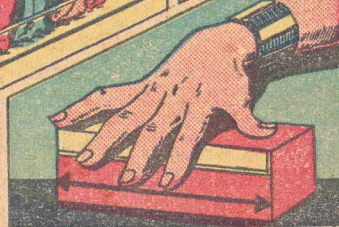




THE AMAZING STORY OF MEASUREMENT



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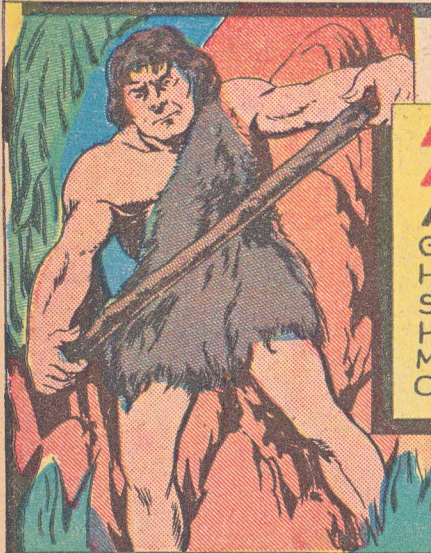
SINCE TIME BEGAN...

MAN HAS ALWAYS MEASURED THE WORLD AROUND HIM. THE CAVE-MAN JUDGED DISTANCES BY EYE OR TIME, COMPARED SIZES BY PACES OR BY MATCHING OBJECTS WITH TREES, STONES OR MOUNTAINS THAT HE KNEW FROM MEMORY. HIS WORLD DEMANDED NO ACCURACY ---- ANY SIZE CAVE WOULD DO IF HIS FAMILY WOULD FIT INTO IT.



HIS BODY BECAME HIS YARDSTICK--

AS HIS NEEDS REQUIRED GREATER ACCURACY, HIS HEIGHT, HIS ARMS OUT-STRETCHED, HIS FEET AND HIS HANDS BECAME ROUGH METHODS OF MEASURING CLOTHING, WEAPONS ETC .



NO STANDARDS WERE EVER RECORDED ---- EACH PERSON HAD HIS OWN METHODS OF MEASURING FOR HIS OWN NEEDS --- EACH PERSON WORKED ALONE WHEN MEASUREMENTS WERE INVOLVED.



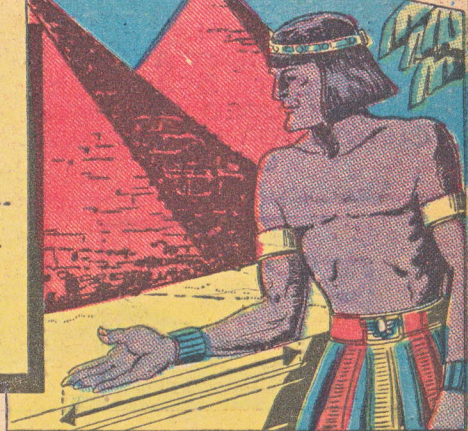
IN 6,000 B.C.--

THE FIRST KNOWN STANDARDS OF MEASUREMENT WERE ESTABLISHED IN THE ADVANCED CIVILIZATIONS ALONG THE **NILE** AND ON THE PLAINS OF **CHALDEA!**

THE CUBIT

BECAME THE PRIME MEASUREMENT. IT WAS THE BENT FOREARM FROM THE POINT OF THE ELBOW TO THE TIP OF THE MIDDLE FINGER OF THE OUTSTRETCHED HAND--ROUGHLY 18 TO 19 INCHES.

IN 4000 B.C., THE CUBIT WAS STANDARDIZED AT WHAT IS NOW 18.24 INCHES.



THE CUBIT WAS USED IN BUILDING ALL THE PYRAMIDS!....

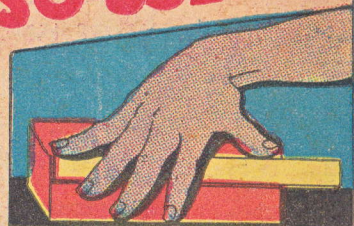
ALL MEASUREMENTS ARE IN MULTIPLES...OR FRACTIONS OF CUBITS.

THE PERIMETER OF SOME PYRAMIDS MEASURE 2000 CUBITS.... OR $\frac{1}{2}$ A MERIDIAN MILE.



EARLY EGYPTIANS ALSO USED: THE SPAN--

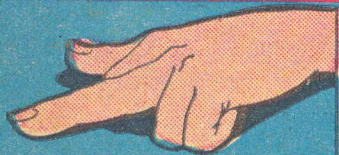
THE LENGTH BETWEEN THE TIPS OF THUMB AND LITTLE FINGER OF THE OUTSTRETCHED HAND --- $\frac{1}{2}$ A CUBIT OR 9 INCHES.



THE UNIVERSAL SIZE OF A BRICK IS A *SPAN* BY $\frac{1}{2}$ *SPAN* BY A *NAIL* --- (THE LAST 2 JOINTS OF THE MIDDLE FINGER.)

THE PALM --

THE BREADTH OF 4 FINGERS --- $\frac{1}{6}$ OF A CUBIT -- OR ABOUT 3 INCHES. WIDELY USED BY MERCHANTS FOR MEASURING CLOTH.



THE DIGIT --

$\frac{1}{24}$ CUBIT --- THE BREADTH AT MIDDLE OF MIDDLE FINGER ... $\frac{3}{4}$ INCH.

FROM THIS DIVISION OF THE CUBIT INTO 24 DIGITS, AND THE DIVISION OF A SPAN INTO 12 DIGITS, CAME THE NUMBER OF HOURS IN A DAY AND MONTHS IN A YEAR!



THE FOOT --

WAS ADOPTED QUITE LATE IN HISTORY. (JUST AS THE **PYRAMIDS** WERE BEING BUILT.) IT EQUALLED $\frac{2}{3}$ OF A CUBIT, 4 PALMS, OR 16 DIGITS. MEASURED ABOUT 12.16 INCHES.

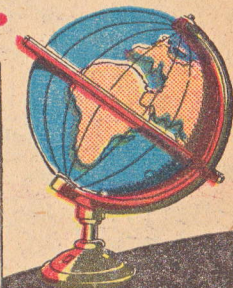
EVEN MODERN SCIENCE CAN'T IMPROVE ON IT!

THE ANCIENT'S KNOWLEDGE OF ASTRONOMY AND LAND MEASUREMENT WAS OF SUCH ACCURACY THAT EVEN MODERN SCIENCE CAN'T IMPROVE GREATLY ON MERIDIAN MEASUREMENTS MADE IN EGYPT AND CHALDEA 60 CENTURIES AGO!



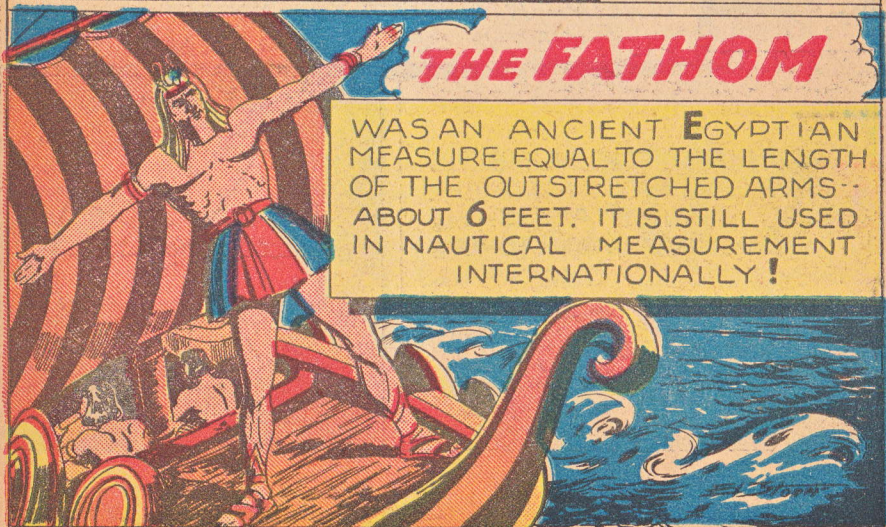
THE MERIDIAN MILE...

THE UNIT USED BY SEAMEN THE WORLD OVER TODAY, WAS ESTABLISHED BY 4000 B.C. AS 4000 CUBITS OR 1000 EGYPTIAN FATHOMS (DON'T FORGET THAT SOME OF THE PYRAMIDS MEASURE EXACTLY $\frac{1}{8}$ OF A MERIDIAN MILE ALONG EACH SIDE!)

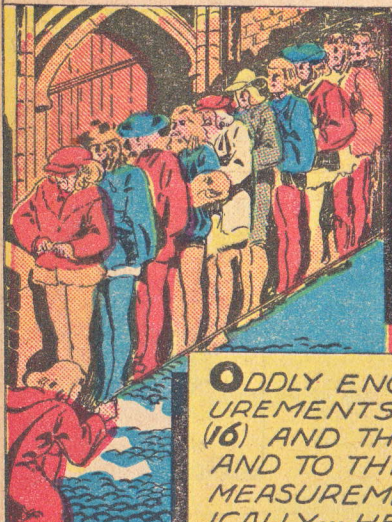


THE FATHOM

WAS AN ANCIENT EGYPTIAN MEASURE EQUAL TO THE LENGTH OF THE OUTSTRETCHED ARMS-- ABOUT 6 FEET. IT IS STILL USED IN NAUTICAL MEASUREMENT INTERNATIONALLY!



THE REED WAS
THE FORERUNNER TO THE **ROD**.
IT EQUALLED A **DOUBLE FATHOM**---
8 CUBITS, 12 FEET OR 16 SPANS.

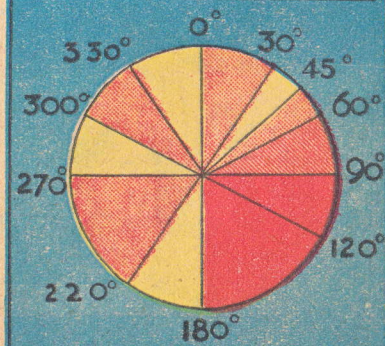


IT WASN'T UNTIL THE
16TH CENTURY A.D THAT
THE **ROD** WE KNOW WAS
ESTABLISHED AS THE LENGTH
OF THE **LEFT FEET** OF THE
FIRST **16** MEN OUT OF
CHURCH ON A CERTAIN
SUNDAY!

ODDLY ENOUGH ALL ANCIENT MEASUREMENTS WERE IN THE **SEXDECIMAL (16)** AND THE **DUODECIMAL** SYSTEMS, AND TO THIS DAY, MAN STICKS TO MEASUREMENTS HE CAN MATCH PHYSICALLY--- HE FIGHTS THE ACCEPTANCE OF THE DECIMAL SYSTEM!

CHALDEANS

WORSHIPPED THE NUMBERS
6, 60, 600 ETC, AND THEIR
ASTROLOGY ESTABLISHED
THE **CIRCLE** AS **360°**(DEGREES)
THEY ALSO SET THE YEAR
AS **6** MONTHS OF **60** DAYS
EACH, PLUS **5** DAYS AT
THE YEAR-END.

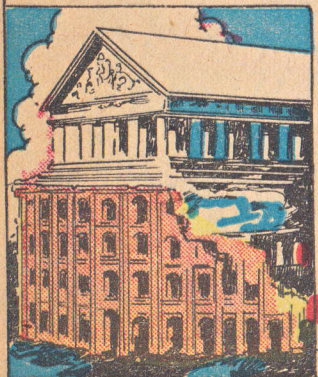


ALEXANDER THE GREAT

CONQUERED THE WORLD AND ANCIENT MEASUREMENTS WERE CARRIED TO GREECE AND ROME AS STANDARDS FOR FOREIGN TRADE.



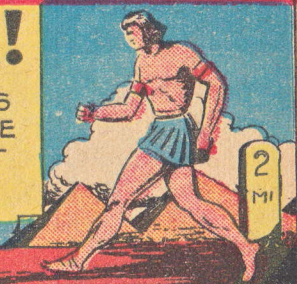
THE GREEKS AND ROMANS



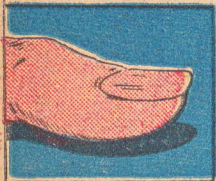
SOON SET UP THEIR OWN STANDARDS FOR THE LONGER DISTANCES --- COMBINING OLYMPIC, PERSIAN, CHALDEAN AND EGYPTIAN MEASURES. THESE INCLUDED SUCH MEASURES AS STADIA ($\frac{1}{10}$ OF A MERIDIAN MILE), --- SCHOINOS, ($\frac{1}{10}$ OF A DEGREE) AND PARASANGS (4 MILES), BUT ONLY ONE EXISTS TODAY.

THE MILLE OR MILE!

1000 PACES OR DOUBLE STEPS WAS ESTABLISHED AS THE STATUTE MILE (THEN EQUIVALENT TO 5000 FEET OR $\frac{4}{5}$ OF A MERIDIAN MILE.)



THE ROMANS ALSO INVENTED THE INCH!



ORIGINALLY CALLED THE
"THUMB-BREADTH", IT
DIVIDED THE FOOT INTO
12 UNITS.



IN 1150 A.D. KING DAVID I

OF **SCOTLAND** RULED
THAT THE INCH WAS THE MEAN
MEASURE OF THE THUMBS OF
3 MEN... "A MEKILL MAN, A
MAN OF MESSURABIL STATUR
AND OF A LYTELL MAN. THE
THOUMS" ARE TO BE MESSURIT
AT THE RUT OF THE NAYLE"!

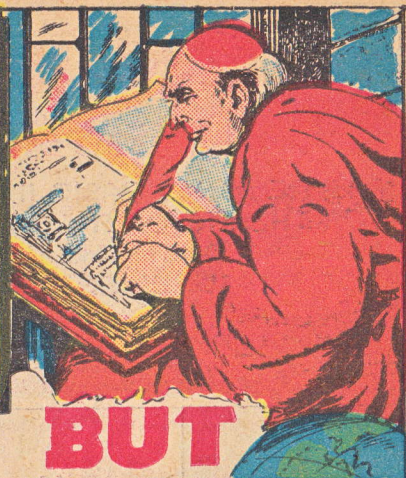


IN 1324, ENGLAND'S KING EDWARD II DE- CREED THAT 3 BARLEY- CORN'S TAKEN FROM THE MIDDLE OF THE EAR AND PLACED END TO END EQUALLED 1 INCH!



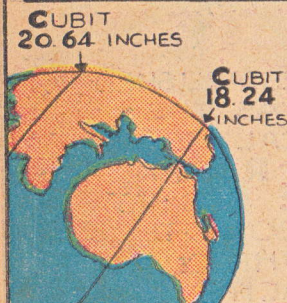
GEODESY--

THE ART OF MEASURING THE EARTH AND ITS SHAPE INFLUENCED MEASUREMENT THROUGH THE 9TH CENTURY --- STANDARDS WERE NO LONGER BASED ON HUMAN MEASUREMENTS AS SUCH ---



BUT

THE CUBIT AND OTHER ACCEPTED UNITS BEGAN TO VARY IN LENGTH WITH THE MERIDIAN ON WHICH PEOPLE LIVED. DIFFERENT MEASUREMENTS WERE BY LAW DECREED FOR DIFFERENT COUNTRIES --- ALL BASED ON ASTROLOGY AND THE MERIDIAN OF THE LOCALE.



SO--

THERE WAS A RETURN TO NATURAL AND HUMAN MEASUREMENT WHICH PERSISTED THROUGH---

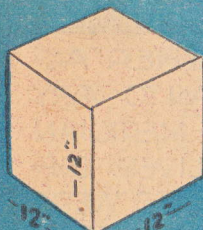


THE DARK AGES!

THE LEGEND OF THE FOOT IS A FAIRYTALE!

THERE IS NO BASIS IN HISTORY FOR THE STORY THAT THE FOOT WAS BASED ON THE HEEL-AND-TOE MEASUREMENT OF

KING ALFRED'S FOOT!



IT IS MORE LIKELY

THAT KING ALFRED ESTABLISHED THE ENGLISH FOOT AS THE MEASURE OF A CUBICAL VESSEL CONTAINING 1000 ROMAN OUNCES OF WATER! THIS SET A STANDARD FOR BOTH THE LINEAL FOOT AND THE CUBIC FOOT OF CAPACITY.

THE YARD IS A DIFFERENT STORY--

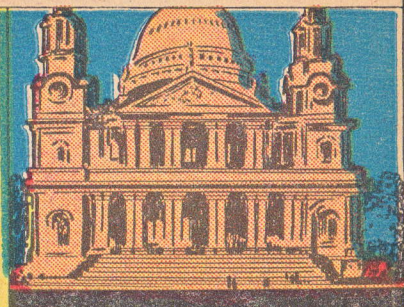
THIS MEASURE OF 3 FEET OR $\frac{1}{2}$ FATHOM WAS DECREED BY KING HENRY I TO BE THE DISTANCE FROM THE TIP OF HIS NOSE TO THE END OF HIS THUMB!



"YARD" COMES FROM THE OLD ENGLISH "GERDE" OR "YERDE" --- MEANING "WAND".

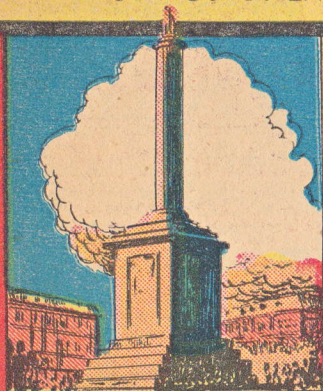
THINGS BECAME SO CONFUSED--

BY THE 13TH CENTURY THAT ALL ENGLISH LAND MEASUREMENTS WERE MADE IN ACCORDANCE WITH THE FOOT STORED IN SAINT PAUL'S CHURCH, AND WITH THE IRON "ELL" IN THE KING'S PALACE.



EVEN TODAY

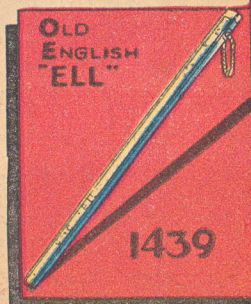
YOU'LL FIND THE STANDARD MEASURES OF LENGTH IMBEDDED IN THE BASE OF THE NORTHERN WALL OF TRAFALGAR SQUARE, IN THE LONDON GUILD HALL AND IN CHIEF PUBLIC BUILDINGS ALL OVER ENGLAND, PLACED THERE TO HELP SETTLE DIFFICULTIES.



IN 1500 THE ENGLISH MILE WAS FINALLY ESTABLISHED LIKE THIS:

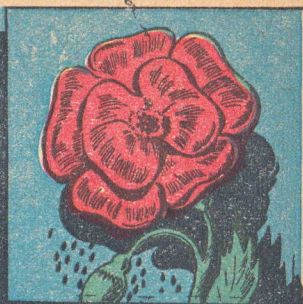
3	BARLEYCORN	(LENGTHWISE)	=	1	INCH
12	INCHES	=	1	FOOT	
3	FEET	=	1	YARD	
9	INCHES	=	1	SPAN	
5	SPANS	=	1	ELL *	
4.85	FEET	=	1	PACE (ROMAN)	
136	PACES	=	1	FURLONG (659.6 FT.)	
5½	YARDS	=	1	ROD	
40	RODS	=	1	FURLONG	
8	FURLONGS	=	1	ENGLISH MILE	
12	FURLONGS	=	1	LEAGUE (½ ROMAN MILES)	
24	FURLONGS	=	1	LEAGUE (ANCIENT ENGLISH)	

* ORIGINAL CLOTH MEASURE



THE BIRTH OF PRECISION!

THE **POPPYSEED** BECAME A MEANS OF PRECISE MEASURE IN THE 1700s! THE INCH DIVIDED INTO 3 BARLEYCORNs, EACH CORN EQUALLED 4 POPPYSEEDS---AND EACH SEED EQUALLED 12 HUMAN HAIRS.



WE STILL MEASURE HORSES BY HANDS!



THE "**HAND**" EQUALS 4 INCHES OR $\frac{1}{3}$ OF A FOOT--A MODERN CARRYOVER FROM A SYSTEM POPULAR IN 1700. IN AUSTRIA, THE "**FAUST**" OR **FIST** IS USED TO MEASURE HORSES.



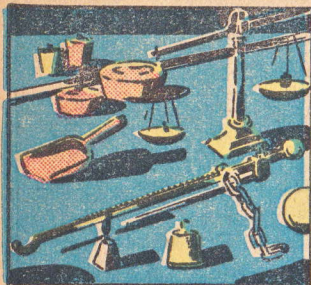
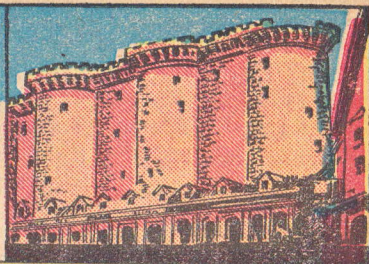
THE **SHAFTMENT**..

ANOTHER POPULAR MEASURE THROUGH THE AGES. THE FIST WITH THUMB PROTRUDING EQUALS 6 INCHES. IT'S CALLED "**BAUD**" IN WALES, "**SOMESSO**" IN ITALY, "**KUBDEH**" IN EGYPT AND "**TAIM**" IN BURMA.



IN FRANCE

NEARLY EVERY CITY
AND PROVINCE HAD ITS
OWN SYSTEM OF WEIGHTS
AND MEASURES.



MARSEILLES,

FOR EXAMPLE, HAD MEAS-
URES FAMOUS THE WORLD
OVER---AND ITS WATERFRONT
SHOPS STILL SECRETLY
USE THEM TODAY, DESPITE
LAWS ENFORCING THE
METRIC SYSTEM!

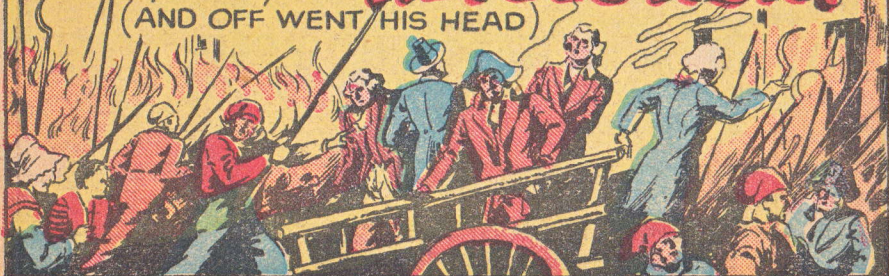
KING Louis XVI

WAS DISCUSSING THE
POSSIBLE UNIFICATION
OF FRENCH MEASURING
SYSTEMS---COMBINING
THE PARIS AND MAR-
SEILLES. METHODS--
WHEN ---



(CAME THE REVOLUTION!

(AND OFF WENT HIS HEAD)



ON MAY 8, 1790 --

THE **DECIMAL METRIC SYSTEM**
WAS IMPOSED UPON THE **FRENCH**
BY LAW OF THE **REPUBLICAN**
CONVENTION !



IT WAS BASED ON A
RATHER INACCURATE
SYSTEM OF METRIC
DECIMAL FRACTIONS
OF THE QUARTER
MERIDIAN RUNNING
THROUGH **PARIS.**

THE MEASURES WERE
VASTLY INCONVENIENT...
COMPARED WITH NOTHING
IN OLD SYSTEM... CAUSED
UNTOLD CONFUSION...
AND ACTUALLY HAD TO
BE ENFORCED BY SPIES
AND POLICE !

THE CONVENTION WENT ALL OUT FOR THE DECIMAL SYSTEM IN EVERYTHING!

MONTHS WERE DIVIDED INTO **3** PERIODS
OF **10** DAYS EACH --- PLUS A **5** DAY YEAR-END
PERIOD CALLED **JOURS SANS SCULOTTIDÉS.**

DAYS WERE DIVIDED INTO **10** HOURS OF
100 MINUTES OF **100** SECONDS.

IT WAS A CRIME

TO SELL EGGS,
BUNS, OR ANY-
THING BY THE
DOZEN !

YOU HAD TO BUY
10 OR **20** OF
WHAT YOU
WANTED !



THE **CITIZENS**
DIDN'T LIKE THE **METRIC SYSTEM!**

ON AUG 1, 1793

THE WEIGHTS & MEASURES
COMMITTEE WAS THANKED
FOR ITS WORK --- ALL
SCIENTIFIC ACADEMIES
WERE CLOSED --- AND
LAVOISIER, (THE GREAT
SCIENTIST AND PRINCIPAL
MEMBER OF THE **METRIC**
COMMITTEE), WAS SENT
TO THE **GUILLOTINE !**



NAPOLEON

WON THE POPULAR ACCLAIM OF ALL FRENCHMEN WHEN HE RELAXED THE METRIC LAW IN 1799, RETURNED THE GREGORIAN CALENDAR IN 1805, AND PERMITTED THE OLD STANDARDS TO BE USED IN 1812! HE DID STANDARDIZE THE OLD SYSTEMS, HOWEVER.

UNDER LOUIS PHILIPPE IN 1837.

THE METRIC-DECIMAL SYSTEM WAS RETURNED BY LAW IN ALL MEASURES EXCEPT TIME. (HOLLAND AND BELGIUM HAD NEVER LEFT THE METRIC MEASUREMENTS SINCE THEY WERE FORCED ON THEM IN 1792 - 1795 IN DEFEAT)



ITALY

ADOPTED THE METRIC SYSTEM AS A REPUBLIC IN 1859--



IN THANKS FOR MILITARY AID THAT FRANCE HAD GIVEN HER AGAINST

AUSTRIA!

BISMARCK

ADOPTED THE METER IN 1868 (WHEN PORTUGAL DID) AND MADE IT COMPULSORY IN ALL OF GERMANY IN 1872.

HIS ACCEPTANCE HELPED SPREAD THE METRIC SYSTEM THROUGHOUT THE WORLD !

TODAY, THE METRIC SYSTEM IS IN GENERAL USE IN MOST OF THE CIVILIZED WORLD EXCEPT THE UNITED STATES AND THE BRITISH COMMONWEALTH OF NATIONS. IT IS PERMISSIVE, HOWEVER, IN EVERY CIVILIZED COUNTRY IN THE WORLD

GEORGE WASHINGTON WAS WORRIED

ABOUT THE MANY DISCREPANCIES AND SECTIONAL DIFFERENCES IN WEIGHTS AND MEASURES IN THE UNITED STATES.



IN HIS 1ST ANNUAL ADDRESS TO CONGRESS, PRES.

WASHINGTON SAID: "UNIFORMITY OF CURRENCY, WEIGHTS AND MEASURES OF THE UNITED STATES IS AN OBJECT OF GREAT IMPORTANCE AND WILL, I AM PERSUADED, BE DULY ATTENDED TO."



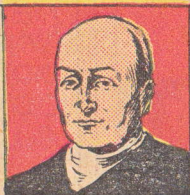
THOMAS JEFFERSON



AS USUAL AHEAD OF HIS TIME, RECOMMENDED IN 1790 THAT WE "REDUCE EVERY BRANCH OF WEIGHTS & MEASURES TO THE SAME DECIMAL RATIO ALREADY ESTABLISHED FOR COIN AND BRING THE CALCULATIONS OF THE PRINCIPAL AFFAIRS OF LIFE WITHIN THE ARITHMETIC OF EVERY MAN WHO CAN MULTIPLY AND DIVIDE PLAIN NUMBERS".

BUT CONGRESS COULDN'T AGREE!

JOHN QUINCY ADAMS



FROM 1817-1821 MADE A THOROUGH STUDY OF FOREIGN MEASURING SYSTEMS PRO AND CON, AND RECOMMENDED THAT NO CHANGE BE MADE.

IN 1866, A BILL WAS INTRODUCED TO MAKE THE METRIC SYSTEM COMPULSORY IN THE U.S. BUT IT WAS AMENDED TO MAKE THE USE OF THE SYSTEM "PERMISSIBLE."

IT WOULD COST AT LEAST \$200⁰⁰ PER WORKER TO PUT THE U.S. ON THE METRIC SYSTEM!

BUT THERE NO LONGER IS SUCH A NEED SINCE **U.S.** SCIENCE AND INDUSTRY HAVE **DECIMALIZED** OUR SYSTEM FOR GREATER ACCURACY. INCHES ARE NOW BROKEN INTO--- TENTHS, HUNDREDTHS. THOUSANDTHS AND TEN THOUSANDTHS.

OLD COMMON FRACTIONS LIKE $\frac{1}{32}$ " OR $\frac{1}{64}$ " ARE NO LONGER USED IN THE MOST ACCURATE PRECISION WORK.

LUFKIN MICROMETERS FOR EXAMPLE READ TO THE $\frac{1}{1000}$ TH AND $\frac{1}{10,000}$ TH OF AN INCH.

MILESTONES IN MODERN PRECISION!

IN 1851 **SIR JOSEPH WHITWORTH** INVENTED THE **1ST** MEASURING MACHINE USING END STANDARDS AND CAPABLE OF ONE MILLIONTH OF AN INCH DETECTION.

ALSO IN 1851, ---
JOSEPH R. BROWN DEVELOPED THE **FIRST** **VERNIER CALIPER**. DIFFERENCES OF ONE THOUSANDTH OF AN INCH COULD BE MEASURED BY THIS INSTRUMENT.



CARL EDVARD JOHANSSON

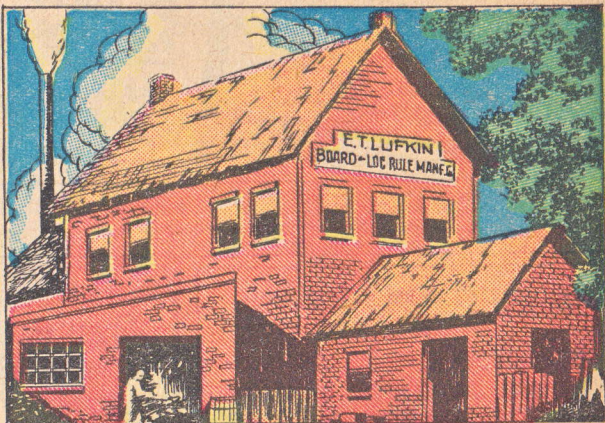
INVENTED THE AMAZING **JOHANSSON** GAUGE BLOCKS AT **ESKILSTUNA, SWEDEN** IN **1896**. THEY MEASURE WITHIN MILLIONTHS OF AN INCH. HE ALSO ACHIEVED UNIVERSAL ACCEPTANCE OF **1 INCH** AND **25.4 MILLIMETERS** AS EQUAL LENGTHS.

IN 1869 ---



E.T. LUFKIN

NEARLY 30 YEARS BEFORE THE JOHANSSON INVENTION, E.T. LUFKIN FOUNDED A COMPANY IN CLEVELAND, OHIO, WHICH HE CALLED THE E.T. LUFKIN BOARD AND LOG RULE MANUFACTURING CO. THESE BOARD AND LOG RULES SIMPLIFIED THE MEASURING OF LUMBER IN LOGGING CAMPS AND MILLS.



ORIGINAL HOME OF THE LUFKIN RULE CO.

SO, IN ORDER TO BE CLOSER TO THE FAST-GROWING LOGGING INDUSTRY, THE PLANT WAS MOVED IN 1890 TO SAGINAW, MICHIGAN, THE CENTER OF LUMBERING AT THAT TIME.



PIONEERING IN PRECISION MEASUREMENT



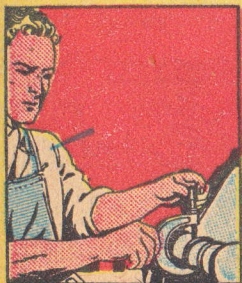
WITH BOARD AND LOG RULES AS BASIC PRODUCTS, LUFKIN SOON ADDED STEEL AND WOVEN MEASURING TAPES--METAL AND WOOD FOLDING AND MISCELLANEOUS RULES. AS INDUSTRY'S NEED FOR CLOSER TOLERANCES GREW, LUFKIN APPLIED ITS ACCURATE MEASURING "KNOW-HOW" TO THE MANUFACTURE OF PRECISION TOOLS.

DURING THE PAST HALF CENTURY---

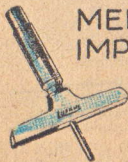
THOUSANDS OF "MEN WHO MEASURE" HAVE DEPENDED UPON LUFKIN TO BRING TO THEIR WORK, TRUTH IN DIMENSIONS--THE VERY BASIS OF PRECISION AND QUANTITY PRODUCTION WHICH HAVE MADE POSSIBLE OUR HIGHWAYS, OUR MOTOR CARS--OUR HOMES FILLED WITH MECHANICAL MARVELS.



INDUSTRY'S CONTINUING DEMAND---



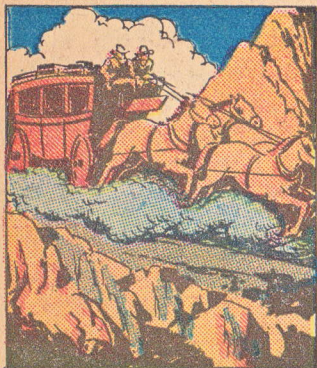
FOR GREATER PRECISION HAS BEEN MET BY **LUFKIN** WITH NEW TOOLS TO MEET THE CRAFTSMEN'S NEEDS, AND MANY IMPROVEMENTS IN EXISTING TOOLS.



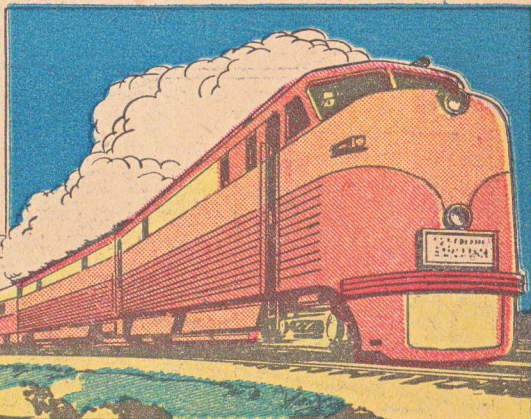
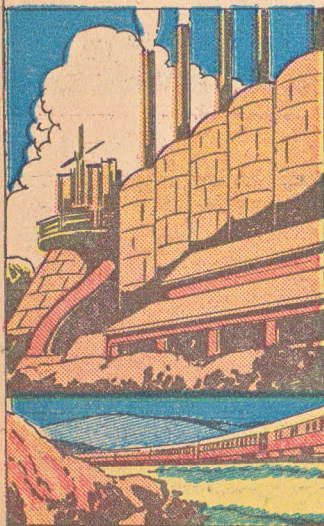
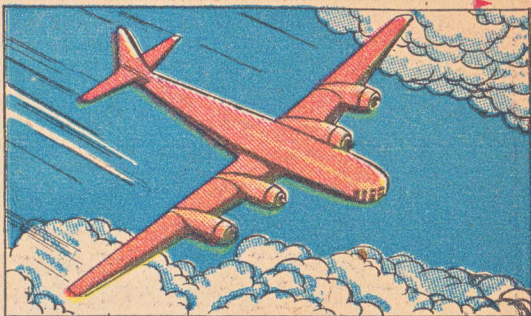
CIVILIZATION OWES ITS PROGRESS TO---

PRECISION MEASUREMENT:

IT PLAYS AN IMPORTANT ROLE IN OUR DAILY LIFE IN PRACTICALLY EVERY ITEM WE USE IN LIVING --- FROM FOOD, CLOTHING AND SHELTER TO THE MANY OTHER ITEMS WE USE WHETHER LUXURIES OR NECESSITIES, PRECISION IN MEASUREMENT MUST BE UTILIZED IN ITS PRODUCTION.

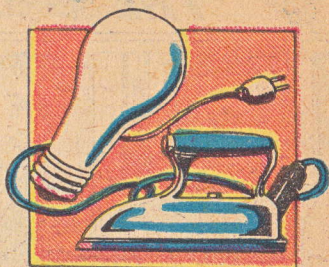
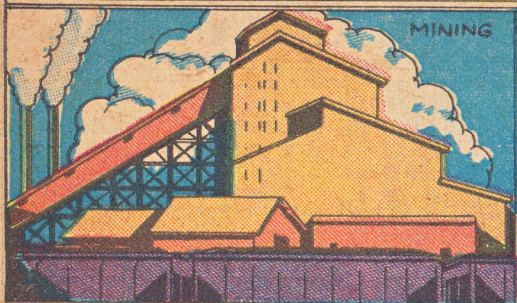


IN THE DAYS OF THE STAGE COACH, THERE WAS LITTLE NEED FOR PRECISION MEASUREMENT AS WE KNOW IT TODAY.

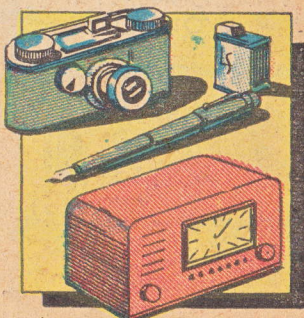
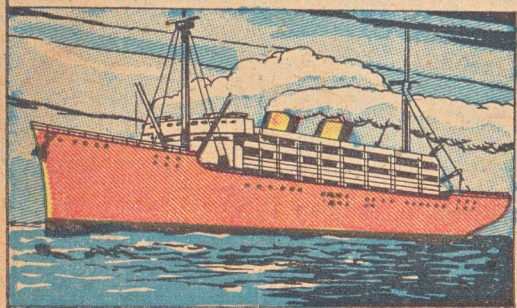
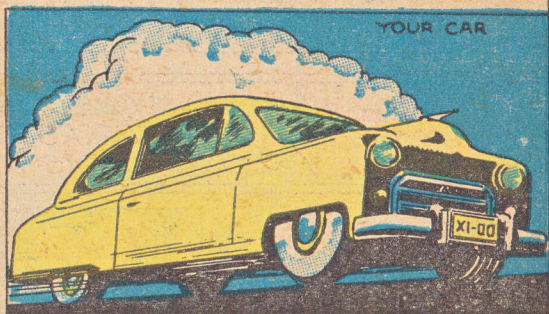
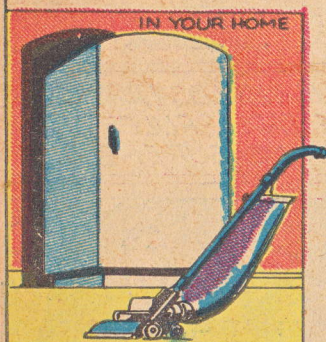


--PRECISION MEASUREMENT !

HUNDREDS OF RAILROADS, AUTOMOTIVE FIRMS, UTILITY COMPANIES AND PRECISION MANUFACTURERS COUNT ON LUFKIN TAPES, RULES, GAGES AND MICROMETERS. LUFKIN IS KNOWN WHEREVER MEN MEASURE.

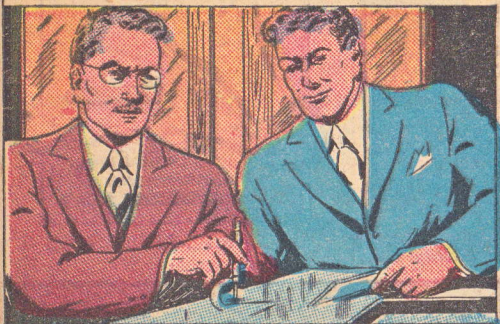


ELECTRICAL APPLIANCES



THESE AND THOUSANDS OF OTHER ARTICLES OR SERVICES WE USE DAILY REQUIRE THE USE OF PRECISION MEASUREMENT IN THEIR PRODUCTION.

THE GROWTH OF **LUFKIN** IS THE GROWTH OF MANKIND!



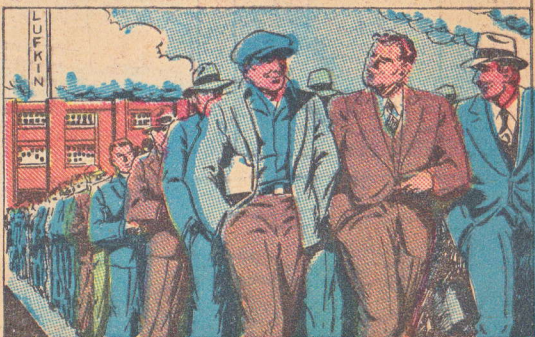
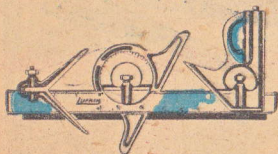
LUFKIN IMPROVED
ITS PRECISION IN-
STRUMENTS AS
SCIENTISTS' KNOW-
LEDGE OF MEASURE-
MENTS INCREASED.



**THUS
TODAY:**

LUFKIN IS ONE OF THE WORLD'S LARGEST
MANUFACTURERS OF TAPES, RULES AND
PRECISION TOOLS FOR MEASUREMENT.

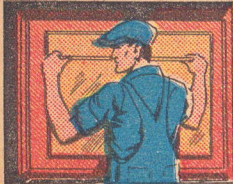
THE NAME LUFKIN
IS A STANDARD OF
ACCURACY AMONG
HUNDREDS OF
INDUSTRIES
THROUGHOUT THE
WORLD.



LUFKIN, FROM ITS MODEST BE-
GINNING 80 YEARS AGO, NOW
EMPLOYS MANY HUNDREDS IN ITS
LARGE MODERN PLANT AT
SAGINAW MICHIGAN.

ACCURACY OF MEASUREMENT IS THE KEY TO PRECISION!

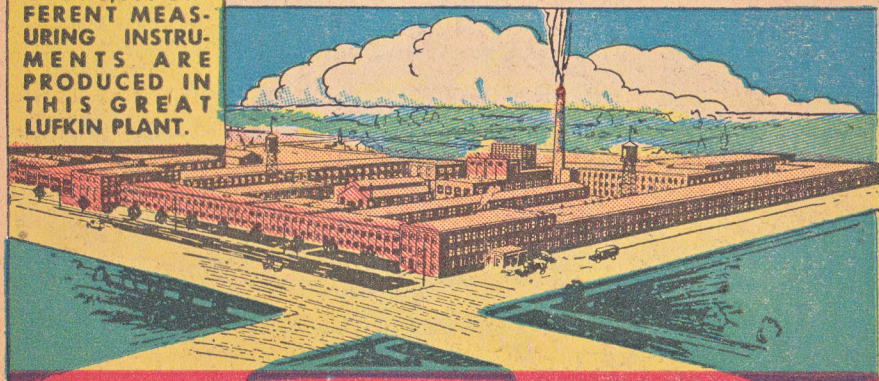
MANY EXAMPLES OF *LUFKIN* IMPROVEMENTS.



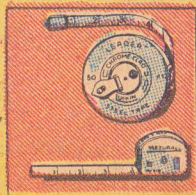
CREDITED GENERALLY IN THE FIELD OF SCIENCE AND PRECISION TO LUFKIN, WE FIND---

CHROME CLAD SATIN FINISH ON STEEL TAPES, PROVIDING DURABLE AND EASY-TO-READ MARKINGS IN BRIGHT OR POOR LIGHT. INSTANTANEOUS READINGS ON STEEL TAPES. SELF-ADJUSTING HOOKS ON TAPE-RULES FOR EASY BUTT-END AND HOOK-OVER MEASUREMENTS. "RAPID READING" (EACH THOUSANDTH NUMBERED) GRADUATIONS ON MICROMETERS. BALANCED TELESCOPING GAGES. THE MASTER PLANER GAGE. AN ENTIRELY NEW PRINCIPLE IN A RADIUS GAGE PROVIDING 5 APPLICATIONS FOR EACH RADIUS.

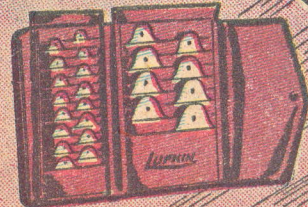
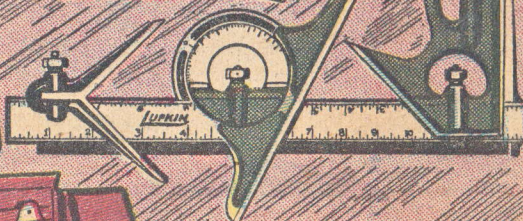
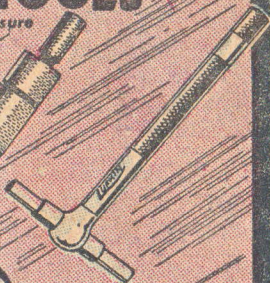
OVER 3,000 DIFFERENT MEASURING INSTRUMENTS ARE PRODUCED IN THIS GREAT LUFKIN PLANT.



LUFKIN---FOR 80 YEARS
PREFERRED BY
MEN WHO MEASURE!



Preferred by Men Who Measure



LUFKIN