

Founded in 1872  
Vol. 181 No. 6

# Popular Science

Mechanics and Handicraft®  
Popular Science®  
MONTHLY

Robert P. Crossley  
Editor

HOWARD JENSEN  
Art Director

Assistant Managing Editors  
Kendall W. Goodwyn  
Robert P. Stevenson  
Senior Editors  
Alden P. Armagnac  
Everett H. Ortnier  
Automobile Editor  
Devon Francis  
Electronics and Technical Editor  
Hubert Luckett  
Photography Editor  
Albert L. Hering

Boating Editor  
Jim Roe

Home Workshop Editor  
Sheldon M. Gallagher

West Coast Editor  
Wesley S. Griswold

Associate Editors  
Frank Dorr, Herbert O. Johansen  
Alex Markovich, Joan Steen  
Ruth Westphal

Editorial Assistants  
Eleanor Crapullo (Chief), Anna Dallas  
Barbara Weisheit, Dorothy Zallen

Art Editors  
Herbert Anthony  
Harry Samuels  
Associate Art Editor  
Richard J. Meyer  
Art Associates  
Robert Martin, Kenneth Buddington  
Art Production Manager  
Henry W. Kazmirowski  
Photography  
W. W. Morris (Chief)  
Robert D. Borst

JOHN R. WHITING, Executive Vice-President and Publisher

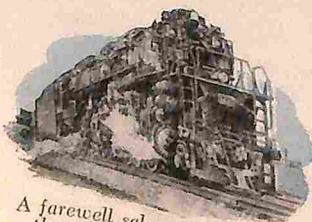
December 1962

Cover painting by  
Ray Ploch

Germany—March, 1945  
With the U. S.  
and Russia closing in,  
who would get the  
rocket secrets of  
Peenemünde? Read  
how Dieter Huzel, on  
orders from Wernher  
von Braun, saved them  
for America. Page 67.



Take a ride in the Scott 17.D.75 with  
PS Boating Editor Jim Roe. Verdict:  
It's got everything! Page 112.



A farewell salute to the Mallets  
—the iron monsters that cut our  
mountains down to size. Page 84.

2 POPULAR SCIENCE DECEMBER 1962

## SPACE AND AVIATION

- Keeping a Date with Venus • 43
- Peenemünde to Canaveral • 67
- Inside Our First Space Station • 96

## CARS AND DRIVING

- Transistor Ignition: How Good? • 53
- Latest Sporty Cars from England • 64
- Renault with an American Accent • 66
- Trouble-Shoot for Young Mechanics • 70
- What You Should Know About PCV • 92
- Shifting to a Floor Shift • 126

## SCIENCE AND INVENTIONS

- Teaching Machines—Do They? • 58
- ... plus "PS Teach-Yourself Chase"
- Hot Rod on Skis • 75
- Depression: Science Vs. the Blues • 79
- Second Deck Makes Bridge Biggest • 90
- The Ship That's Built to Sink • 103

## BOATING

- Boat Elevator Speeds Drydocking • 72
- You Name It—This Boat's Got It! • 112
- What's New in Boating • 148

## SPECIAL REPORTS

- Blizzard Busters of Berthoud • 48
- Those God-Almighty Mallets! • 84

Copyright © 1962 by Popular Science Publishing Co., Inc. All rights reserved

POPULAR SCIENCE 90<sup>th</sup> YEAR

## HOME AND SHOP

- Round Shapes from Flat Boards • 116
- Simple Bending Brake for a Shop • 130
- 2 Trains, Different Speeds, 1 Track • 136
- How to Find Space for a Shop • 140
- Staying Friends with a Fireplace • 144
- First Space-Age Saber Saw • 152
- You Dial Any Speed on This Drill • 154
- What's New in Tools • 158

## PHOTOGRAPHY

- A Photography Gift for Christmas • 108
- 3 Tips for Better Photos • 139

## ELECTRONICS

- Carpenter's Level Sounds Off • 122
- Zenith's New Record Changer • 150

## AUTO REPAIRS

- Hints from the Model Garage • 36
- Gus Puts the Brakes on a Fast Deal • 160

## PICTURE NEWS

- Winged Boat Skims Water • 63
- Super-Truck for the Desert • 73
- Sub's-Eye View of Mystery Weapon • 83
- Tank Keeps Hot Fuel Real Cool • 106
- Auto Engine Powers Motorcycle • 107

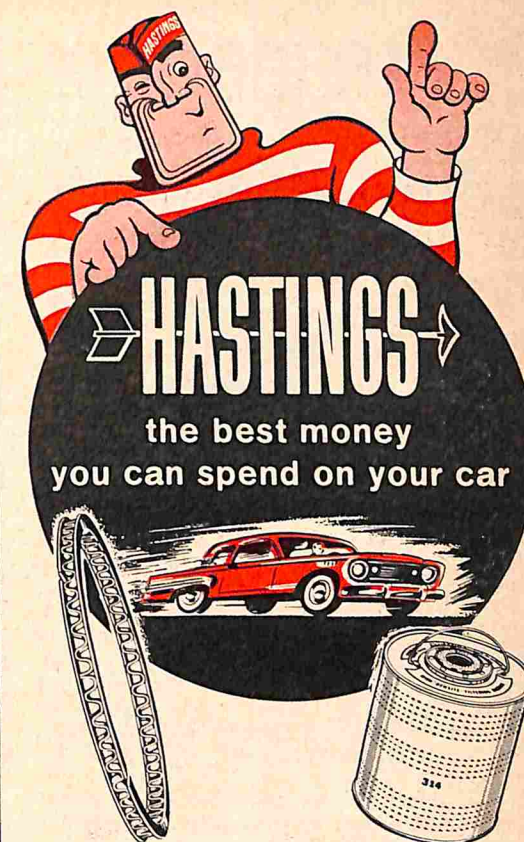
## SHORT CUTS AND TIPS

- Easy Way to Cut Glass Disks • 121
- Can of Fat Is Handy in Shop • 124
- Power Socket Hidden in Bumper • 125
- Nuts Molded from Epoxy Cement • 129
- Roller to Measure Distance • 133
- Casting a Concrete Planter Box • 138

## EVERY MONTH

- PS Readers Talk Back • 4
- The March of Science • 13
- Getting Ahead • 20
- Shop Talk • 24
- Detroit Report • 40
- I'd Like to See Them Make • 74
- New Ideas from the Inventors • 100
- Wordless Workshop • 134

24 Printed in U.S.A.



**HASTINGS**  
the best money  
you can spend on your car

## HASTINGS PISTON RINGS

### Stop Oil Pumping

Get new car power and performance from your present car with Hastings Piston Rings... motor-engineered exclusively for replacement. Your Hastings re-ring job will pay for itself in oil and gas savings!

## HASTINGS OIL FILTERS

### Keep Oil Clean

The only filter made with DENSITE—a super-filtering material that keeps oil visibly clean and free of abrasives from one filter change to the next. Hastings is your best bet, too, in air, diesel fuel and gasoline filters.



## CASITE ADDITIVES

### Make Your Car Run Better

Tune-Up frees sticky valves, rings, \$1.25. Motor Honey quiets engines, \$1.30. 3-C stops hydraulic lifter noises, \$1.50. Smooth-Seal stops transmission leaks, jerks and jars, \$1.95. Leak-Stop stops cooling system leaks, \$1.00. Stop-Rust inhibits rust and neutralizes acids, \$1.00. Results guaranteed or double-your-money-back.

Ask Your Service Man for Hastings Products

**HASTINGS MANUFACTURING COMPANY**  
HASTINGS, MICHIGAN



DECEMBER 1962 35 CENTS

# Popular Science

Monthly

Inside Our First  
Space  
Station



**Extra:** First Time Ever in a  
**TRY-IT-YOURSELF**

**Car Features:** How to Install  
Transistor Ignition—Positive Crankcase Ventilation

MINN 81  
MINNEAPOLIS 18 MINN  
3222 ARTHUR ST NE  
G D ANDERSON  
4  
MID54767 278004DECO

SON