These Firemen Jump to Work

FROM the top of a mountain deep in a national forest, a lonely lookout slowly scans the neighboring slopes. Suddenly his eyes focus on a tiny puff of smoke. Within a few minutes a plane loaded with paratroopers heads for the fire.

These paratroopers carry no guns. They are the "smokejumpers" of the U. S. Forest Service, trained to parachute into isolated wood areas and put out a fire with only the tools dropped alongside them—there seldom is water. Then they must find their way afoot to the nearest road and civilization. In one year alone, the airborne firemen made 1,236 individual jumps, fighting fires in public and private forests in the Northwest.

Smokejumpers of the Forest Service get ready to step into space to fight fire below. Various kinds of planes, including the reliable old DC-3 —and even ancient Ford Tri-Motors—are used.

Hand tools are jumpers' main fire-fighting equipment. They don't attempt to extinguish blaze, but isolate it by cutting a clear path around it, then let it burn out. Moist earth is turned to prevent smoldering. Smokejumpers are most often used against small fires—frequently caused by lightning—in areas remote from roads and trails. They also rescue lost or injured persons.

Parachutes used by smokejumpers have two narrow slots cut in rear, permitting jumper to guide descent, pick landing. Slots were developed by a smokejumper.

Portable short-wave radios keep jump teams in contact with ranger station. This and other equipment is dropped from plane, but men carry own food supply.

Fully equipped smokejumper wears high-collared canvas coveralls and football helmet with wire-screen face guard to protect him during a treetop landing. Back 'chute is released by static line; chest 'chute is emergency spare. Leg pocket holds rope for slide from a tree to the ground.

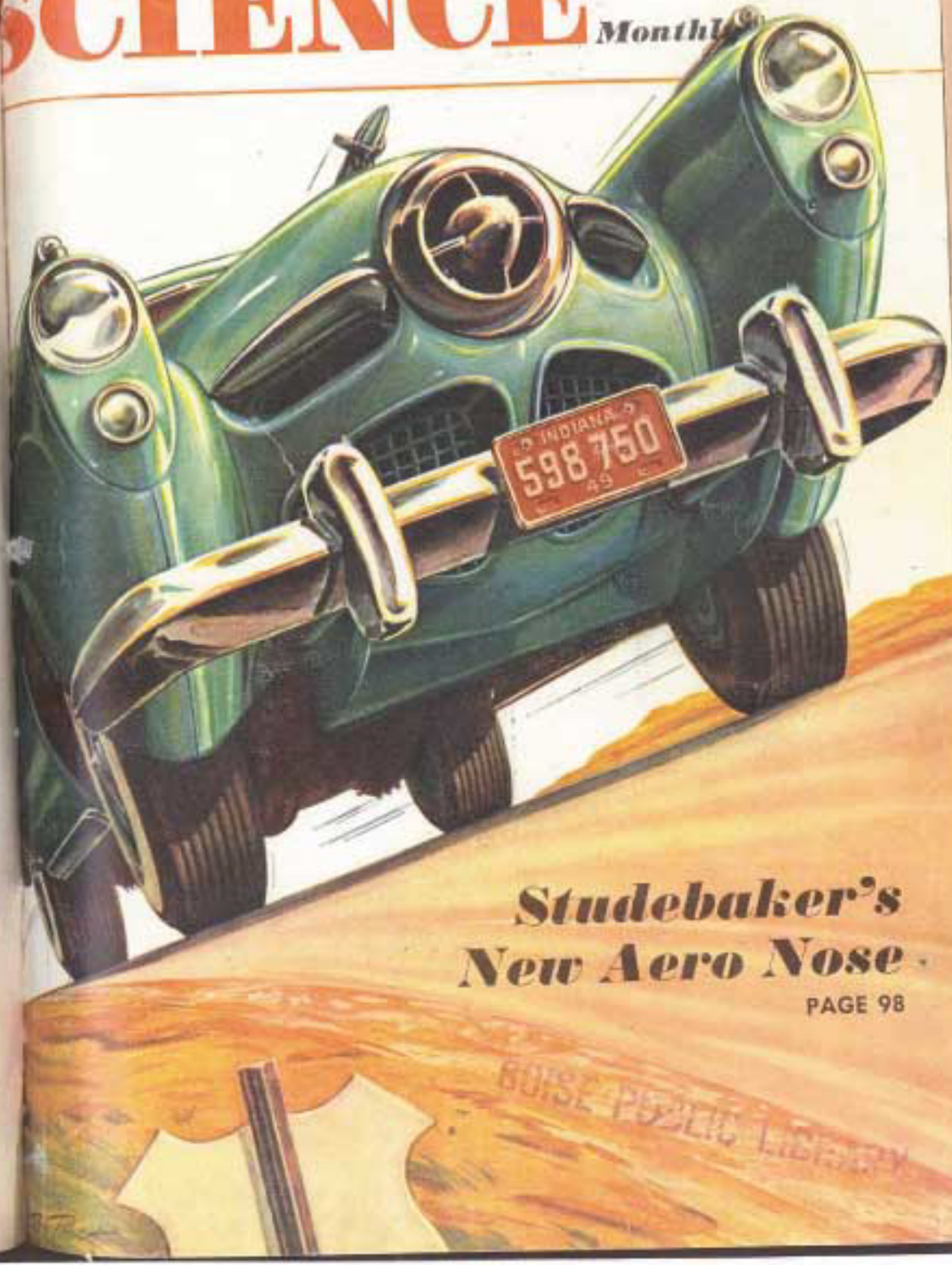
POPULAR SCIENCE

Sept. 1949

25¢

Monthly

29 1949



Studebaker's New Aero Nose

PAGE 98

BOISE PUBLIC LIBRARY

FOUNDED 1872 — VOL. 155, NO. 3

POPULAR SCIENCE

MECHANIX ILLUSTRATED Monthly

SEPTEMBER, 1949

Perry Githens, EDITOR

Fred O. Newman, Volta Torrey
MANAGING EDITORS

Howard C. Jensen, ART EDITOR

Harry Walton, MECHANICS & HANDICRAFT EDITOR

Hartley E. Howe, Frank Bowsame, Jr.
ASSISTANT MANAGING EDITORS

ASSOCIATE EDITORS: Howard Allaway, Alden P. Armagnac, Devon Francis, Richard Gilvine, Robert Gorman, Sheldon Gallager, Herbert Johansen, Martin Mann, Denis Snelgr, Robert P. Stevenson.

ART DIRECTOR: Harry Samuels. ART ASSOCIATES: Herbert Anthony, Ilyc Karmiski, Jr., Richard Meyer, Edward Hallstrom, Frances Cooper (Production).

EDITORIAL ASSISTANTS: Julia Chumel, Beatrice Eldridge, Carol Ennis, Charlotte Korch, Gerngette Sparks, Ruth Westphal.

STAFF PHOTOGRAPHERS: W. W. Mortz (Chief), Hubert Luckett, Orlando Garcia (Darkroom).

WESTERN EDITOR: Andrew R. Boone (Los Angeles).

WASHINGTON CORRESPONDENT: John F. Lansbrack

EDITORIAL OFFICES: 380 Fourth Avenue, New York 10, N. Y. Manuscripts and illustrations submitted at regular rates should be so marked, addressed to "The Editors" and accompanied by stamped, self-addressed envelope. Popular Science Monthly exercises all possible care but assumes no responsibility for unsolicited material.

TRADE NAMES by which products or materials are commonly known are indicated by the symbol ®. These names may or may not be Registered Trademarks (see PS, Mar. '49, p. 294). This symbol is used only as a service to readers and Popular Science Monthly assumes no responsibility by use or omission.

Godfrey Hammond, PUBLISHER

Stephen P. Gleason, ADVERTISING DIRECTOR

Edward Roeder, Jr., ADVERTISING MANAGER

ADVERTISING OFFICES: NEW YORK—353 Fourth Avenue; CHICAGO—360 North Michigan Avenue; DETROIT—820 Book Building; SAN FRANCISCO—1606 TWA Building; PORTLAND (ORE.)—907 Terminal Sales Building; CLEVELAND—326 Citizens Building; LOS ANGELES—Granada Building.

Popular Science Monthly is published monthly by the Popular Science Publishing Co., Inc., Godfrey Hammond, President and Treasurer; S. v. Wilson, Harrison J. Brown, Gordon T. Gleason, Vice-Presidents; F. H. Bright, Secretary. Entered as second-class matter Dec. 08, 1918, re-entered as second-class matter June 25, 1948, at the Post Office in New York, N. Y., under the Act of March 3, 1879. Published only as second-class matter at Dayton, Ohio. Entered as second-class matter at the Post Office, Toronto, Canada. Printed in U.S.A. Copyright, 1949, by Popular Science Publishing Co., Inc. All rights covered in the United States, Great Britain, and in all countries parties to the International Copyright Conventions and Pan-American Copyright Convention. Yearly subscriptions to United States, its Possessions and Canada, $3.00 (2 years, $5.50; 3 years, $7.50); foreign countries $4 per year rate. Subscribers must notify us of change of address four weeks before next publication date. Be sure to give both old and new addresses. Duplicate copy numbers, Vol. 155, No. 3,

TABLE OF CONTENTS

Science News

March of Science.....110
New Plastics Conduct Current.....119
Huge Magnet to Curve Cosmic Rays.....129
So You Think 32° Is Freezing?.....138

Science at Work

Paving a Big Gutter.....97
Mexico Gets Giant Diesels.....109
U. S. Making Gasoline from Coal.....114
Glass Smock Stops Atom Rays.....136
Aluminum Roof Strong as Steel.....137
Lubricant Baked into Engine Parts.....140
"Flying" Kitchen Tests Cakes.....149
Helmet Helps Smog Study.....153
Water Stored Under Street.....156
New Tanks Hurdle Ditches.....168

PS Features

How They Put Up a Skyscraper.....126
Generator Hurls Life-Size Lightning.....130
Paul Bunyan Comes to Life.....141
Fitting the Glove to the Job.....150
These Firemen Jump to Work.....160
How to Make Contour Maps.....180
Dentist Builds Super Models.....197
Polarized Light Experiments.....234
Radar Reads Rain Signs.....239

Aviation

Scale Feels Jet's Muscle.....113
5,000-Hp. Jet Unveiled.....118
Sonic Models Predict Jet Tricks.....124
Turboprops Power Flying Boat.....138
What's New in Aviation.....142

Automobiles

Studebaker's New Aero Nose.....98
Crosley Strips to Racer.....120
New Bus Lets Riders See Sights.....129
Jeep Tells "American Story".....145
Buick Slicks Up Its Big Little Car.....162
Trailer "Treadmill" Tests Cars.....167
Gus Fixes a Traffic Rap.....170
Hints from the Model Garage.....174
Anchors Repair Aluminum Head.....176
Rear Deck Raised Hydraulically.....177
Blinker Also Gives Work Light.....178
Motorbike Has Two Speeds.....236

Inventions

Paper Bazooka Kills Bugs.....105
New Ideas from the Inventors.....106
Machine Vends Roasted Coffee.....108
"Tan" Meter Times Sunbaths.....123
Combine Cools Driver.....129
Folding Crate Stops Thieves.....152
Ax Is All-Purpose Tool.....156