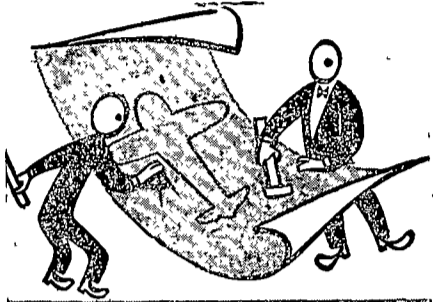
**AVIATION INSURANCE AT A SAVING**  
**JAMES N. RAY COMPANY**

Bismarck, North Dakota  
 LET A PILOT FILL YOUR AIRCRAFT FINANCING AND INSURANCE NEEDS  
 Phone-440 114 W. Brdwy

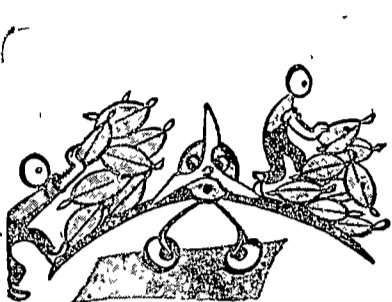
**Aviation — Finance — Service**  
 LOW — RATES — PROMPT SERVICE  
**NORTHWEST FINANCE COMPANY**

GEO. STEVENS, Mgr.  
 First Bldg South of Prince Hotel  
 110 Third St. PHONE 923 Bismarck, N. D.

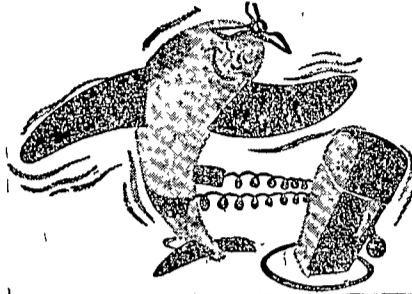
**IMPORTANT STEPS IN BUILDING AIRCRAFT**



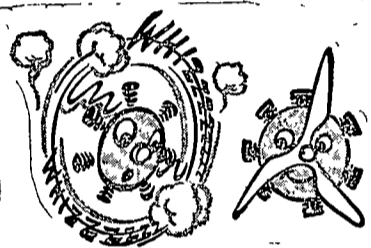
Before a test model is built, acres of blueprints are drawn. Data are checked and rechecked and thousands of man-hours go into design analysis. Landing gear alone on one new model requires as many as 500 drawings. The blueprints for one plane can cover a four-lane highway for a distance of 20 miles.



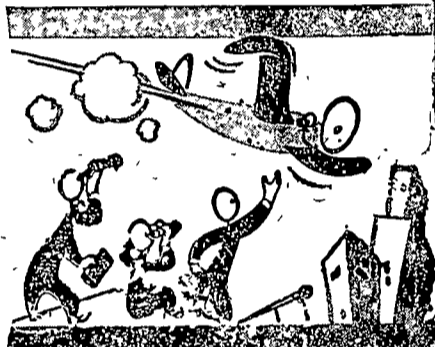
Super-strength, built into each new plane, springs from numerous and exacting strain tests, most familiar being the static load, or "sand-bag" tests. Strain in structural material is measured to 0.00001 inch per inch, and thousands of readings on horizontal and vertical movement are taken in a single wing test.



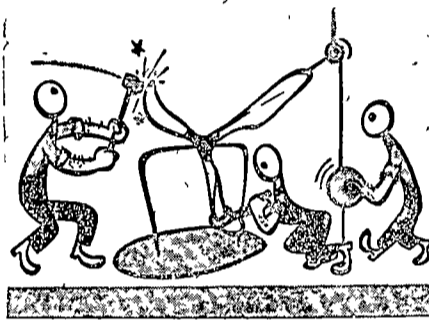
V-i-b-r-a-t-i-o-n, because of its effect on the life and strength of the materials in a plane's structure, receives careful attention of testing engineers. Both on the ground and in flight the plane is subjected to rigorous high-frequency vibration tests. Delicate instruments, especially, must give reliable performance over a wide range of vibration frequencies.



Gruelling test runs are given to new engines. Run repeatedly far above normal peak power, they also are pushed beyond normal limits by frequent starting and stopping. Top performance must be delivered under extremes of temperature and atmospheric pressure. Engine parts are machined to ten thousandths of an inch accuracy.



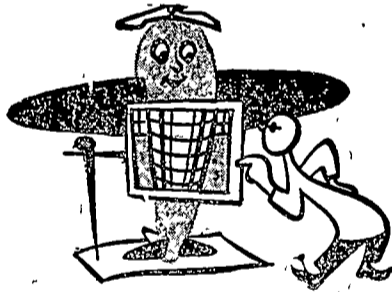
During the life of each plane and all important parts, careful performance records are kept. For example, if an engine is moved from one position to another on a multi-engine airplane, the engine maker is advised. Never satisfied, the industry is campaigning to speed the exchange of operational information between the government operators and manufacturers.



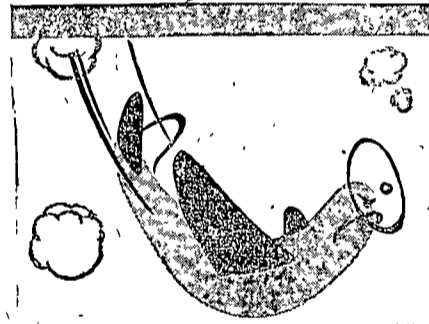
Propellers undergo tests for every manner of stress and strain. Twisted, stretched and compressed by special rigs on the ground, they also go through rigorous flying maneuvers. Special attention is given to the amount of vibration set up at various speeds. Propellers with adjustable blades, "controllable pitch props," are subjected to many sudden adjustments.



Instruments must be delicately accurate yet rugged enough to defy rough treatment. Years of research and testing go into a new instrument before it is approved. One company, making automatic pilots since 1917, recently completed three years of laboratory tests on a new model automatic pilot. Instruments undergo thousands of hours of checking, exposed to extremes of vibration, heat, cold, moisture, and dust.



Precise skill ferrets out invisible defects in the materials and metals that go into an airplane. Materials undergo chemical and physical tests. Metals are X-rayed, subjected to sensitive light rays, or given a magnetic testing to locate and eliminate flaws. Imperfections don't escape detection, however tiny.



Championship teamwork is required of the parts in a plane. Having reached peak perfection individually, their first real chance to click as a team comes with flight tests. Every trick play in nature's book is thrown at a new plane to prove its mettle. No part can muff an opportunity for star performance. The plane is run through every conceivable combination of natural forces and man-created hazards.