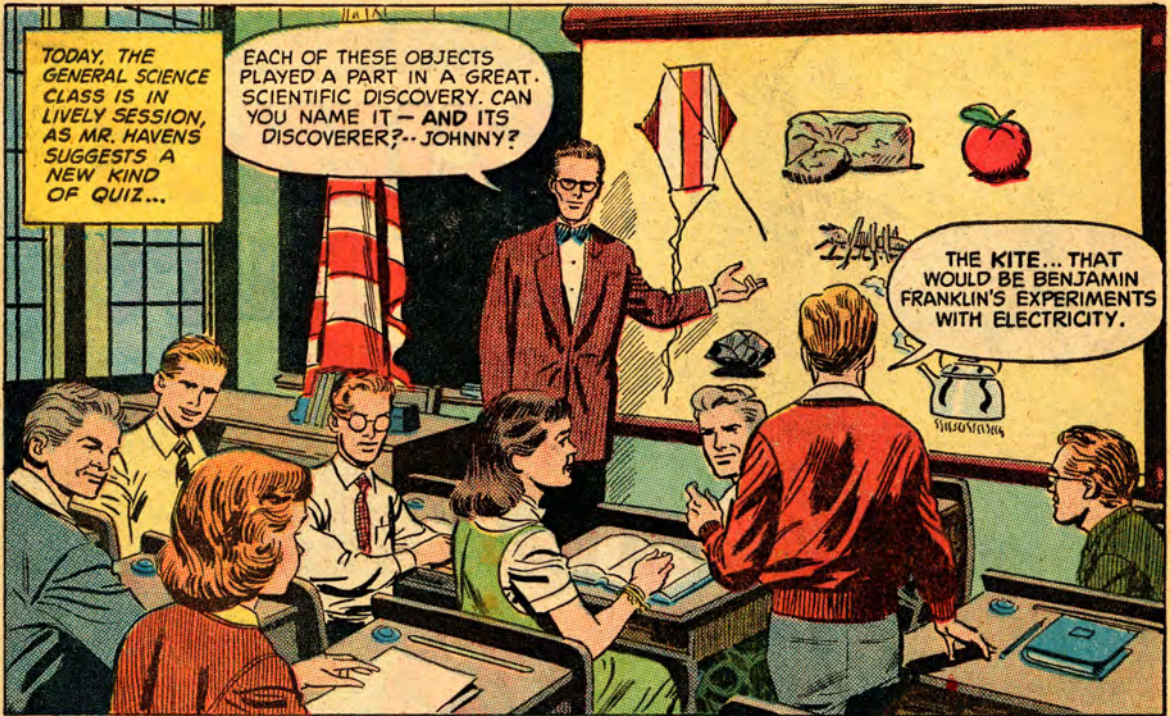


SCIENCE in your future

THE AGE OF PROGRESS HAS GIVEN US A STANDARD OF LIVING FAR BEYOND OUR THREE BASIC NEEDS... THESE EXTRA HUMAN SATISFACTIONS, NOW BASIC TO OUR WAY-OF-LIFE, ARE PRODUCTS OF THE MINDS, HEARTS AND HANDS OF OUR RESEARCH SCIENTISTS, IN THEIR NEVER-ENDING SEARCH FOR NEW KNOWLEDGE. THE DISCOVERIES OF TODAY'S RESEARCH TRAIL-BLAZERS OPEN UP NEW HORIZONS FOR TOMORROW'S EXPLORERS. FOR RESEARCH IS THE LAMP OF PROGRESS, CONSTANTLY SHEDDING NEW AND MORE LIGHT ON THE ARTS AND SCIENCES.

ADVENTURES IN
SCIENCE SERIES

GENERAL  ELECTRIC



TODAY, THE GENERAL SCIENCE CLASS IS IN LIVELY SESSION, AS MR. HAVENS SUGGESTS A NEW KIND OF QUIZ...

EACH OF THESE OBJECTS PLAYED A PART IN A GREAT SCIENTIFIC DISCOVERY. CAN YOU NAME IT - AND ITS DISCOVERER?-- JOHNNY?

THE KITE... THAT WOULD BE BENJAMIN FRANKLIN'S EXPERIMENTS WITH ELECTRICITY.

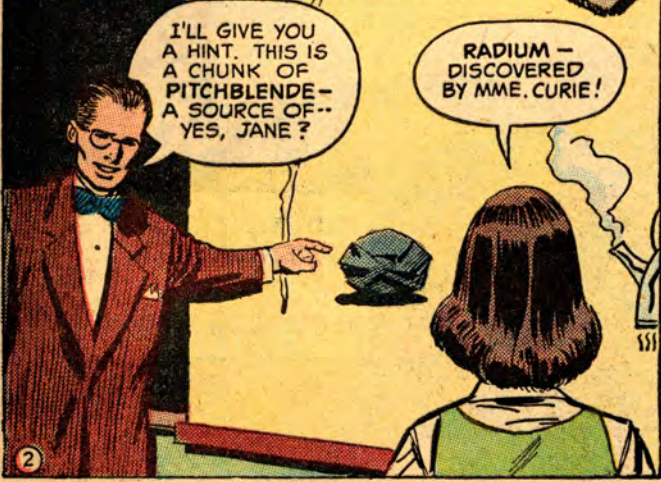
BREAD... THAT'S FLEMING'S DISCOVERY OF PENICILLIN.

AND THE MOSQUITO MUST STAND FOR WALTER REED'S CONQUEST OF YELLOW FEVER IN CUBA.

I'D SAY THE TEA-KETTLE WAS THE BEGINNING OF JAMES WATT'S STEAM ENGINE.

THE APPLE MUST MEAN NEWTON'S LAW OF GRAVITATION.

THE CLASS HAS TROUBLE IDENTIFYING THE LAST OBJECT... UNTIL...



I'LL GIVE YOU A HINT. THIS IS A CHUNK OF PITCHBLLENDE - A SOURCE OF-- YES, JANE?

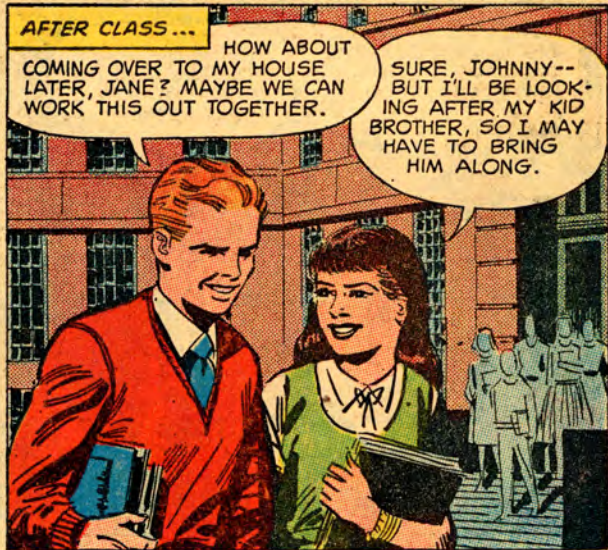
RADIUM - DISCOVERED BY MME. CURIE!

WELL DONE!-- ALL OF YOU-- CONSIDERING THAT ONE DISCOVERY HAD NOTHING TO DO WITH THE OTHER. BUT THEY'VE ALL PROVEN OF GREAT BENEFIT TO MAN. WHAT'S MORE...





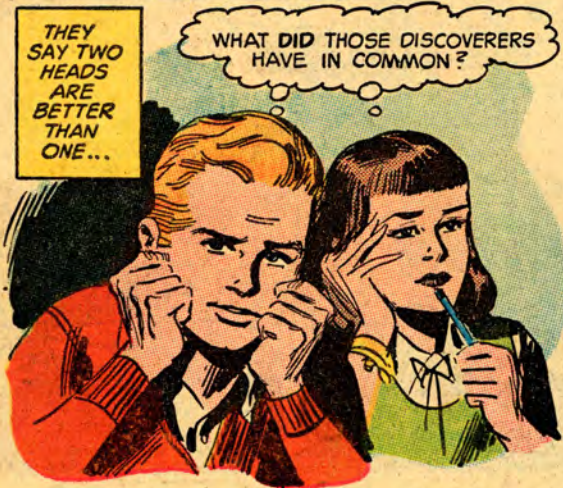
... THEIR DISCOVERERS HAD SOMETHING IN COMMON. I WANT YOU TO THINK ABOUT IT AND SEE IF YOU CAN FIGURE IT OUT FOR YOURSELVES OVER THE WEEKEND.



AFTER CLASS ... HOW ABOUT COMING OVER TO MY HOUSE LATER, JANE? MAYBE WE CAN WORK THIS OUT TOGETHER.

SURE, JOHNNY-- BUT I'LL BE LOOKING AFTER MY KID BROTHER, SO I MAY HAVE TO BRING HIM ALONG.

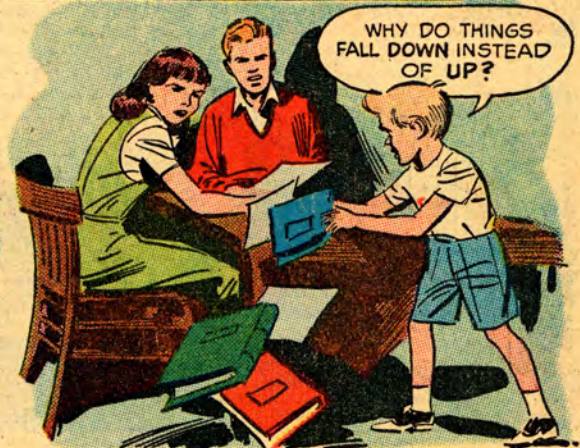
LATER, IN THE POWERS' STUDY...



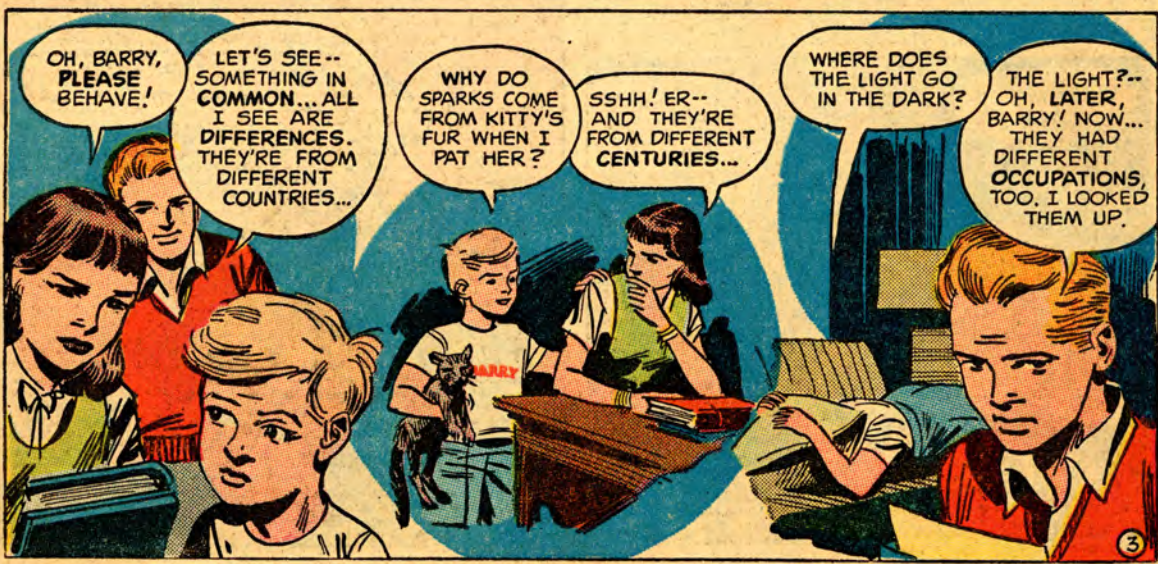
THEY SAY TWO HEADS ARE BETTER THAN ONE...

WHAT DID THOSE DISCOVERERS HAVE IN COMMON?

BUT THREE'S DEFINITELY A CROWD - ESPECIALLY WHEN THE ADDITION IS A FIVE-YEAR OLD HEAD!...



WHY DO THINGS FALL DOWN INSTEAD OF UP?



OH, BARRY, PLEASE BEHAVE!

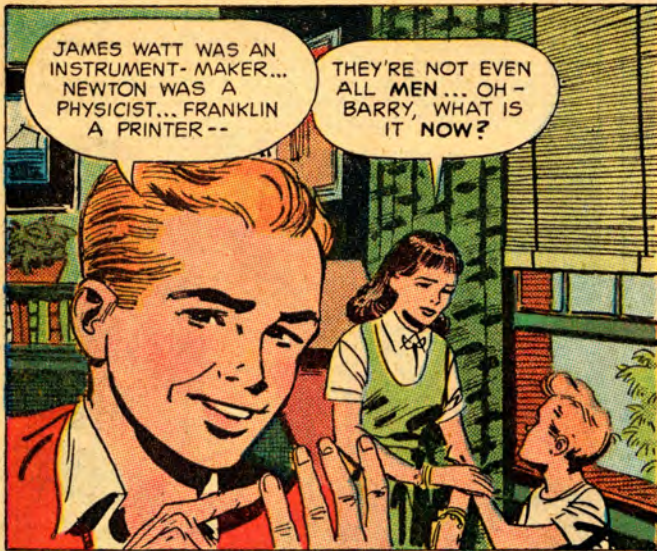
LET'S SEE-- SOMETHING IN COMMON... ALL I SEE ARE DIFFERENCES. THEY'RE FROM DIFFERENT COUNTRIES...

WHY DO SPARKS COME FROM KITTY'S FUR WHEN I PAT HER?

SSHH! ER-- AND THEY'RE FROM DIFFERENT CENTURIES...

WHERE DOES THE LIGHT GO IN THE DARK?

THE LIGHT?-- OH, LATER, BARRY! NOW... THEY HAD DIFFERENT OCCUPATIONS, TOO. I LOOKED THEM UP.

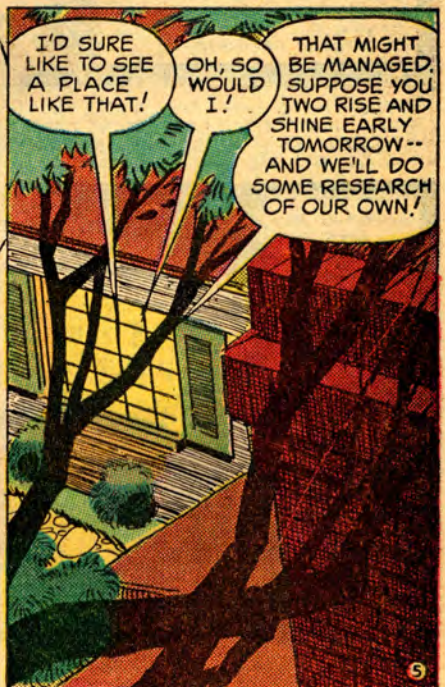
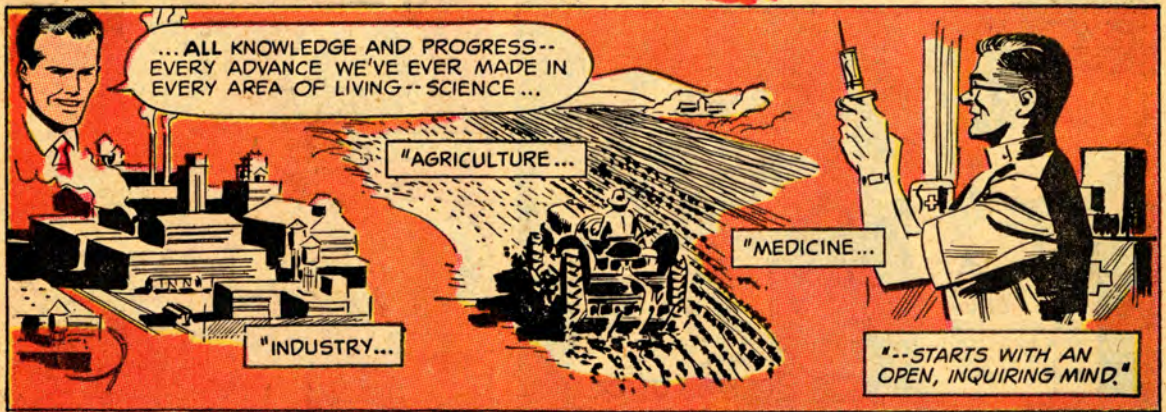
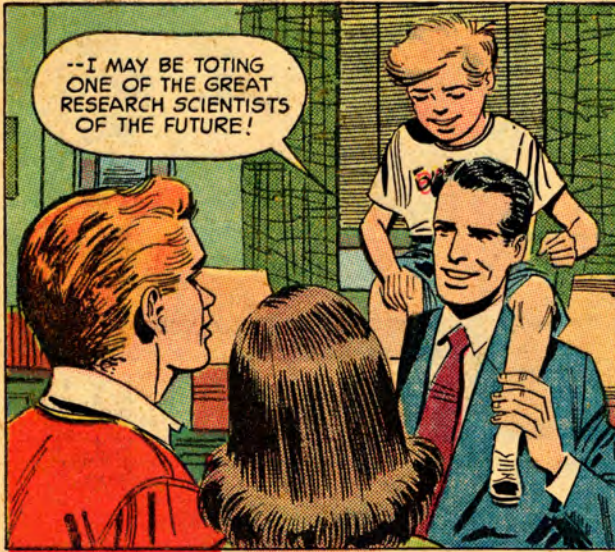


JOHNNY'S BROTHER ED ARRIVES - IN TIME FOR LITTLE BARRY'S NEXT "WHY"...



AS JANE AND JOHNNY CONSULT ED ON THEIR GENERAL SCIENCE ASSIGNMENT...





EARLY NEXT MORNING...

WE'RE IN LUCK, YOU TWO!
I'VE GOTTEN SPECIAL PER-
MISSION FROM MY COMPANY
FOR YOU TO VISIT OUR
GENERAL ELECTRIC RESEARCH
LABORATORY.

TELL US SOMETHING
ABOUT WHAT WE'RE
GOING TO SEE, ED.

WELL, TO
BEGIN
WITH--THE
LABORATORY
WAS STARTED
OVER FIFTY
YEARS AGO
IN A PLAIN
OLD BARN...

"IT WAS OUR COUNTRY'S FIRST INDUSTRY-
SPONSORED LABORATORY IN WHICH
BASIC RESEARCH WAS DONE..."

IT'S NOW A COMPLETELY MODERN SCIENTIFIC
CENTER DEDICATED TO RESEARCH-- THE SEARCH
FOR NEW KNOWLEDGE. YOU'LL FIND THE WORK
COMES UNDER THREE DIVISIONS...

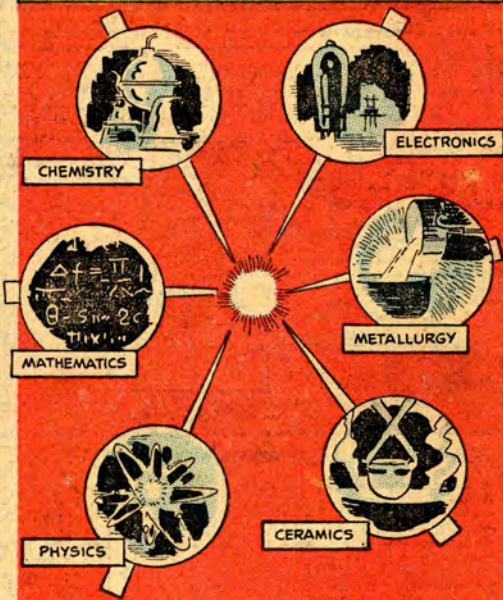
"BASIC RESEARCH--
THE SEARCH FOR
NEW KNOWLEDGE
WITH NO SPECIAL
END OR APPLICA-
TION IN MIND..."

"APPLIED RESEARCH--
THE SEARCH FOR
NEW KNOWLEDGE
WITH A DEFINITE
APPLICATION IN
MIND, AND --

"DEVELOPMENT-- THE APPLICATION
OF AVAILABLE KNOWLEDGE TO
A DEFINITE PROBLEM."

"THOUGH WE'VE MANY SPECIALISTS WORKING IN DIFFERENT
FIELDS, THEY'RE ALL PART OF THE GREAT BROTHERHOOD OF
RESEARCH. EACH PERSON MAKES HIS CONTRIBUTION--"

"... SO THAT ALL KNOWLEDGE IS SHARED
AND THE VARIOUS UNITS MAKE UP ONE
GREAT, SINGLE SCIENTIFIC TEAM."



ARRIVING AT
THE SITE OF
THE LABORA-
TORY-- THE
KNOLLS, ON
THE BANKS
OF THE
MOHAWK...

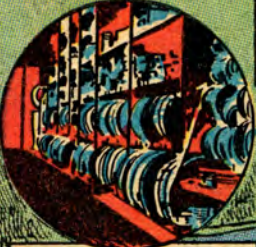
WHY-- IT'S SO PRETTY!
I NEVER EXPECTED A PLACE
OF SCIENCE TO LOOK
LIKE THIS!

THE BEAUTY OF
NATURE IS PART OF
THE LABORATORY, JANE--
GIVING PLEASURE AND
INSPIRATION TO MEN
AND WOMEN WHO
WORK HERE.

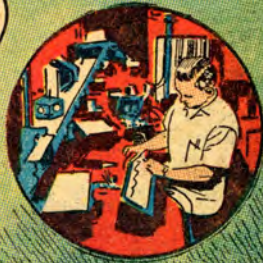


THERE ARE 40 G-E DEVELOPMENT LABS THROUGHOUT THE COUNTRY, BUT IT'S HERE THAT MOST OF THE BASIC RESEARCH AND MUCH OF THE APPLIED IS DONE. RIGHT NOW, THERE ARE AS MANY AS 300 DIFFERENT PROJECTS GOING ON -- WITH THE HELP OF EVERY POSSIBLE FACILITY...

"THERE ARE OVER 10,000 INSTRUMENTS IN STOCK AVAILABLE TO THE SCIENTISTS... AND A STAFF OF SKILLED TECHNICIANS TO REPAIR AND SERVICE THEM..."



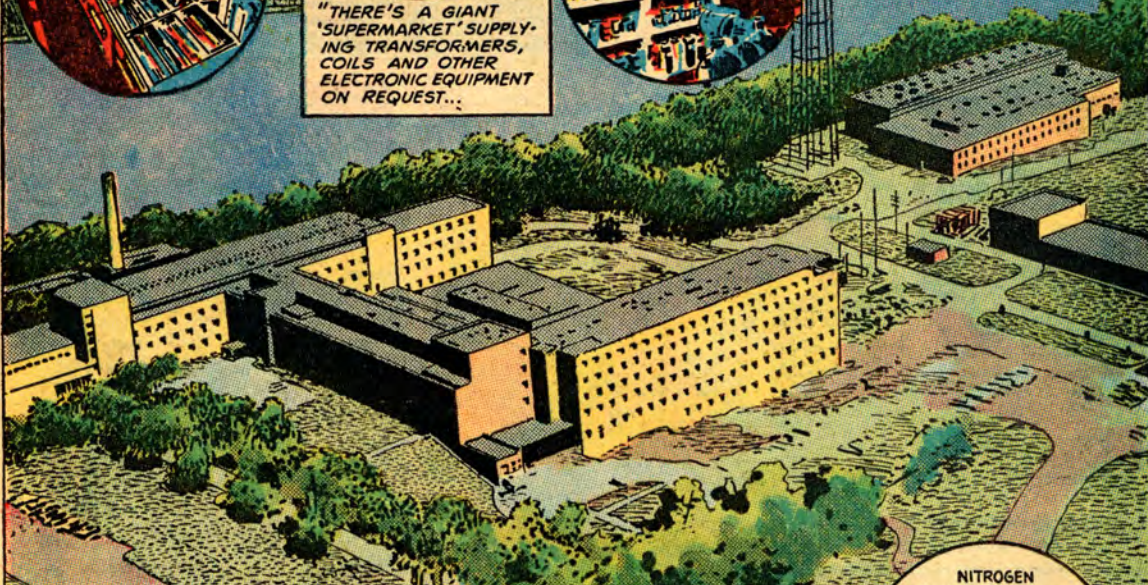
"ABOUT 13,000 CHEMICALS AND FACILITIES ARE RANGED ON THE SHELVES OF THE CHEMICAL STOCK-ROOM, WHERE THE RESEARCHER MAY SIMPLY HELP HIMSELF..."



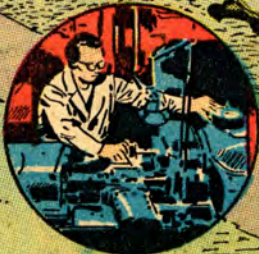
"IF A SCIENTIST NEEDS SOMETHING THAT HASN'T BEEN BUILT YET, A STAFF OF CRAFTSMEN WILL CONSTRUCT WHATEVER APPARATUS HE MAY HAVE IN MIND..."



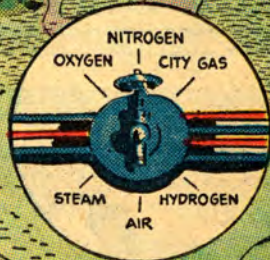
"THERE'S A GIANT 'SUPERMARKET' SUPPLYING TRANSFORMERS, COILS AND OTHER ELECTRONIC EQUIPMENT ON REQUEST..."



"IN THE GLASS SHOP, EXPERTS TURN OUT SPECIALLY BLOWN APPARATUS FOR USE IN SCIENTIFIC RESEARCH..."



"A WOODWORKING AND PAINT SHOP FILLS ORDERS ON REQUEST..."



"MACHINISTS, TOO, ARE AVAILABLE TO FULFILL THE NEEDS OF THE RESEARCHERS WHO WORK HERE..."

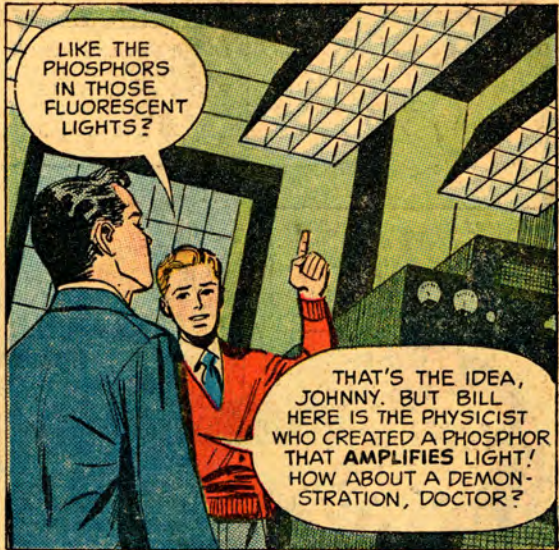


"THROUGHOUT THE BUILDING, RESEARCH SCIENTISTS MAY - BY TURNING A HANDLE - BRING WHATEVER GASES THEY MAY NEED TO THEIR LABORATORIES, DIFFERENT VOLTAGES AND CURRENTS OF ELECTRICITY, TOO, ARE ABUNDANTLY SUPPLIED..."

"SO YOU SEE, THIS LABORATORY - WITH ITS 1300 PEOPLE (ABOUT 400 OF THEM ON THE SCIENTIFIC STAFF) - IS BUILT FOR THE KIND OF ACTION THAT MAKES PROGRESS... FOR EFFICIENCY IN RESEARCH SCIENCE. LET'S SEE WHAT GOES ON INSIDE THOSE WALLS..."

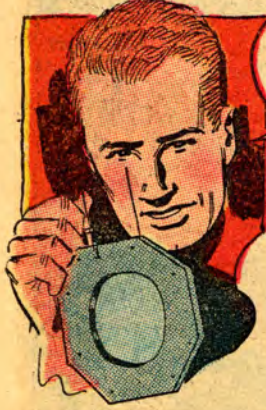
FIRST STOP--THE LABORATORY WHERE LIGHT IS BEING EXPLORED...

OUR INTEREST IS MORE AND BETTER LIGHT. WE'VE BEEN DOING RESEARCH ON PHOSPHORS LIKE THESE - MATERIALS THAT GLOW WITH LIGHT WHEN EXPOSED TO CERTAIN RAYS.

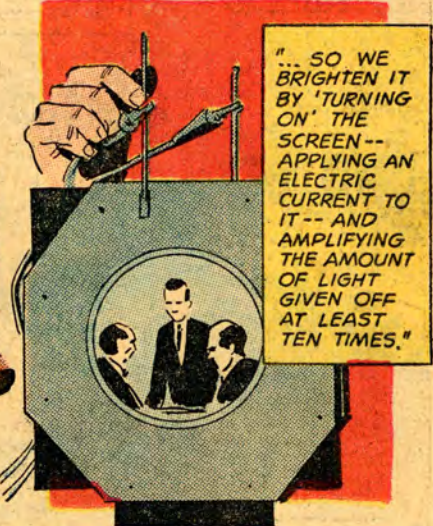
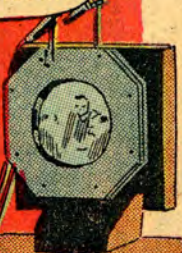
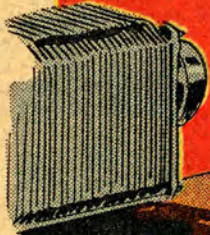


LIKE THE PHOSPHORS IN THOSE FLUORESCENT LIGHTS?

THAT'S THE IDEA, JOHNNY. BUT BILL HERE IS THE PHYSICIST WHO CREATED A PHOSPHOR THAT AMPLIFIES LIGHT! HOW ABOUT A DEMONSTRATION, DOCTOR?



WELL, HERE'S THE LITTLE SCREEN ON WHICH I SHALL PROJECT A PICTURE. IT'S A SPECIAL SCREEN THAT'S BEEN COATED WITH THOSE PHOSPHORS ED MENTIONED...



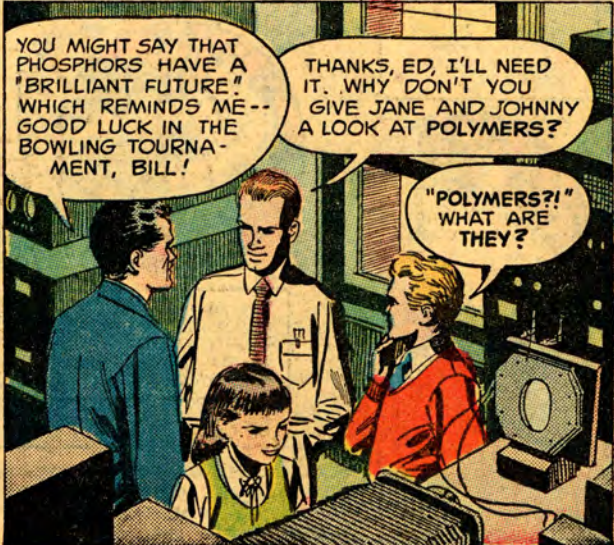
"... SO WE BRIGHTEN IT BY 'TURNING ON' THE SCREEN -- APPLYING AN ELECTRIC CURRENT TO IT -- AND AMPLIFYING THE AMOUNT OF LIGHT GIVEN OFF AT LEAST TEN TIMES."

"FIRST, WE PROJECT ON THE SCREEN AN ORDINARY PICTURE. IT'S A FAIRLY DIM ONE..."



BILL, WHAT SORT OF THING MIGHT THIS PHOSPHOR RESEARCH LEAD TO SOME DAY?

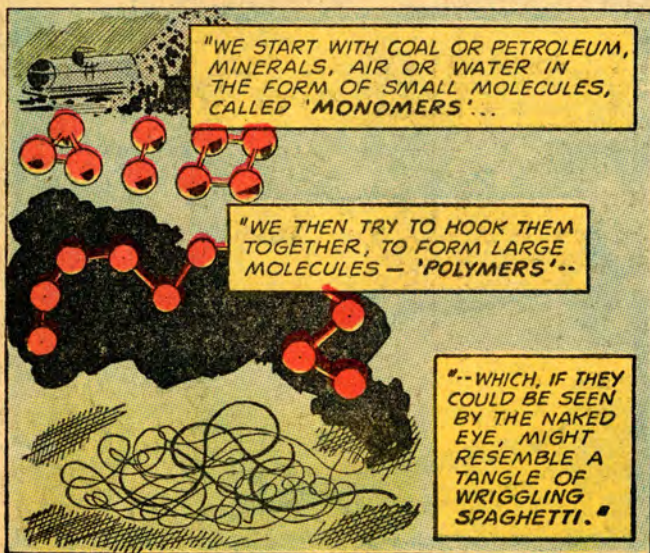
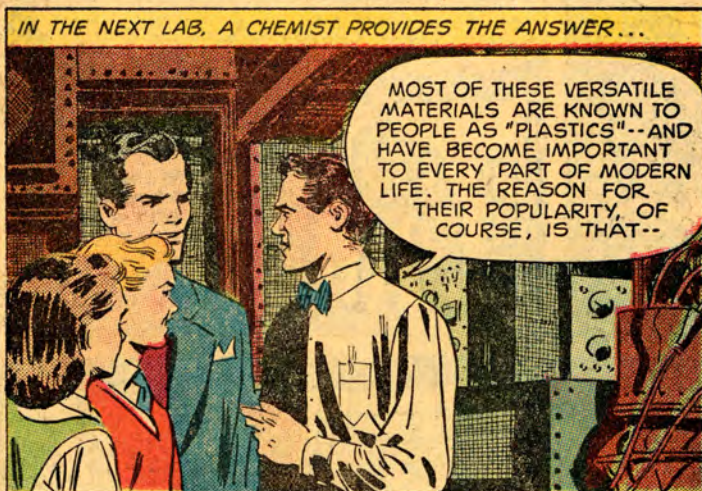
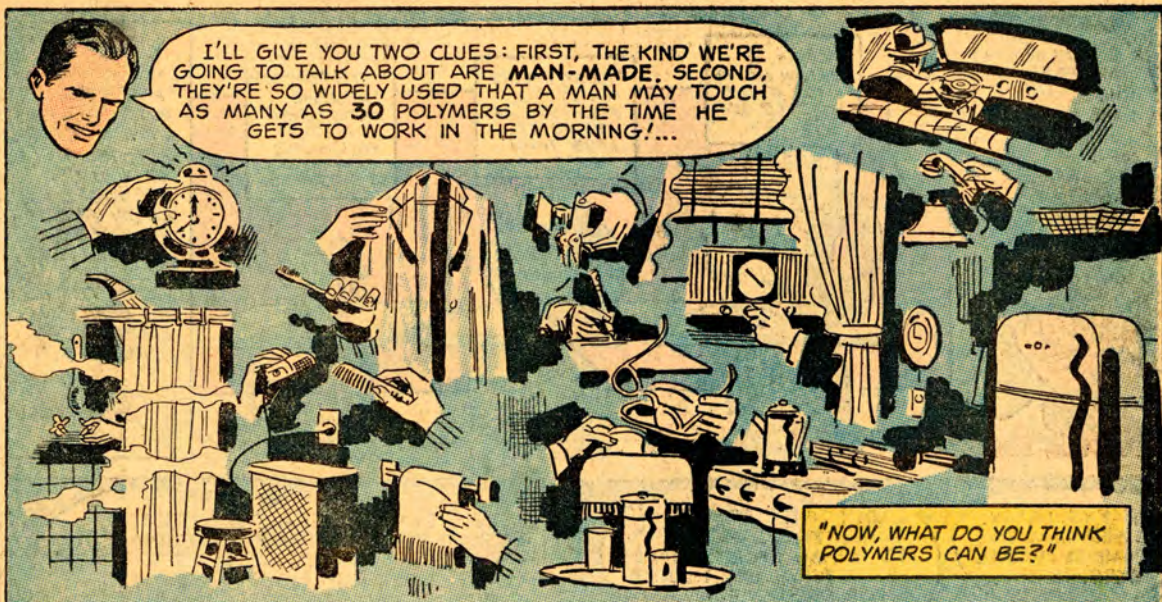
WELL... WHO KNOWS? MAYBE SOME DAY WE'LL HAVE "PICTURE-ON-THE-WALL" TELEVISION... AND MAYBE EVEN ENTIRE WALLS OR CEILINGS GLOWING WITH THIS COOL LIGHT!



YOU MIGHT SAY THAT PHOSPHORS HAVE A "BRILLIANT FUTURE!" WHICH REMINDS ME -- GOOD LUCK IN THE BOWLING TOURNAMENT, BILL!

THANKS, ED, I'LL NEED IT. WHY DON'T YOU GIVE JANE AND JOHNNY A LOOK AT POLYMERS?

"POLYMERS?!" WHAT ARE THEY?



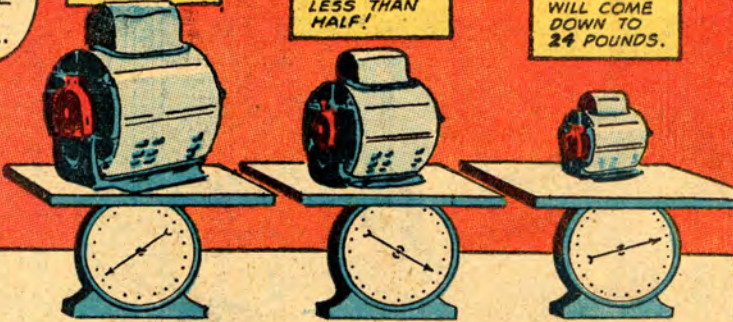
IN CASE YOU'RE WONDERING WHY IMPROVEMENTS IN POLYMERS ARE IMPORTANT TO G. E., HERE'S AN EXAMPLE OF WHAT THEY CAN BE MADE TO DO...

"IN 1929, A CERTAIN MOTOR MADE BY G. E. WEIGHED 65 POUNDS..."

"TODAY, THANKS PARTLY TO POLYMERS, IT WEIGHS 32... LESS THAN HALF!"

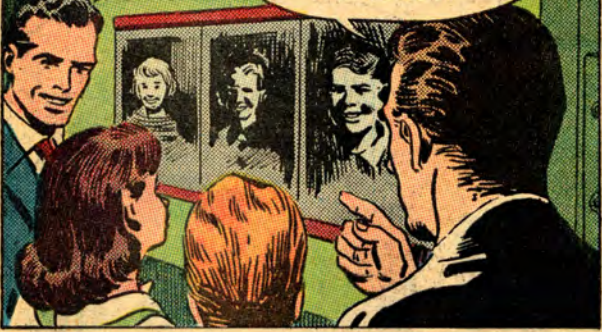
"AND WE EXPECT THAT IN 1960, IT WILL COME DOWN TO 24 POUNDS."

"THAT'S REALLY PUTTING MACHINERY ON A DIET, ISN'T IT? SO YOU SEE, THE MORE WE KNOW ABOUT POLYMERS, THE BETTER THEY WILL WORK FOR US AS EFFICIENT, ECONOMICAL SERVANTS."



THANKS, LARRY. I SEE THAT THE CAMERA IS STILL YOUR HOBBY.

WITH THREE PRETTY DAUGHTERS, I'VE GOT TO BE AN EAGER-BEAVER PHOTOGRAPHER. THANKS FOR STOPPING BY, EVERYBODY.



LET'S SEE... WE'VE MET A PHYSICIST BOWLING-CHAMP --AND NOW A CHEMIST-PHOTOGRAPHER WITH HIS VERY OWN "PIN-UP" GIRLS... I DIDN'T KNOW THAT SCIENTISTS WERE SUCH "DOWN-TO-EARTH" TYPES!

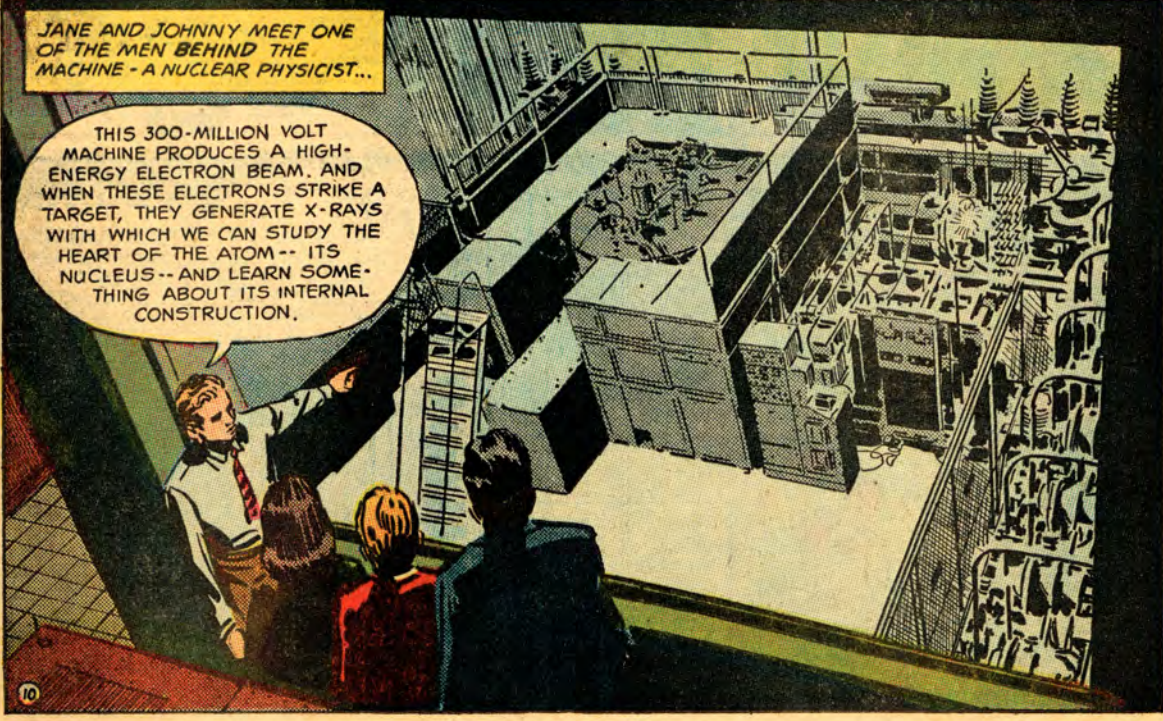
THERE'S NOTHING "OUT-OF-THIS-WORLD" ABOUT PEOPLE WHO WANT TO GET AT THE HEART OF THINGS, JANE.



-- WHICH REMINDS ME-- LET'S HAVE A LOOK NOW AT A VERY SPECIAL PIECE OF RESEARCH EQUIPMENT-- THE ATOM-SMASHING SYNCHROTRON!

JANE AND JOHNNY MEET ONE OF THE MEN BEHIND THE MACHINE - A NUCLEAR PHYSICIST...

THIS 300-MILLION VOLT MACHINE PRODUCES A HIGH-ENERGY ELECTRON BEAM. AND WHEN THESE ELECTRONS STRIKE A TARGET, THEY GENERATE X-RAYS WITH WHICH WE CAN STUDY THE HEART OF THE ATOM-- ITS NUCLEUS-- AND LEARN SOMETHING ABOUT ITS INTERNAL CONSTRUCTION.



THEN ON TO ANOTHER KIND OF ELECTRON BEAM GENERATOR-- AND A LOOK AT SOME APPLIED RESEARCH...

THIS MACHINE SENDS OUT A MILLION-VOLT BEAM, EITHER X-RAYS OR ELECTRONS... AND WE CAN PUT THINGS IN ITS PATH TO SEE WHAT HAPPENS TO THEM. FOR INSTANCE, THE PLASTIC FROM WHICH THIS "SQUEEZE-BOTTLE" WAS MADE--

--ACTUALLY CHANGED ITS BASIC STRUCTURE AFTER BEING "IRRADIATED," AND A NEW POLYMER EMERGED-- AN INSULATING TAPE THAT IS BOTH STRONG AND HEAT-RESISTANT AT THE SAME TIME.

THIS NEW FIELD OF "ELECTRON CHEMISTRY" IS RICH WITH THINGS-TO-COME... THE BIG PROPHECY IS ELECTRON STERILIZATION OF--

"FOODS - MAKING IT POSSIBLE TO KEEP THEM FOR WEEKS OR MONTHS, PERHAPS, WITHOUT REFRIGERATION..."

"SEEDS - FOR AGRICULTURAL USE..."

"BLOOD-- ARTERIES-- SKIN -- WHICH CAN BE STORED IN BANKS FOR EMERGENCY USE..."

"BACTERIA -- FOR DISEASE CONTROL..."

"DRUGS..."

THE ELECTRON BEAM OFFERS A NEW WAY TO CREATE CHEMICAL REACTIONS, WHICH SHOULD MAKE IT POSSIBLE TO PRODUCE NEW MATERIALS AND BETTER DRUGS. IT OPENS NEW PATHS FOR FUTURE RESEARCH SCIENTISTS TO EXPLORE.

IS THERE ALWAYS SOMETHING NEW TO WORK ON?

WELL... DR. WILLIS R. WHITNEY, G. E.'S DEAN OF INDUSTRIAL RESEARCH, SUMMED IT UP WHEN HE SAID...

"DISCOVERIES AND INVENTIONS ARE NOT ENDS IN THEMSELVES; THEY ARE FRESH STARTING POINTS FROM WHICH WE CAN CLIMB TO NEW KNOWLEDGE."

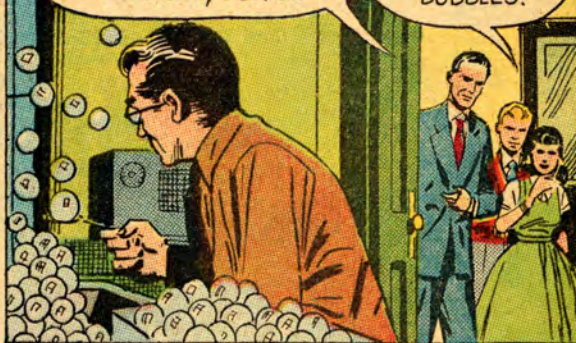
SPEAKING OF THE "NEW," ED-- THESE TWO SHOULD GET TO KNOW SOMETHING ABOUT OUR NEW SCIENCE, METALLURGY...

NEW?!--I THOUGHT GETTING METAL FROM ORE AND REFINING IT WAS "OLD BUSINESS"!

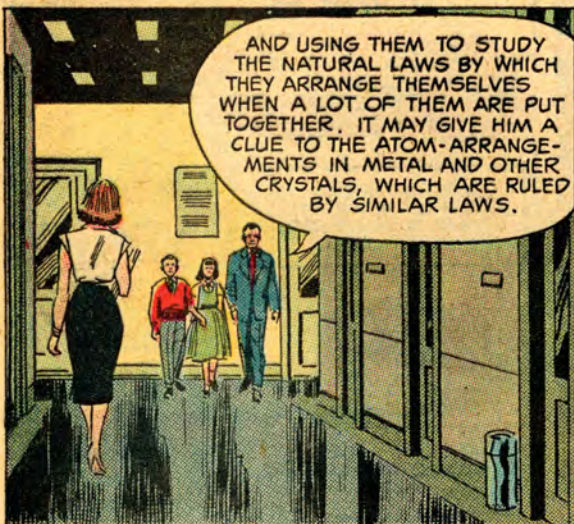


IT IS AN OLD ART, THAT'S BEEN CHANGED INTO A NEW SCIENCE - IN WHICH WE STUDY THE BEHAVIOR OF METALS... WHY THEY CHANGE UNDER CERTAIN CONDITIONS... HOW THEY MIGHT BE MADE TO CHANGE... TAKE THAT PHYSICIST, FOR EX--

WHY, HE'S JUST BLOWING SOAP-BUBBLES!



AND USING THEM TO STUDY THE NATURAL LAWS BY WHICH THEY ARRANGE THEMSELVES WHEN A LOT OF THEM ARE PUT TOGETHER. IT MAY GIVE HIM A CLUE TO THE ATOM-ARRANGEMENTS IN METAL AND OTHER CRYSTALS, WHICH ARE RULED BY SIMILAR LAWS.



ALREADY, AS A RESULT OF THIS KIND OF RESEARCH, SCIENTISTS HERE HAVE BEEN ABLE TO "GROW" THE STRONGEST, MOST NEARLY PERFECT METAL IN THE WORLD!

GOSH, DO YOU THINK WE COULD SEE THAT?



SOON, IN THE "METAL-GROWING" LABORATORY...

BUT THEY LOOK LIKE LITTLE WHISKERS -- SO TINY YOU CAN HARDLY SEE THEM!

YOU SEE, ORDINARY METALS WEAKEN WHEN ONE ATOM IN ABOUT A MILLION GETS OUT OF LINE AND CAUSES A DISLOCATION. BUT IN THESE LITTLE METAL "HAIRS" THE ATOMS ARE ALMOST PERFECTLY ALIGNED!

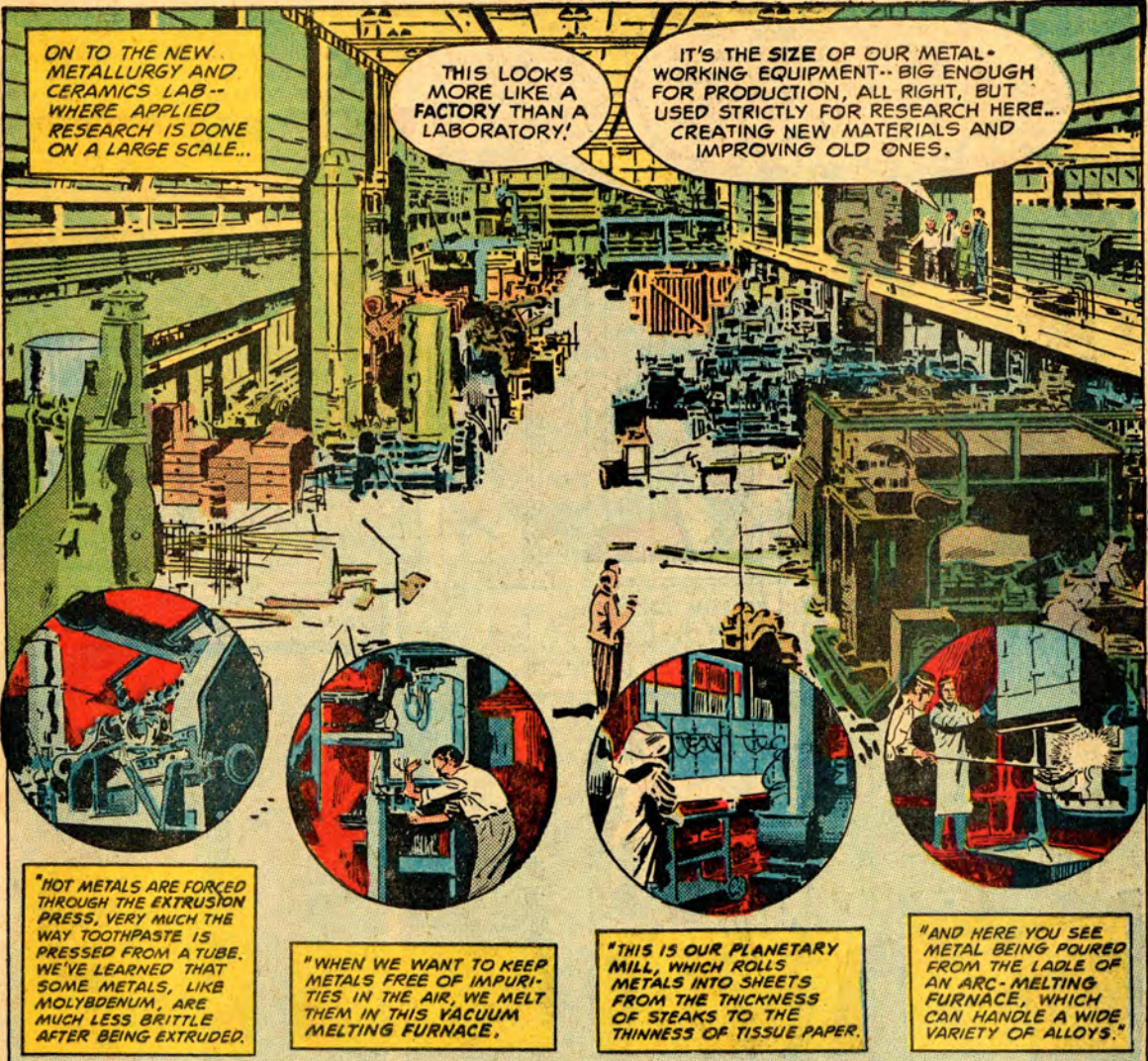
"GREAT OAKS FROM LITTLE ACORNS GROW"-- AND GREAT SKYSCRAPERS AND BRIDGES -- PLANES, AUTOS -- EVERYTHING MADE OF METAL-- MAY GROW FROM IRON WHISKERS.

NICE SEEING YOU, ERNST...

I'VE ENJOYED IT, TOO.

THAT'S A GOOD DESCRIPTION, JANE. THEY ARE WHISKERS -- OF IRON. BUT THEY'RE 100 TIMES STRONGER THAN ORDINARY IRON!

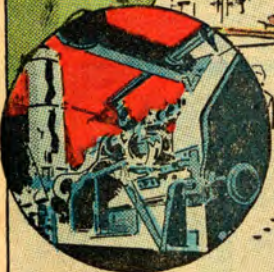




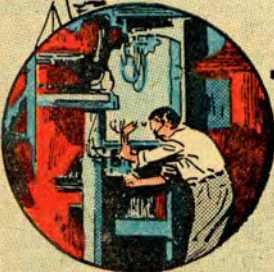
ON TO THE NEW METALLURGY AND CERAMICS LAB-- WHERE APPLIED RESEARCH IS DONE ON A LARGE SCALE...

THIS LOOKS MORE LIKE A FACTORY THAN A LABORATORY!

IT'S THE SIZE OF OUR METAL-WORKING EQUIPMENT-- BIG ENOUGH FOR PRODUCTION, ALL RIGHT, BUT USED STRICTLY FOR RESEARCH HERE... CREATING NEW MATERIALS AND IMPROVING OLD ONES.



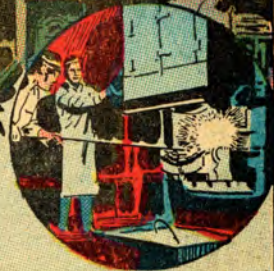
"HOT METALS ARE FORCED THROUGH THE EXTRUSION PRESS, VERY MUCH THE WAY TOOTHPASTE IS PRESSED FROM A TUBE. WE'VE LEARNED THAT SOME METALS, LIKE MOLYBDENUM, ARE MUCH LESS BRITTLE AFTER BEING EXTRUDED.



"WHEN WE WANT TO KEEP METALS FREE OF IMPURITIES IN THE AIR, WE MELT THEM IN THIS VACUUM MELTING FURNACE.



"THIS IS OUR PLANETARY MILL, WHICH ROLLS METALS INTO SHEETS FROM THE THICKNESS OF STEAKS TO THE THINNESS OF TISSUE PAPER.

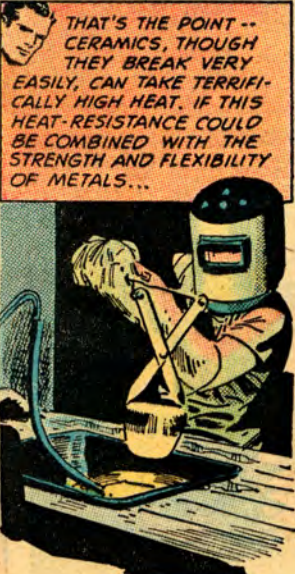


"AND HERE YOU SEE METAL BEING POURED FROM THE LADLE OF AN ARC-MELTING FURNACE, WHICH CAN HANDLE A WIDE VARIETY OF ALLOYS."



AND THE STUDY OF CERAMICS IS A NATURAL PARTNER FOR METALS BECAUSE THEIR BASIC CRYSTAL STRUCTURES ARE SIMILAR.

I ALWAYS THOUGHT CERAMICS WERE HOUSEHOLD THINGS SHAPED FROM CLAY AND BAKED HARD...



THAT'S THE POINT -- CERAMICS, THOUGH THEY BREAK VERY EASILY, CAN TAKE TERRIFICALLY HIGH HEAT. IF THIS HEAT-RESISTANCE COULD BE COMBINED WITH THE STRENGTH AND FLEXIBILITY OF METALS...

"WE COULD CREATE MATERIALS THAT WOULD DEFY THE HEAT AND PRESSURES OF SUPERSONIC FLIGHT, THE FANTASTIC JETS, ROCKETS AND MISSILES OF THE FUTURE WOULD BECOME REALITIES..."



"OUR AIR POWER DEPENDS ON WHAT OUR RESEARCHERS CAN ACCOMPLISH."

JANE AND JOHNNY SEE HOW RESEARCH IN METALS AND CERAMICS HELPED A REMARKABLE DEVELOPMENT IN ELECTRONICS --- THEY VISIT THE VACUUM-TUBE "PIONEERS"...

THAT TINY OBJECT, THE SIZE OF A PENCIL-ERASER, IS A FULL-FLEDGED VACUUM TUBE FOR TELEVISION SETS. IT WAS DEVELOPED RIGHT HERE AT THE LAB.

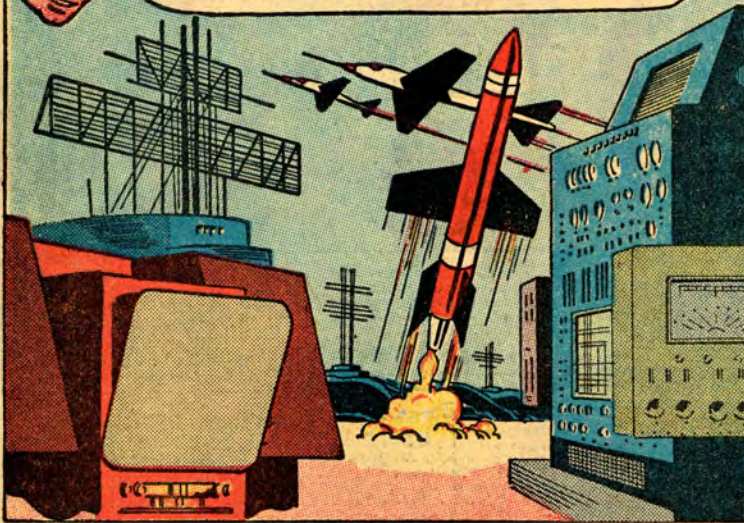
IT'S NOT ONLY THE SMALLEST, ED, BUT THE BEST OF ITS KIND EVER MADE--

"-- THANKS TO THE 'WONDER METAL,' TITANIUM, SPECIAL CERAMICS, AND NEW METHODS OF SEALING METALS TO CERAMICS.



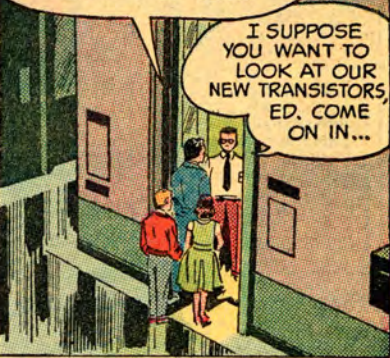
"IT'S THE COMBINATION THAT MAKES THIS LITTLE TUBE TOUGH ENOUGH TO OPERATE RED-HOT."

MINIATURE CERAMIC VACUUM TUBES LIKE THESE MAY SOME DAY BE USED IN ALL KINDS OF COMMUNICATIONS SYSTEMS, COMPUTING MACHINES... AIRCRAFT AND GUIDED MISSILE CONTROLS...



AND JUST UPSTAIRS, OUR TRIO LOOKS IN ON THE COMPETITION...

THOSE VACUUM-TUBE BOYS ARE MIGHTY PROUD OF THEIR ACHIEVEMENTS, BUT WAIT UNTIL YOU SEE WHAT OUR SEMI-CONDUCTOR MEN ARE UP TO...



I SUPPOSE YOU WANT TO LOOK AT OUR NEW TRANSISTORS, ED. COME ON IN...

THE LAB SAMPLES ARE EVEN TINIER THAN THE MINIATURE VACUUM TUBES...



BUT WE'RE OUT TO MAKE THEM EVEN BETTER. AND WITH NEW MATERIALS -- LIKE THIS VERY PURE SILICON -- TO WORK WITH, WE'LL DO IT!

MORE POWER TO ALL OF YOU, SAY I!



SCIENTIFIC RESEARCH DOES GO FURTHER -- MUCH FURTHER THAN I THOUGHT.

SOMETIMES, IT EVEN GOES BEYOND THE AVERAGE MAN'S DREAMS, JOHNNY. WE'RE NOW GOING TO SEE ONE OF THE MOST THRILLING ACHIEVEMENTS OF THIS LAB --





MAN-MADE DIAMONDS!

ARE-ARE THEY REAL?

YES, JANE - AND JUST AS GOOD, IF NOT BETTER, THAN NATURAL DIAMONDS DUG FROM THE EARTH -- THE HARDEST SUBSTANCE KNOWN. BUT THESE ARE NOT GEM-STONES FOR TIARAS AND ENGAGEMENT RINGS...



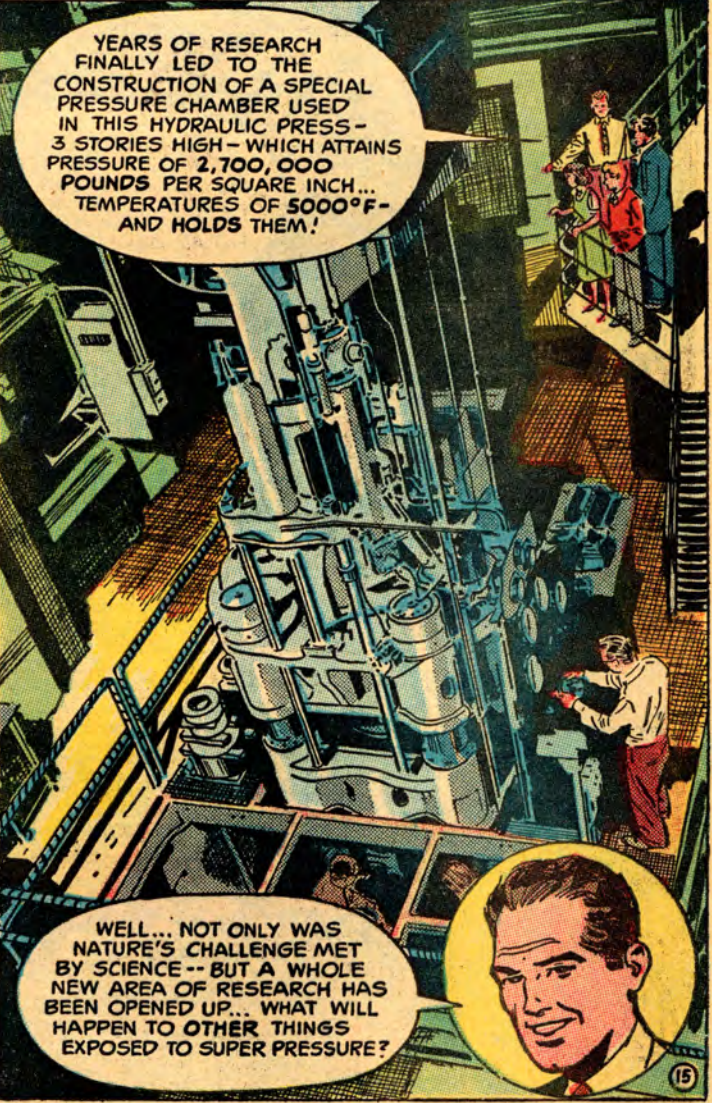
SCIENTISTS HAVE BEEN TRYING TO MAKE DIAMONDS FOR ABOUT 150 YEARS, HAVEN'T THEY, HANK?

YES, ED, WE FIGURED WE MIGHT DO IT-- IF WE COULD SUBJECT CERTAIN CARBONACEOUS COMPOUNDS TO FIERCE TEMPERATURES AND TREMENDOUS PRESSURES - AND DUPLICATE THE "SQUEEZE" 240 MILES INSIDE THE EARTH!

THEY ARE INDUSTRIAL DIAMONDS - THE KIND USED BY OUR FACTORIES AND DEFENSE PLANTS FOR CUTTING, GRINDING AND POLISHING...



UP UNTIL NOW, OUR COUNTRY HAS IMPORTED OVER FIFTY MILLION DOLLARS WORTH OF INDUSTRIAL DIAMONDS A YEAR FROM SOUTH AFRICA. IF WE CAN PROVIDE OUR NATION WITH INEXPENSIVE MAN-MADE DIAMONDS, THEY WILL BE MUCH MORE WIDELY USED BY MANY MORE INDUSTRIES.

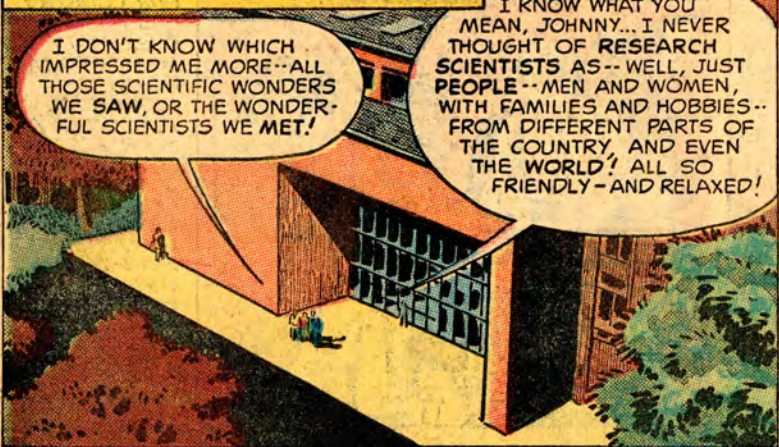


YEARS OF RESEARCH FINALLY LED TO THE CONSTRUCTION OF A SPECIAL PRESSURE CHAMBER USED IN THIS HYDRAULIC PRESS - 3 STORIES HIGH - WHICH ATTAINS PRESSURE OF 2,700,000 POUNDS PER SQUARE INCH... TEMPERATURES OF 5000°F - AND HOLDS THEM!

WELL... NOT ONLY WAS NATURE'S CHALLENGE MET BY SCIENCE -- BUT A WHOLE NEW AREA OF RESEARCH HAS BEEN OPENED UP... WHAT WILL HAPPEN TO OTHER THINGS EXPOSED TO SUPER PRESSURE?



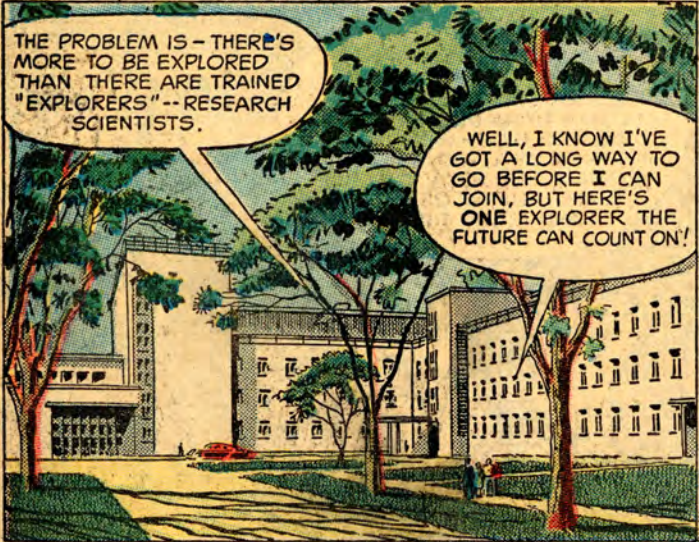
STILL DAZZLED BY THEIR GLIMPSE OF G.E.'S "DIAMOND-MINE"--AND THE LAB TOUR IN GENERAL-- JOHNNY AND JANE TRY TO SUM UP THEIR REACTIONS...



I DON'T KNOW WHICH IMPRESSED ME MORE--ALL THOSE SCIENTIFIC WONDERS WE SAW, OR THE WONDERFUL SCIENTISTS WE MET!

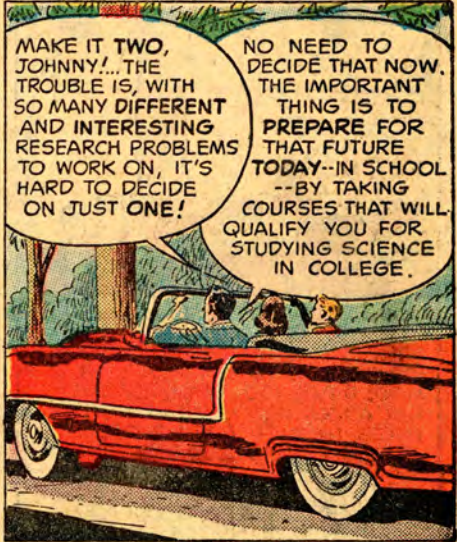
I KNOW WHAT YOU MEAN, JOHNNY... I NEVER THOUGHT OF RESEARCH SCIENTISTS AS-- WELL, JUST PEOPLE-- MEN AND WOMEN, WITH FAMILIES AND HOBBIES-- FROM DIFFERENT PARTS OF THE COUNTRY, AND EVEN THE WORLD! ALL SO FRIENDLY-- AND RELAXED!

THERE'S A GOOD REASON FOR THAT ATMOSPHERE, JANE... EVERY OPPORTUNITY AND ENCOURAGEMENT HAVE BEEN GIVEN TO SCIENTISTS HERE. MOST IMPORTANT, THEY HAVE FREEDOM-- THE FREEDOM TO THINK, TO EXPLORE, TO INVESTIGATE-- IN THE SEARCH FOR KNOWLEDGE!



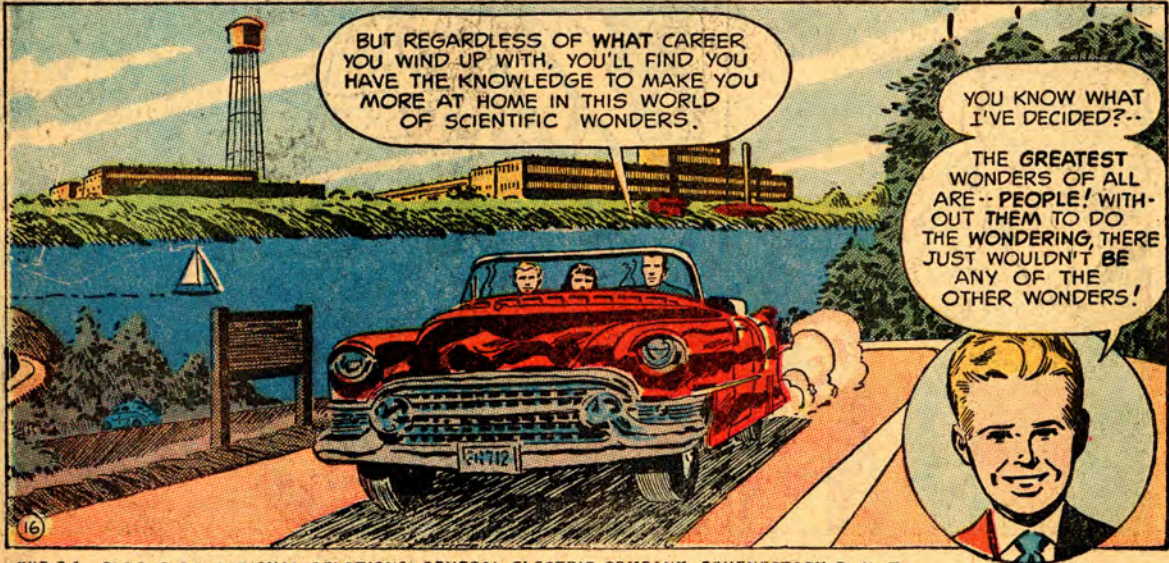
THE PROBLEM IS-- THERE'S MORE TO BE EXPLORED THAN THERE ARE TRAINED "EXPLORERS"-- RESEARCH SCIENTISTS.

WELL, I KNOW I'VE GOT A LONG WAY TO GO BEFORE I CAN JOIN, BUT HERE'S ONE EXPLORER THE FUTURE CAN COUNT ON!



MAKE IT TWO, JOHNNY... THE TROUBLE IS, WITH SO MANY DIFFERENT AND INTERESTING RESEARCH PROBLEMS TO WORK ON, IT'S HARD TO DECIDE ON JUST ONE!

NO NEED TO DECIDE THAT NOW. THE IMPORTANT THING IS TO PREPARE FOR THAT FUTURE TODAY-- IN SCHOOL --BY TAKING COURSES THAT WILL QUALIFY YOU FOR STUDYING SCIENCE IN COLLEGE.



BUT REGARDLESS OF WHAT CAREER YOU WIND UP WITH, YOU'LL FIND YOU HAVE THE KNOWLEDGE TO MAKE YOU MORE AT HOME IN THIS WORLD OF SCIENTIFIC WONDERS.

YOU KNOW WHAT I'VE DECIDED?-- THE GREATEST WONDERS OF ALL ARE-- PEOPLE! WITHOUT THEM TO DO THE WONDERING, THERE JUST WOULDN'T BE ANY OF THE OTHER WONDERS!



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