

HOME-IMPROVEMENT ISSUE

# POPULAR SCIENCE

September 35¢

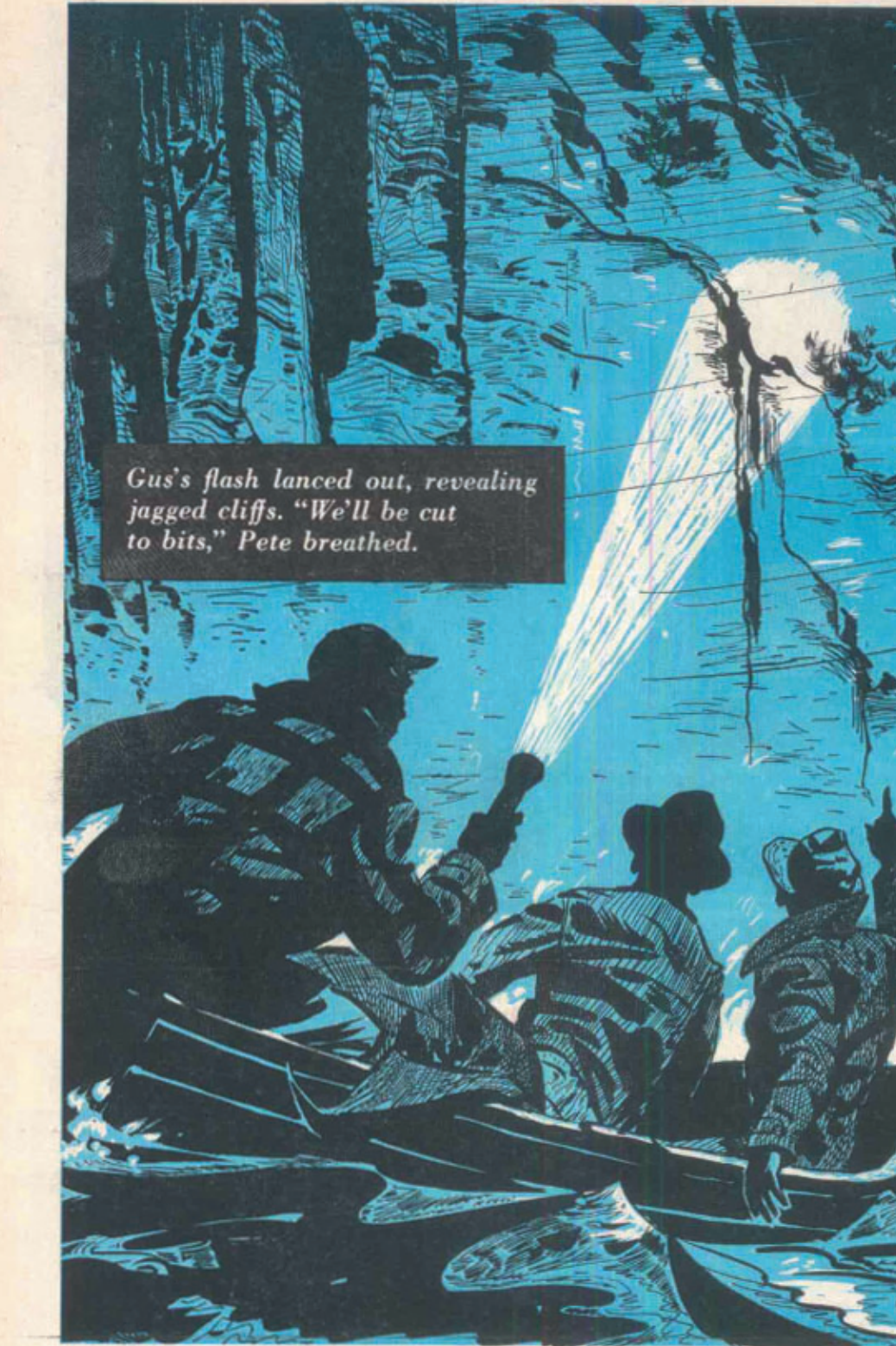
MONTHLY



**OHIO  
SHOWS:**

**How They Build Super Roads**

PAGE 156



*Gus's flash lanced out, revealing jagged cliffs. "We'll be cut to bits," Pete breathed.*

# Gus Takes to Water

By Martin Bunn

GUS WILSON, genial proprietor of the Model Garage, and two fishing buddies were on their long-planned vacation at last. And they were having the time of their lives. On a sheltered cove of a lake in the rugged wilderness of the northeastern highlands of Minnesota, Gus had just hooked the biggest fish of the trip.

"Keep him out of the brush!" Pete Vancourt whooped.

Elmer Stoddard worked determinedly with the oars to keep the 14-foot, flat-bottomed skiff away from the shore. Gus, in mackinaw and battered hat, leaned into his rod as a monster northern pike went into the air.

"Wheel!" Gus yodeled, and his joyous shout was tossed back from the forested peaks surrounding the lake.

Gus finally brought the great pike in close.

"Got him!" yelled Elmer, as he batted the fish over the head with a wild swing of an oar.

"Man, what a fish!" Gus exulted, admiring the green, pale spotted prize. "This one alone makes the long trip up here worth while."

"Sure does," Pete agreed. "We'll fish this cove again tomorrow."

Gus looked up at the evening sky. "Right now, we'd better head for camp—we've got 10 miles of lake to cross."

"Let's go," said Pete. He pulled the starter cord on their three-horse Lauson motor. "We'll make camp by dark."

THE motor sprang to life and the skiff swung around. As they came out of the sheltered cove they met a stiff headwind which was beginning to pick the lake up into curling whitecaps, and a lashing of spray came over the bow.

"Hey," Elmer complained, "Quarter those rollers, Pete—what are you trying to do, drown us?"

"Camp," Pete reminded him, "is straight across the lake. I'm not running in circles for a little blow like this. Water'll do you good, Elmer—you haven't washed up since we left home."

"We won't make camp by dark," Gus remarked, after a while. "This wind is holding us back. We should have



brought Elmer's six-horse motor along."

"Pete's three-horse is better for trolling," said Elmer, tossing a coin expertly in the air and catching it. "Heads, you do the cooking tonight, Gus—tails you wash dishes."

"I lose either way," Gus protested, grinning, wiping the spray from his leathered features. "Hey, what's wrong with the motor?"

Even as Gus spoke the motor suddenly died.

"Can't be out of gas," Pete said. "I just filled it today."

"Didn't sound like gas to me," Gus said, whipping out a flashlight. "Keep her head into the wind with the oars, Elmer."

"How can I? I broke one oar on that fish of yours—all I've got now is the handle."

"Fine," Gus said ironically. "Light the gas lantern, will you, Pete? It's there under the forward seat."

Gus bent over the outboard and shut off the gas petcock and the air vent, unclamped the motor and swung it inboard. Spray lashed over the gunwales.

"This motor," said Pete, "is old perpetual motion itself. Never have had any trouble with it before."

"You've given it a lot of use," Gus grunted, taking out the single spark plug. "There's always a first time, even for the best."

"Nothing wrong with it now, I'll bet, but wet plug or wires—man, that wind is sure picking up to blow."

"Maybe it's just wet." Gus placed a big thumb over the spark-plug hole and pulled the starter cord. "Ah, so that's it."

"What's it?"

"No compression," Gus said. "Likely it's valve trouble."

**G**US removed the motor skirts, took the cover from the valve compartment,

and peered inside with his flashlight. Darkness had now come down in earnest.

"Broken valve spring," he announced. "We're cooked."

"Cooked?" Elmer poised his lone oar. "What'll we do now?"

"We'll drift with the wind," Pete said, "until we hit shore, and bail like our lives depend on it."

"Mine does," said Elmer hollowly. "I can't swim."

"Put on a life preserver," Gus told him, "just in case. But we won't have to swim. We'll bail and stay afloat until we reach shore."

"Sounds wonderful," Elmer chuckled, "if we make it."

We'll make shore all right, Gus thought grimly, but what shore will it be? The way I've got this wind drift figured out, we'll hit a mile or so of cliffs that come down sheer to

the water, with boulders sticking up. We won't be able to tell which way to dodge until we're close in—then it will be too late. These waves would batter us against the cliffs, even with life belts on.

"Well," he said, "I might as well tinker with the motor—maybe I can fix it."

"Nice way to get out of bailing, Gus," said Pete. "You can't fix a broken valve spring."

Gus couldn't open up the motor with spray coming aboard and into the works. He took a square of canvas they had brought along for a luncheon ground cloth, and with this covered the motor, his head and shoulders, and the lantern. Down below the gunwales on his knees, he could feel the skiff rise on the waves, fall sickeningly into the trough with a thud. Cascades of spray spattered on the canvas above Gus's head, and above the howling of the wind came the clatter of frantically wielded bailing cans.

Gus pulled the carburetor and re-



"Yes, Madam, we probably have one of the most thorough driving schools in the country."

[Continued on page 280]

# Care and Feeding of Engines



BY  
S. P. CORP

## SEATING NEW RINGS

Even the best re-ring job depends, for enduring satisfaction, on how the engine is driven during break-in. When the engine is started for the first time with new rings, it should be accelerated quickly to an engine speed equal to 25 to 30 mph. This insures getting plenty of oil up onto cylinder walls and rings. Keep engine at this fast idle until it reaches normal operating temperature. Do not allow engine to idle at low speed during the warm-up period, and never run cold water through the radiator while seating new rings.

After engine is warmed up, drive car in low or second gear, to insure good lubrication and reduce load on compression rings. Accelerate in second gear to 35 mph, then drop back to 25 mph. Continue for 10 minutes. High idle speed with a light load as in second gear prevents overloading pistons and rings. Drive at 50 mph for first 200 miles.



## TIMING WITH HIGH OCTANE

If the timing of your engine hasn't been checked lately, this should be done to make sure it is within manufacturers' specifications. With high octane gas, timing may be advanced, but only as specified. If you use high octane continuously, advance timing until a slight detonation is heard when you accelerate in high gear from 19 to 30 mph. Now retard timing just enough to eliminate the detonation, then idle and check for smooth operation. For economy, engine should be timed for the type of gasoline you use.



## WRITE FOR FREE MANUAL

For professional suggestions on car care, send a postal card for your free copy of Sealed Power's new illustrated manual, "Care and Feeding of Engines." And when you re-ring, be sure to use Sealed Power KromeX Ring Sets—for fast break-in, for immediate oil economy, and for double ring life. They are the best ring sets built, proved in millions of road miles. Sealed Power, Dept. H-9, Muskegon, Mich.



# Sealed Power

## PISTON RINGS

## Gus Takes to Water

[Continued from page 190]

moved the exhaust stack, took out the studs and freed the cylinder. He pulled it from the piston, exposing the valves. With long-nosed pliers he reached into the inspection hole and pulled the key from the broken-sprung valve stem. As he pulled the valve up out of the guide, the spring rolled across the floorboards in two segments.

"I WONDER," Elmer called out, the wind whipping his words away, "how far we are from shore? Get to bailing, Pete. Water's gaining on us."

Gus ducked under the canvas again, thinking about that mile of sheer cliffs, where they'd have no chance if they struck. Why, he asked himself, didn't we bring along our spare six-horse motor this morning? But why should we? The lake was like a mill pond when we started out and the three-horse job is best for trolling. We're babes in these woods, I guess. How far from shore . . . how much time do we have left? Suddenly, Gus reached out and dragged his fishing-tackle box under the canvas.

"Hey," Pete yelled, a few minutes later, "we're close to shore. I can hear the wind in the pines."

Gus came out from under the canvas. His flashlight beam lanced out through the heaving blackness, revealing cliffs that stood straight up from the water, angry waves foaming at their base, exposing jagged rocks.

"Good heavens!" Pete breathed. "We'll be cut to bits."

Gus grunted as he swung the motor outboard and clamped it firmly in place, opened gas petcock and air vent.

"Try her, Pete," he said. "You know her better than I."

"Try her!" Pete echoed. "You didn't . . ."  
"Maybe," Gus said. "Try it, man."

PETE shut the choke, cracked the throttle, pulled the starter cord, once, twice, three times. The motor coughed, staggered, cleared its throat and hit

[Continued on page 282]

EVERY SKILLED CRAFTSMAN,  
MECHANICAL HOBBYIST AND  
DO-IT-YOURSELFER SHOULD  
HAVE THIS NICHOLSON

# HANDY FILE

**TWO FILES  
IN ONE:**

DOUBLE CUT ON ONE  
SIDE—SINGLE CUT  
ON OTHER SIDE

Like those inseparable Siamese twins, the Nicholson HANDY FILE is *two files in one*. Either or both are always at hand . . . in the single-cut side for smoothing and edge sharpening; the double-cut side for fast stock removal.

Flat forged-on orange-colored handle makes the HANDY FILE easy to carry—in hip or leg pocket. Hang-up hole makes it easy to store and find. Cellophane wrapping brings it to you rust-and-moisture free. Made by the world's foremost file manufacturer, you can be sure it is unbeatable in long-lasting quality.

*(Also made in Black Diamond brand)*

At hardware stores everywhere

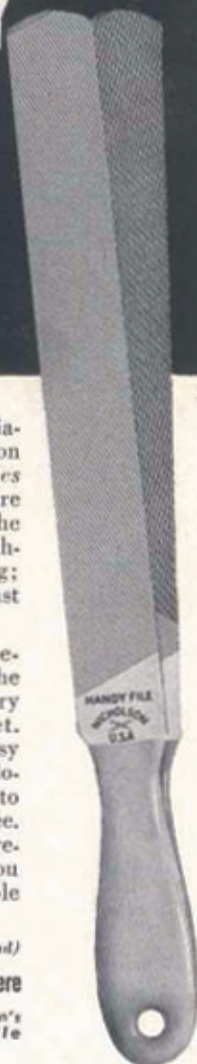
FREE new edition of Nicholson's famous 52-page book, "File Philosophy." Write to



NICHOLSON FILE COMPANY  
19 Acorn St., Providence 1, R.I.

*(In Canada: Nicholson File Company of Canada Ltd., Port Hope, Ontario)*

**NICHOLSON  
FILES** FOR EVERY PURPOSE



## Gus Takes to Water

*(Continued from page 280)*

smoothly. Glancing at the rocks close aboard now, Pete opened the throttle wide. The motor didn't respond. It sputtered, loaded up, began to die. Gus shut the throttle to slow.

"Easy does it," he said. "That valve spring is too weak to take it fast—slow and steady now, to pull us away."

IT WAS touch and go there for a few minutes, but slow and steady did pull them away, down to the end of the cliffs and to a sandy beach. With the boat propped three-quarters over on sticks to form a shelter, and a roaring fire reflecting heat, the battle of the lake seemed never to have been.

"This is the life," Pete commented, turning a slab of pike on a forked stick over the fire. "Now tell us, Gus, how you managed to fix that broken valve spring. Seemed impossible to me."

"It was impossible," Gus admitted. "But you know those heavy piano-wire leaders we brought along for muskel-lunge? I wrapped one of those leaders around a screwdriver that had a shaft a bit larger than the bottom end of the valve guide. The spring I made was too weak to close the valve fast enough for any speed—that's why she died when you opened the throttle."

"But it was fast enough," Pete said fervently, "to claw us off those cliffs. If we'd hit there we'd have had it."

"You can say that again," Elmer agreed. "I'm glad you didn't tell me about those cliffs, Gus, out there on the lake. I'd have been scared to death."

"I was," Gus said, and he meant it. END

**NEXT MONTH: Gus starts the music.**

## Whistle Stop

The silver-haired old lady in the ancient car drove down the wrong side of the road, went through a red light and, to make matters worse, ignored the efforts of a traffic cop to stop her.

"Didn't you hear my whistle?" the cop demanded angrily.

"Yes, I did, officer—but I never flirt when I'm driving."