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CASGRAIN
dial actual
size - "A"
figure for
every mile"

SPEEDOMETER FACTS



H. CUNTZ
NEW YORK BRANCH
1910 BROADWAY
Mad 50 1911

CASGRAIN SPEEDOMETER
53 STATE ST BOSTON MASS.

Speedometer Facts

This little book tells
how we have built a
speedometer so accu-
rate and durable that
we can *guarantee*
it for all time.

Casgrain Speedometer

53 State St., Boston, Mass.

Know
your
speed

A SPEEDOMETER is a necessity. It is one of the first accessories an owner puts on his car—because he *must know* how fast he is traveling. Guessing at speed in a car is sometimes dangerous, many times expensive. The difference between 8 miles and 12 miles an hour is from \$10 to \$100 (in a police court).

The man who drives without a speedometer transgresses speed laws without intention. He is a lawbreaker through ignorance. He is in a bad way. But a hundred times worse off is the owner who has a speedometer that is inaccurate on his car. He believes it is correct — that he is driving within the limits — but how is he to *know*? He has misplaced his confidence in most cases.

Get a
Casgrain

There is one way to *know* your speed absolutely — use a Casgrain Speedometer. There is one speed indicator that is

guaranteed accurate to the mile — Casgrain Speedometer. There is one speedometer that carries with it a guarantee "for all time" against wear, breakage or inaccuracy — the Casgrain Speedometer.

The Casgrain is original. It is in no way similar to any other automobile speed indicator. It is no attempt to improve upon or refine any other speedometer, but operates on an entirely different principle.

A
distinctive
new type

As a result it is so good — all the way through — that we stand back of it with a guarantee unheard of heretofore in the automobile accessory field. (See last page of this booklet.)

The principle upon which the Casgrain Speedometer is built is well known in mechanics. It simply utilizes the power of a rapidly moving body of liquid, similar to the manner of the old water-wheel. The application of this liquid force in a speed indicator is original, and

Actuated
by a
liquid
force

so ingeniously applied that fundamental patents of very broad scope were granted.

The outer casing is of heavy brass, cylindrical in shape. Inside this brass shell the dial, its operating mechanism and the liquid operating medium are all contained in a sealed glass cylinder. The accompanying illustrations show this construction and assembly better than words can describe it.

The instrument is very simple and substantial in construction, and is of such a nature that absolute accuracy is easily obtainable. When once secured — by means of our electrical testing apparatus — this accuracy is permanently assured.

Motion is conveyed to the liquid — a specially refined mineral oil — by means of four steel paddles which are rotated by the driving mechanism. The amount of liquid is a fixed quantity. The size of the confining cylinder is always the same.

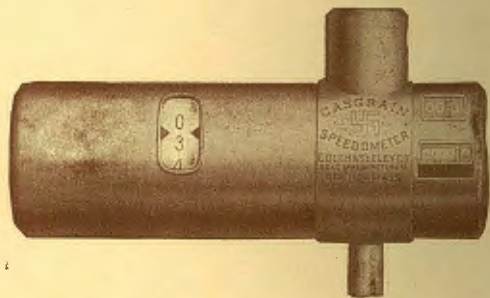
Operates
in per-
manent
oil bath

There is no possible chance for wear or alteration in the size of the rotated paddles. Therefore the result must always be the same — variation is impossible.

All road shocks or engine vibrations are absorbed by the liquid. No mechanical connection exists between the driving mechanism and the dial. The indicating mechanism is therefore relieved from shocks of any nature whatever, and is free to perform its duties without regard to road conditions or other outside influence.

A flexible shaft of improved design connects the instrument with the front wheel. This shaft gives a positive drive. It has no loose play, and enables the Speedometer to indicate the very slowest movement of the car. The Casgrain Speedometer registers five miles an hour just as accurately as it does twenty or sixty.

Shocks
won't
affect
the
dial



CASGRAIN SPEEDOMETER

Model A, 65-mile scale	. . .	Price, \$50.00
Model B, 90-mile scale	. . .	Price, \$75.00

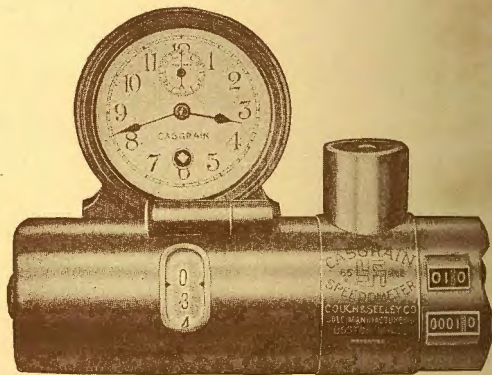
Not only will the Casgrain Speedometer indicate speed accurately, but it shows on its dial an individual large black figure for every mile. It is absolutely accurate and plainly readable under all conditions.

A
figure
for
every
mile

Every figure on the dial is the same in size. The scale is 28 inches long, the figures being arranged in spiral form four and one-half times around a $2\frac{1}{8}$ -inch cylinder. The dial is steady at all speeds — no flicker nor roll — and yet it is sensitive to the slightest variation in speed.

By referring to the illustration on page 14 the assembly of the Casgrain Speedometer parts can be readily understood. You will note the cylindrical dial, the actuating paddles, etc. You will also note the absence of any fine bearing surfaces. The fact that the entire instrument is filled with oil insures lubrication for the

No
fine
bearings



CASGRAIN SPEEDOMETER

With 8-Day Chelsea "Auto" Clock and Electric Light

- | | |
|----------------------------------|-----------------|
| Model A, 65-mile scale | Price, \$100.00 |
| Model B, 90-mile scale | Price, \$125.00 |

two large bearings at either end of it; in fact, the whole mechanism operates in an oil bath.

It is impossible for this oil to escape. The instrument is tightly sealed after it is assembled. It is also impossible for dirt or dust to get inside the Casgrain. It is grit, more than any other cause, that wears out a piece of mechanism. In the Casgrain there can be no grit, therefore wear is reduced to the minimum.

The mineral oil used in the Casgrain Speedometer is specially refined for this purpose. Heat or cold won't alter its consistency. We demonstrated this at our show exhibits last winter. One Casgrain Speedometer was frozen in a cake of ice; another was put into an electrical heater. Temperatures were freezing point and 120° F. respectively. Both instruments were run from the same shaft, at varying speeds, and both showed

Special mineral oil is used



CASGRAIN SPEEDOMETER

Model C, 50-mile scale . . . Price, \$30.00

identical speeds on their dials at all times.

This same test applied to a speedometer that depends for its accuracy upon the delicate adjustment of fine bearing surfaces shows a wide variance in dial readings. The reason for this is that heat expands and cold contracts these metal bearing surfaces.

We have built an adjustable bracket to secure the small driving gear to the steering arm. This bracket, when once fastened securely in position, cannot be shaken loose. It is adjustable to fit any car. The large driving gear is secured to the wheel in an original and positive manner. Clips are provided which slip over the bolts on the inside of the wheel hub. When the nuts are replaced the gear is automatically centered and fastened. This does away with drilling and small screws entirely.

**Casgrain
brackets
fit all
cars**



CASGRAIN SPEEDOMETER

Model C, 50-mile scale, with watch in
waterproof case Price, \$35.00

When the Casgrain Speedometer is delivered to you it is sealed. Just as long as the seals are unbroken we stand behind this instrument with our guarantee. The Casgrain has been on the market three years. It has been thoroughly tested. It is not in any sense an experiment, but a Speedometer that has proven its merit on many hundreds of cars.

Casgrain
merit
has been
proven

We want *you* to try a Casgrain on *your* car. We know it will make good; therefore this offer. We'll send you an instrument, any model, on thirty days' trial. Put it on your car. Try it out for a month. Give it every possible kind of a test. Then after it has demonstrated, *to your entire satisfaction*, that it is the speedometer *you want*, the one *you can depend on* absolutely, remit to us, or our local agent.

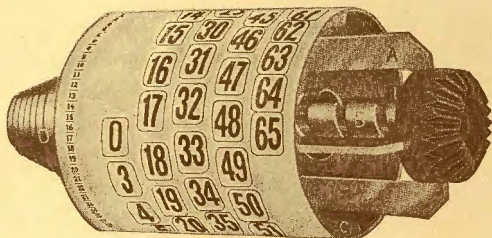
Thirty
days'
trial
offer

Write us right now. Give us your bank for reference and we'll either send



This illustration shows the simplicity
—the few parts— of the

CASGRAIN SPEEDOMETER



Casgrain figure scale showing large individual
figures for each consecutive mile

you a Casgrain Speedometer or we'll
send you an order on our local agent for
one. This offer has no strings attached to
it. We know what the Casgrain is,
what it will do. *And we know we
can show you.*

Let us
prove it
to you

Write us now.

Casgrain Speedometer

53 State St., Boston, Mass.

GUARANTEE

We guarantee the Casgrain Speedometer "for all time," against wear or breakage in the instrument itself. We guarantee its accuracy at all speeds. If for any reason the Casgrain Speedometer ever becomes inaccurate return it to us, with seals unbroken, and we'll repair or replace it. Express charges to be paid by you. We guarantee the driving shaft, the driving gears and the Casgrain universal bracket against both defective materials and workmanship for one year from date of sale.