

ADVENTURES IN *JET POWER*



ADVENTURES IN
SCIENCE SERIES

GENERAL  ELECTRIC



AS A JET PLANE — BOEING'S B-47 STRATOJET — FLASHES PAST JOHNNY POWERS AND HIS SCIENTIST BROTHER, ED...

ZING! NO WONDER THEY CALL IT A STRATOJET— IT SURE MOVES LIKE ONE!

YES-- AND IT'S POWERED BY ONE, TOO, JOHNNY.



BEAUTIFUL SIGHT, ISN'T IT? BUT WHAT A WHALE OF A LOT OF TROUBLE WE HAD BEFORE WE FINALLY MADE JET PROPULSION WORK.

WHAT DO YOU MEAN "FINALLY?" YOU TALK AS THOUGH THE IDEA WAS A THOUSAND YEARS OLD.



ACTUALLY ALMOST TWO THOUSAND, JOHNNY. BUT IT WAS ONLY A DREAM FOR MANY CENTURIES. THE STORY OF THE MEN WHO MADE THAT DREAM A REALITY BEGAN IN 1933...



"IN THAT YEAR, A YOUNG ENGLISH INVENTOR ENTERED CAMBRIDGE TO CONTINUE HIS RESEARCH ON A 'PROPELLERLESS AIRCRAFT.'"

LOOKS LIKE A FLIGHT OF THE IMAGINATION TO ME, OLD CHAP.

I TELL YOU IT CAN BE DONE. AND SOMEDAY I'LL FIND A MANUFACTURER WITH ENOUGH VISION TO HAVE A GO AT MY JET PLANE.



"YEAR AFTER YEAR, THE YOUNG INVENTOR STRUGGLED TO PERFECT HIS ENGINE. AND THEN CAME WAR AND THE DEVELOPMENT OF JET POWER BECAME URGENT!"

STILL HAVING TROUBLE?

I'M CERTAIN I'M ON THE RIGHT TRACK, SIR; BUT IT WILL TAKE TIME

NOT TOO MUCH, I HOPE. YOUR WORK IS A VITAL PART OF THE WAR EFFORT. YOU MUST SUCCEED!

"IN THE SUMMER OF 1941, NAZI BOMBERS SWARMED OVER ENGLAND. GALLANT RAF FLIERS, PILOTING SPITFIRES, FOUGHT THE RUTHLESS ENEMY IN THE SKIES WHILE LONDON BURNED BELOW...

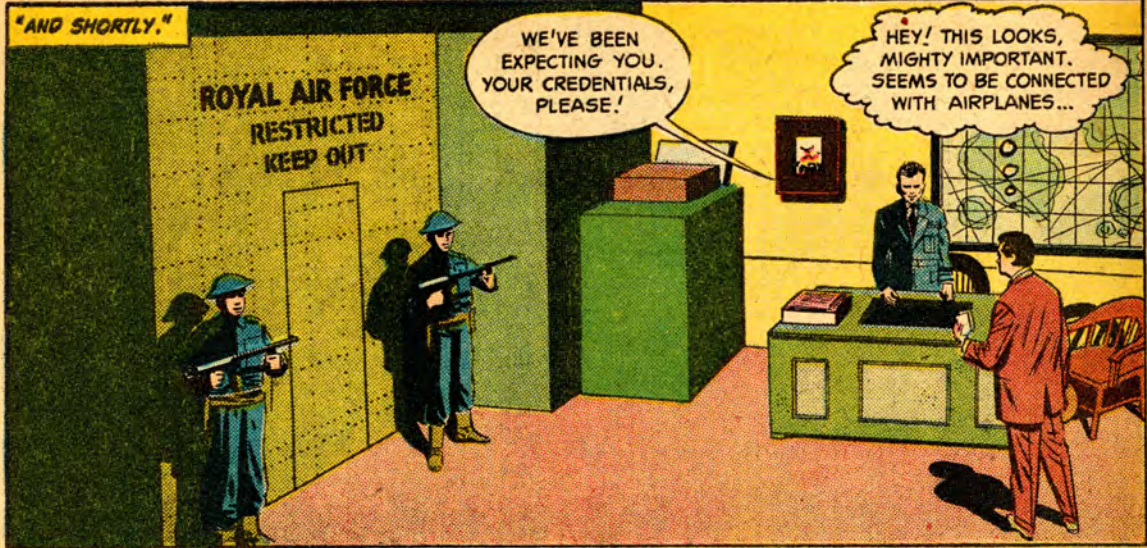
"IT WAS A WAR OF SURVIVAL. OUR PLANES HAD TO BE BETTER... FLY FASTER... OR ELSE!"

"WHILE THE DESPERATE BATTLE WAS GOING ON..."

AH, HERE'S THE AMERICAN ENGINEER NOW...

BEG PARDON, SIR... A CABLEGRAM FOR YOU. I BELIEVE IT'S URGENT!

HMMM... FROM THE BIG BOSS AT HOME. INSTRUCTIONS TO REPORT TO A LONDON ADDRESS FOR FURTHER ORDERS. NO EXPLANATION, NO DETAILS--SOUNDS MYSTERIOUS!

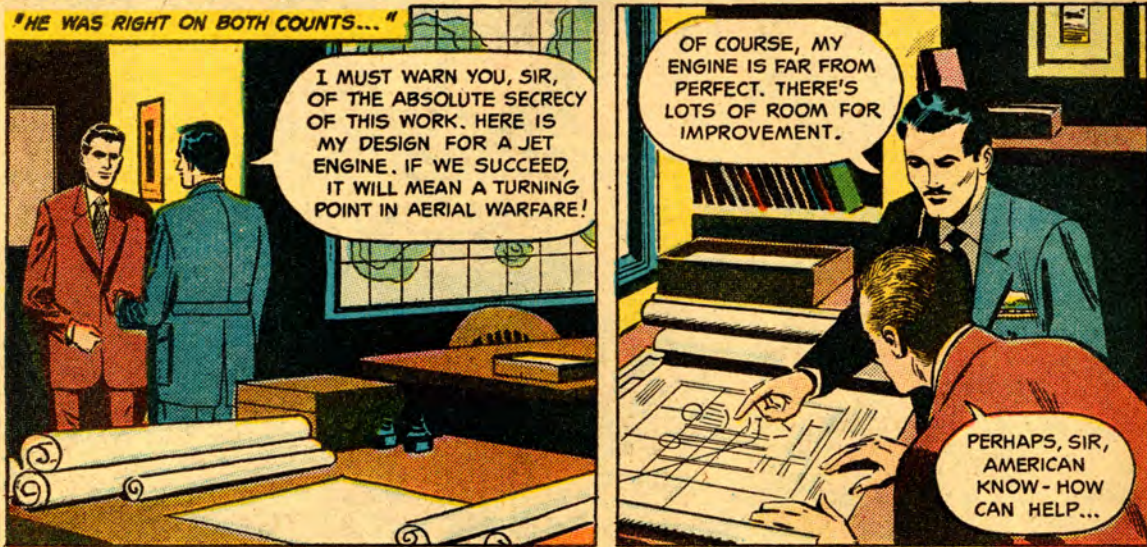


"AND SHORTLY."

ROYAL AIR FORCE
RESTRICTED
KEEP OUT

WE'VE BEEN EXPECTING YOU.
YOUR CREDENTIALS,
PLEASE!

HEY! THIS LOOKS,
MIGHTY IMPORTANT.
SEEMS TO BE CONNECTED
WITH AIRPLANES...

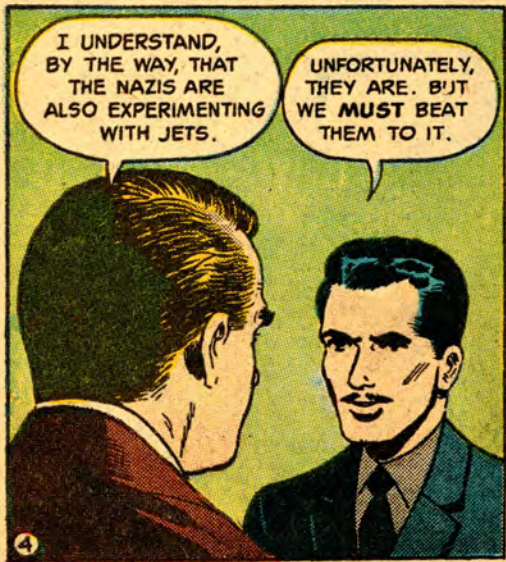


"HE WAS RIGHT ON BOTH COUNTS..."

I MUST WARN YOU, SIR,
OF THE ABSOLUTE SECRECY
OF THIS WORK. HERE IS
MY DESIGN FOR A JET
ENGINE. IF WE SUCCEED,
IT WILL MEAN A TURNING
POINT IN AERIAL WARFARE!

OF COURSE, MY
ENGINE IS FAR FROM
PERFECT. THERE'S
LOTS OF ROOM FOR
IMPROVEMENT.

PERHAPS, SIR,
AMERICAN
KNOW-HOW
CAN HELP...



I UNDERSTAND,
BY THE WAY, THAT
THE NAZIS ARE
ALSO EXPERIMENTING
WITH JETS.

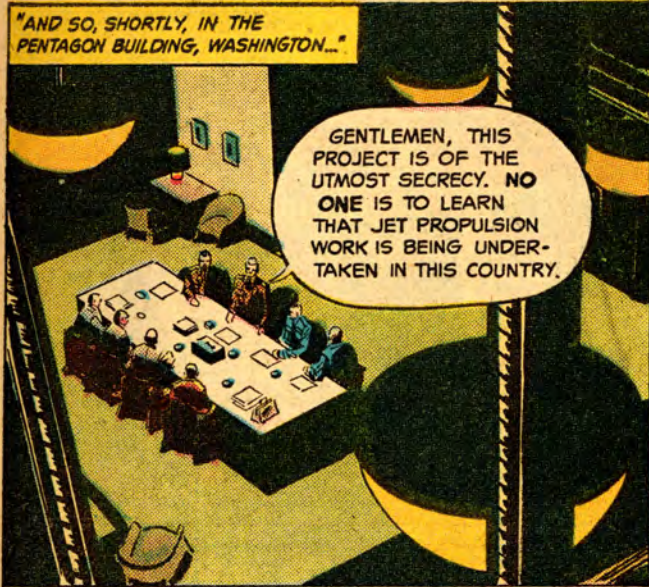
UNFORTUNATELY,
THEY ARE. BUT
WE MUST BEAT
THEM TO IT.



THAT IS WHY, SIR, YOU
WON'T BE ABLE TO TAKE
THESE DRAWINGS WITH
YOU WHEN YOU RETURN
BY CLIPPER TO
THE STATES.

I UNDERSTAND...
MY TRIP HOME WILL
TAKE ME THROUGH
SPY-RIDDEN COUNTRY...
WE CAN'T AFFORD
TO RISK IT!

"AND SO, SHORTLY, IN THE PENTAGON BUILDING, WASHINGTON..."



GENTLEMEN, THIS PROJECT IS OF THE UTMOST SECRECY. NO ONE IS TO LEARN THAT JET PROPULSION WORK IS BEING UNDERTAKEN IN THIS COUNTRY.



THESE PAPERS JUST ARRIVED BY ARMY PLANE FROM ENGLAND. I HAVEN'T SEEN THEM MYSELF, YET.



HERE YOU ARE... VERY ROUGH, BUT THEY'LL GIVE YOU THE IDEA. THIS IS THE BRITISH JET ENGINE.



THESE ARE A LOT LIKE TURBINE BUCKETS!



EXACTLY! THAT'S WHY WE'VE COME TO YOUR COMPANY FOR HELP. OF COURSE, YOU PEOPLE ARE PRIMARILY CONCERNED WITH ELECTRICITY, BUT WE NEED THE BENEFIT OF YOUR EXPERIENCE WITH THE STEAM TURBINE AND SUPERCHARGER.



AND NOW, GENTLEMEN, ARE YOU WILLING TO UNDERTAKE THE DEVELOPMENT AND MANUFACTURE OF THE JET ENGINE IN AMERICA?

PERHAPS, GENERAL, THEY'D LIKE TIME TO CONSULT THEIR WAR PROJECTS COMMITTEE...



THAT ISN'T NECESSARY, SIR... GENERAL ELECTRIC WILL TAKE ON THE JOB RIGHT NOW!

"AND SO, THE UNITED STATES JOINED BRITAIN AGAINST GERMANY IN THE RACE TO BUILD A FASTER PLANE -- A JET PLANE!"

"SOON, IN THE G-E PLANT AT LYNN, FIVE KEY ENGINEERS ARE PULLED OFF TURBOSUPERCHARGER WORK..."

... SO YOU SEE, MEN, WE'VE TAKEN ON QUITE A CHALLENGE-- AN ARMY AIR FORCE'S TOP SECRET... AND WE'VE GOT TO KEEP IT A SECRET! ANY QUESTIONS?

JUST ONE, SIR... HOW SOON CAN WE START?

RIGHT NOW! YOU FELLOWS ARE TO BEGIN COLLECTING MEN FOR THE DIFFERENT UNITS IMMEDIATELY. THE BRITISH ENGINE WILL ARRIVE IN A FEW WEEKS, AND WE'VE A LOT TO DO IN THE MEANTIME. SO GET BUSY... AND GOOD LUCK!

"THOSE MEN REALLY DID GET BUSY, TOO. IN JUST A FEW WEEKS THEY HAD COMPLETED DESIGNS FOR SEVERAL DIFFERENT PARTS OF THE ENGINE..."

JUST LOOK AT HER, TOM! ISN'T SHE BEAUTIFUL?

SO HELP ME, IF YOU DON'T STOP ACTING LIKE A PROUD PAPA, I'M GOING TO ASK FOR A TRANSFER.

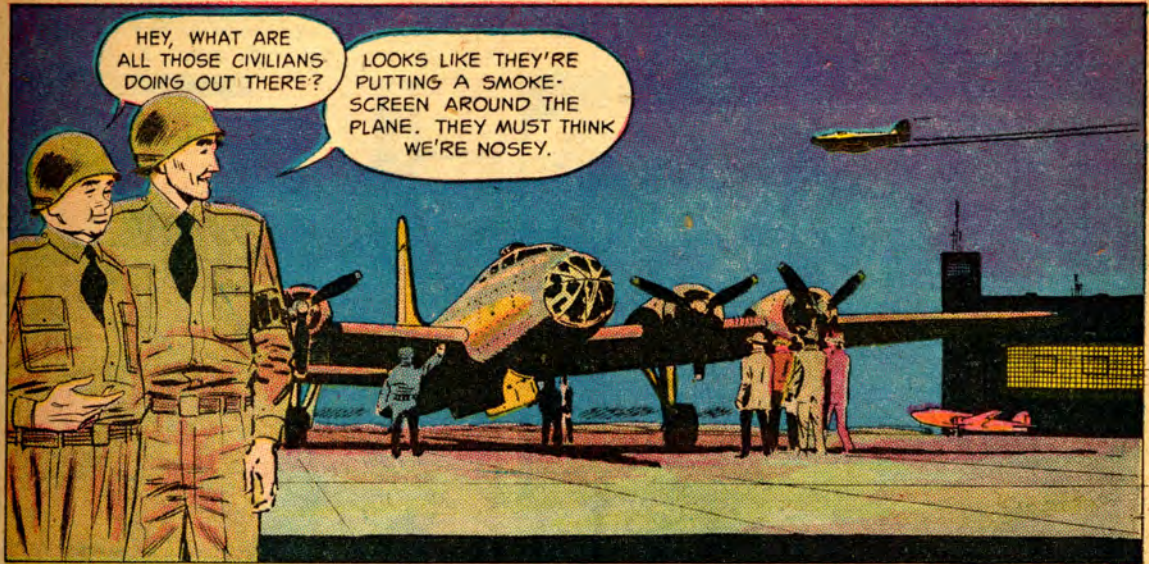
"WHILE OUTSIDE..."

HI, FRANK... WHAT HAPPENS INSIDE?

SAY... YOU KNOW BETTER THAN TO ASK QUESTIONS LIKE THAT! IF THEY WANTED YOU TO KNOW, THEY WOULDN'T HAVE ME STANDING HERE!

"THEN ONE DAY-- A MONTH FROM THE MEETING IN WASHINGTON, AT AN AIRPORT NEAR BOSTON..."

WONDER WHAT THAT BABY'S BRINGING IN?



HEY, WHAT ARE ALL THOSE CIVILIANS DOING OUT THERE?

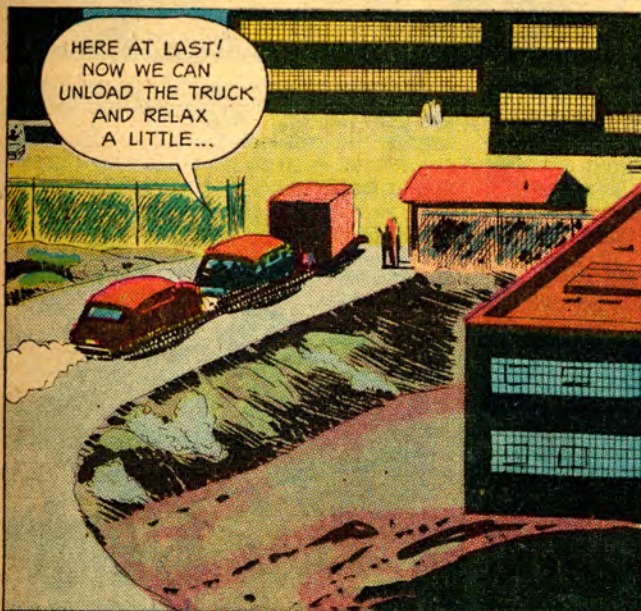
LOOKS LIKE THEY'RE PUTTING A SMOKE-SCREEN AROUND THE PLANE. THEY MUST THINK WE'RE NOSEY.



"THE MP'S DIDN'T LIKE IT, BUT THE SECRECY WAS FOR THEIR OWN GOOD. THAT PLANE WAS CARRYING UNASSEMBLED PARTS OF THE BRITISH EXPERIMENTAL ENGINE... AND THOSE CIVILIANS WERE GUARDS."

EASY NOW... GET THOSE BUNDLES OUT AND INTO THE TRUCKS, BOYS... BUT FAST!

"BUT THERE WAS NO RELAXING. THE ARRIVAL OF THE BRITISH ENGINE MEANT WORK NIGHT AND DAY... UNDER CONSTANT GUARD."



HERE AT LAST! NOW WE CAN UNLOAD THE TRUCK AND RELAX A LITTLE...



'EVENING, FRANK. STILL BIG DOINGS INSIDE, I SEE...

BIGGER THAN EVER...THEY'VE GOT TWO OF US NOW!

"THE NEXT SIX MONTHS WERE BUSY ONES AT G.E.-- AND VIGILANCE WASN'T RELAXED FOR A MOMENT..."



I DON'T LIKE THIS PRYING INTO THE PRIVATE LIVES OF OUR EMPLOYEES...

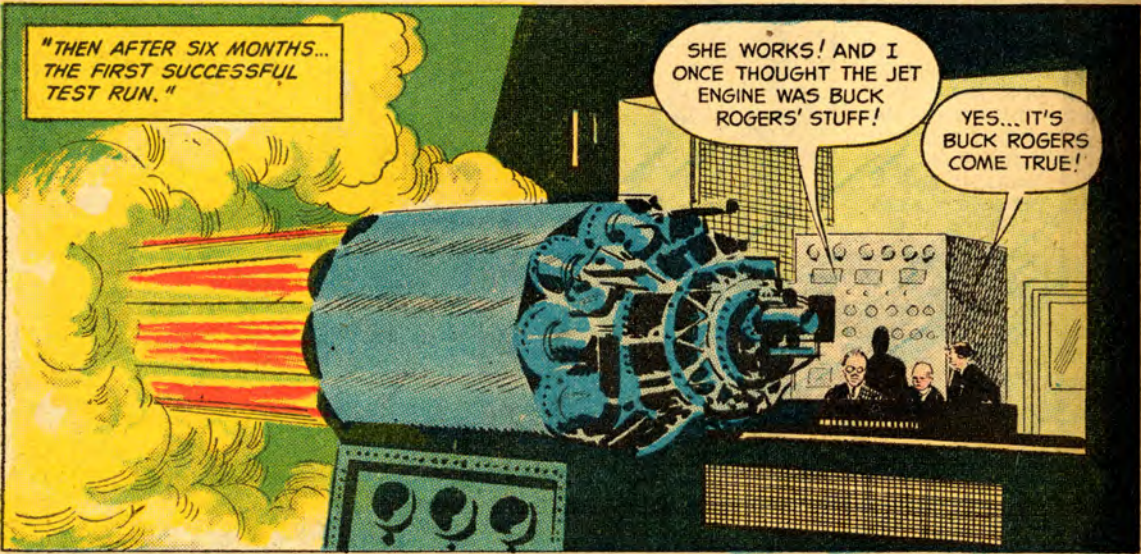
I UNDERSTAND, SIR... BUT WE'VE GOT TO WEED OUT THE "TALKERS."

"ONLY RELIABLE MEN, FROM WORKS MANAGERS TO JANITORS, WERE CHOSEN..."



IT ISN'T THAT I'M NOT INTERESTED IN MY HUSBAND'S WORK... HE JUST WON'T TALK ABOUT IT!

"THEN AFTER SIX MONTHS... THE FIRST SUCCESSFUL TEST RUN."



SHE WORKS! AND I ONCE THOUGHT THE JET ENGINE WAS BUCK ROGERS' STUFF!

YES... IT'S BUCK ROGERS COME TRUE!

IT TOOK G.E. ONLY SIX MONTHS, SINCE THAT MEETING IN WASHINGTON TO DEVELOP A SUCCESSFUL JET ENGINE...



... BUT THAT'S NOT COUNTING THE MANY YEARS OF GAS TURBINE RESEARCH THAT MADE IT POSSIBLE-- RESEARCH FIRST BEGUN BY G.E.'S DR. SANFORD MOSS ALMOST 40 YEARS BEFORE!

BUT, ED-- YOU SAID BEFORE THAT THE IDEA OF JET PROPULSION WAS 2,000 YEARS OLD! WHY PEOPLE IN THOSE DAYS DIDN'T KNOW ANYTHING ABOUT ELECTRICITY-- OR STEAM...

HMMM... YOU'RE NOT GIVING THOSE OLD BOYS ENOUGH CREDIT, JOHNNY. FACT IS THEY DID KNOW SOMETHING ABOUT STEAM AND HOW TO GET POWER FROM IT.



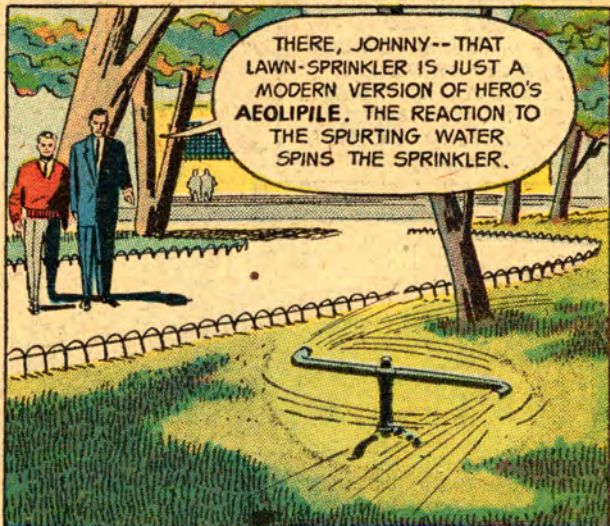
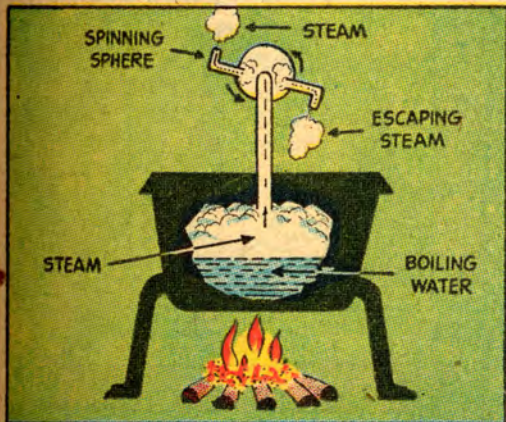


"IN 100 A.D., HERO OF ALEXANDRIA INVENTED THE FIRST STEAM TURBINE."

IT SPINS BY ITSELF... 'TIS MAGIC!

AYE, THE MAGIC OF MY MIGHTY BRAIN!

"STEAM FORMED IN THE VESSEL BELOW PASSED INTO THE HOLLOW BALL AT TOP. AS IT ESCAPED THROUGH THE NOZZLES IN THE BALL, THE STEAM JET MADE THE BALL SPIN."



THERE, JOHNNY-- THAT LAWN-SPRINKLER IS JUST A MODERN VERSION OF HERO'S AEOLIPILE. THE REACTION TO THE SPURTING WATER SPINS THE SPRINKLER.



BUT THAT SPRINKLER DOESN'T GO ANY PLACE. THAT'S A LONG WAY FROM A 600-MILE-AN-HOUR JET PLANE.

THAT'S RIGHT, JOHNNY. BUT IT'S BASED ON THE SAME IDEA.



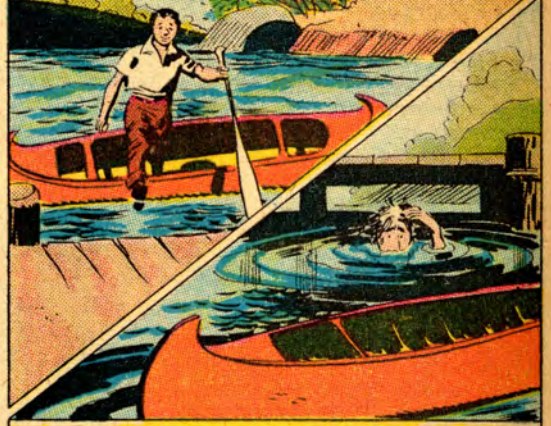
"ACTUALLY, IT WASN'T UNTIL 1620 THAT SOMEONE HAD THE IDEA OF USING JET PROPULSION FOR FORWARD MOTION. REMEMBER SIR ISAAC NEWTON'S THIRD LAW OF MOTION?"

EVERY ACTION PRODUCES A REACTION, WHICH IS EQUAL IN FORCE AND OPPOSITE IN DIRECTION.

"THE IDEA'S SIMPLE, JOHNNY. BLOW UP A BALLOON LIKE THIS ONE... AND WHEN YOU LET IT GO..."

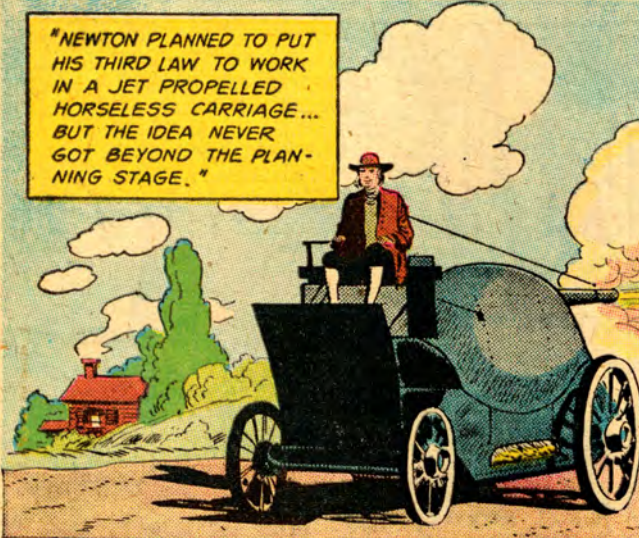


"OR TAKE A BOY STEPPING OUT OF A CANOE..."

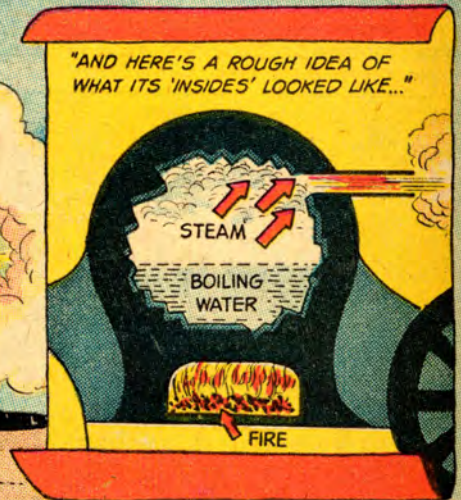


"AS HE THRUSTS HIS FOOT FORWARD, THE CANOE SHOTS BACK."

"NEWTON PLANNED TO PUT HIS THIRD LAW TO WORK IN A JET PROPELLED HORSELESS CARRIAGE... BUT THE IDEA NEVER GOT BEYOND THE PLANNING STAGE."

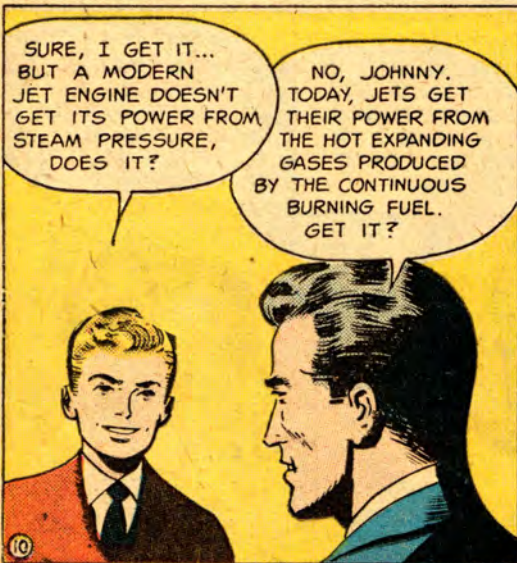


"AND HERE'S A ROUGH IDEA OF WHAT ITS 'INSIDES' LOOKED LIKE..."



SURE, I GET IT... BUT A MODERN JET ENGINE DOESN'T GET ITS POWER FROM STEAM PRESSURE, DOES IT?

NO, JOHNNY. TODAY, JETS GET THEIR POWER FROM THE HOT EXPANDING GASES PRODUCED BY THE CONTINUOUS BURNING FUEL. GET IT?

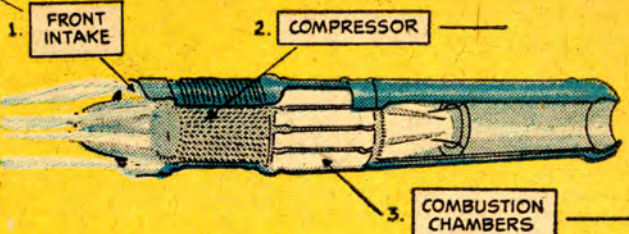


I-I GUESS SO... BUT...

HERE, JOHNNY-- IT'S ALL SPELLED OUT IN THIS LITTLE BOOK. I'LL SHOW YOU...



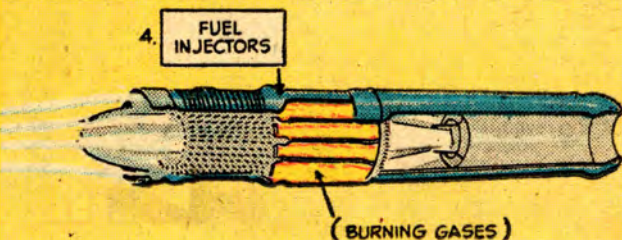
(1) AIR IS SUCKED INTO THE ENGINE THROUGH THE FRONT INTAKE AND ON INTO THE--



(2) COMPRESSOR, WHICH - ACTING LIKE A LARGE FAN - COMPRESSES THE AIR TO MORE THAN FIVE TIMES ATMOSPHERIC PRESSURE AND FORCES IT THROUGH DUCTS TO THE--

(3) COMBUSTION CHAMBERS, WHERE--

(4) FUEL IS SPRAYED INTO THE COMPRESSED AIR AND IGNITED. THE BURNING GASES EXPAND RAPIDLY AND BLAST THEIR WAY OUT THE REAR OF THE ENGINE. THIS JET BLAST GIVES THE ENGINE AND AIRPLANE ITS ENORMOUS FORWARD 'PUSH'."

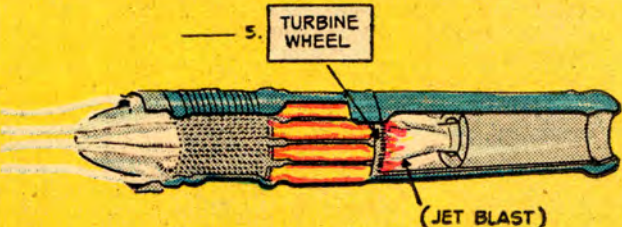


NOW TO SEE WHAT TURNS THE COMPRESSOR, IN THE FIRST PLACE...

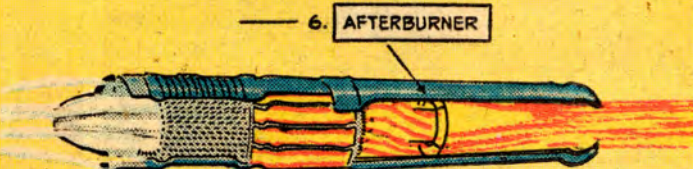
"AS THE HOT GASES RUSH OUT OF THE ENGINE, THEY PASS THROUGH A FAN-LIKE SET OF BLADES - THE

(5) TURBINE-WHEEL - WHICH REACTS LIKE A WINDMILL AND TURNS THE MAIN ENGINE SHAFT. (THIS TURNING POWER IS TRANSMITTED TO THE COMPRESSOR WHICH PUCKS IN MORE FRESH AIR).

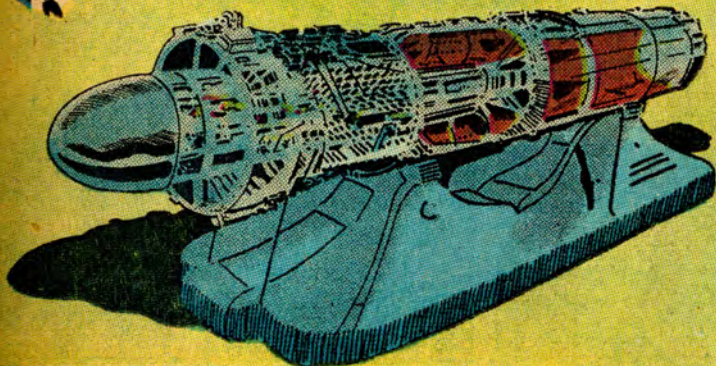
SOME ENGINES, DESIGNED TO GIVE EXTRA PUSHING POWER, HAVE AN--



(6) 'AFTERBURNER' - ATTACHED TO THE REAR OF THE ENGINE. THE AFTERBURNER IS AN EXTRA-LONG TAILCONE IN WHICH MORE FUEL IS SPRAYED AND BURNED."

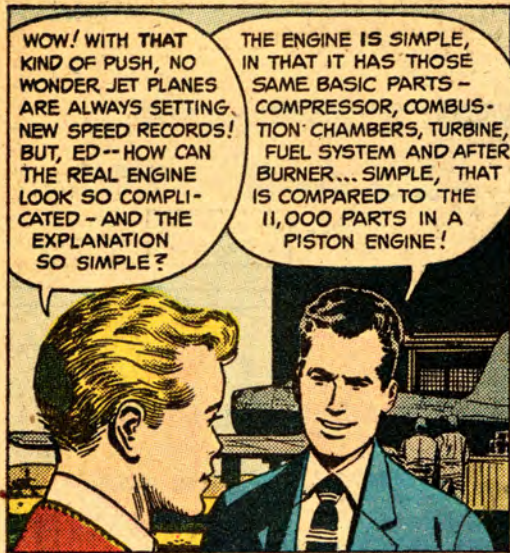


AND HERE'S A CUT-AWAY MODEL OF AN ACTUAL G-E J-47 TURBOJET ...IT'S ABOUT 19 FEET LONG, 3 FEET IN DIAMETER, AND WEIGHS ABOUT 1½ TONS...



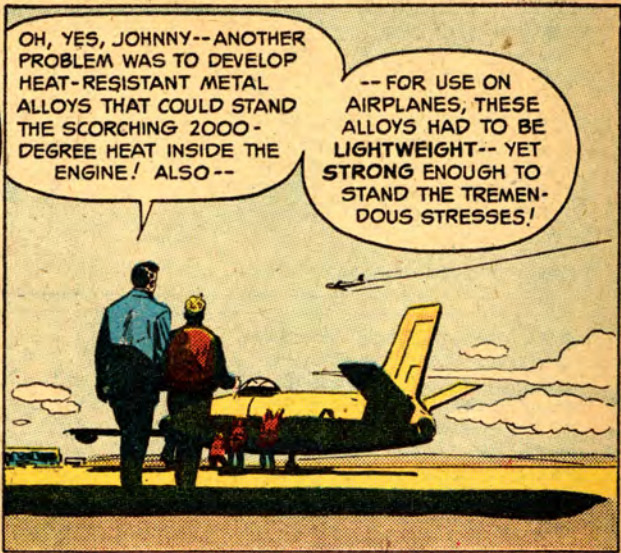
IN NORMAL OPERATION, THE TURBOJET "BREATHES" ABOUT 3 TONS OF AIR A MINUTE - AND EXHAUST GASES RUSH THROUGH THE AFTERBURNER AT MORE THAN 1500 MILES AN HOUR!





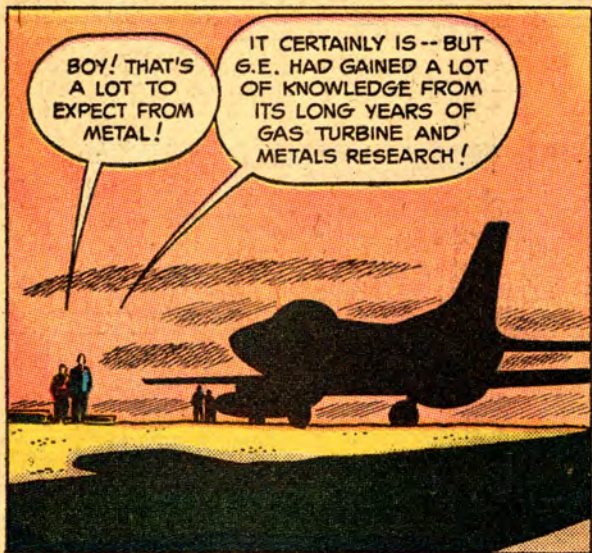
WOW! WITH THAT KIND OF PUSH, NO WONDER JET PLANES ARE ALWAYS SETTING NEW SPEED RECORDS! BUT, ED--HOW CAN THE REAL ENGINE LOOK SO COMPLICATED - AND THE EXPLANATION SO SIMPLE?

THE ENGINE IS SIMPLE, IN THAT IT HAS THOSE SAME BASIC PARTS - COMPRESSOR, COMBUSTION CHAMBERS, TURBINE, FUEL SYSTEM AND AFTER-BURNER... SIMPLE, THAT IS COMPARED TO THE 11,000 PARTS IN A PISTON ENGINE!



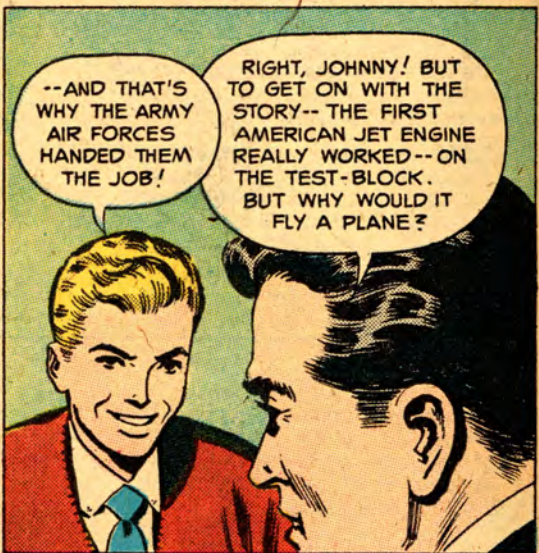
OH, YES, JOHNNY--ANOTHER PROBLEM WAS TO DEVELOP HEAT-RESISTANT METAL ALLOYS THAT COULD STAND THE SCORCHING 2000-DEGREE HEAT INSIDE THE ENGINE! ALSO--

-- FOR USE ON AIRPLANES, THESE ALLOYS HAD TO BE LIGHTWEIGHT-- YET STRONG ENOUGH TO STAND THE TREMENDOUS STRESSES!



BOY! THAT'S A LOT TO EXPECT FROM METAL!

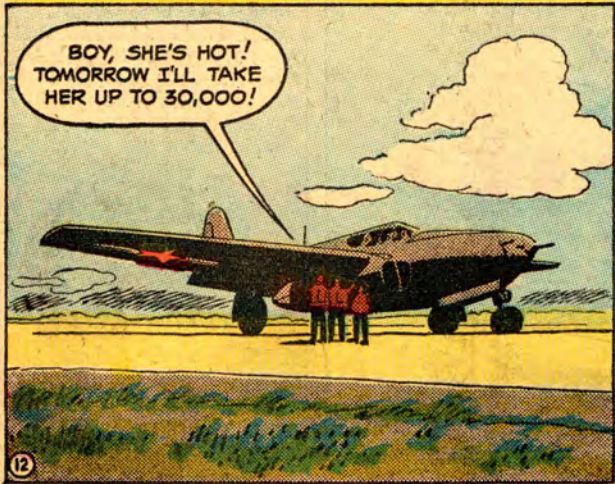
IT CERTAINLY IS-- BUT G.E. HAD GAINED A LOT OF KNOWLEDGE FROM ITS LONG YEARS OF GAS TURBINE AND METALS RESEARCH!



--AND THAT'S WHY THE ARMY AIR FORCES HANDED THEM THE JOB!

RIGHT, JOHNNY! BUT TO GET ON WITH THE STORY-- THE FIRST AMERICAN JET ENGINE REALLY WORKED-- ON THE TEST-BLOCK. BUT WHY WOULD IT FLY A PLANE?

"THE ANSWER CAME IN OCTOBER, 1942, AT MUROC, CALIFORNIA. AN EXPERIMENTAL P-59 BELL AIRACOMET WAS READY FOR ITS FLIGHT TESTS..."



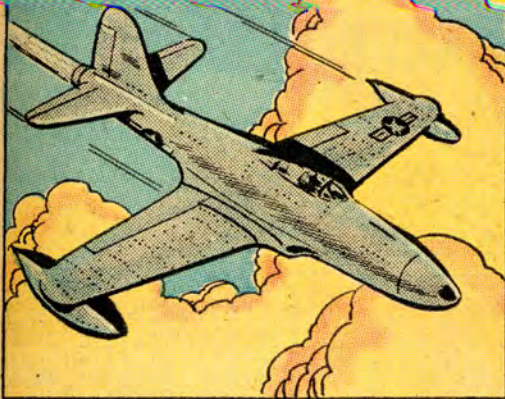
BOY, SHE'S HOT! TOMORROW I'LL TAKE HER UP TO 30,000!



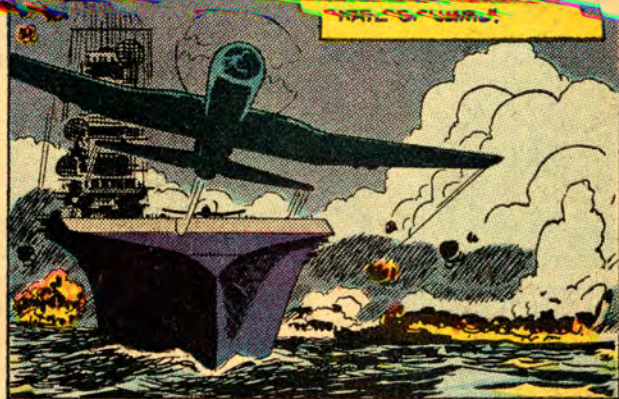
"AND THE NEXT DAY..."

LOOK AT THAT BABY GO!

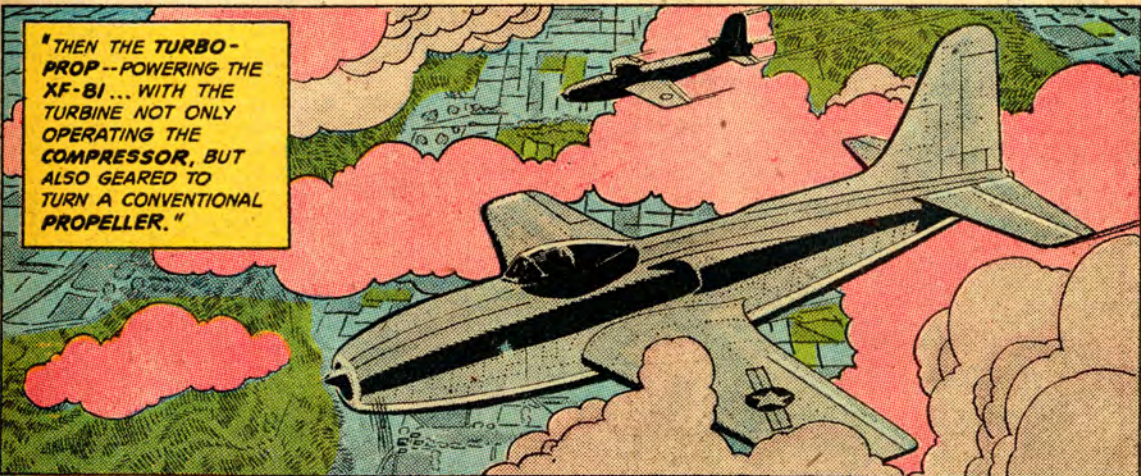
"THEN CAME OTHER TYPES-- FAST AND FURIOUS!--THE LOCKHEED 'SHOOTING STAR' OR F-80, WITH AN IMPROVED JET ENGINE, IT SET RECORD AFTER RECORD... COAST TO COAST IN 4½ HOURS... NEW YORK TO SCHENECTADY IN 17 MINUTES."



"A NEW KIND OF PLANE WAS DEVELOPED FOR THE NAVY... THE RYAN 'FR-1 FIREBALL'... A JET ENGINE PLUS A CONVENTIONAL-TYPE, WITH PROPELLER. DESIGNED AS A CARRIER-BASED FIGHTER, THE FR-1 WAS THE FIRST..."

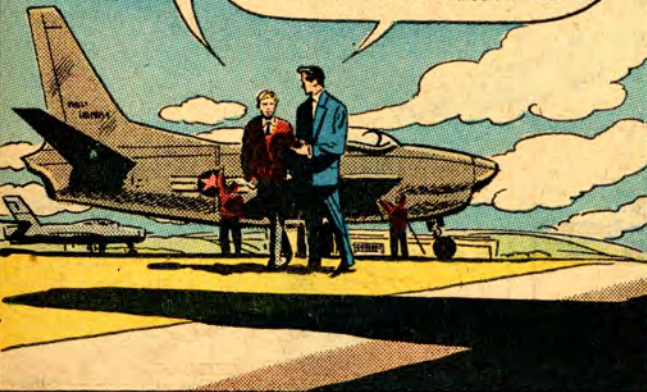


"THEN THE TURBO-PROP--POWERING THE XF-85... WITH THE TURBINE NOT ONLY OPERATING THE COMPRESSOR, BUT ALSO GEARED TO TURN A CONVENTIONAL PROPELLER."



BUT I THOUGHT THE JET ENGINE WAS SUPPOSED TO REPLACE THE PROPELLER...

IT DOES-- ON A NUMBER OF TODAY'S PLANES, JOHNNY. BUT REMEMBER-- JET POWER IS STILL GROWING AND WE'RE EXPERIMENTING WITH EVERYTHING.



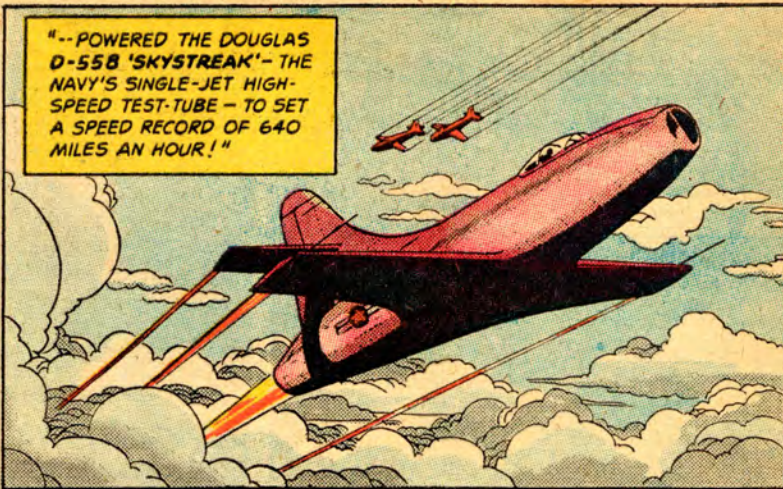
WE'LL PROBABLY ALWAYS USE PROPELLERS FOR CERTAIN PURPOSES, BUT JETS WILL BE USED MORE AND MORE AS THEY'RE DEVELOPED AND IMPROVED. FOR INSTANCE...



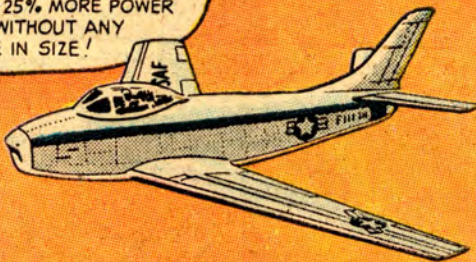
IN JUST THESE FEW SHORT YEARS SINCE THE FIRST SUCCESSFUL JET FLIGHT - AS PRODUCTION INCREASED AND MORE EXPERIENCE WAS GAINED - G.E. DEVELOPED THE J35 TURBOJET ENGINE, WHICH IN 1947 -



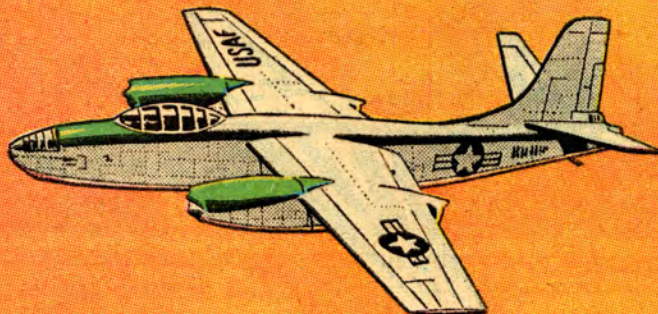
"-- POWERED THE DOUGLAS D-558 'SKYSTREAK' - THE NAVY'S SINGLE-JET HIGH-SPEED TEST-TUBE - TO SET A SPEED RECORD OF 640 MILES AN HOUR!"



G.E. CONTINUED WORKING ON AN EVEN GREATER JET POWER PLANT... AND IN 1948, PRODUCED THE J47 - 25% MORE POWER THAN THE J35, WITHOUT ANY INCREASE IN SIZE!

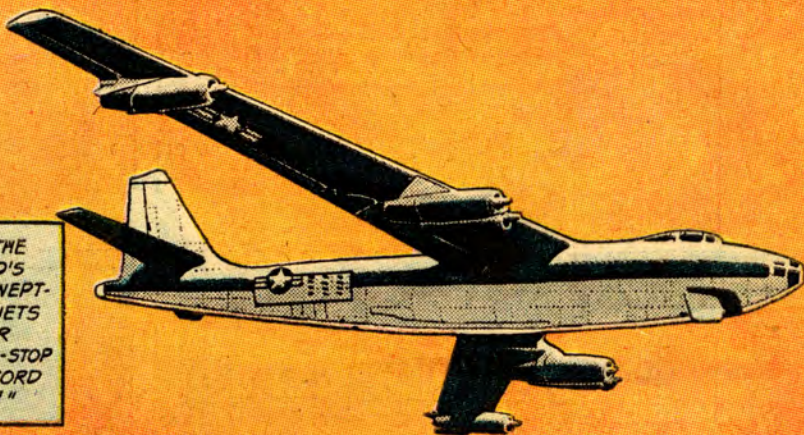


"AND IN THAT SAME YEAR (1948), THE J47 POWERED NORTH AMERICAN'S F-86 - 'SABRE JET' - A SINGLE COCKPIT FIGHTER - TO A NEW WORLD'S SPEED RECORD OF 671 MILES AN HOUR!..."



"THIS ENGINE ALSO POWERS NORTH AMERICAN'S B-45 - THE 'TORNADO' - THE FIRST OPERATIONAL JET BOMBER. IN THE 550-MILE-AN-HOUR CLASS, THE 'TORNADO' IS EQUIPPED WITH 4 TURBOJETS..."

"IN 1949, BOEING'S B-47 - THE 'STRATOJET' - THE WORLD'S FASTEST BOMBER - WITH SWEEP-BACK WINGS, 6 G-E TURBOJETS (PLUS 18 ROCKET UNITS FOR FAST TAKE-OFF) - SET A NON-STOP COAST-TO-COAST SPEED RECORD OF 3 HOURS, 46 MINUTES!"



"CONSOLIDATED VULTEE'S B-36 IS THE WORLD'S LARGEST AND LONGEST-RANGE BOMBER..."



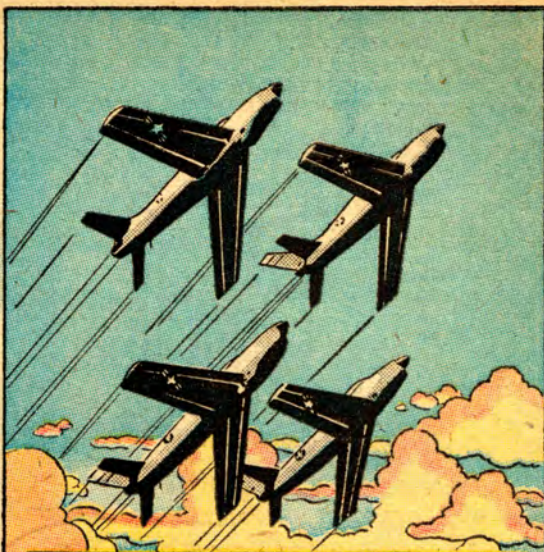
"THE B-36 CARRIES 4 J47'S SUSPENDED BENEATH THE WINGS, IN ADDITION TO THE 6 PISTON ENGINES."



YES, WE'VE COME A LONG WAY SINCE THE WRIGHT BROTHERS... AND WITH JET ENGINES, WE'RE GOING A LOT FURTHER...

1903		ORVILLE WRIGHT	120 FT IN 12 SECONDS
1904		WILBUR WRIGHT	50 M.P.H.
1919		ARMY PLANES	106 M.P.H.
1931		RUTH NICHOLS	210.65 M.P.H.
1932		JIMMY DOOLITTLE	294.28 M.P.H.
1935		HOWARD HUGHES	352.388 M.P.H.
1944		LOCKHEED F-80 "SHOOTING STAR"	580 M.P.H.
1945		REPUBLIC F-84 "THUNDERJET"	590 M.P.H.
1947		DOUGLAS D-558 "SKYSTREAK"	640.7 M.P.H.
1948		NORTH AMERICAN F-86 "SABRE"	671 M.P.H.
1953		NORTH AMERICAN F-86D "SABRE" (INTERCEPTOR)	715 M.P.H.
?		RAMJET	? M.P.H.
?		ROCKET PLANES	? M.P.H.

"YES, JOHNNY - WE'RE RIGHT ON THE THRESHOLD OF A WHOLE NEW AGE OF FLIGHT..."



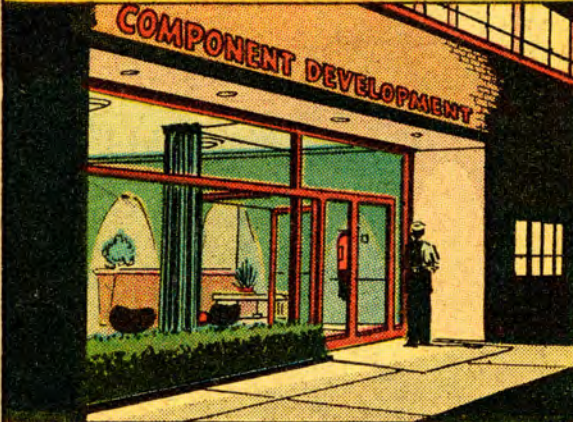
"NORTH AMERICAN AVIATION'S MIGHTY F-86D SABRE JET INTERCEPTOR IS POWERED BY A 'SOUPED UP' J47-GE-33 AFTERBURNER ENGINE. THOUSANDS OF THESE SLEEK AIRCRAFT ARE NOW BASED ALONG AMERICA'S COASTLINE AND NORTHERN BORDER - PART OF THE AIR FORCE'S 'ROUND-THE-CLOCK' AIR DEFENSE SYSTEM AGAINST POSSIBLE ENEMY ATTACKS BY AIR."

"BEHIND THE DOORS OF G-E'S PLANT AT CINCINNATI, OHIO - JET ENGINES ROLL OFF THE PRODUCTION LINE IN A STEADY STREAM..."



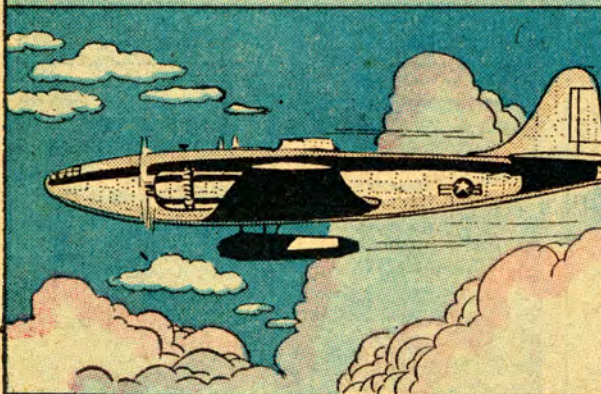
"... WHILE THE RESEARCH ENGINEERS EXPERIMENT WITH THE JET ENGINES OF TOMORROW."

"TO MEET AVIATION'S CONSTANT DEMAND FOR MORE EFFICIENT, MORE POWERFUL JET ENGINES, GENERAL ELECTRIC HAS BUILT A NEW, MULTI-MILLION DOLLAR "COMPONENT DEVELOPMENT" LABORATORY AT CINCINNATI..."



"HERE G-E ENGINEERS ARE TESTING TOTALLY NEW ENGINES THAT SOMEDAY WILL PROPEL AMERICAN MILITARY AIRCRAFT AT TWICE THE SPEED OF SOUND - AND FASTER!"

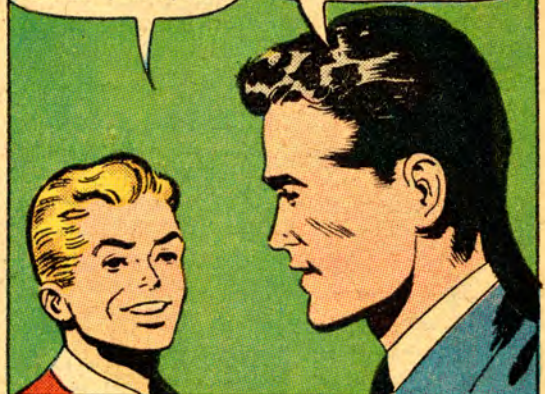
"THE FINAL TEST, OF COURSE, IS PERFORMANCE IN THE AIR. THE SLEEK B-29 ACTS AS A 'FLYING TEST BED' FOR NEW ENGINES, WHICH ARE SUSPENDED THROUGH THE BOMB-BAY DURING TRIAL FLIGHTS."



"BEHIND THE THICK WALLS OF THE TEST CELLS, THE POWERFUL TURBOJETS ARE TESTED--AND RE-TESTED -- BY SKILLED TECHNICIANS WHO HAVE ONLY ONE STANDARD: PERFECT PERFORMANCE."

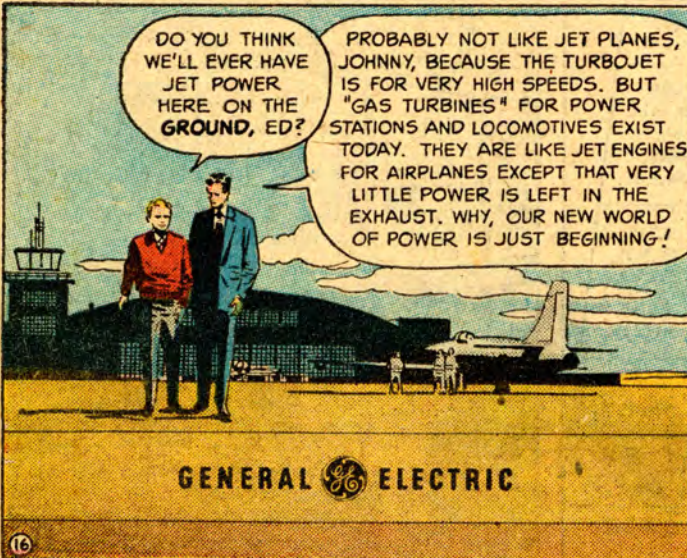
BOY, AT THE RATE WE'RE GOING, I GUESS IT WON'T BE LONG BEFORE AMERICA HAS JET-PROPELLED PASSENGER PLANES, TOO!

RIGHT, JOHNNY... SOME COMPANIES ARE TESTING JET TRANSPORTS RIGHT NOW. IT'LL REALLY BE A "SMALL WORLD" SOON!



DO YOU THINK WE'LL EVER HAVE JET POWER HERE ON THE GROUND, ED?

PROBABLY NOT LIKE JET PLANES, JOHNNY, BECAUSE THE TURBOJET IS FOR VERY HIGH SPEEDS. BUT "GAS TURBINES" FOR POWER STATIONS AND LOCOMOTIVES EXIST TODAY. THEY ARE LIKE JET ENGINES FOR AIRPLANES EXCEPT THAT VERY LITTLE POWER IS LEFT IN THE EXHAUST. WHY, OUR NEW WORLD OF POWER IS JUST BEGINNING!



GENERAL  ELECTRIC

WOW! I HOPE I'LL SEE THAT "NEW WORLD OF POWER"!

YOU WILL, JOHNNY... YOU WILL!



1998, 59A11