

Popular Science

THE What'S New MAGAZINE"

DECEMBER 1971 Founded in 1872/Vol. 199, No. 6

HIGHLIGHTS OF THIS ISSUE:

Converter Turns Your B&W TV into a Color Set PAGE 45 color Set Save Color Set Page 45 color Set Page 4

Say, Smokey—a Steam Engine? PAGE 48

Smokey Yunick joins talents with inventor Jim Oliver to build a rotary-expanded Counterfait W. The Counterfeit Watch Racket PAGE 54

Can you spot the fakes? Beware—they look good, but are worth less than \$5. Warning—Tsunamis! PAGE 62

Now science finds a way to warn against those great killer sea waves.

All You Need to Know About Adhesives PAGE 92 PS report gives you the most comprehensive chart ever to appear in a consumer how to select and use the right one.

Four Ways

Adhesives

Power Tools

ELECTRONICS

EVERY MONTH

Look and Listen

for Your Home

Double-Duty Centerpiece

Classic Picture Frame

Mod Clock of Manmade Marble

Three Projects for Hobbyists

Bonus Shop Tricks You Can Do with a Lea

Add-On Converter
Walkie Turns Your B&W TV into a Color 61

All You Need to Know About

How Electronics Can Lock

with a Jointer
Seven Smart Tricks for a
Wood Lathe

Walkie-Talkie Flashlight

They've Changed the Rules for Marine Radio

Ultrasonic Alarm
Shoos Off Intruders

BOATING/OUTDOOR RECREATION

4 Cylinders, 4 Carbs, 4 Strokes, and 500cc of Action

CO2 Fun Gun Fires Like 6-Shooter

New Outboard: 65 Hp from a 3-Cylinder Lightweight......

PS Readers Talk Back

Mod Glow Lamp and a Knee Easel 86

COVER PHOTO BY ORLANDO GUERRA

25-PAGE WINTER WORKSHOP The Furniture That Serves You

Eugene Watson
Executive Vice-President

Vice-President Production

Vice-President and Advertising Director

STUART BERNARD Vice-President Corporate Advertising Services

355 Lexington Ave., New York, N. Y. 10017

PUBLISHED MONTHLY By Popular Science Publishing Co., Inc., 355 Lexington Ave., New York, N. Y. 10017.

ADVERTISING OFFICES

Return postage must accompany all manuscripts
Return postage must accompany all manuscripts
submitted. We cannot be responsible for the loss
submitted.

C. P. GILMORE . Executive Editor KENDALL W. GOODWYN • Managing Editor
HARRY SAMUELS • Art Director

HUBERT P. LUCKETT

Editor-in-Chief

GROUP EDITORS

ARTHUR FISHER • Science & Engineering EVERETT H. ORTNER • Consumer Information ROBERT P. STEVENSON • Projects & Activities

SENIOR EDITORS Herbert Shuldiner, David D. Vigren AUTOMOTIVE EDITOR Jan P. Norbye BOATING EDITOR Jim Roe HOME WORKSHOP EDITOR Alfred W. Lees ELECTRONICS EDITOR William J. Hawkins ASSOCIATE EDITORS Ruth Westphal,
A. J. Hand, John R. Free, Ray Hill ASSISTANT EDITOR Kenneth Furie MIDWEST EDITOR E. F. Lindsley DETROIT EDITOR Jim Dunne WEST COAST EDITOR Jim Davis EUROPEAN EDITOR David Scott ART EDITORS Herbert Anthony, Richard J. Meyer, W. David Houser ART PRODUCTION MANAGER Henry W. Kazmirowski EDITORIAL ASSISTANTS Anna Dallas (Chief), Marilyn Bender, Floyd Ford, Dorothy Fox, Susan Licato

E. S. DUFFIELD

MICHAEL HADLEY

Circulation PETER CALVO

FRANCIS X. WILKINSON

EDITORIAL OFFICES

SUBSCRIPTION SERVICE

SUBSCRIPTION SERVICE

New or Renewal Orders: Send to: Popular Science
Subscription Department, Boulder, Colorado
Subscription Department, Boulder, Colorado
Subscription Department, Boulder, Colorado
Subscription Senders, S11, 3 years \$15 in
Boulder, Single
Lyear \$9.50, 2 years \$18, 3 years \$25. Single
Lyear \$9.50, 2 years \$18, 3 years \$25. Single
Lyear \$9.50, 2 years Canada.
Copy 60¢ in U.S. and Canada.
Copy 60¢ in U.S. and Canada.
Subscription orders processed
Subscription adjustments: Write to Robert
All subscription adjustments: Write to Robert
All subscription adjustments: Write to Robert
All subscription orders
Subscription orders
Subscription adjustments: Write to Robert
All subscription orders
Subscription adjustments:
Write to Robert
Mriana, Popular Science, P.O. Box 2871, Boulder,
Harlan, Popular Science, P.O. Box 2871, Boulder,
Harlan, Popular Science, P.O. Box 2871, Boulder,
Harlan, Science, P.O. Box 2871, Boulder,
Harlan, Second-class postage paid at New
Mr. Harlan, Second-class matter at the Post Office
Intered as second-class matter at the Post Office
Entered as second-class matter at the Post Office
Intered as second-class matter at the Post Office
Entered as second-class matter at the Post Office
Intered as sec

ADVERTISING OFFICES

NEW YORK: 355 Lexington Ave. (10017), Tel.
212-687-3000; cHtCAGO; 401 N. Michigan Ave.
212-687-3000; cHtCAGO; 401 N. DETROIT: 1716
(60611), Tel. 312-527-0550; DETROIT: 1716
(60611), Tel. 312-527-7060;
Fisher Building (48202), Tel. 313-872-7060;
Fisher Building (48202), Tel. 315-872-7060;
Los Angeles (Pacific West Coast): 3550 Willos Angeles (90005), Tel. 213-380-shire Blvd., Suite 908 (90005)



Plymouth Cricket, with more room

inside than Pinto, Vega or VW. It's a very big little car.

Deft. The beautiful finish for a beautiful finish.

When it comes to wood staining and finishing, Deft has all the answers. Our products are all you need to make wood beautiful. And you can stain and finish in the same day!

Deft's wood stains are packaged in either standard wood tones (nature's colors) or "right on" decorator colors to add zest to your color scheme.

Your choice: vinyl wood stains-no mess-cleanup hands and tools with water. Or lacquer aerosol stains for hard-to-brush places, shading and toning effects.

To protect wood surfaces use Deft's Interior Clear Wood Finish. Fast drying, it's non-yellowing and gives a bar top finish. Spray or brush on.

Deft has five beautiful instruction folders all about staining and finishing wood They're yours free.

AR quarantees its published specifications

At Acoustic Research we believe that the publication of complete performance data on our high fidelity components is obligatory. Otherwise, our guarantee would have little meaning.

Find out just what AR guarantees that its products will do. Mail the coupon below, and detailed technical literature will be sent to you free of charge.



Acoustic Research, Inc. 24 Thorndike Street Cambridge, Mass. 02141 Dept. PS-12

Please send measured performance data on AR products to

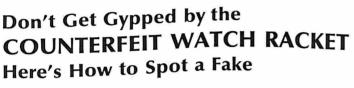
Popular Science

THE What'S NEW MAGAZINE

Add-On Converter Lets You View Real

COLOR TV

On Your Black-and-White Set



SMOKEY YUNICK REVEALS Details About Unique Low-Pollution Steam Engine

TSUNAMIS!

How Science Predicts Those Giant Sea Waves

WHICH GLUE IS BEST FOR EACH JOB?

6-Page Special Tells All You Need to Know About 117 Adhesives

PRESENTING THE

AZER –
for All Seasons

KED WORKSHOP

Suild Furniture
Suild Furnitur

and 7 More Projects

inter

...plus a dozen other exciting articles, What's New Digest, 11 great every-month features

