

## ⇒ Slide-Rule Hawks—Speed Demon ⇐

By C. B. ALLEN

**F**RANK M. HAWKS has come in for a lot of joking from other pilots about the slide-rule that occupies such a prominent position on the instrument board of the speedy little monoplane with which he has set up so many quick-travel records during the last eight months. It is a tradition of the aircraft industry that practically every pilot in the game who takes himself seriously and is worth his aeronautical salt thinks he knows more about aerodynamics than the engineers who designed his plane, and the slide-rule, of course, is the accepted badge and apurtenance of the engineer.

Hawks grins good-naturedly at the chaffing of those who are amused, and is content to let the impression go unchallenged. He doesn't even bother to correct those who see in the ever-conspicuous slide-rule a subtle and canny attempt to capitalize an idiosyncrasy as Al Smith capitalizes his own derby. But, if you penetrate the protective banter with which Hawks has come to surround his slide-rule, it is quickly apparent that he has made it a real adjunct to his other equipment for aerial navigation.

"I really wouldn't feel right without that slide-rule," he says. "In an ordinary airplane, making a hundred miles an hour or so, I'll admit it would look like a fad to attract attention and cause comment, but in a machine averaging about 200 miles an hour it becomes almost indispensable. A slight miscalculation at speeds approaching four miles a minute could easily throw me off course twenty or twenty-five miles, and a mistake like that might mean the difference between coming down through a blanket of clouds into a nice valley and smacking against the side of a mountain.

"A pilot only makes one mistake like that; somebody else makes his next one for him. I did not spend much time at the head of the class in mental arithmetic and I can't afford to guess, at least not at 200 miles an hour. That slide-rule may look like an ornament to some people, but it looks like a lifesaver to me."

Hawks's flying is the smart airman's usual combination of dead reckoning and landmark navigation. Before each of his flights, he carefully plots his course on a map, determines the compass bearing, makes necessary corrections for drift on the basis of his plane's cruising speed and the direction and force of the wind at the time of take-off. Obviously, the latter factor is subject to constant change, and the experienced pilot frequently checks his

course by railroads, rivers, towns and cities in relation to the line of flight he has drawn across his map. Also, if he is the Hawks brand of aviator, he scales off his course on the map and, by frequent reference to these markers and his watch, he can tell his exact ground speed and the particular minute at which he should arrive over any given point.

**I**T is here that the slide-rule is invaluable, because it is the essence of accuracy and eliminates all mental or pencilled calculations on the part of the pilot. Flyers, on the whole, are a pretty intelligent and well-educated lot, so that it is the exception rather than the rule who can't figure out in his head that he is traveling 180 miles an hour if, ten minutes after starting on his course, he passes the intersection of two railroads just thirty miles out. But, if the intersection is  $34\frac{1}{2}$  miles from the starting point and it flits by after exactly 9 minutes and 35 seconds, how many pilots or non-pilots in the world can pop right out with the exact flying speed and say when the plane should reach its objective, so-and-so many miles away? But Slide-Rule Hawks doesn't have to worry his brain over the matter. He reaches out and pushes one section of this intriguing little gadget until it rests at  $34\frac{1}{2}$ , another part slides along to figures representing 9 minutes and 35 seconds and, presto! at still a third place on the rule he reads the correct answer to his question in miles per hour.

"Suppose I am flying to a town lying between two mountain ridges and find some little distance before reaching my destination that the clouds are beginning to close in solidly," Hawks says. "Either by a radio receiving set on board the plane or by weather reports received before taking off, I know that there is plenty of room underneath the clouds at the place to which I am going, but that the 'ceiling' will be well down on top of both mountains. If I have kept careful check of my ground speed throughout the flight and have passed over a landmark at a known distance from my objective just before losing sight of the ground, I can hardly go wrong by flying straight ahead for as many minutes and seconds as my slide-rule tells me is necessary, and then dropping down through the clouds. For I know that the open valley and not the jagged mountain ridges will be waiting below."

A second slide-rule in a well-worn leather case which Hawks always carries in his pockets further attests that the thing is no pose with him; that Hawks is not to be classed with a certain pilot and "navigator" of 1927's hectic transatlantic flying days whose picture was taken with a sextant which neither he nor the photographers knew he was holding upside down! Let the talk turn to planned assaults on Hawks's transcontinental speed records—14 hours, 30 minutes and 43 seconds westward; 12 hours, 25 minutes and 3 seconds eastward over the New York-Los Angeles course—and out comes the slide-rule. It is 700 miles from Los Angeles to Albuquerque, 540 thence to Wichita, 600 to Indianapolis and 675 to New York, which are the stops Hawks made in recapturing his cross-continent laurels from the Lindberghs and in clipping more than 2 hours and 20 minutes from their one-stop performance. In a twinkling Hawks has figured out just how fast each of these legs must be covered by any one who beats his own time, or exactly how many miles an hour would have to be flown on a non-stop journey over the 2,515-mile course to set a new record.

What is even more interesting, Hawks can show in the course of a few minutes with his slide-rule how it is possible for him, if necessary, to shorten his own time across the continent in the same ship with which he so decisively beat Lindbergh's record. For Hawks is holding in reserve an ace or two in his little game of speed that most people do not suspect. The average man's conception of Hawks is that of a dare-devil racing pilot, tearing around the country at top speed and pushing his motor to the limit. It is, perhaps, the logical conclusion concerning a man who travels faster in life's daily routine than any other figure of his age. But it is none the less highly erroneous.

**I**T is true that Hawks has made a fetish of speed, but at the same time he has turned it to practical account. To him the breadth of the United States is a daylight jaunt, luncheon in Chicago and dinner in New York a commonplace. Yet, for all this, Hawks refuses to hurry. So far, he has never pushed his machine to its limits on the flights that bring him fame; his philosophy in setting the fastest pace of his time is that by doing so he captures enough leisure to keep from rushing through the ordinary affairs of life. In the air—and this is the ace he holds in reserve—he

flies with his motor throttled to its normal cruising speed, never wide open. This undoubtedly accounts for the phenomenal dependability that has been displayed by the special Wright Whirlwind motor in Hawks's low-wing Travel Air "mystery" monoplane, the "Texaco No. 13," aside from initially sound engineering and excellent workmanship. Hawks simply has a ship whose normal cruising speed is higher than the top speed of most others, and he has been long-headed enough not to "shoot the works" when he could accomplish his purpose and at the same time spare his engine.

Such simple strategy and common sense ought to be easy of comprehension, but very few have grasped it; perhaps because nothing is so hard to see as the perfectly obvious, perhaps because the ordinary record-seeker cannot conceive of demanding anything less than the maximum from a mechanism built for speed. Certainly it will be interesting to see what happens if one of the current aspirants to Hawks's crown exceeds his transcontinental record by a narrow margin. For there is every reason to believe that Hawks's motor will stand full-throttle operation all the way from California to New York and none to think that he will balk at putting it to the test if this becomes necessary.

About the first of April Hawks and his airplane—the fastest traveling combination in America—are going abroad on the Europa, the fastest vessel that sails the seas. The announced purpose of the trip is for the American speed merchant to fly about the Old World, calling on local representatives of the oil company whose aviation department Hawks heads. Nothing has been said or will be said about breaking existing travel records in Europe, for preliminary ballyhoo is not a part of the Hawks program. All the same, it is a safe assumption that some of them will be broken as Hawks goes casually about his business calls, and Europe will awake to the realization that her air transport lines are painfully short on the commodity known as speed. The experts, of course, will scoff, for does not England hold the speed record of the world at 357 miles an hour, a pace that makes Hawks's best performance look like that of a slow freight? But this English racing plane, winner of the last Schneider Cup Race, *has never flown across a continent and never will*; it is useless for all practical purposes except as a laboratory for the development of faster flight, while Hawks contends that he "Texaco No. 13" is a practical commercial airplane—the fastest in the world. It will be unfortunate, indeed,

if he fails to fly his machine over some of the Old World's longer airways (say from London to Karachi or even Australia) during his foreign visit for purposes of comparison with the best performances European aviation has set up in this field.

Hawks's first burst on the American consciousness as a national figure was when he set a new west-east transcontinental speed record by flying non-stop from Los Angeles to New York in a Lockheed Air Express monoplane, which he had volunteered to ferry across



Texas Co.

*Hawks flew across the continent in a glider towed by a plane. They were hooked together by a cable and a telephone line. Hawks is probably telling the airplane to go faster*

the country for the manufacturers in order to get himself quick transportation. He was accompanied by a mechanic, Oscar Grubb, whose duties en route included pumping the contents of seventy-five separate five-gallon tins of gasoline from the cabin to the fuel tanks in the wing. This was on February 4 and 5, 1929. Hawks saw the ground only once from Arizona until he was nearing Washington, and that was when he descended through 9,000 feet of fog to find that conditions underneath were impossible, and that his only chance was to climb "blind" up through the fog again. He arrived at Roosevelt Field, L. I., 18 hours, 21 minutes and 59 seconds after taking off from Los Angeles.

Later, when his company had purchased this borrowed airplane and it had been equipped with proper tanks and radio, he flew alone from New York to Los Angeles on June 27, 1929, in 19 hours and 10 minutes, returning next day over the same route in 17 hours and 38 minutes, both records still standing in the field of non-stop performance. His five-stop westward flight across the country in 14 hours, 30 minutes and 43 seconds with the "Texaco No. 13" on August 6, 1930, and his return over the

same course August 13 in 12 hours, 25 minutes and 3 seconds (including three stops for fuel), are well-known achievements. So is his flight from New York to Havana and back early last November in 18 hours, 5 minutes, and so are his numerous other fast trips about the country, including a recent 17-day tour of the southwest with Will Rogers, cowboy comedian, during which 57 cities were visited and a quarter of a million dollars raised for Red Cross drouth relief. Incidentally, Hawks took his regular turn on the stage during their four appearances daily, manipulating a mouthful of gum and a diminutive lariat in mimicry of Rogers' performance. He was an actor for a period in his youth.

Before all these events, Hawks, in 1927, bought the sister ship of Lindbergh's "Spirit of St. Louis," christened it the "Pride of San Diego," and flew it to sixth place in the Ford Air Tour. Later that year he took the same ship to the National Air Races at Spokane and won first place for speed in the *Detroit News* Air Transport Speed and Efficiency Race. Still later in 1927 he "sold" the Texas Company on the idea of taking up aviation in a serious way, and the following year flew their first airplane, a tri-motored Ford, on a 50,000-mile tour of the United States, visiting 175 cities, safely carrying 72,000 passengers, including every executive and director of his own company. The same plane was entered in the 1927 Ford Tour and finished second with Hawks at the controls.

The first and only transcontinental glider flight ever attempted was made by Hawks last year. Starting from Lindbergh Field, San Diego, on March 30, he landed in triumph and exactly on schedule eight days later at Van Cortlandt Park, New York City, after the longest towed flight in the history of aviation. His Franklin utility glider, the "Eaglet," was towed at the end of a 500-foot cable containing a telephone line over which Hawks constantly communicated with J. D. "Duke" Jernigin, pilot of the Waco tow plane. The "Eaglet" was the first cabin glider ever built and the first glider to be equipped with brakes. The transcontinental trip required 44 hours and 10 minutes flying time, 35 hours of which was spent in tow and the remainder in soaring exhibitions at towns and cities en route. The glider is now in the Smithsonian Institution with other famous American aircraft.

Hawks's early flying history, not to make a bad pun, is full of the ups and downs of a typical barnstorming pilot's career except for the additional spice of nearly three years spent in Mexico. Dur-

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## ⇒ Testimonials, Wholesale ⇐

### Constance Talmadge—Champion Endurance Endorser

By ALVA JOHNSTON

**A**MONG the brightest chapters in the history of the testimonial are the campaigns for Lux toilet soap, John Ward shoes, Fleischmann's yeast and the film *Breakfast at Sunrise*. Constance Talmadge, the star of *Breakfast at Sunrise*, is the game's official heroine. In one day she endorsed 400 articles, ranging from an aspirin tablet to a grand piano.

The Lux toilet soap campaign was a masterpiece of thoroughness and dash in which Lux rounded up "442 important Hollywood actresses." The campaign was planned in this city. Officials of the great film companies were won over to Lux. James R. Quirk, the Northcliffe of movie journalism, was attached to the Lux cause. Twenty-one movie directors swore allegiance to Lux. Lux arranged big dinners at Hollywood to put the Lux testimonial wangers on the best Hollywood social footing. Hollywood drug stores and beauty shops through trade arrangements were buried under an avalanche of Lux. In the studios word went out that people of the greatest importance would be gratified if the little girls would all sign up with Lux.

Lux cornered the soap rights of the profession. That was not all. Other manufacturers soon discovered that Lux had not acquired the soap rights alone; it had cornered the talcum rights, the lotion rights and all make-up and cosmetic rights of every kind and character. The Lux beauties agreed to be beautiful because of Lux and nothing but Lux for a term of years. It will be 1932 before some of the stage and screen favorites can legally thank other preparations for their loveliness.

There was one defect in the Lux campaign. The 442 beauties were beauties before Lux broke into the beauty testimonial industry. Lux might have claimed them anyway; unborn cakes of Lux or the retroactive effect of Lux could have beautified them in the pre-Lux period. The laws of nature are null and void in the testimonial universe; yesterday's effects result from tomorrow's causes and the past is subject to change without notice. No one would be surprised to learn that a soap of the year 1928 was responsible for Lily Langtry, Nell Gwynne, or the Fair Maid of Perth. But the testimonial industry has suddenly developed a conscience. It has become an unwritten law with the better testimonial houses to avoid obvious mendacity, when artfully arranged truths

This article is the second in a series by Mr. Johnston on the use of big-name testimonials in advertising—a subject on which even the opinions of advertising men are divided.

work just as well. The 442 were not allowed to owe their beauty to the lifelong use of Lux or to inheritance from Lux-using mothers. Most of them merely affirmed that a smooth skin was a good thing in the movies. The reader, however, was not advised that nature or youth or some other toilet soap had made the 442 beautiful enough to get into the pictures in the pre-Lux days; on the contrary, he was allowed to infer that 442 Lux babies would be ugly ducklings and wall flowers today except for blessed old Lux.

The ideal endorsement technique today is to make no false statements. The golden rule is never to fool the public; let it fool itself.

The central idea of the John Ward campaign was to picture John Ward shoes being worn by men who looked like regular members of the rotogravure set in the Easter parade or in some other stylish setting. The early John Ward advertisements stated that alert press photographers had discovered that fashionable people wore shoes and that a check-up showed that many an important foot occupied a John Ward. The impression was strongly cultivated that the John Wards occurred spontaneously on these high-life feet and that the John Ward advertising department had nothing to do with instigating it.

The truth is, however, that those genteel feet were rented at varying rates. The average rental of a couple of genuine Social Register feet is \$75 and two pairs of John Wards; feet of smaller social pretensions are to be leased for \$25 and one pair of John Wards; feet of no particular éclat are farmed out for one pair of John Wards and no money. The fact is that the windfall of a single pair of John Wards has been a godsend of the first magnitude to more than one pair of impoverished feet. In the John Ward testimonial advertisements, the owner of the revenue-producing feet is usually accompanied by a debutante; as a rule he met her for the first time a

few minutes before their picture was taken. The debutante ordinarily received \$25 for being photographed on the arm of a gentleman who has commercialized his extremities. In one advertisement the Brooklyn feet of Arthur Fowler Staniford, Jr., were passed off on the reader as genuine Park Avenue "dogs." John Wards were snapped as they stalked down the gangplank from the President Roosevelt on the owner and business manager of a pair of feet which had never been out of this country. Another man, who had leased the usual number of feet for the usual price, was snapped emerging with his partner from St. Bartholomew's Church. They had either not been inside of the edifice, or had passed through a half inch of wrought iron, because the church portals were tightly closed not more than a few inches behind them.

The Fleischmann's yeast campaign was carried on with great success, in spite of two major handicaps: first, the backwardness of the aristocracy in letting the world know how it overcame sluggishness; second, the fanatical honesty of the manufacturers who insisted on having the yeast endorsed by none but *bona fide* yeast eaters. In order to procure a large supply of *bona fide* testimonials, testimonial contests were held throughout the country, cash prizes being offered in local newspapers for the best tributes to Fleischmann's yeast. Thousands of eloquent endorsements resulted, but they did not come from celebrities and social leaders; on the contrary, they came from factory and garage employees, domestics, clerks, waiters, chauffeurs, skilled and unskilled laborers.

It was necessary to build them up; to invest them with glamour; to make the ordinary reader look up to them. The following plan was invented to glorify the endorsers. Teams were sent out into the testimonial country, each consisting of a camera artist and a bland but dominating woman. Each team systematically visited endorsers, looking for promising types. If they found a handsome boiler-maker's helper, printer's devil, or garage hand, it was their cue to wash and barber him, slip him into a polo costume, prop him up on a highly polished pony, wind his fingers round a polo mallet, patiently work him into a Meadowbrook attitude, carefully close the open mouth, coax the stupefied expression from the face and snap him. Then he would sign a new testimonial