

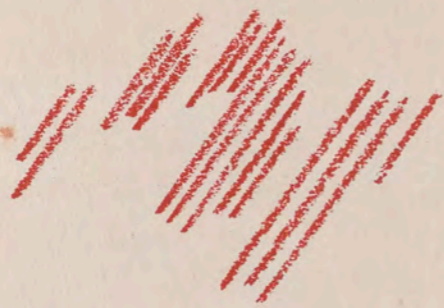
It's
BALANCED
CONSTRUCTION

that
counts!

Antique Boat Museum

FEB 1934





WHAT

do you want in your outboard motor, and how much of it do you want?

Almost any feature can be developed to satisfy the most exaggerated taste. But in so doing, other features are bound to suffer. Proportion is destroyed—the whole product becomes unbalanced. And you have a headache—not a motor.

You can increase engine speed and step up power till you have a skyrocket. And it will last about as long. Or you can extend piston displacement and add metal till you have a brute that will propel a battleship. But it would only sink a fishing boat.

It's not any one particular feature that makes an outboard motor. Too much emphasis here or there leaves too much

weakness elsewhere. The thing to seek is the *correct relation* of materials and design and power and speed and weight and features—all *coordinated!*

That's *BALANCED CONSTRUCTION*. You can't draw a picture of it. You can't point to it. Yet it's the most important thing in outboard motors. It's the thing that such men as Colonel Lindbergh, Admiral Byrd and Bernt Balchen look for in *their* motors. *It's the thing that you'll be glad to find in yours.*

Balanced Construction means flashier performance, because there is no over-developed feature to act as a drag on the rest of the motor. It means easier handling, because when all working parts are in correct proportion a greater precision of control is possible. It means longer life, because there is less wear. It means *dependability*—for which Johnson motors have always been particularly noted.

In the SEA-HORSE line for 1934 Johnson achieves entirely new heights in *balanced construction*. No feature is emphasized to the detriment of another. Each SEA-HORSE is designed to *fill a purpose*—not to make a show.

In fact the Seven Sturdy SEA-HORSES for 1934 are divided into three Great Groups according to the class of work you want performed. This is the first time in outboard history that such classification has been made.

There are no excesses in any group. Nor is anything *lacking!* Whatever model you choose, you will find that everything you need for performance, comfort and convenience are included as *standard equipment*. **THERE IS NOTHING EXTRA TO BUY!**

JOHNSON MOTOR COMPANY, WAUKEGAN, ILLINOIS
Canadian Johnson Motor Co., Ltd., Peterboro, Canada

Antique Boat Museum



Design

ALONE IS NOT ENOUGH ★ ★ ★

Design is powerfully important. That is why Johnson has one of the finest engineering staffs in outboard motoring. Among other famous men, this staff includes the men who designed America's first successful monoplane, who built one of the first power boats in the world, and who actually revolutionized water motoring with the sensational developments of their original outboard in 1921.

Johnson engineers have *always* been out in front. Trust them to put the latest and best into all SEA HORSE motors!

But design alone is not enough. To make it click, design needs *organization* behind it. It needs *courage* to see it through.

It needs *resources* to permit of endless experiment. It needs costly *production facilities* to handle the difficult problems imposed by advanced design. It needs *skilled workmen* who know what precision manufacture means.

These are things you can't see with your eyes or take hold of with your hands—but they are what make your motor hum. *And they are all there in a Johnson!*

YOU CAN'T RIDE ACROSS

A LAKE ON A BLUEPRINT



Materials ALONE ARE NOT ENOUGH ★ ★

So long as your motor runs, why should you worry what it's made of? It's only when things go wrong that you begin to wonder. Was the right material used—or what the heck?

The *kind* of material is important. The *amount* is important, too. Remember that, and check the *weight* of your motor against its horse power rating to see how many pounds of metal you have per horse power developed. Is it enough?

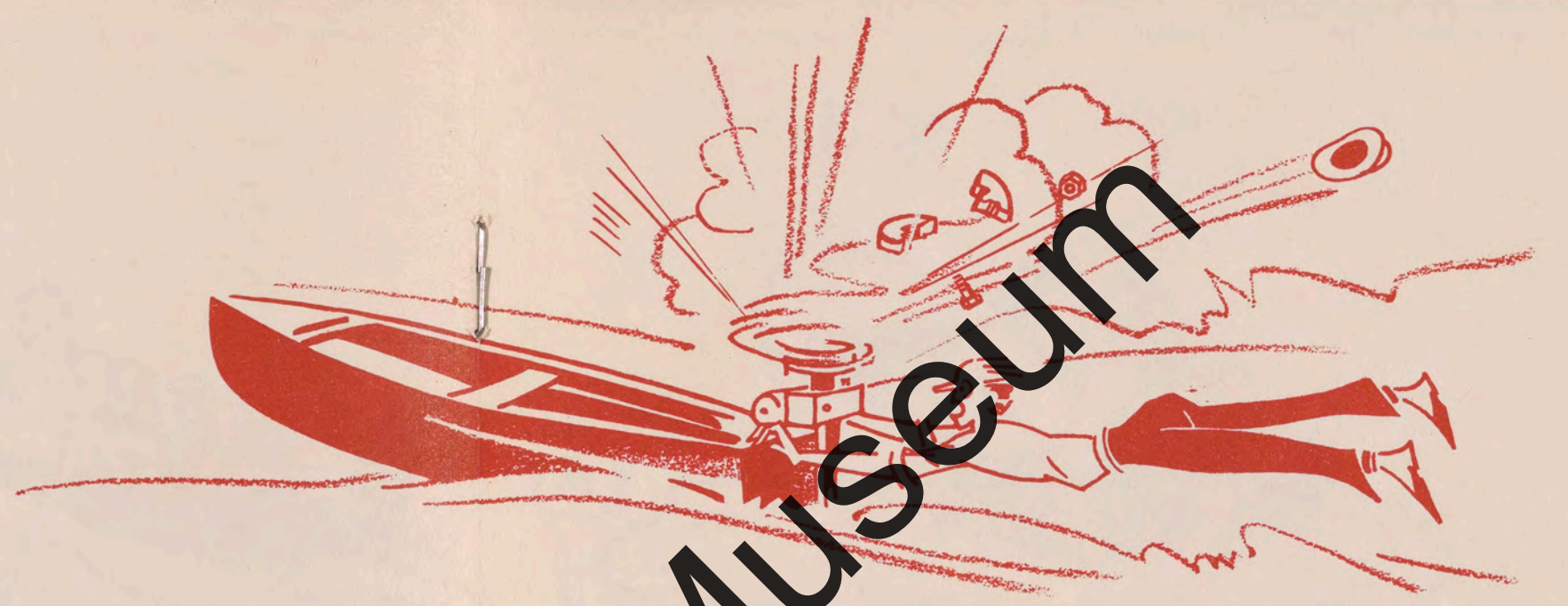
Distribution of metal is another factor. There is no point in using gears, for instance, so heavy that they dissipate your

power. On the other hand, if you're driving a SEA-HORSE, it's mighty nice to know that your gears are heat treated high carbon nickel steel, and that all of the other working parts are similarly tough.

But even the finest materials, alone, are not enough. There is the matter of shaping them into a smooth running unit. Would it interest you to know that Johnson SEA-HORSE motors are manufactured to *closer limits of precision than many automobile motors of the better type?*

YOU CAN WRAP YOUR FOOT IN

LEATHER AND STILL NOT HAVE A SHOE



Power ALONE IS NOT ENOUGH ★ ★ ★

Is horse power your measure of the value of a motor? If so, remember that *power alone is not enough*—and here's why:

In any motor the forces of internal inertia on bearings, connecting rods, crankshaft and such important parts, increase not in proportion to the actual running speed, but in proportion to the *square* of that speed.

If you increase the speed of a motor from 3000 R.P.M. to 3750 R.P.M., for instance, you increase the running speed 25%. But the internal inertia forces are increased 56.3%!

Add higher compression and higher explosive pressures and either the working parts must be heavier or else they must be stressed considerably closer to safe working limits.

And what do you gain? An additional half-mile per hour for each extra horse power? Is that what you want?

Or do you want the *long life and dependability* of a motor designed to develop adequate power at a conservative speed—and built with enough metal to back up all the power it develops? *That's what you get in a Johnson!*

TOO MUCH 'HORSE' CAN KICK A MOTOR APART • • • •

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Features

ALONE ARE NOT ENOUGH ★ ★

Johnson's many important developments have influenced the entire trend of outboard motoring.

Such basic ideas as instant pivot reverse, the anti-cavitation plate, the float feed carburetor with throttle control, portable weight, modern rotating speeds for higher power output and easy rope starting—all of which you now take for granted—were *introduced* into outboard motoring by Johnson.

We have spent hundreds of thousands of dollars in pursuit of outboard betterment. Alternate firing, the propeller protection clutch, the release charger, and the rotary valve are some

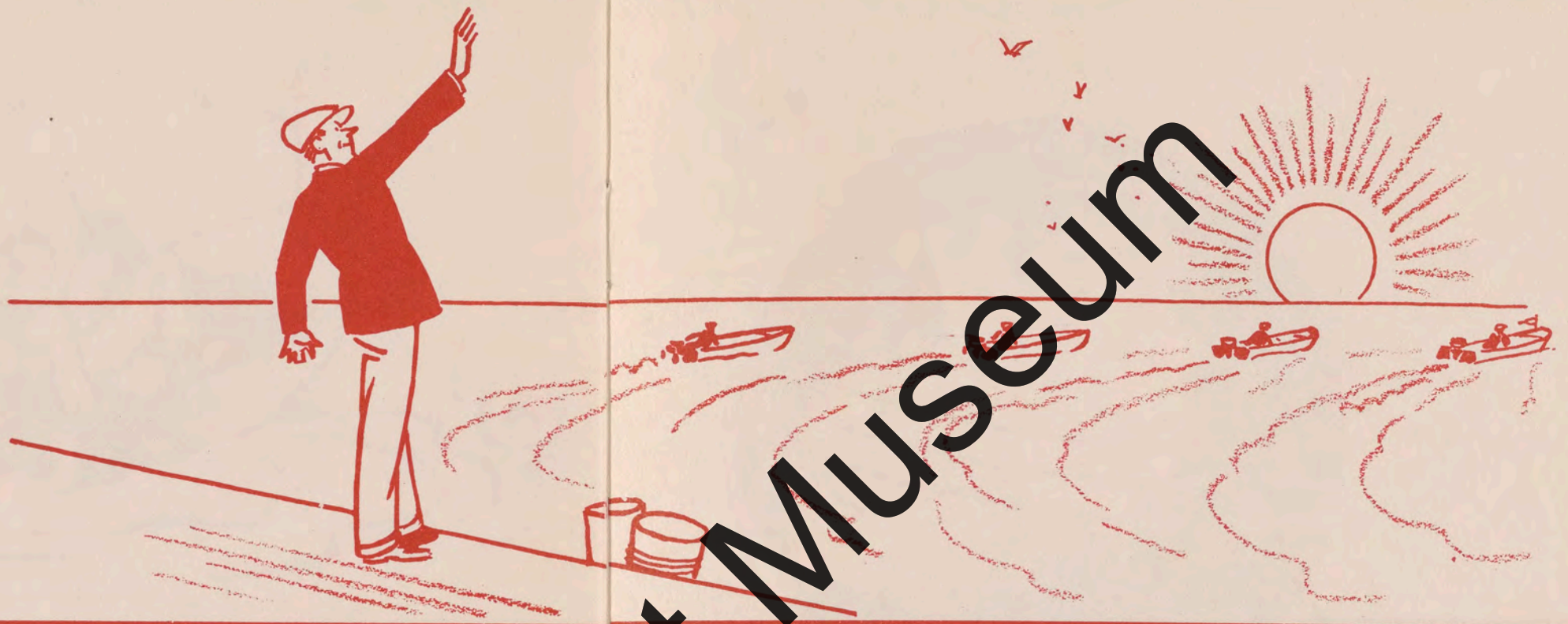
of the great refinements that have literally cost us a fortune in development work.

But what is more important is how Johnson features are *combined* into working units that *work*. We didn't design our motors, build them and then ask, "What are they to be used for?" We asked that question *first*—and then built Seven Sturdy SEA-HORSES in three Great Groups to meet *each* outboard need.

It isn't what *can* be built; it's how close we can fit a motor to your *purpose*—and your purse!

WHAT USE IS A FIFTH WHEEL TO A WAGON

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It's "BALANCED CONSTRUCTION" that Counts

There are thousands of SEA-HORSE owners operating their SEA-HORSE motors in every part of the world under all kinds of conditions, eating up the miles—without ever giving a thought to the construction of their motors. Why should they? After all, that's our worry.

There are other thousands who, in order to have the latest developments, are buying new SEA-HORSES from time to time, and enjoying the *highest used-motor values*, without considering the part that *balanced construction* plays in holding their depreciation to a minimum. To them a Johnson is simply a better motor.

Naturally, *balanced construction* is technical. Not everyone is inclined to go thoroughly into its details. However there are those who do examine, test and compare to the *nth* degree. They are the explorers and expeditionists whose very lives depend upon their equipment. They *know*. And it is significant

that such men, among whom are included Captain Bartlett, Count Felix Von Luckner, Bernt Balchen, Admiral Byrd and Colonel Lindberg, chose Johnson SEA-HORSES to accompany them on their adventures into the far reaches of the world.

We urge you, too, to compare. Compare the *whole* motor . . . not just two or three features. Compare it on your boat where you use it. Once you get a taste of *balanced construction*, you'll forget features as such. You'll revel in the joy of carefree water motoring. *And that's exactly what you buy in a Johnson!*



Backed

BY WIDE-SPREAD JOHNSON SERVICE

Johnson dealers are to be found in every principal city of the United States. Hundreds more are strategically located along the Nation's waterways.

Another network of Johnson dealers is spread across Canada—served by the Canadian Johnson Motor Company, Ltd. And, if your voyages carry you into foreign ports, you'll find Johnson dealers there.

Back of all this is a complete system of District Service Stations—located to give *immediate* service to dealers and to you.



No service organization in the industry carries a more complete stock of parts than Johnson's District Service Stations. We *watch* those stocks. We watch the service rendered by these Service Stations. For *you*.

That is *part* of your purchase when you buy a SEA-HORSE. It's a part that seems insignificant—until you need a starting rope or shear pins, or the like, *in a hurry*.

Vacation days don't wait on service. It's best to think of this *before* you buy *your* motor!

J O H N S O N M O T O R C O M P A N Y • W A U K E G A N • I L L I N O I S



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