

AMERICAN HORIZONS



JUNE • 1937

PUBLISHED MONTHLY BY AMERICAN AIRLINES, INC.



FEWER Husband-less Nights

Her husband, like many other business men, has to travel to Chicago often. Formerly, every trip meant that she would have to be alone. She was used to having him away during the day at work, but when dinner time came she was lonesome. She dreaded the long evenings alone. Then she did something about it. He still makes the same number of trips to Chicago, but she has him home *more* evenings. His firm benefits greatly, too. It is all so very simple! He travels by American Airlines, the modern, time-saving, efficient way to travel. Instead of being enroute, he is at home all night, has his breakfast with his family, leaves at 9:00 in the morning, daylight time, and is in Chicago the same afternoon at 1:33. He can return "American" that evening, having spent no nights away from home—having spared himself two nights-on-the-road. If his business carries over to the next day, he may return "American" at noon and be back home for dinner that night. That's why more and more business men use "American". It's easier, less fatiguing, more enjoyable, more efficient, and gives them **MORE TIME AT HOME**. Phone VAnDerbilt 3-2580 or your travel agent. Ticket office: 45 Vanderbilt Ave.

AMERICAN
AIRLINES INC.

New Sales Campaign

WHY spend money for advertising? That is a question comparable to asking a doctor, "Why hang out a shingle?" You can be the finest surgeon in the world—but if you keep the fact a secret you won't cure many people. Likewise, we can operate the finest air line in the United States; fly over the best routes, with the finest equipment; employ and train the most carefully selected mechanics, agents, radio operators, clerks, meteorologists and pilots; secure the prettiest, most personable young graduate nurses, train them as stewardesses and rig them out in the last word in smartly designed uniforms—but, unless we tell the world about it, we won't sell many seats.

American Airlines is a manufacturing plant. We manufacture seats and just like any other manufacturer we must sell our product.

The air transport industry is, in many respects, unlike other businesses. When a motor car manufacturer wants to bring out a new model, or finds himself overstocked, he can cut the cost of the old cars and make place for the new. If a grocer finds his shelves full of a slow moving product, he can hold a sale and at least be sure to get back his cost. This method cannot be applied to the air line business. We manufacture a highly perishable commodity. We "ship" to each of our cities hundreds of seats every day. These seats must be sold before our planes leave the ground; for, if a seat is not sold, and if it does not carry a passenger when the plane leaves the ground, we cannot salvage our product, it becomes a dead loss to us. Yet—the cost of operating each flight remains fixed, regardless of the revenue. We cannot materially reduce our costs, so obviously our only alternative is to fill the seats we fly.

American Airlines, with its advertising counsel, has made a complete and exhaustive analysis of our particular problem, and we have recently launched one of the most extensive newspaper advertising campaigns ever undertaken by an air transport company.

Being a leader in many things, it is not surprising that we should be **FIRST** to do an outstanding job of merchandising. **FIRST** with complete Sleeper planes; **FIRST** with the latest model Douglas equipment; **FIRST** to carry one million passengers; in fact, American is first in so many things that to list them

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AMERICAN HORIZONS

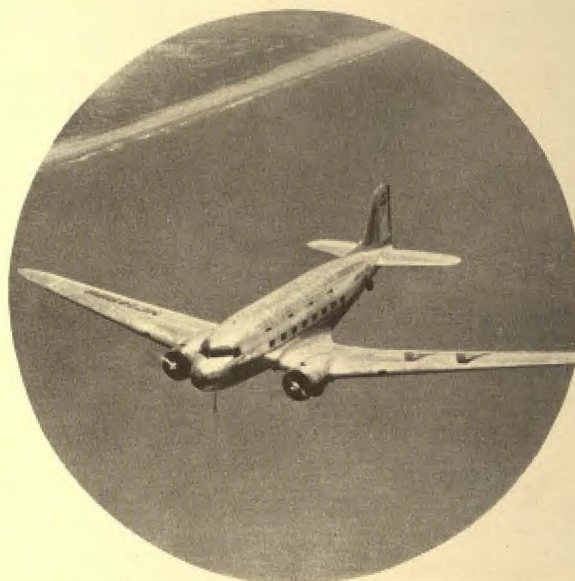
Vol. 1 JUNE, 1937 No. 1



PUBLISHED MONTHLY

AT 20 N. WACKER DRIVE, CHICAGO

BY AMERICAN AIRLINES, INC.



BIRTHDAY

EVERYONE has a birthday—and so do magazines. This, the birthday issue of American Horizons, is presented to you with the hope that you enjoy its contents; for it is about American Airlines, Inc., and the people in American Airlines. It concerns you and the job that you are doing.

We are inclined to be too casual about the vast extent of the AA territory and organization. Some of us never traveled beyond the boundaries of our native state until we became affiliated with an air transport company. Today, we talk glibly about Connecticut and California, discuss Dallas and Montreal in the same breath. Great distances lend interest to our business, but they also increase our obligations to keep the people who work with us, and are scattered all over the country, informed about what the company and the people in the company are doing. It was the desire to meet these obligations that prompted this magazine.

American Horizons did not “just happen.” It is the result of careful planning and untiring effort on the part of a great many people in the company who expressed

a desire to know more about American Airlines and the people who comprise its organization.

If you enjoy reading about the new development in our company and about the splendid jobs that some of our men and women are able to do—remember that other members of the organization want to know what you are doing. Don't just read this magazine—take time out to send us your story ideas.

We have no hidebound formula for presenting this material. We shall deal primarily with company news, with individual achievement and with interesting personalities within the company. Our first consideration is copy, readable interesting copy, reflecting a true picture of American Airlines. If you want the picture to be correct in every detail, you will do your part to help us paint it. We do not guarantee to print all the suggestions you send in, but the wealth of material which we should receive from the 1991 people for whom this magazine is intended will be the life blood of this new born publication, and should provide copy which will produce a magazine that you will welcome each month.

FOR VALOR



A DARK, wet night at the flooded Washington Airport, March, 1936. Three American Airlines' employees, Reed, Penrose and Rea, in a boat, attempting to reach the hangar for some necessary radio equipment. They were tired, worn with the strain of maintaining service in a flooded area. Suddenly, the boat was caught in a swift current and started off out of control. They were just over a flooded roadway; there was time to jump into the shallow water and be safe. Reed and Rea leapt to safety, but by the time Penrose could leave the boat, the road was far behind. He landed in deep water, was sucked into the seething current and carried downstream under a railroad bridge, off into the blackness of the night. An emergency rescue squad came on the scene, but apparently believing Penrose irretrievably lost, made no effort to search for him. Rea was wild. He looked around, spied a negro workman in a boat, persuaded him to take him in, and they set off in the darkness. For hours they searched. It was

heartbreaking work, the thick night closed around, and there was only the sound of rushing water. Then suddenly, from over near the shore, they heard someone call. They rowed furiously, and there on a pile of debris, stretched across some branches, awaiting the help he felt would surely come, was Penrose. Back at the Washington Airport that night a cathedral stillness hung over the hangar—a stillness born of the realization of a great deed done.

On May 3, 1937, the Distinguished Service Award Board met in Chicago. The Board was composed of the following men:

- Ralph S. Damon,
Vice-President—Operations—Chairman
- T. J. Dunnion,
Vice-President—Treasurer
- Charles A. Rheinstrom,
Vice-President—Sales
- Keith Bullard,
Chief Radio Operator—Boston
- J. H. Foster,
Mechanic in charge of Engine Crew Change—Chicago
- George T. Rutledge,
Station Manager—St. Louis
- C. R. Vine,
Chief Pilot—Memphis

These men met under the provision of Mr. C. R. Smith's bulletin of June 8, 1936, which set up the Distinguished Service Award Board. They met to consider the cases on record worthy of merit to receive the Distinguished Service Award or the Award of Merit, established last December. They had the records before them, they reviewed the evidence of this and other cases which had been brought to their attention, and they made three recommendations which were confirmed by President C. R. Smith. The first citation read as follows:

Distinguished Service Award to Station Manager T. G. Rea of Detroit, for Valor and Courage displayed in the

Mr. Damon presenting Distinguished Service Award Medals to E. N. Coates and W. C. Carnegie.



rescue of fellow employee whose life had been given up by an official rescue squad at the time of the flood on Washington Airport in March, 1936.

The other two citations were:

The Award of Merit to Mechanic John C. Williamson of Chicago, for outstanding and unusually meritorious service in the discovery of difficult and hidden defects in airplane structures, thereby resulting in a high standard of maintenance and safety on American Airlines in the year 1936.

The Award of Merit to Pilot B. C. Moore, for outstanding and unusually meritorious service in connection with a safe landing of an airplane with a disabled motor which was contributing greatly to the difficulties of flying the airplane, at Bellefonte, Pa. on September 22, 1936.

And so three more names are added to the roster of the American Airlines' elect. On a bronze plaque to be placed in the office of the President their names will be engraved, together with those of the three men who have already won a place of honor in the annals of American Airlines. These other men are Pilot James G. Ingram, who received the DSA for Valor and Courage in piloting a burning airplane away from a thickly settled area before leaving it in a successful parachute jump over El Paso, Texas, on November 21, 1933; Pilot E. N. Coates, who was awarded the DSA for quickly and skilfully maneuvering and successfully landing a burning airplane at the Chicago airport on May 26, 1936; and Courier W. C. Carnegie, who was awarded the DSA for his work aboard this same airplane, who, with one passenger protected this passenger from the flames with his own body and prevented him from jumping from the plane until Coates had safely executed the landing.

These six men are heroes but they would be the last to admit it, for it is only by digging out the facts that tales such as these are brought to the attention of the Distinguished Service Award Board. The men won't show you their medals, so here is a picture of one. It is the Distinguished Service Award Medal, a sterling sil-

ver disc with the words, "Distinguished Service Award—American Airlines" in raised lettering around the rim, and a gold insignia of the company in the center. The Award of Merit Medal is of oblong design with rounded corners, made of bronze with sterling silver insignia. In addition to the medal, a certificate on which is inscribed the citation of the award is given to each man, as well as a lapel button of special design. The DSA button is of the regulation blue enamel, the AA insignia in red with a white eagle, and around the rim a gold band inscribed with the words "Distinguished Service Award." The Award of Merit button is of blue enamel, but has a silver eagle, the red AA, and a silver band inscribed "Award of Merit." If the recipient is entitled to a service jewel, that is mounted into the band of the button, just as in the Pioneer insignia.

The Distinguished Service Award Board will meet again from time to time. Its personnel changes in part, under the provision made at the time it was established. The three Vice-Presidents remain the same, but the rest of the Board serves only for one year. The new members, just appointed, are:

- J. E. Aldahl, *Station Manager—Nashville*
- Roy Daniels, *Radio Operator—Glendale*
- B. T. Dykes, *Chief Mechanic—Newark*
- W. H. Proctor, *Pilot—Chicago*

These men have a thoughtful task to perform. So far over 30 cases have been brought to their attention. No hasty judgments are made, for no case may be considered until 90 days have elapsed after the incident or service in question. Then with the perspective of time a truer picture is presented, and by careful investigation of every claim these men arrive at their decisions. They act for all of us, and we are proud of the men they have chosen.

As we travel around the system and happen to encounter a man who wears a strangely different sort of insignia in his lapel, give pause and remember that this man has performed meritorious service, or that he has been cited for Valor.



John C. Williamson



T. G. Rea



B. C. Moore



James G. Ingram

AIR EXPRESS ☆

THE story of the growth of our air express business during the past year reads like an Alger yarn. Prior to February 1, 1936, we handled our air express in conjunction with several other air lines and kept books on our part of the transactions. This involved a tremendous amount of paper work not justified by the revenue. Tabulated results indicated that we were spending too much money to make just a little money, and that we were not getting our share of the total air express business. It was decided that something should be done to make air express revenue a more important item on our balance sheet.

On the date mentioned above, we entered into an agreement with the Railway Express Agency, along with 20 of the 23 domestic air lines in the United States. While it was the responsibility of the Express Agency to solicit business, we were to help their activities in every possible way. Our outlets were augmented by the 23,000 REA offices scattered throughout the country. The Agency agreed to handle all pick-up and delivery and, in addition, to keep all records of shipments and render us a monthly accounting and a check for our percentage of the receipts. The accounting department heaved a sigh of relief.

A quick glance at the figures proves that the present affiliation certainly justified the change in the method of handling air express. In December 1935, under the old system, we shipped 66,753 pounds of express — 19.9% of the total business done in this country. Just a year later, operating under our agreement with Railway Express, we carried 201,393 pounds of express, 33.61% of all business done, and netted American Airlines an increase in express revenue of 194.2%!

And business is still on the up, for people are becoming more and more aware of the tremendous advantages of air express service. In the old days, it took an emergency to start even an important paper across the country by plane. But now with intelligent solicitation, careful handling of shipments and dependable service the public is convinced that using air express means dollars in their coffers, and our consignments have



Air express business is booming all along the system. Here is Bart Cox, flight superintendent at Glendale, stepping out of his major rôle long enough to check a cargo manifest, as Jack Hudgens stows an armload of packages inside the cargo compartment.

become as diversified as a drug store's inventory.

Oysters are shipped from Baltimore to the west coast to connect with the China Clipper for Honolulu; gold fish come from Newark to Chicago, with the consignee waiting at the Chicago terminal to test the temperature of the water, and make sure the fish are alive and swimming. Dogs are often sent over the lines, and if the canine cargo could talk, they might have strange tales to relate about traveling through space in a crate. The cargo compartments are well ventilated and the dogs arrive at their destinations, frisky and well found. The major part of our express consignments consists of films, advertising material, news photographs, automotive and radio parts, flowers and perishable foods. Serums, cosmetics and valuable papers are also included, but occasionally the public becomes too avid to use air express and we are forced to turn down business. An undertaker called one of our offices the other day and wanted to ship a corpse. We regretted the lack of space. He offered to set the gentleman up in a seat, promising none of the passengers would be the wiser. We still regretted.

Now since every Alger yarn should have its hero, the people who are responsible for the rapid growth of air express business deserve mention, but none of them could be located—they were all out along the entire system building up more business.

Joe Glass

THIS tall, lean, gimlet-eyed fellow is Joe Glass, American Airlines pilot who has piled up the amazing record of 14,000 flying hours during his trips through the skies, with an all time minimum record of wasted words. There is a Coolidge look about Glass, which is further emphasized when anyone tries to pierce through his self-imposed wall of silence. Joe manages to get what he wants by a series of signs and grunts, and he answers questions the same way. Without recourse to the records we would never have known his story.

Joe Glass was born in Granite, Oklahoma, thirty-eight years ago. He seems to have taken on some of the characteristics of the name of his native town, for he is as steady and unruffled as a block of granite. Joe spent his boyhood in lonely ranches of the southwest, with few companions and only the great ranges for his playground. He joined the Army Air Corps during the World War and received his flying instruction at Kelly Field, Texas. He resigned from the Army in 1921, and like so many boys who had learned to fly at that time, found no other outlet for his training than a barnstorming tour of Oklahoma. But wing-walking wasn't thrilling enough for Joe. He surveyed the flying situation in the United States. It didn't offer much. But down across the Rio Grande there was plenty going on. Mexico had very few roads, for they were difficult to build in that rugged country, so planes were being used to transport supplies to industries in the more isolated districts.

Therefore, Joe Glass went to Mexico and joined Cia. Mexicana Transportacion Aerea, S.A. He flew the first air mail in Mexico—from the high mountains of the interior to sea level at Tampico. He was sent out to make aerial maps of the country; oil wells and mines were photographed and strip maps made. On one occasion he and an observer flew steadily for 8 hours, taking 600 pictures of the terrain. In this part of his service he mapped 2000 square miles of the inaccessible country on the Isthmus of Tehuantepec, near the Guatemalan border. In 1923, he joined the Mexican Federal Forces and served through the de La Huerta revolution. After successfully dodging bullets and barely eluding capture during this campaign, he began transporting payrolls and nitroglycerine to the mines and oil fields of the interior. It was fortunate he had mapped that country, that he knew every jagged peak and every high plateau.

In 1924, having survived this last diversion, he took part in the organization of Compania Mexicana de Aviacion, now a part of Pan American Airways. He had

flown 4400 exciting hours, but he now settled down to the conservative job of Chief Pilot for the new company. Three years later, in 1927, when commercial aviation in the United States was spurred to new life, Glass grew restless and began to cast his eyes back across the border. He decided to come home; and one day joined one of the air transport companies of the southwest, which later became a part of American Airlines. Ever since 1928, Glass has been piloting planes over the country he knows so well—knows every wind current, every mountain pass and each landmark along the route. Perhaps it is not strange that in all these years of flying he has never acquired the habits of a magpie. He is still Silent Joe, and among the legends growing up around him is this story:

Coming into El Paso one afternoon, Joe and his co-pilot were quietly checking controls. The teammate glanced out of the window and remarked "There's a nice looking ranch down there, Joe." No answer, just the steady drone of the motors. The co-pilot sighed and gave up the idea of conversation. A little later the ship landed at El Paso and the two men went into town for the night. Next morning back on the ramp, they checked weather, loads, fuel and motors, climbed into the cockpit, the clearance was delivered and they were off to the west. No conversation had taken place between these two men. Not a word. Then, an hour or so out of El Paso, Joe glanced down, turned to his partner and said quietly—"Yes, it's quite a ranch."

Maybe Joe figures he would rather just sit and think about his vast store of experiences. Certainly he sees no reason to become garrulous over either a cargo of nitroglycerine or a load of celebrities. It's all just part of the flying game—he knows all the rules, he loves to play it and he is convinced that none of it is worth mentioning.



The Tiffany System ☆

THE procedure of reserving space on airplanes has been a major problem of the air transport business ever since the day a pilot pushed a couple of mail sacks aside and made room for the first passenger. Since then, many different ways of handling space have been tried—but until the advent of the “Tiffany” system, none was satisfactory. The big problem to solve was always how two reservations clerks could book space on the same trip at the same time. When business grew to such an extent that four or five clerks wanted a certain trip chart at the same moment, the confusion knew no bounds. But out of the madhouse of the old system has come the comparative calm of “Tiffany.”

The history of the Tiffany system, its origin and final adoption, centers around three men in the company.

In 1933, Jess Reed, who was then in New York reservations, recognizing the need for centralized control of space, presented a plan for handling reservations which was almost identical with the Tiffany system as it operates today. Reed's plan was not tried out, since the volume of business at that time was not sufficient to warrant the expense of installing the necessary equipment. Cincinnati made a valiant effort to solve the paper work load by inventing a regular Rube Goldberg contraption which picked up the cards and deposited

them in a box for filing. But still the snarl continued. A plan for reservations control was presented by Herb Lyall, and later, in 1935, Howard Tiffany and Bob Meserve of Boston worked out another system. There were a good many defects in both these plans, and they were discarded after a short trial.

Business grew apace. Jess Reed became supervisor of reservations for the whole system—and developed a worried frown trying to iron out the reservations wrinkles which resulted from operating with increased loads under the movable rack system.

Then in the spring of 1936 when all New England was flooded, Howard Tiffany, still in Boston, was completely submerged under a sea of phone calls and telegrams. When he had time to breathe, he put into operation the first master control system for handling space on airplanes. Under his supervision all the charts then in use were placed on a single desk in charge of Bob Meserve. No space control was available to the persons actually taking reservation calls. The calls were relayed verbally to the control man, who assigned the space; the seat number and other information was entered on a slip of paper, handed over to the control man, who entered all information on cards, then filed them. The system wouldn't work, reason: the poor control man, Meserve, had too much to do. So Reed went to Boston, and with Howard Tiffany and the other men at the station, took the best features of their brain children and succeeded in establishing the first effective master control system ever put in operation on any air line. The installation was completed about the middle of June, 1936. The men who had been slaving to put the Tiffany system into operation sat back in exalted exhaustion to view their handiwork; the scoffers stood around waiting for the tangle to start. One girl bet Jess Reed some cigars that it wouldn't work—he promised her orchids if it did—and she won the orchids! For the system actually worked, and this is why:

The control man now releases all space to the reservations clerks but he does not fill out the cards—he only checks the cards against his master control chart and files them. Under the system as it now operates, reservations receives the request for space over the phone, calls to the control man—“Give me a seat on Flight 9 to Newark, Wednesday May 19th.” The control man, who has completely lost his identity under the all-embracing name of “Tiffany,” assigns the space requested by saying, “Take seat 7 Flight 9 to Newark, 3:20 Wednesday afternoon.” Tiffany marks the chart, reservations confirms the space to the customer, fills out his card with all necessary information and drops

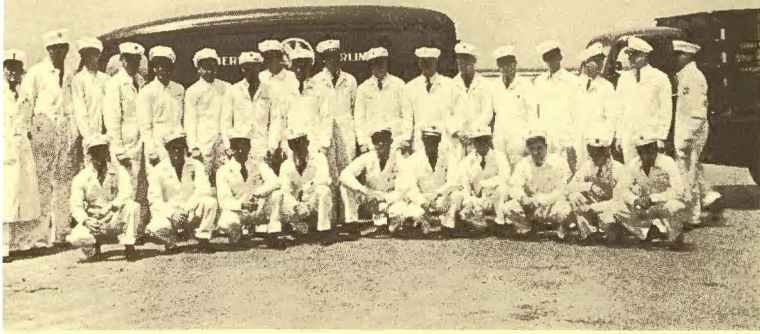
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NEW YORK RESERVATIONS BEFORE



NEW YORK RESERVATIONS AFTER





Supply Department

AN army moves no faster than its service of supply, nor can it extend its front line far in advance of its ammunition train. So also, an air transport company cannot perfect its service beyond the limits of perfection with which its Supply Department functions. Now, no army ever went into the field with 6,850 miles of front line, scattered through 53 large cities, with outposts of radio beacons on lone mountain tops and weather stations in isolated desert spots.

In 38 of the cities which American Airlines serves it maintains a complete inventory of airplane, engine and radio parts, in order to avoid undue delay in operating schedules. At 6 additional points on the line spare radio parts are required to maintain continuous radio communications. Many problems of the air transport business prove more difficult of solution than those usually encountered in industry. But this major problem of keeping our inventory investment at a minimum over this widely scattered territory, yet being certain that each station is constantly supplied with all necessary spare items, has required some wakeful nights.

When American Airlines, as a part of its program to point the way in aviation, placed the Flagships in service last fall and speeded up schedules, the situation was further complicated. The new Douglas planes, which required a substantial increase in our parts inventory, not only in Chicago, but at all outlying points. There was a crying need for further inventory control to keep our investment in parts at a minimum. It was to meet this need that the Supply Department was organized as a separate operating unit, under the direction of a man whose entire time could be devoted to this problem. Up until the first of the year, the source of supply had been a sub-section of the Purchasing Department. This was entirely satisfactory when the company was smaller and its operations limited, but if we were to maintain the position which we had assumed as leader in the air transport field, we needed a Supply Department geared into this new conception and coordinated with the Maintenance and Operating Departments.

So on February 1, 1937, under the direction of L. A. Slauter, the Supply Department began operating as a separate unit. Mr. Slauter, who has been with the company since 1933, was doing an excellent job selling off our old airplanes, engines and other equipment as they became obsolete. He knew all about cutting inventories, and he and the men of the supply Depart-

ment have proven they know how to furnish the supply service required by our present operations.

If you dislike figures, stop right now, for the magnitude of the task and how it is accomplished can only be told in good round numbers. The supply base at Chicago consists of three separate units: the principal stockroom at 5036, a service stockroom at 4848, and a warehouse about a mile away. The floor space totals approximately 15,000 square feet, which is a lot of dance halls. 20,000 separate items line the shelves. It sounds like a mail order house, and that is just exactly what our supply service is—a board mail service house with a retail store at the front counter and a clerk dispensing merchandise; an order and shipping department in the rear, where men are receiving and issuing 1400 items every day. You all know the procedure of filling out C-44 or PD4B forms, but do you know what happens when you fill out one of these forms, put it in an envelope or attach it to a worn part and toss it into a mail pouch? It is forwarded to Chicago immediately by company plane. One chap gets the C-44 material, scrutinizes it to see if it is too badly worn for further service or if it can be repaired, marks his opinion on the ticket, secures and sends you a new part if it is something you need at once—or notifies you that he received your shipment and will return it when it is repaired. The order for new material, strangely titled PD4B, may be handled by 8 or 10 men. Perhaps you want a few gaskets, a box of soap, some radio tubes, a new tire and a pilot's cap. That means a lot of different men must know where those treasures rest. Then the bookkeeping starts. In a room filled with the most tremendous ledgers ever seen, clerks pore over figures, keeping track of what you buy and what you replace out of stock—in other words, they maintain inventory control. When the order is filled, priced and placed in a shipping bin, another man wraps it all neatly together and dispatches it with a sticker on the package so that everyone handling it can record its progress as it flies back to you. Except in rush periods due to emergency demands, this whole procedure is accomplished in less than 24 hours after receipt of your order.

If you radio for a spare part, a lot more things happen, for this Supply Department operates 24 hours a day every day in the year. Over a period of the last six months they have handled 3,432 emergency radio requests from outlying weather stations, radio stations and maintenance shops all over the system. When one of those messages drops into town, things hum, and your part or your engine goes flying back to you on the very first plane scheduled for your spot on the map. Naturally, radio requests take precedence over run of

the mill orders. If a plane is out of service somewhere along the line, and Operations is running its fingers through its hair waiting for a new engine or part to put the plane back in service, it's too bad, but your order for flashlight batteries will just have to wait. Sometimes, if an engine goes out, they don't send a new engine or cylinder head by a scheduled flight—they send a whole airplane carrying that new part. Passengers are transferred, the schedule is maintained, and the repaired ship flies home to roost. Does it sound easy to operate a Supply Department? I don't think so.

I was impressed—impressed with the tidiness of the bins, each one numbered with the part it contained.

SERVICE CART FOR RAMP SERVICE

LONG before the new transcontinental Flagship service was inaugurated on September 18, 1936, men all over the system had been planning each item of operation down to the last minute detail. Operations checked flight control, sales issued new timetables, stewardess service was stepped up; every station put itself in readiness to meet the challenge of servicing the splendid new equipment. When the first Flagship rolled up to the ramp at Dallas, Chief Mechanic L. W. Harmon and his maintenance crew stood by to groom the giant flagship. The men tore about with oil cans, water cans, service ladders, tool boxes, portable flood lights and other service paraphernalia. The ramp presented an unsightly mess, and precious minutes were wasted as men ran back and forth for extra supplies. Harmon determined to eliminate such scenes of haphazard servicing. He called the maintenance men together and explained his plan for constructing a portable cart which would be easy to maneuver and adequate in size to accommodate all the items necessary to complete Flagship service. The men agreed to help Harmon put his idea into effect, and with no blueprints, only a few rough drafts on scratch paper, the work was begun.

For ten days these men spent all their spare time at this task, and they produced a contraption which has proven the answer to every station's prayer. It is an

I admired the holes ground into the shelves to hold cylinder heads steady so they won't topple over and spoil their nice smooth edges. I liked the smell of the place, the new rubber, the fresh paint, the oiled parts. But most of all, I was impressed with the spirit of those men clad in their fresh white uniforms, their names helpfully stitched over their pockets, who fill your orders. I wondered how they managed to keep so clean, and I was grateful for their patience with my dumb questions. They just grinned, answered me, and went right on working. The Supply Department is indeed a marvelous example of a perfectly coordinated operating unit; and I am sure that inventory is adequately controlled.

efficient labor-saving device which aids in the servicing and rapid dispatching of airplanes.

The original plan called for a cart on wheels which would accommodate the oil and water cans and tool boxes. Then it was decided to add a spare battery as well as an auxiliary starting battery hook-up. An emergency flood-light was included, which, with the aid of a regular landing light bulb, provided light in any part of the field. As work progressed, more things were added, until the completed job presented a rolling shop and lighting plant ready for instant service.

The cart is so rigged that it can be handled by one man. It is mounted on two industrial wheels with pneumatic tires and retractable legs for use when it is not being moved from one location to another. With the legs retracted, the cart is so balanced that it is as easy to move as a streamlined velocipede. Provision is made on the cart for mechanics' tool boxes, spare battery, oil and water service cans, two Lux fire extinguishers, emergency parts bin; a 110-volt flood-light with the plug-in cord on a reel, is mounted at one end. There is a tank holding a supply of compressed air for servicing tires, and which acts as a source of supply for the propeller greasing apparatus. A duplex combination grease heater and supply hose and gun for greasing propellers; auxiliary battery with cannon plug equipped for starting motors, are all included on the cart, and there is still room for any small items which may be necessary for any particular service.

When the plane to be serviced arrives, the mechanic orderly pushes the service cart to the front of the plane, completes his work, pulls the cart back of the fence out of the way, and the plane is ready to depart. At no time are oil cans, rags, spare tools or ladders scattered around the ramp, for as each item is used, it is placed back on the cart. A saving of 25% has been made in the time required for the servicing operation of Flagships, by the use of this ingenious device; and as for the appearance of the ramp, it is immaculate.



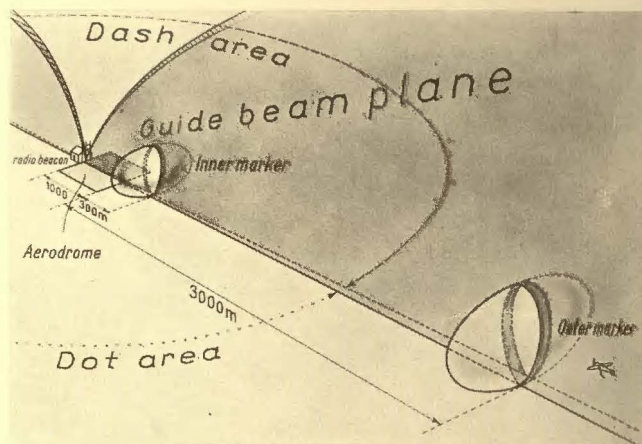
RADIO LANDING DEVICE

ON May 14, 1937, at the Indianapolis Municipal Airport, an event took place which may prove an important milestone in the history of air transportation. On that day, a crowd was assembled at the airport to witness the first practical demonstration of an airplane instrument landing system ever conducted in this country. For years radio experts, aviation companies and Bureau of Air Commerce officials have been investigating, testing, designing and developing electrically operated landing instruments. The trick has always been to secure proper co-operation between the various groups, so that some practical means of producing an instrument for commercial use which would be approved by the Bureau of Air Commerce could be devised and installed. But at last every group who played an important rôle was present. The Bureau of Air Commerce asked for the use of the Indianapolis Airport and when permission was received, sent a group of men out to aid in the installation of the system. The International Telephone and Telegraph Company brought to this country from Germany the necessary equipment which is manufactured by one of its subsidiaries, C. Lorenz-A. G. of Berlin; and finally, the American Airlines loaned one of its Douglas Flagships to the enterprise and operated the plane for the purpose of the demonstration.

For some time the Lorenz Instrument Landing System has been in practical, everyday use by most of the transport companies of Europe, and the landing equipment is installed in commercial airports from Croydon to Capetown. A full set of equipment has just been delivered to Moscow, and now at last, to Indianapolis.

The equipment consists of two units—one installed at the airport, the other in the airplane. The airport equipment provides an ultra-short wave radio beam, audible within a twenty-mile radius from the runway. Upon entering this radio field, the pilot locates an ultra-short wave glide path which leads him directly to the landing field. This directional beam is narrow so that the pilot, by keeping his airplane in the "on course" path, knows he will come in directly over the runway. The ground equipment also sends out an inclined beam in the vertical plane, the glide path, which can be followed down to the approach end of the runway. There are two radio markers in the glide path—one 10,000 feet from the edge of the runway and the other at 1,000 feet. There is no guessing. The pilot is able to accurately check his distance.

The other equipment is in the airplane. The signals, transmitted from the ground equipment, are received by the pilot in audible form through headphones, and simultaneously, they are recorded visibly on an indicator mounted on the instrument board.



In operation, the pilot approaches the field by means of the usual directional or homing beacon to within about twenty miles of the airport, at which point the Lorenz System begins to operate. The ultra-high frequency directional signals are the first received. The signal is the code A for the starboard and N for the port side. The pilot by maneuvering his plane reaches the "on course" signal, which is indicated by a continuous tone and having the indicator on his dial exactly centered. As he crosses the first marker on the field a light flashes on the left side of his indicator. This instrument also contains a glide path indicator, which tells the pilot the exact rate of descent to maneuver the plane. Setting the glide path indicator, and keeping his plane directly "on course," the pilot gradually loses altitude, and throttling down and descending at an approximately constant rate, he crosses above the inner marker, over the edge of the runway. There is a short high-keyed note in his head phones, the right hand lamp flashes on his dial, and then by further gradual reduction of altitude, he brings his machine down safely to land.

There is one further device on the instrument panel, the vertical indicator. Once the pilot is on the glide path, this part of the dial registers, by means of a float, whether he is above or below the proper path or approach. By holding the airplane exactly on the indicated level of the slanting glide path, he can execute a successful landing.

The demonstration at Indianapolis that day was successful. The system works, and the time is not far distant when the Lorenz Guide Beam and Landing System, after certain modifications have been made to conform with American flying conditions, may become an integral part of American aviation. It offers one more aid to pilots, enabling them under conditions of poor visibility to bring their airplanes down through the overcast, and by the use of proven instruments, to successfully approach a landing.

THE TIFFANY SYSTEM

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the card onto an endless belt running through the middle of the desk, the card drops into a box which is later placed on Tiffany's desk to be checked and filed in visible racks hanging just behind Tiffany's counter. If the airport calls, or the city ticket office; if someone cancels; if there is any question about Seat 7 on Trip 9 out of Boston for Newark on Wednesday May 19th, Tiffany has the data right at hand, and is able to control that space effectively from the very moment he assigns it until the passenger is on board the plane. In addition, the Tiffany system has speeded up communications tremendously—space is confirmed along the line in less than half the time formerly required.

Sounds complicated, doesn't it? Well, it looks complicated—but it is a simple operation if the rules are followed. It is its very simplicity which makes it succeed, and which has made the name "Tiffany" one to conjure with.

The Boston installation had been operating six months and when it was running on greased wheels,

in January, 1937, the Tiffany system was installed in New York. There are now 30 reservations clerks and 6 control men in that office. The Washington and Detroit installations were completed in April this year, the Los Angeles one in May, and right now they are making the installation at Chicago. Fort Worth will be next. The name Tiffany is no longer an exclusive American Airlines designation for the reservations control man. Good news travels fast and the fame of the Tiffany system has spread, for other people are bothered with reservations headaches. Step into the Chicago office of United some day, and you will see "Tiffany" controlling space, and soon in their San Francisco office, another "Tiffany" will be born.

So next time you, or you, or you, want space on the American Mercury and in the flash of an eye, get it—and what is more, find it really held for you, remember Jess Reed, Bob Meserve and Howard Tiffany. Yes, and the crazy Goldberg gadget that has become the endless belt to carry the cards along. Remember the people who laughed at the scoffers, stayed up nights—and really made a master reservations control system work.

NEW ADVERTISING CAMPAIGN

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is almost an endless task—so why should we not be first in selling methods?

We are not attempting an untried experiment. The advertising campaign we have undertaken is not a new idea. We have simply adapted to our purpose the same principle that has been employed successfully to sell other products. We are trying, like other manufacturers, to translate our product in terms of usefulness to the traveling public. We are trying to show people what we have to sell which can be of benefit to them. People are not interested alone in planes and motors. They want to know what air transportation can do for them. The Telephone Company tells you in its advertising copy, "Use the telephone—not only for convenience, but because it is fun." Soap manufacturers urge you to buy their products, not just to have some soap—but to "Keep that schoolgirl complexion"—or "To rub sunshine into your skin."

We are trying to translate our product in similar terms to make people want to fly for the benefits it will bring them.

We know that most people do not realize the many advantages of air transportation. We believe that if we tell them what air travel really has to offer, in terms which they can understand, they will begin flying in ever-increasing numbers and we will fill our planes.

On May 13, we began a concentrated newspaper campaign in the six cities on our system where we have the most seats to sell, namely—Boston, New York, Los

Angeles, Detroit, Dallas and Chicago. These six cities represent 70% of our total potential revenue. If we fill every seat out of these six cities, we will have sold 70% of all the goods we manufacture. We know too, that the advertising we do in these great population centers will improve our business elsewhere, but we shall continue our regular newspaper advertising at many other points.

"FEWER HUSBAND-LESS NIGHTS" is the subject of our first advertisement; a reproduction of this ad appears on the inside front cover of this issue and, as we go to press, we are swamped with comments; telling us how effective this advertisement has been. Perhaps, up until this moment, few women have ever considered air travel as a part of their daily lives. Now we hope to translate in terms of their own experience what air travel means to them.

No advertised product or service, in our opinion, has a more alluring, interesting or convincing story to tell than has American Airlines. People are interested in anything we have to say because it's about aviation. If we tell our story well we will create among the traveling public the desire to fly.

Watch for the other ads in the newspapers of these six cities. Get the reactions of the public. Tell us what you think of our copy. Write the General Sales Department in Chicago about anything you hear, or about any ideas you have which you think can be incorporated into our advertising which will help us do a better job of selling the American public.