

# HEADQUARTERS EIGHTH AIR FORCE Office of the Commanding General APO 634

10 January 1945

SUBJECT: Army Talks

TO: All Personnel, Eighth Air Force

1. For many months you have been reading and discussing Army Talks, and have found these weekly pamphlets of real value in adding to your knowledge and understanding of the peoples, events and problems involved in the prosecution of global war.

2. "Stars Over the Reich" is different from previous issues of Army Talks in that it has been specifically designed by and for personnel of this Command. Be on the alert, not only for weekly Army Talks issues, but for the Eighth Air Force Army Talks which will reach you every fourth week and which will be of particular interest and value to all of you.

3. It is appropriate that "Stars Over the Reich" should tell the story of the Eighth Air Force, because we will commemorate our third anniversary on the 28th of this month. This story is presented to give you a clear picture of who we are, what we have done and how we work as a unified team to contribute to Allied military power.

> JAMES H. DOOLITTLE Lieut. General, USA

Commanding

"It is desired that, consistent with operational requirements group discussions, through the medium ARMY TALKS... be held in all units within this command, using one hour of training time each week... unit commanders will conduct an orientation program, using not less than one hour training, time a week... presentation of this material is a command function... A company officer will be present at each discussion, whether or not he is the discussion leader..."



BY COMMAND OF GENERAL EISENHOWER.

(Extract from letter ETO, 30 April, 1944, AG 352/2 OpGA, Subject:
Education in Military and Current Affairs.)

# STARS OVER THE REICH

IN the years between the two World Wars the Army Air Corps hammered out some definite convictions about the use of air power. Common to them all was one basic idea—strategic daylight precision bombing by long range high altitude planes.

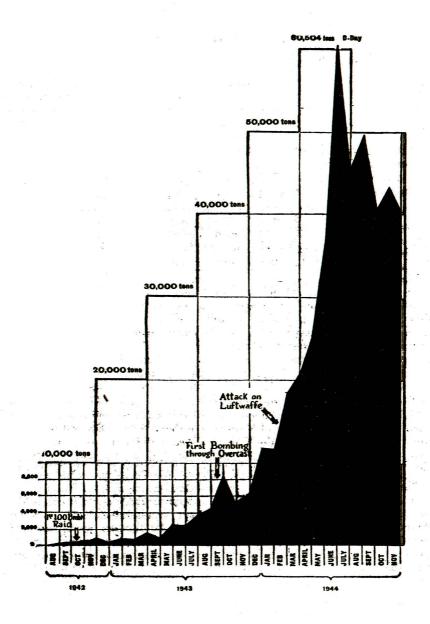
It has been the job of the Eighth Air Force to pioneer this idea, give it wings and fly it over the toughest enemy air opposition in history. The story of the three years' growth of the Eighth is the story of the gradual winning of this goal in the face of doubts, setbacks and every kind of difficulty. Where two great air forces failed, the Eighth has won through and in so doing has earned a place in history.

#### THE BABY IS BORN

On January 28, 1942, the Eighth Air Force was activated. It had no planes, airfields or personnel—only a mission. Flying from Britain, the only remaining European base, it was to strike deadly blows at Germany's war industries. In February seven officers arrived in England to make preparations for building up an air armada. They faced a gigantic task. Even their objective was frowned upon by many. The Luftwaffe had lost more than two thousand planes in a few months over Britain in attempting massed daylight bombing. The RAF had decided against the strategy after trying it out and had resorted to night bombing.

Nevertheless, the RAF went to work wholeheartedly, handed over bases, helped re-equip and rebuild them. Eighth Air Force personnel studied at first hand the hard won experience of their two and a half war years. Combat crews and ground units were trained at RAF operational fields. On May 12, 1942, a light bombardment squadron arrived and on Independence Day six of their crews, flying RAF Bostons, took part in a bombing operation over the Continent. Their low level attack on De Kooy airfield in Holland was not typical of the missions of the Eighth, but it announced the start of troubles still undreamed of by the Nazi High Command.

On August 17 the Eighth flew its first mission in its own aircraft, Flying Fortresses which had arrived at the end of June. Twelve of them dropped 18 tons of bombs on the Rouen rail marshalling yards. Two years later, on a typical full scale attack, each of those 12 bombers would be multiplied by a hundred and the distance flown would be four times as far. But the important thing about that first operation was that it worked. The bombs fell on the target and all the planes returned.



### MONTHLY BOMB TONNAGE DROPPED

#### **GROWING PAINS**

Through the long months of the fall and winter the Eighth gained precious experience. It gained strength, but only slowly, owing to the demands of a global war. Slowly the monthly bomb tonnage mounted, although it was not until March, 1943, that it passed the thousand mark. On October 9, '42, B-24 Liberators joined the Forts in the biggest venture to date—a fleet of 108 bombers. Compared with the precision standards of night bombardment the results were impressive.

After October the growth of the Eighth was slowed by the North African invasion. The most experienced crews were transferred to the Twelfth Air Force, which moved in with the invasion forces in November. Replacements naturally went to Africa rather than to Britain. All through November and December the Eighth was hammering U-boat bases on the Atlantic in an effort to deal with the very serious submarine menace. Mission by mission new techniques of formation flying and bombing were tested. This was the period when concentrated precision bombardment was pioneered, proving a deadly blow to compact industrial and military targets.

At the Casablanca Conference in January these early exploits of the Eighth were sufficient evidence to convince the Combined Chiefs of Staff that daylight precision bombing of the Reich's industrial power was a practical plan and must be launched on a large scale as a main feature of global warfare in 1943.

#### DAY AND NIGHT

On January 27 the Eighth made its first attack on Germany—the U-boat yards at Wilhelmshaven. From this time on there was a steady stepping up of the weight and frequency of the attacks. Daylight operations began to take their place alongside the RAF's night bombing as the twin scourge of the Reich. On May 14 the Eighth was able to fly four simultaneous missions over the Continent, the first of many such tactics to confuse the Nazi defenses.

In August '43 the bomb tonnage dropped was twenty times that of August '42, the first month of operations. Gradually the distances were lengthened. In the last week of July the Eighth bombers reached Trondheim, Norway, a flight of 1,900 miles, and came within 80 miles of Berlin to bomb Oschersleben. Then, on August 17 126 Forts hit Regensburg in Southern Bavaria and flew on over the Alps to land on North African bases. This was the first big AAF shuttle operation, a development which placed great new stretches of enemy territory within reach of our bombs.

One further technical development and the Eighth was ready to launch the full weight of its striking power. In late September the first bombers, equipped with new electronic devices, bombed their targets through overcast. Results were satisfactory, and as the instruments were improved, they made possible more frequent operations through the poor weather of winter months. In fact, the tonnage soon mounted to figures which made the first year's operations look puny. The monthly total of nearly 13,000 tons in January '44 was more than doubled in April, and in the month before D-Day it reached 40,000 tons. In June the Eighth dropped 60,504 tons on Nazi occupied territory—a blow not far short of the estimated tonnage dropped on Britain by the Luftwaffe during the three years 1940-1942.

#### FORTRESS EUROPE CRACKS

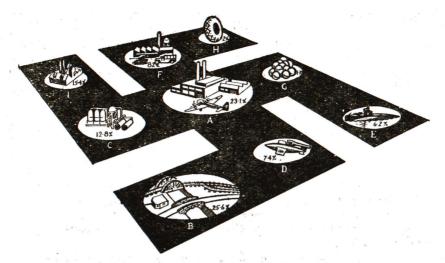
How effective was this American use of air power? D-Day gave the answer. For more than two years "the great bombing controversy" had raged back and forth. Enthusiasts sometimes prophesied that Fortress Europe would be shattered into surrender by air bombardment, just as was the island of Pantelleria during the North African campaign. Pessimists spoke gloomily of vast resources of Nazi material and equipment unharmed by bombing and held in readiness for the invasion attempt. Both were wrong. As the smoke and dust cleared from the invasion coast two facts stood out clearly:

- 1. The Allies held overwhelming air superiority over the Luftwaffe.
- 2. The Nazi war machine lacked the huge blacklog of supplies which the Allies could muster.

The round-the-clock pounding of the German industrial strength by the RAF, the Eighth and the Fifteenth had supplied the essentials for successful invasion. It was that preliminary strategic bombing which made possible the successful tactical missions of the RAF, Eighth and Ninth during the critical invasion days when they crippled the Nazi communications and supply lines, sealed off the bridgeheads, protected the ground and airborne attacks, blasted the enemy defenses ahead of our ground forces and carried emergency supplies for our rapidly advancing elements.

#### **FOLLOW-THROUGH**

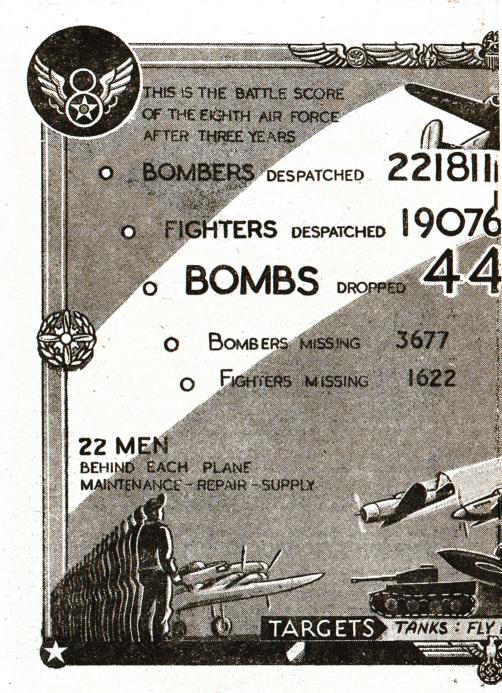
The fury of the air assaults has been maintained since D-Day, while the target area has steadily diminished. For more than six months every part of the Reich and German occupied territory has been open to attack from the air. American bases in Russia have enabled the Eighth and Fifteenth to undertake the shuttle bombing which reached the last corners of enemy territory. It is difficult to imagine the destruction being let loose day and night on the key industrial centers of Germany. The blitz attacks on British cities-London, Coventry, Bristol-were minute fractions of what Cologne, Hamburg, Berlin or Bremen are suffering. Oil, rubber, tanks, trucks, locomotives-all of these have become critical shortages for the enemy, whittled down by the Eighth-Fifteenth-RAF offensive. For lack of fuel and lubricants many otherwise serviceable tanks, vehicles and weapons have been found abandoned by the Nazis. Untold numbers of lives will be saved as the Allies penetrate the Reich, as surely as they were saved on the Normandy beach-heads, by the strategy of giant air blows, a strategy begun by the Luftwaffe but mastered by the Allied Air power.



# Targets of the Eighth

- A Aircraft Industry (includes assembly, engine and repair plants and airfields). The four great air blows in February 1944 were a decisive factor in weakening the Lustwaffe and giving the Allies the essential air superiority before the invasion of Europe. They were the first of many aimed at aircraft.
- **B** Tactical Direct Army Support (includes coastal and military defenses, bridges and all marshalling yards attacked after I June '44). Although designed for strategic bombing, the Eighth proved its flexibility during the invasion days in the tactical support it gave to the ground and sea forces by crippling Nazi ground force support.
- C Oil Industry (includes refineries, synthetic oil, and storage). The Nazis have more planes, tanks, vehicles and other equipment than they are able to operate, owing to the critical shortage of fuel and lubricants. Strategic bombing has played a very large part in causing this shortage.
- D Flying Bomb Sites. The Eighth, though not designed for such work, took part in the pounding of these targets when the flying bomb menace became serious.
- E U-Boat Industry (includes sub-pens, bases and construction yards). At the height of the German submarine activity in the winter of 1942-43 the Forts and Libs gained experience at the expense of the U-boats and had a big hand in whittling down the U-boat supremacy.
- F Indirect Army Support (includes tank, vehicle and locomotive plants, steel industry, ordnance depots, and marshalling yards prior to 1 June '44). This is one of the basic strategic jobs of the Eighth Air Force.
- **G Ball Bearing Industry.** A small but significant target, since the serious damage caused by bombing has been a production bottleneck for the aircraft and other industries dependent on the manufacture of ball bearings.
- H Rubber Industry. The same is true of this target, especially for transportation.
- I Miscellaneous Strategic. An assortment of targets have been attacked in key industrial areas when weather has singled them out as targets of opportunity or as suitable for overcast bombing.

The figures on the chart show the percentage of total bomb tonnage dropped on each type of target for the period August '42-November '44 inclusive.





#### EYES OF THE EIGHTH

When the Nazis think of the Eighth they no doubt picture the almost daily stream of a thousand heavies and many hundred fighters launched at the nerve centers of the Reich. That is all they need to know, but the behind-the-scenes picture of that deadly striking force is no less vivid. One of the best ways to view the Eighth is to see what goes into a typical bombing mission. Long before the bombers take off, even before the mission is finally planned, a vital component of the Air Force has been at work. The reconnaissance work of the Eighth is one of its outstanding contributions to aerial warfare, and one of the least known. Much of its work is done in secret and much of it is routine, but none the less hazardous. The Reconnaissance Wing of the Eighth, largest unit of its kind in the world, has two distinct sections—photo and weather.

During the past months fast unarmed P-38s and Spitfires have mapped out every foot of enemy territory of any importance. The mosaics from their photos have revealed the enemy's secrets, stripped of camouflage, and have been of the highest value to the Allied ground and tactical air forces in addition to the heavies. Nearly every day some area of the sky over enemy country is clear and there the planes are taking photos. Their job is never done. They keep a constant watch on rail movements, building and repair progress on industrial plants and many other activities. The information they provide is essential for picking the targets.

Before any proposed mission a reconnaissance plane will be out over the target to bring back the latest photo report. Even before the pilot climbs down from his plane the camera is rushed to the labs. Day and night the processing goes on. Speed is the essential as the film is prepared for "first phase" interpretation. The interpreters make a hurried but accurate examination and their report is flashed by teletype to the headquarters concerned.

A few hours after the bombing is completed, if the weather permits, Recon Wing will have photos showing the results of the mission. Meanwhile, the original photos will have been put through "second phase" interpretation where the prints are given more detailed study and a careful report is compiled. This source has often revealed vital information about the enemy's situation and plans.

#### WHATEVER THE WEATHER

While photo reconnaissance is providing this information, weather reconnaissance is doing an equally important job. The weather outlook is the first consideration in choosing the day's targets. Many questions must be answered—can the target be bombed visually? What is the possibility of icing? At what altitude can condensation trails be expected? Day and night the planes of weather reconnaissance are in the air, often when all other operations have been cancelled. Heavy bombers, filled with meteorological instruments, fly on regular runs every day, far out over the Atlantic, to sample weather conditions. They climb to extreme altitudes and they skim the waves in the course of their missions. In fast

unarmed Mosquitoes Eighth Air Force pilots and navigators fly deep into Germany, evading flak and fighters, to make weather readings there. As a result of the long and short range forecasts highly successful surprise attacks have been sprung on special targets. The missions have been brilliantly timed to give cloud cover on the way and clear sky over a target requiring perfect visual bombing.

#### SERVICE IS THEIR SLOGAN

The preliminaries are finished—staff work has coordinated all available information and precise orders have been passed down to the bases where the briefings of the crews will take place. Through the night before the day's mission the ordnance personnel are working like beavers. The transportation of the bombs from revetments to the planes, the bombing up and fusing and checking of the bombs—these are part of their contribution to the success of the mission. In preparation for a thousand bomber attack they have to handle some three thousand tons of bombs and, including the supplies for a thousand fighters, close to five million rounds of ammunition. Yet they are but part of the vast army of ground personnel who sweat it out in the mud so that the planes can fly. Backbone of the supply, maintenance and repair work is the Eighth Air Force Service Command. It has 22 men on the ground for every operational plane.

It is no easy task to keep in stock half a million different items of supply, but it is even tougher to keep them functioning. Before every mission, each plane has a thorough check up in addition to its regular servicing schedule. The smallest defects in any part may cost a life. The repair jobs after every heavy attack on the well protected Reich present a large scale problem. Suppose that on this attack there are a thousand heavies and as many fighters; it can be expected to provide repair work for at least the equivalent of 5,000 men for a 48-hour week. And these armorers, electricians, radio men and the rest of the repair crews are trained specialists, each a craftsman in his own sphere.

The ground men have specialized in impossibilities and have frequently invented ingenious repair tools and machines to overcome the problems of combat damage. Many a modification which was incorporated in the building of a later model was first engineered in a repair depot. The ground crews have a big stake in the pounding of Germany. They know what it takes to keep the air armadas flying. So do the hundreds of air crews who have limped home on "flying wrecks" which miraculously stuck together.

#### THE FIGHTERS STRETCH THEIR WINGS

When the story of the Eighth is written a large share must be given to the role played by the fighters. For the first few months of their operations the heavies had to carry out their bombing with little or no fighter support. In those days effective long range fighter escort operations were almost unknown. Today it is no surprise to read in the newspapers that hundreds of fighters are giving cover to our bombers deep into Germany. This advance in strategy has been made possible partly through the amazing

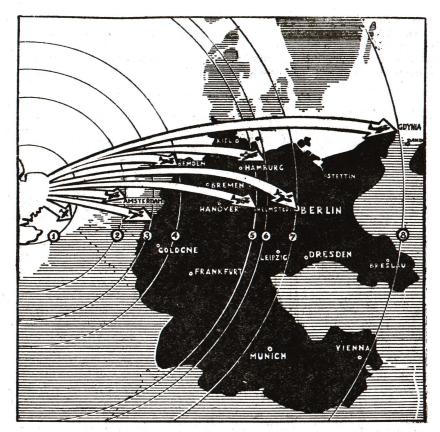
lengthening of the range of the Eighth's tighters and partly through developments in their use. As the bombers rendezvous and start heading for enemy territory the first fighters prepare to join them. They are succeeded by further relays, the number depending on the distance of the target. It takes little imagination to picture the skilful teamwork needed to coordinate these maneuvers.

The fighters of the Eighth have not only given cover to the heavies; they too have performed remarkable feats of precision bombing, especially during and after D-Day. Their strafing and bombing of tactical targets and their liaison with the ground forces were not typical of their regular duties, but they tackled every job as it came up and often produced sensational results. When the Nazi fighters have risen to do battle, the Eighth fighter pilots and their planes have proved their worth. For many months the Luftwaffe has concentrated on its defensive fighter strength. Fighting over its own territory the German fighter has many advantages, yet the scoreboard shows the loss of more than four enemy fighters to every Eighth Air Force fighter downed.

#### TOUGHNESS, TEAMWORK AND TRADITION

Three years of all-out effort in a total war is a test of any organization, especially when it has to be built from the ground up and has to face constantly changing combat conditions. Guts and teamwork were essential equipment in building the Eighth's striking power. They are as essential today. It takes a special kind of toughness to go quietly about your job miles high in the bitter cold, when your senses rebel and you know hot metal is flying at you and there isn't a thing you can do about it. It takes another kind of toughness to go on working long hours in the mud, taking pride in your work, though few will ever know how much you put into it, except the men whose lives depend on it. It takes toughness, too, to work shoulder to shoulder with other guys and other outfits, caring more for the big job to be done than for how much credit will come your way.

These things make up the spirit of the Eighth and its traditions which will live on long after the technical achievements are forgotten. They say of the men of the Eighth Air Force—"As long as they are conscious they hit their target and they bring their ship home." Never yet has an attacking force been turned back by fighters or flak. In one Group alone two bombardiers, mortally wounded, operated their bomb releases in their last living moment. Time and time again pilots have brought back planes when by all reasonable standards they or their planes were too seriously injured to fly. A fighter pilot, wounded in the eyes so that he could only see upwards, is typical of that determination. He refused to abandon ship when he found that he could follow a fellow pilot flying a few feet above him. Together they flew in to a safe landing. The men on the ground stand with the flyers in equal devotion to duty—the corporal, for example, who has serviced the guns which have never suffered a mechanical defect while firing twenty thousand rounds. Such men can be relied on for any job—so can their outfit, the Eighth.



# The Growth of Fighter Escort Range

- 7. For the first nine months of their operations the Eighth's heavies had little fighter escort over the Continent.
- Beginning in May, 1943, the P-47s regularly escorted missions within a 200 mile range.
- 3. Fitted with auxiliary fuel tanks, on 28 July the P-47s extended their range to 260 miles.
- 4. Two months later technical improvements and new tactics enabled the Thunderbolts to escort the bombers to Emden, 325 miles distant, and over the borders of the Reich.
- 5. By March '44 the P-47s, with greatly improved fuel carrying equipment, had lengthened their escort range to Helmstedt, 470 miles.
- In the same month P-38s, similarly equipped, began reaching the 500 mile mark.
- 7. On 6 March '44 P-51s made their appearance over Berlin, escorting the heavies, 560 miles from base.
- 8. Five months later, 6 August, the Mustangs broke all records for Eighth fighter escort range when they accompanied a bombing mission to Gdynia, in the Polish Corridor—a round trip of more than 1,600 miles.

# WORDS FROM THE WING WISE

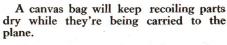
THESE tips on preventing frozen guns and gunners come from gunners who were on operations last winter.

#### How to Keep Your Guns from Freezing

Thorough cleaning before and after every mission is point number one. Remove all moisture and powder deposits, especially from the bolt recesses. Firing pin port and receiver (especially extractor switch recess and front barrel bearing) should be thoroughly cleaned, dried and then properly oiled with AXS 777 (new specification number—2-120). Leave only a light film of oil.

And keep oil cans tightly closed to keep

out dust and foreign matter.



Charge your gun just before or just after take-off (whichever is your Group's policy). If your gun freezes when *unloaded* you're stuck. If it's *loaded* the recoil will loosen any frozen parts.

Test-fire at bombing altitude. If you can charge the gun but it won't fire, hold the trigger back while the parts slam forward into battery—this sometimes loosens frosted parts. Only charge the gun when you have to; it lets cold moist air in to the recoiling parts. If the

extractor switch is frozen charging may result in an out-of-battery stoppage.

#### How to Keep Yourself from Freezing

Use the correct equipment and wear clothing as it says on the posters. Clothing should fit loosely, as air insulates, and your blood circulates better.

Keep dry. If your feet get wet, change your socks before take-off. Don't work around the plane in too heavy clothing before take-off, as sweat increases the danger of frostbite.

Pre-flight your heated suit. The connection in the plane may be out of order. Only turn your heated-suit rheostat up far enough so you are just warm enough to keep you from being miserable. Be sure to have fleece-lined clothing in case the suit goes permanently out of order. If it does, keep moving the parts of your body that don't have heat, flexing the muscles, wiggling your fingers and toes. And it's a good idea to have extra heated gloves and cords.

Wear mufflers or bath towels around your knees, neck and anywhere else that gets cold. Goggles and canvas or wool hoods are available, and they sure are handy if the plexiglass is broken near you.

If you have to take off your heated glove at altitude don't remove the glove liner. Don't leave any part of your body exposed for more than a few seconds. *Remember*, at 40 below zero you may freeze a hand badly enough to lose a finger before you feel any pain or realize anything's wrong.

## FROM THE EAGLE'S NEST

#### 24-Volt Drill Motor

DID you ever find yourself in a dispersal area or some isolated spot where there was no generator to power your electric repair tools? At the Third Strategic Air Depot the boys have been working with a home-made gadget for the last nine months to help them out on such occasions.

Working on B-24s, they have been using an assembly constructed from salvaged aircraft units. It is a 24-volt drill motor and can be run from the plane's batteries in an emergency, thus expediting rush repairs.

Here are the units they used:

- 1. A burned out drill motor was disassembled, leaving the handle and trigger assembly intact, along with the gear box chuck assembly on the end of the motor.
- 2. A motor, usually utilized to drive the fan on a heating unit, was removed from the radio compartment of a salvaged B-24.
- 3. A suitable pinion gear, manufactured in the machine shop, was used to drive the gearing mechanism on the drill motor gear box.
- 4. Spacers were then made and fitted in each end of the motor. The three assemblies were bolted together and attached.
- 5. The motor was then ready to use on Model C-10 energizers (a common airfield unit) or by simply plugging into any 24-volt outlet on the aircraft itself.

#### Flexible Ratchet Wrench Extension

There are some nuts and bolts which seem to be located in hidden corners and narrow blind spots just to make things difficult. The ordinary ratchet wrench extension won't get at them. At the same depot mentioned above they have worked out an instrument for dealing with this stubborn problem and so saved themselves a lot of man hours.

This is how they made what they call their "flexible ratchet wrench extension":



- 1. Remove the ends from a Sperry K-4 sight elevation flexible shaft.
- 2. Remove the ends from an ordinary 9/32 by 4 in. ratchet extension and rivet on to each end of the flexible shaft.
- 3. Completed assembly will then handle any sized nut or stud up to 7/16 in., the standard maximum size of a 9/32 in. ratchet set, by simply attaching suitable ratchet extension handle and the desired sized socket.

This idea can be further used on sizes above 7/16 in. by using a heavier flexible shaft with suitable attachments.

# **MILESTONES**

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JAN. 28 1942	Eighth Air Force activated at Savannah, Ga.
MAY 12	Units of Eighth Air Force arrive in England.
AUG. 17	First mission in Eighth AF aircraft—twelve Fortresses bomb Rouen railway yards.
OCT. 9	Liberators join Fortresses in largest mission to date—108 bombers in an attack on Lille industrial plants.
JAN. 3 1943	First use of "concentration" precision bombing (simultaneous bombing by formations instead of individually) in raid on St. Nazaire sub-pens.
JANUARY	Principle of daylight precision bombing accepted by Casablanca Conference as a result of the Eighth's pioneer operations.
JAN. 27	First US bomber attack on Germany (Wilhelmshaven and Emden).
MAR. 18	First use of automatic flight control linked with Norden bombsight brings excellent results in mission against Vegesack U-boat yards.
MAY 14	First multiple attack by the Eighth—a technique developed to confuse enemy defenses. Four simultaneous missions over Germany, Belgium and Holland.
JULY 24	Raid on Heroya magnesium and aluminium plant and Trondheim U-boat base in Norway. Excellent precision results.
JULY 28	Auxiliary fuel tanks enable P-47s to give fighter escort over Kassel, Germany.
AUG. 1	Eighth AF B-24s join with Ninth AF on low level attack on Ploesti, Rumania, oil refineries.
AUG. 17	First large scale US shuttle bombing mission. Forts attack Regensburg, Bavaria, and fly on to North African bases.
SEPT. 27	First use of instruments permitting bombing through overcast—used over Emden.
JAN. 29 1944	First full scale attacks on Reich—806 bombers with 634 fighters bomb Frankfurt.
FEB. 20-25	Series of four devastating attacks on German aircraft plants and assembly centers.
MAR. 4 1944	First US bomber attack on Berlin.
JUNE	In the month's operations the Eighth dispatched 54,388 bombers and fighters, and dropped more than 60,000 tons of bombs in strategic and tactical support of the invasion forces.
SEPTEMBER	The Eighth contributed to the great aerial umbrella protecting the airborne landings in Holland, including destruction of 230 flak positions. Fighters and bombers destroyed 904 enemy planes during the month.
OCTOBER	Instrument precision bombing of the Reich through overcast on 16 days secured outstanding results, including breaching of Mittelland Canal.
DEC. 24	Largest single bombing mission in history, carried out by more than 2,000 Forts and Libs, with more than 900 fighters, against rail yards and communication centers behind the

enemy lines.