

Making Room at the Top in Radio

Which Begins a Series of Brief Biographies of Figures in Radio Industry Who Did Not Wait For Opportunity to Knock at the Door

By A. Henry

HAVE you ever sat in one of the skyscraping stadiums which now dot the land and watched a famous football team in action—and then, later in the game, had an opportunity to stand close by the side-lines and see that team rush past you, literally shaking the ground as it bucked the line of its adversaries with speed “faster than the eye can follow?” That is, perhaps, a feeble suggestion of the impression one gets from meeting the newest and youngest among those radio manufacturers who hold the coveted “RCA license.” He is one of the most remarkable figures in an industry distinguished for the number of young men who have attained high places.

Yet, lest the impression be conveyed that McMurdo Silver is a superman sent to earth with some peculiar sort of silver spoon in his mouth which causes difficulties to vanish before his inspired onslaught, it had best be explained that such by no means appears to be the case. Those familiar with Silver's short but adventurous business life know that, if he is a whole football team in himself, his life has been no continual succession of marches down the field to repeated touchdowns. On the contrary, there have been times when the ball was in the enemy's hands, with the line gritting its teeth to withstand the opponents' determined rushes. But, after all, the important thing about a football game is the final score. And there is no better way of stating his score than to say that in 1924 Silver went into the radio parts business with a determination to attain leadership in that business within five years; and that the thing was done in four years instead of five—for 1928 saw Silver-Marshall at the top of the heap!

And—if further evidence is needed—1929 finds this same 26-year old executive the recipient of a manufacturer's license from the Radio Corporation of America, General Electric Company, Westinghouse Electric & Manufacturing Company, and American

Telephone & Telegraph Company, to manufacture radio receivers under the famous “pooled patents” which opened the door to large-scale radio production in the market of the middle twenties. When it is remembered that these licenses have consistently been issued only to large and long-established radio manufacturing corporations—and that a minimum payment of \$100,000 per year is required of each licensee as compensation for the use of these combined patents of the largest electrical research laboratories in America—it becomes clear that those in the high councils of electrical big business are much of the deliberate opinion that McMurdo Silver is a “good bet.”

And the story of this man who is still a mere boy, is doubly interesting; for it can easily be the story of any “amateur” young man of today, if only he is willing to follow in Silver's footsteps, and work and study to fit himself—not to seize, but to do as Silver did—to make, his own opportunities.

McMurdo Silver was born on the 15th of March, 1903, in Geneva, New York—almost a St. Patrick's baby. His father was professor of ancient history at Hobart College. Both of his parents were of American stock for several centuries back, with Scotch, English and French blood behind their American ancestry. The boy's early youth was uneventful except, as this narrative may fall in the class of “success stories,” it must be stated that young Silver did not run true to “success” form. He was not a leader among the boys of the town, he did not play the most devilish of practical jokes, and he was not at the head of his class—actually, he was far from the top, most of the time. Nor was he a book-worm—in fact, up to the age of nine, nothing unusual seems to have been apparent in the boy except a rather noticeable seriousness.

AS THE TWIG IS BENT

At the age of nine, “wireless” came into Silver's life. How it came, and how he assimilated it, forms an amusing anecdote. Some older members of his family, seeking to instill educational thoughts in the child's mind, one day read to him two accounts from a monthly magazine. One was of “wireless,” which had come into the lime-

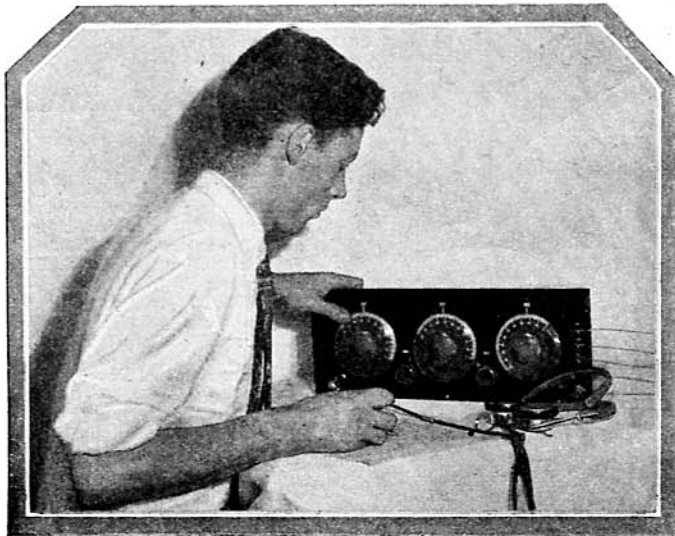


McMURDO SILVER

light of public attention through the sinking of the *Republic* and, just then, of the *Titanic*. At the same time an account was also read of the Mexican Rurales, a troop of mounted police recruited from criminals by the simple and masterly expedient of catching one, putting a rope around his neck, placing him upon a horse all ready to be gently stroked with a whip, and asking the individual so situated if he wished to become a Rurale, or if he preferred to dismount from his steed posthaste and remain in the unenviable position of hanging by his neck to an obliging tree limb, separated from it by several feet of rope, and from the ground by several feet more. The answer, unless choked off by the culprit's emotion, or the executioner's desire for the unusual negative reply by way of a bit of extra excitement, was invariably “yes.”

Strange as it may seem, these two bits of instruction stuck firmly in the young man's mind. The next day the cook, called to the back yard of the family residence by unearthly yells, beheld a strange sight. Sitting astride a saw-horse was a young Mexican boy hurriedly conscripted for the part of the convict. His hands were tightly tied, and a very heavy rope, almost thicker than his pudgy arms, connected his unwilling neck with the limb of a small tree directly above him. He was calling loudly upon all the saints known to him in a somewhat unintelligible imitation of Spanish. Next to him stood one of the “Silver Gang,” asking loudly and repeatedly whether he “joined or died.” The executioner, in anticipation of the reply, held the nozzle of a length of garden hose in his hand. Some distance away, in a confiscated wash-boiler, stood the instigator of this new game, holding the other end of the hose in one hand, while in the other was another piece of hose which reached back to the gibbet and terminated in the grimy grip of the assistant executioner. As the victim's pleas were uttered, the executioner shouted them into one hose, through which they were presumably transmitted to the ship at sea, represented by the wash-boiler. From there, through the other hose, the verdict was shouted in a high falsetto to the assistant executioner, who in turn put the all-important question to the prisoner.

In this way wisdom was assimilated by



A young constructor, a few years back, busy with a set which its contemporaries can readily date. He has since grown up with the industry—in fact, from a business standpoint, much faster.

the analytical mind of McMurdo; communication with ships could only be through rubber hose, since one couldn't shout several thousand miles. And to use "wireless telegraphy" one had to have a reason; which was opportunely provided by the recalcitrant son of a Mexican villager, who might even yet be reclaimed to the cause of the law by strong-rope methods and the marvels of radio.

THE TREE'S INCLINED

Having had the error of his ways physically impressed on him in no uncertain manner, the inquiring streak of Silver's mind came to the surface. He set out to find out about "wireless," and the reason for his chastisement. This he did for several years with no overpowering success. To earn money to buy the parts with which to experiment, he obtained a job that every older boy in town had had before him, and given up after a few days—or few weeks—for the job required a degree of regularity abhorrent to a small boy's soul. It was the newspaper route in the village. Every day, including Sunday, the boy had to get the New York City papers from the noon train, make up his route, and deliver papers from one end of town to the other, rain or shine. Fortunately, Silver's school hours permitted this and somehow he held the job not for a month, but for years. And so the paper route that had once been a source of emergency revenue to small boys of the town, ceased to be a source of annoyance to the methodical villagers who wanted their papers promptly on the dot, and seldom had got them. But let us not give young Silver credit for too much perseverance. Two factors held him on the job, rain or shine, winter or summer. The first was a parent anxious for his daily paper to arrive promptly and regularly, and the second was a similar determination on the part of the no-longer harassed proprietor of the route, which manifested itself in a much more substantial manner than parental orders.

All the money gained does not seem to have given him a "wireless" that was ever the talk of the town, but the foundation was being laid; he was reading and studying "wireless" to a point where his school studies suffered badly. Early in 1916 Professor Silver died, and the young man moved to New York City with his mother. By this time he had managed to squeeze out of grammar school, from which he never did graduate, and into high school; and for three successive years he was the discouragement of his instructors, all of whom finally gave him up as hopeless, and firmly threw him out of school.

So on a memorable Armistice Day of November 11, 1918, while Wall Street was covered from top and bottom with paper and ticker tape, and the world was terribly jubilant at the prospect of peace after the long repression of the war years, young Silver started to work in earnest to help support his family. And had Professor Silver been alive, it is doubtful if he would have been greatly grieved at the failure of his son to acquire an academic education; for the liberal-minded father had always felt from his years of experience that for a young man so uninterested in a college training as not to desire it, or to be unable, through lack of interest, to assimilate it, its loss was no real loss.

But this time the secret of Silver's success could be seen, but by most parents it

would not have been recognized. He was a failure at school; yet at the age of thirteen, in 1916, he had written, and had succeeded in having published in a sporting magazine of the day, an article of several thousand words on a subject in which he was deeply interested—early American firearms. This was during wartime, and as "wireless" had been prohibited to amateurs, Silver had thrown his whole interest into studying his other hobby, antique guns. His interest was so great, and he had spent his waking hours in such deep study and determined efforts to satisfy his curiosity at public libraries, museums, and in gun stores, that he possessed at the age of thirteen a more complete knowledge of early American arms than many a veteran collector or dealer. And this knowledge had enabled him to earn many hundreds of dollars in the years of 1916, 1917 and 1918 in buying, selling and trading old arms; for in this field his commercial talent first showed itself.

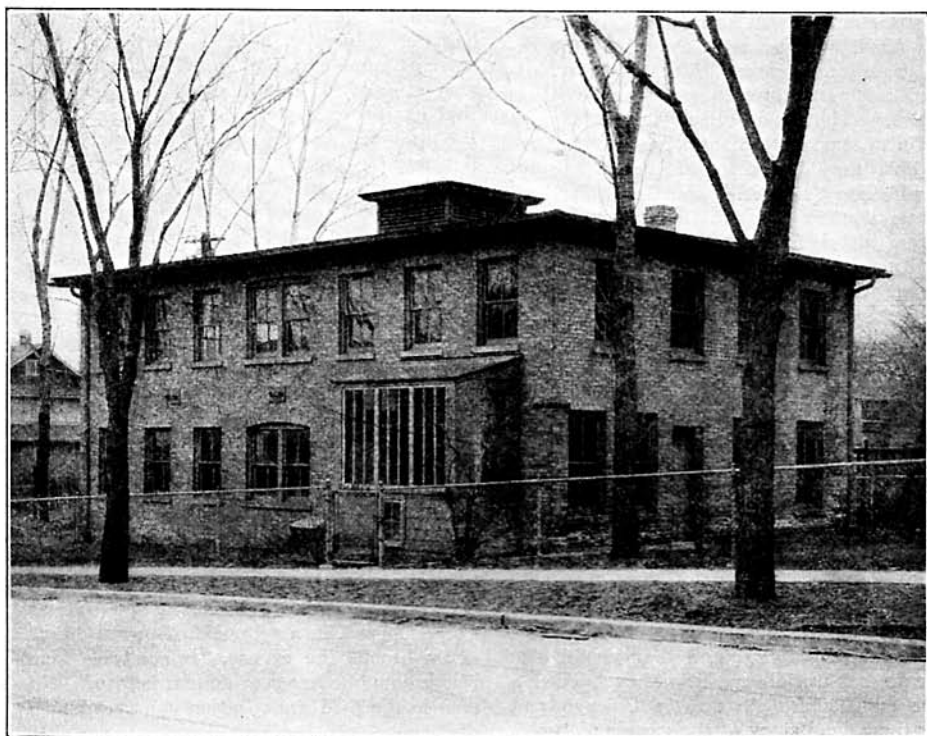
Interested as he was in firearms, he could not enlist, for he was but fifteen years old when the war ended. The ban was lifted from radio shortly after Armistice Day, and Silver began to experiment again, with the new vacuum tubes that had been developed during the war. Not content to work as a Wall Street messenger during the day and play with wireless at night as most boys would have been, he added the commercial element of building, buying and selling the crude "wireless" parts and sets of the day in addition to his trading in old arms. Silver was ambitious, and spent in study his every waking hour outside of a job that he seldom left before seven or eight o'clock in the evening.

WORKING INTO RADIO

The story is told that he gave himself five years to become a partner in the old, established brokerage house for which he worked and, upon finding himself advanced

only to the position of quotation-board boy after a year and a half, forsook Wall Street. At this point his life work was determined upon. Up to then "wireless" and antique arms had had his almost equal interest. The offer of a position as laboratory assistant in the tube laboratories of the Westinghouse Lamp Company at Bloomfield, New Jersey, decided his fate and radio definitely claimed him early in 1920. The work of developing the tubes that preceded the present Radiotrons so intrigued Silver that he decided to become an engineer—this lad who had failed at every scholastic study. How did the boy who had been disappointed because he could not rise to the top over night in Wall Street go about it?

His interest aroused, he set to work, blindly at first, then pointedly. First he asked—"Why can't I have an engineer's job now?" And when laughed at he persisted until he found out concretely just what he would have to do to become an engineer. Having then little money for education, he decided to take night courses in engineering at Cooper Union. But he was unable to pass the entrance examinations; for his only education was what he had absorbed from his parents and dug out of his hobbies for himself. Unable to take up an engineering course at once, he set out to lay the groundwork that would enable him to enter Cooper Union later. Starting in another night school to prepare, he soon passed his examinations at the head of one class, second in another. Such was the strength of his interest when once aroused. In the meantime, having learned all he could at the Westinghouse Laboratories without knowledge of his own, he went to work for a radio and electrical jobber in New York to broaden his experience. Not greatly interested in his work, he made no startling success, though promoted twice in eighteen months, once to head of his department, the second time to a higher department.



A modest start for a manufacturing industry: the second floor of a garage in a Chicago suburb was the first home of "S-M." (Turn the page.)

The spring of 1922 saw the radio broadcasting boom well under way, and the formation of the Griffin Radio Service—to become in a few months the Haynes-Griffin Radio Service, well known to all old-timers—and when the new store was opened Silver was on hand as first employee. The summer of 1922 brought the partnership of A. J. Haynes and John Griffin as the Haynes-Griffin Radio Service, and in the fall came the Haynes D.X. Tuner, one of the first kit-sets ever developed, and the work of A. J. Haynes.

Superheterodynes were almost unknown to the average listener of that day, but Silver's mind, always ranging ahead, realized the possibility of the superheterodyne circuit for broadcast reception. He "sold" both Haynes and Griffin of the idea; the result, in 1923, was the Haynes Superheterodyne, practically every experimental model of which was built and most of the actual testing work done by Silver. After this, he spent a month at Plattsburg training camp, "resting." Intensely interested in his job, Silver worked day and night. But he did not work blindly. He absorbed ideas like a sponge, always prying into things, asking "why?" And as soon as he was told, experimenting to see if he had assimilated the idea well enough so he could do the thing himself—always, always trying until he could. He soaked up merchandising, advertising, selling and engineering ideas with equal rapidity as a result of his intense interest and curiosity, and continuously stirred these ideas about in his mind until he produced a newer one from them.

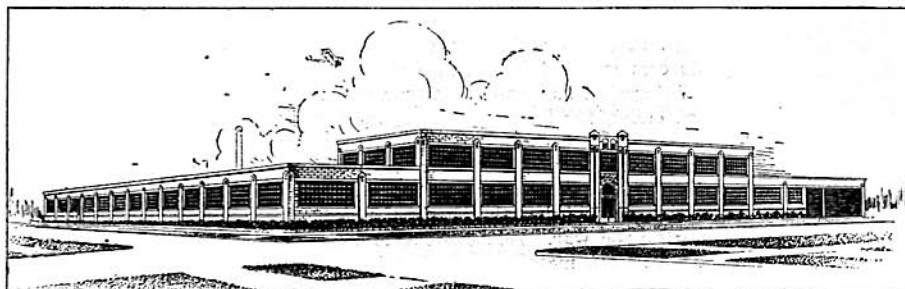
GOING WEST

During this period a number of influential New York business men, caught by the radio craze and sensing Silver's ability, offered to finance him in a business venture of his own, but he would not leave Haynes-Griffin to start out on someone else's capital. In 1926 the unexpected death of a step-grandfather (Frederic Courtland Penfield, ambassador to Austria from the United States, just before the war years) and an equally unexpected bequest, gave Silver his chance. Sensing Chicago as the coming radio center of the country, Silver said goodbye to Haynes and Griffin, went to Chicago, and organized, with his distant cousin, John R. Marshall, the firm of Silver-Marshall, Inc. Silver gave the new firm five years to become a leader in the radio parts business—we shall see if his determination was to be as ill-fated as the earlier one, to jump from messenger boy to partner in the brokerage house in five years.

Silver and Marshall laid their plans well. In those chaotic days they realized that, if they were going to manufacture parts and kits, they must have a retail store to service them and help users, and they would also have to act as jobbers. So they opened a store on Wabash Avenue in Chicago and took the second story of the garage pictured. This was the first S-M "factory," of some 1,600 square feet, and in it Silver worked night and day to achieve his goal. The

spring of 1925 saw Marshall retiring from an active interest in the young concern and Silver carrying on alone. As the manufacturing business developed, the need for a wholesale business diminished, and it was abandoned. Soon it was possible to abandon the retail store also, and 1927 saw these two stepping-stones cast away, and Silver's whole attention devoted to manufacturing. The unexpected business slump of the fall and winter of 1926 hit Silver-Marshall hard, as it did other manufacturers. But the young concern pulled through a period of acute financial stringency, and by the fall of 1927 was well out of the woods, and with a not-to-be-forgotten lesson behind it.

In just four years after the opening of the S-M store, Silver had achieved the goal



Five years later: the most modern factory architecture characterizes the extensive plant which Silver-Marshall will occupy in their fifth year.

he had given himself five years to attain—Silver-Marshall had become one of the largest manufacturers of radio kits and parts distributed through jobbers and dealers in America. In 1928 the firm's position was further strengthened, and leadership in the parts business was lifted well beyond the reach of competition—in a market in which the gross sales had fallen almost forty per cent. a year for every year that Silver had been in it for himself. And—his goal attained... a new one which had always been in his mind's eye was quickly set.

Such is the story of a young man who has not ridden to success overnight on a wave of gambler's luck, but who has worked very step of his way upward in a business that has decreased greatly each year. Had the radio parts business increased each year, it would be difficult to estimate Silver's position today, but no favorable boom of general business in his line ever gave him a boost.

AS A LEADER

What, then, is the man like who at the age of twenty-six is the youngest executive to have obtained the much-coveted R.C.A. manufacturing license which many an old, established corporation has not been able to secure? Over six feet tall, of lean build, he is a combination of nervous energy at one moment and almost phlegmatic calm at the next. But through all runs the determination that is his secret of success—the will to do what he sets out to do, in one honest way or another. This determination is seldom expressed, but it is evident at every moment in a grininess of purpose that never brooks the excuse, "It can't be done because no one has ever done it before." No man in the S-M organization can ever come, discouraged, to the president, and say, "It can't be done," but Silver will reply, "It can be done—but maybe in another way," and then work to find the way. For a man

of a rather mercurial temperament, given to ups and downs of feeling, this steady, never-yielding determination is one of his most interesting and contradictory characteristics, for this man's mind is never "made up." It is always open to suggestion—his mental attitude is always that of the true student, seeking to learn all he can from other men's thoughts and methods. To him the pride that will not allow a change of mind is unknown; if the humblest of his employees wishes to tell Silver that his decision upon one subject is wrong, he will listen attentively—and change his mind in a flash if the arguments advanced are better than those on which his original decision was based. He is never unwilling to take older counsel, and has steadily added to his organization

older men of far greater experience and wisdom than himself, that he may seek their advice.

But though he seeks advice on all matters, important or unimportant, Silver possesses to a marked degree that first requirement of a great executive—the ability to make an instantaneous decision, later to be revised, maybe, if they prove wrong, but made so quickly

that the wheels of his organization are seldom stopped "waiting for the president to make up his mind." He can make up that mind in a flash, and the accuracy of his instantaneous decisions is a by-word with his associates. Yet there is nothing at all phenomenal in this—it is simply the instantaneous summing up of the facts that have been gleaned and continuously mulled over in a mind which is never still, waking or sleeping. Both conscious and sub-conscious mind are always working at top speed—yet a speed that is possible to any other boy once his interest is really aroused.

AN INTERPRETER OF RADIO

Silver is best known to the public as a writer of technical articles. Editors everywhere, of magazines and newspapers alike, learned that articles sent them by McMurdo Silver and published over his name, were found to be intensely interesting to their readers; and when an editor wakes up to such a realization, it requires no button-holing, or sending of flowers or beverages to induce him to publish the "stuff." One of the things which editors liked most was the completeness of the information which Silver gave in his articles as to how the radio sets he wrote about could actually be built. Little things which most writer passed over as being "clear to anybody without explanation" Silver explained carefully; for he realized that in order to be of greatest value, articles must be such that the reader need not be an expert in order to understand them. True, his articles contained, as a part of the unusually complete information they supplied, a list of parts which would be required to build the radio set described, and in these parts one was sure to find several of the "S-M" make. This was in large measure the kind of "advertising" which caused the Silver-Marshall business to grow by leaps and bounds—and it was published

(Continued on page 1138)

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5 Tube	10.00
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NR 7-6 Tube	22.50
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ing "Wavemeter Hints for the Short-Wave Listener." Those who have no desire to construct a wavemeter must be content with whatever their operating technique, patience and location can obtain for them.

On the other hand, there is a class of constructors who appreciate the fact that when they are fortunate enough to be in a good location and the receiver is working efficiently, and atmospherics are not troublesome, and they operate their receiver intelligently—they may, if they have a certain amount of luck, hear a foreign broadcast station. If they are very lucky, they may get it regularly. But the short-wave listener must learn his trade, and know his set.

Room at the Top in Radio

(Continued from page 1078)

by the newspapers and magazines without cost to Silver; simply because editors discovered that if—in deference to what are ordinarily considered good principles of journalism—they omitted all mention of manufacturers' names in publishing these articles, the articles thereby became much less interesting to their readers.

But above all, Silver's articles met the final test that every editor always applies to every contribution: "Is it news?" Decidedly, his articles were news, news that the public wanted, and so Silver's writings became more and more in demand. With a little publicity-seeking, Silver's name might have become much more of a household word than it is, but he shunned the spotlight. Unlike many another executive, his name has seldom appeared in print except over technical articles, and until the issuance of the R.C.A. license sent reporters scurrying for "human-interest" stories and pictures, his picture had been seldom published. It was only with considerable effort that material for this story could be drawn from him.

Silver maintains, and apparently with very decided truth, that his success has not been due to any divine inspiration, or any special spark of genius. It has been due rather to the fact that he paid no attention to the five o'clock bell, but worked eight to twelve hours per day for his employers—was often sent home by them so that they could lock up for the night—and eight to ten hours more for himself. Few boys today have the necessary energy and determination to do this—perhaps for the same reason few of them are as far ahead at the age of twenty-six. And, if Silver is correct, then the requisite for success for any boy seems to be only the ability to be intensely interested and curious; for if interested he will work without thought of time, and if curious he will surmount every obstacle to learn.

And, speaking of learning, in the early days when Silver first studied radio there were no radio engineering courses in any of the colleges, and the path to knowledge was a hard and original one. Had there been radio correspondence courses such as there are today, had there been radio engineering college courses, it is difficult to estimate how much faster this young man might have developed.

Silver is a man who never talks about his past successes—he is always living for tomorrow, working for the future. A thing once done is no longer food for his active mind—it is dead, to be put out of his thoughts to leave his mind free for the future. But if

he will not consider what he has already accomplished, others can at least do so; and, judging from his past performance, they prophesy for this young man who has already reached what most men would call the top of the ladder, a future of the most brilliant accomplishment. He has had but a few years; give him a few more, and—but the surprising thing is that almost any boy today can do as much.

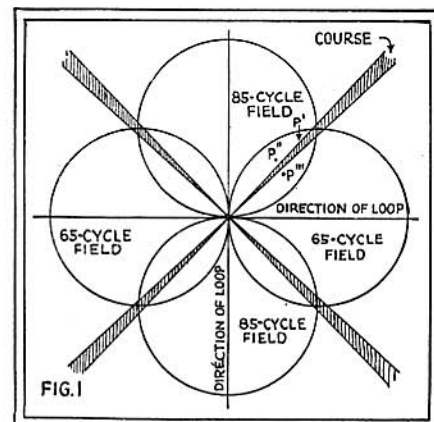
Making the Air Safe for Traffic

(Continued from page 1068)

notes that he is exactly on the course again. He has been checking off his marker beacons, and a glance at his wrist watch tells him that he is making one hundred miles an hour.

IN SAFETY

He whistles to himself with a feeling of absolute security. He knows that he is en route to his destination, following the shortest possible line between the two flying fields. He is at a safe altitude. Science has conquered the menace of the clouds below him. He cannot become lost, the possibility of a forced landing is remote with his three-engined plane and, if worst comes to worst, he and his passengers have their life preservers of the air.



Each loop has a directional field at right angles to the other; in the shaded lines between them where the two fields are of equal strength the pilot finds his course laid out for him.

An hour and a half passes. His co-pilot has been counting the marker beacons as they flashed before him.

"Ten miles more," he says.

The swing of the beacon becomes less pronounced. The white lines become shorter and shorter. Suddenly they cease to move. The plane is directly over the field! Radio-telephone communication with the ground determines the weather conditions below. If the ceiling is above two hundred feet, the plane bores through the clouds and comes in to a conventional landing. If the ceiling is very low, the radio altimeter is used and the pilot knows exactly how far he is above ground, to the foot almost. He circles the field, coming down in a slow spiral. Red boundary lights glim beneath him. He straightens out into the wind, levels the plane off. As it settles, he pulls the control wheel back to his chest. Deft aileron control, with just the proper touch of the rudder, keeps the plane steady, as it glides in to a perfect three-point landing.

In our next flying story we shall tell you how the radio altimeter, the companion instrument to the radio beacon, works.