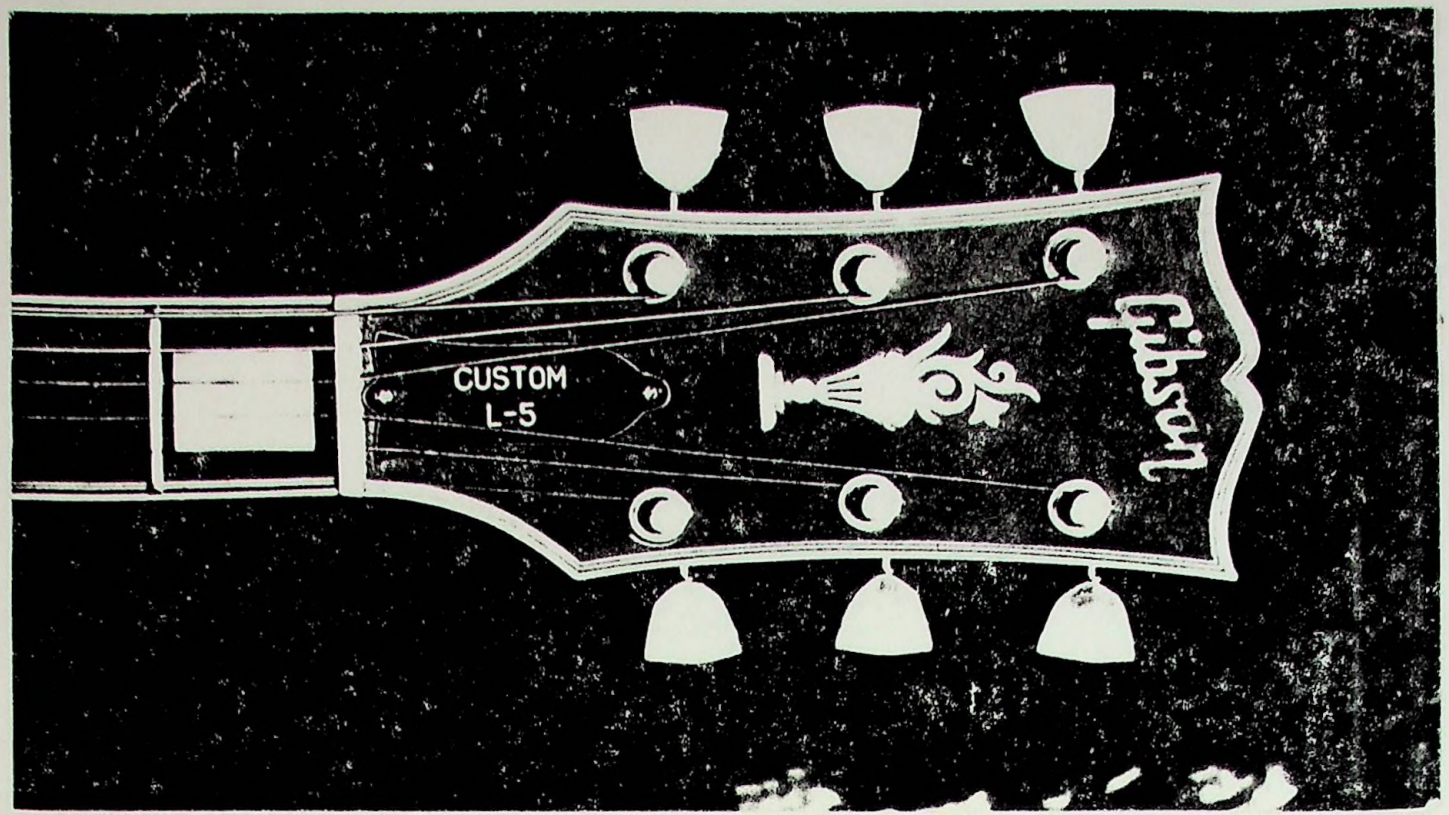
A History of The Design and Development of the Electric Guitar

Niall Kiernan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Gibson

HISTORY OF ART AND DESIGN

THESIS

A HISTORY OF

" THE DESIGN AND DEVELOPMENT OF THE ELECTRIC GUITAR"

by NIALL KIERNAN

FINAL YEAR : INDUSTRIAL DESIGN

N.C.A.D.

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CHAPTER I.

I.0. INTRODUCTION.

The world famous and highly respected classical guitarist Andres Segovia dislikes the electric guitar so much he does not even like to speak about it. He refers to it as "that abomination" and others share his opinion. Even Bob Dylan, the American folk hero of the 1960's was booed when he appeared on stage at the 1965 Newport Folk Festival brandishing an electric Fender Stratocaster guitar instead of his usual acoustic guitar. If the guitar family has a black sheep it is indeed the electric guitar. Why, therefore is it so irresistable to so many musicians whose field of music can vary from Rock and Roll to Modern Jazz? Why did the great Charlie Christian (one time guitarist with the Benny Goodman Big Band) joyfully comment that with electricity powering his guitar he could make it "sing like a horn" (saxaphone), while at the same many classical musicians refer to the electric guitar in unprintable terms and describe it's invention as an act of barbarism?

The electric guitar has become a symbol of an age and a culture, the youth culture of Rock and Roll of the fifties, sixties and seventies. Although the electric guitar is synonymous with rock music it's history dates from a much earlier period and it's uses are far more diverse.

This thesis aims at describing the development of the electric guitar from the earliest days when primitive electronic technology was first married to an acoustic guitar up to the "hi-tech" solid bodied guitars, which first appeared in the late fifties.

I.I ELECTRIC GUITARS: A GENERAL DESCRIPTION AND CATEGORISATION.

The destinction between the electric guitar and all other types of guitar is that the sound is produced by electronic means rather than by the resonation of the instrument itself, as is the case of an acoustic guitar or a violin. The device which converts the energy from string vibrations in an electronic signal is called a pick-up. The pick-up is positioned beneath the strings and sends the electronic signal via wires to the amplifier. The amplifier which is seperate from the instrument itself, then boosts the signal several thousand times and passes it through the speaker, thus producing the sound. The pick-up, a device which si the equivalent of a microphone, can be used to amplify any stringed instrument but is however more suited to the guitar.

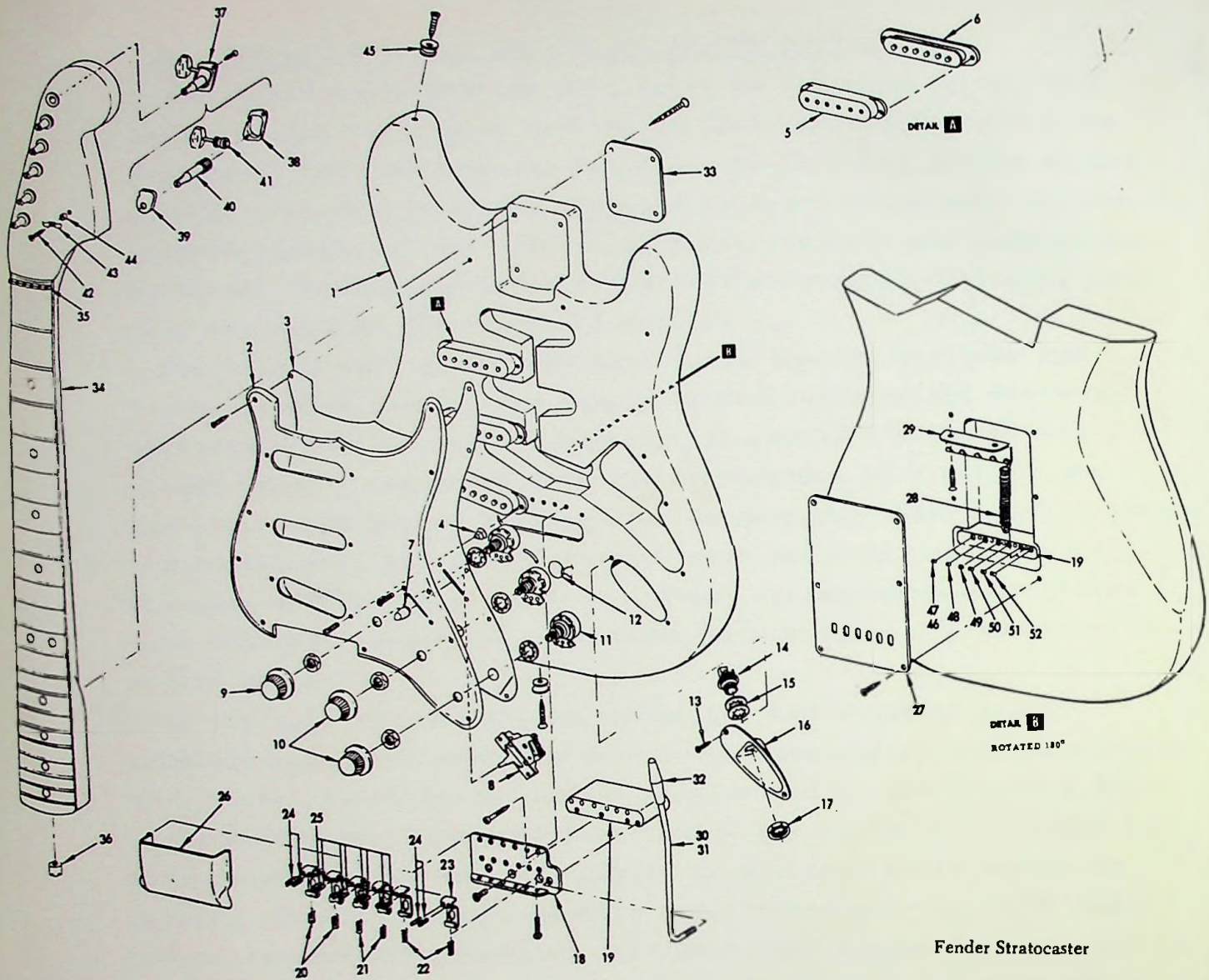
I.2.

There are three general types of electric guitars: solid-body, hollow-body and semi-solid.

a. The solid guitar is the most radically different in shape and sound it produces to the acoustic or classical guitar. It's body is cut from a single or laminated piece of wood. It is heavier than any other kind of guitar and it's tone is almost purely electrical in origin. This means that the sound produced is taken by the pick-up from string vibrations only and that the body of the guitar does not vibrate to cause sympathic vibration to be included in the sound. This type of guitar is associated almost exclusively with Rock, Blues, Country and Soul musicm but exceptions and overlaps are becoming more common.

b. The hollow body electric guitar is more subdued in tone than a solid body. It's seperate top, sides and back allow the body to resinate sympathically with the strings and this sympathic vibration is picked up along with the string vibration by the pick-up. The resulting sound from the amplifier will be a combination of electronic sound, produced directly between the vibrating strings and the pick-up and the resonant sound from the vibrating soundboard. Distinguished by it's arched soundboard and back, f-shaped sound holes and deep body, the hollow-body electric guitar produces a rich, full sound which makes it the natural choice of almost all Jazz guitarists.

c. The Gibson company developed the semi-solid (or semi-electric) guitar in 1958. This ia a cross between the solid-bodied and the hollow-bodied guitar. Designed in the style of the hollow-bodied guitar, but with a much thinner body and a solid block of wood running down the centre of the guitar's body, it produces a more mellow tone than a solid and a brighter, crisper tone than the hollow-bodied guitar. It is versatile and is suited for almost all styles of playing and is a favouite of Blues guitarists.



Fender Stratocaster

1 Guitar Body

PICKGUARD ASSEMBLY

2 Pickguard
3 Pickguard Shield
4 Pickup Compression Spring
5 Pickup Cover
6 Pickup Core Assembly
7 Lever Knob
8 Pickup Selector Switch
9 Volume Knob
10 Tone Knob
11 Volume & Tone Potentiometers (Controls: 250K)
12 Ceramic Capacitor

13-17 OUTPUT PLUG ASSEMBLY

BRIDGE ASSEMBLY

18 Bridge Base Plate
19 Tremolo Block*
20 ¼" Compression Spring
21 5/16" Compression Spring
22 7/16" Compression Spring
23 Bridge Bar
24, 25 Set Screws
26 Bridge Cover
27 Rear Cover Plate
28 Tension Spring
29 Tremolo Tension Spring Holder
30-32 Lever Assembly

*"Tremolo" is used by Fender as a synonym for Vibrato.

NECK AND PEGHEAD ASSEMBLY

33 Neck Plate
34 Neck & Fingerboard, Frets & Position Markers
35 Nut
36 Neck Rod Adjusting Nut

TUNING KEY ASSEMBLY

37 Complete Key Assembly
38 Key Assembly Cover
39 Key Assembly Housing
40 Post and Gear
41 Head and Worm

MISCELLANEOUS

42-44 String Guide Assembly
45 Strap Button
46-52 Strings (Ball Ends)

The components of the Electric Guitar (Fender's Stratocaster).

I.3. THE EVOLUTION OF THE GUITAR IN THE 20th CENTURY.

The guitar has a history that dates as far back as the 14th century. The instrument evolved in Spain and Italy from lutes and lyres, into what became known as the Flemenco guitar in the 1800's. The guitar became accepted as a modern concert instrument largely because of the efforts of Andres Segovia and many pieces by Mozart, Handle and Hyden as well as many other composers have been transcribed for classical guitar.

The guitar went to the New World with Spanish settlers and became popular amongst the people of the Southern and Western American states as well as Mexico. By the 1880's the Martin Guitar Company commenced with the manufacture of steel strung guitars, which became very popular in America. Steel wire replaced the traditional gut strings, which were and still are used on Flamenco and Classical guitars. Steel strings give a brighter tone and last longer and with their introduction the American guitar was born.

At the turn of the Century the guitar had achieved great popularity amongst American folk musicians. After the First World war, black "Delta Blues" became popular and it was men like Blind lemon Jefferson, "Leadbelly" and Blind Boy Fuller who brought the Blues sound to the American public by means of their accoustic guitar. American Blues, Country and Western and City Folk music had become guitar orientated for the simple reason that the guitar is an easy-to-play, easy-to-carry, good sounding and inexpensive instrument. Though it weighs only a few pounds it's musical range is over half that of a piano.

The guitar became an accepted rythm instrument in the early twenties Jazz bands, in which the guitarist strummed four beats to the bar. It was replaced for a time during the late twenties and early thirties by the louder and brasher sounding banjo, but was soon replaced in the thirties as the softer more sophisticated Swing Jazz style came into vogue.

The situation Jazz guitarists found themselves in, began to change in the mid-thirties with the forming of a Jazz band coming oddly enough from Paris, called the Quintet du Hot Club de France. When this band was heard over the American airwaves, they became an instant success.

The guitarist with the band was called Django Reinhardt. Django had a huge effect on other Jazz guitarits. Even with the drastic handicap of having two fingers of his left hand paralysed in a caravan fire, the gypsy guitarist developed a staggering technique. His use of the guitar as a melodic instrument i.e. playing single-note "solos", was at least twenty years ahead of it's time. Reinhardt who started with the quintet in 1934 filled a gap left following the death in 1933 of Eddie Lang, the earliest pioneer of Jazz guitar.

In the Chicago and New Orleans Jazz bands of the early thirties the guitar had a rough time. No matter how hard the frustrated musician picked, he was usually drowned out by all sorts of horns or someone on an eighty-eight key, five hundred pound piano. The early exponents of Jazz guitar had proved how valuable the instrumen was in any Jazz combo, either as a melodic instrument or as the heartbeat of the rythm section. The thirties saw the onset of the Big Band era and as the bands became bigger, the guitarists in these bands became more and more inaudible. Many guitarists, desperate to keep their jobs tried by various means, from using mircophones to attaching phonograph cartridges to amplify their instrument's sound. The days prior to the development of the first electric guitar were marked by continuous experimentation by both guitar manufacturers and musicians. First of all let us look at the predecessors of the electric guitar and the early innovations with electronics.

CHAPTER II.

2.0 TOWARDS A BIGGER SOUND: PRE-ELECTRIC GUITAR DESIGN.

The design of the first electric (Spanish style) guitar in 1936 by the Gibson company was to be a culmination of many years of innovation and design development, in terms of both guitar design and electronic technology. First of all let us look at Non-Electric Arched Toped guitars, which were to be the bridge between the acoustic and electric guitar in terms of instrument design.

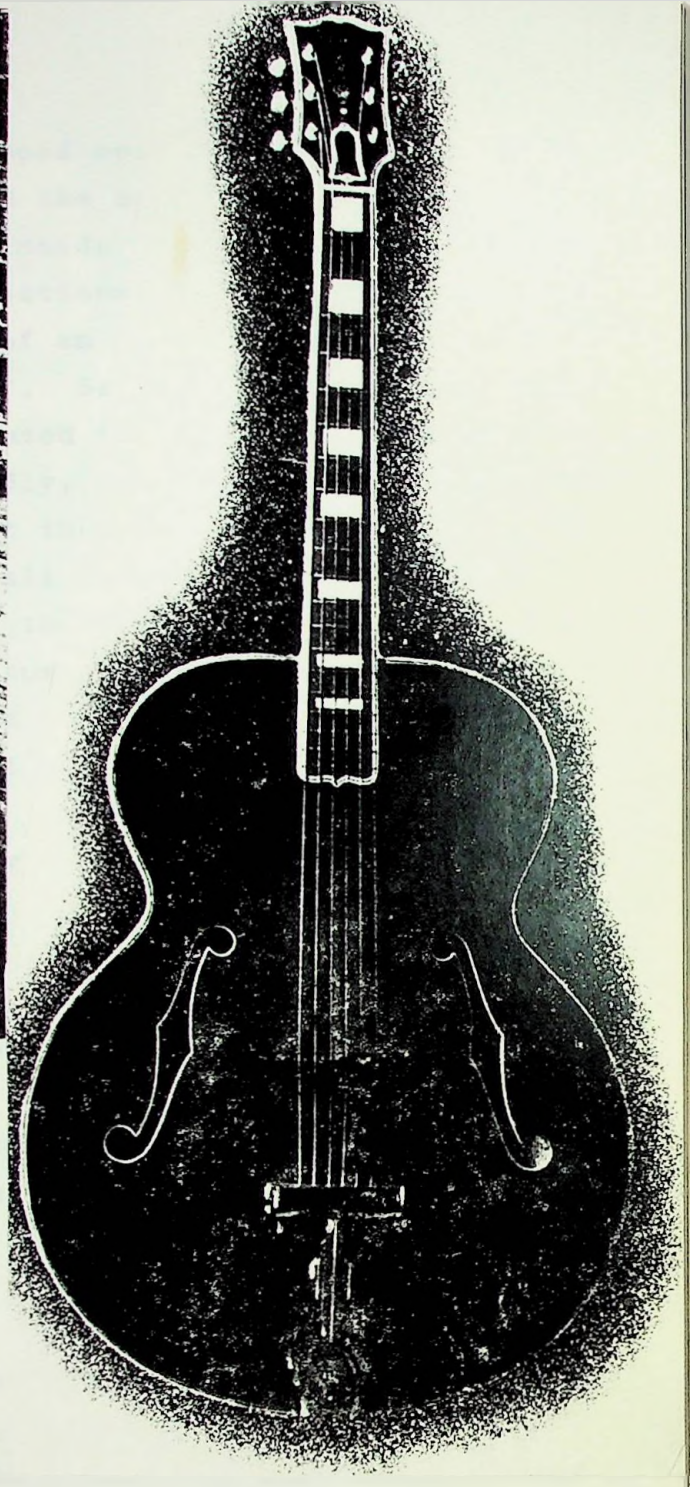
Prior to 1925 the main guitar manufacturing company in the U.S.A. was the Martin Co. They produced high quality flat-toped acoustics with circular soundholes. These guitars are almost identical to the modern day acoustic guitars. The acoustic flat-top had established itself as a useful accompanying instrument to a voice or another instrument, i.e. a violin, in the sphere of country or folk music. The guitar was necessary to provide "heartbeat" to the swing Jazz sounds of the late twenties and thirties. Due to the fact that Jazz was a music that required an ensemble of many different instruments including loud trumpets and saxophones, the acoustic flat-top was much to quite sounding to be in any way useful. For a period in the twenties, guitarists dropped the guitar in favour of the banjo, a louder if somewhat brasher instrument.

The first stage of design development with the acoustic guitar was to make it a louder instrument. The first person to attempt to solve the problem of low volume that was always inherent to the guitar was Loyd Loar.

2.I THE BIRTH OF THE ARCHED-TOP ACOUSTIC GUITAR.

In 1920 the expanding Gibson Company employed Loyd Loar a musician, composer and acoustics engineer. Orville Gibson created this company in 1870 claiming to be the only serious manufacturer of steel strung guitars and mandolines in the world. Loyd Loar was very closely associated with the New York jazz circle and greatly admired the playing of jazz guitarist Eddie Lang. Loar designed the first "jazz" guitar in 1923 and called it the Gibson L-5.

The importance of this guitar in terms of the later development of the electric guitar cannot be underestimated. Although an acoustic guitar, this instrument was a markedly different instrument to any previous guitar design.



ABOVE: A 1924 L-5 guitar designed by Loyd Loar.

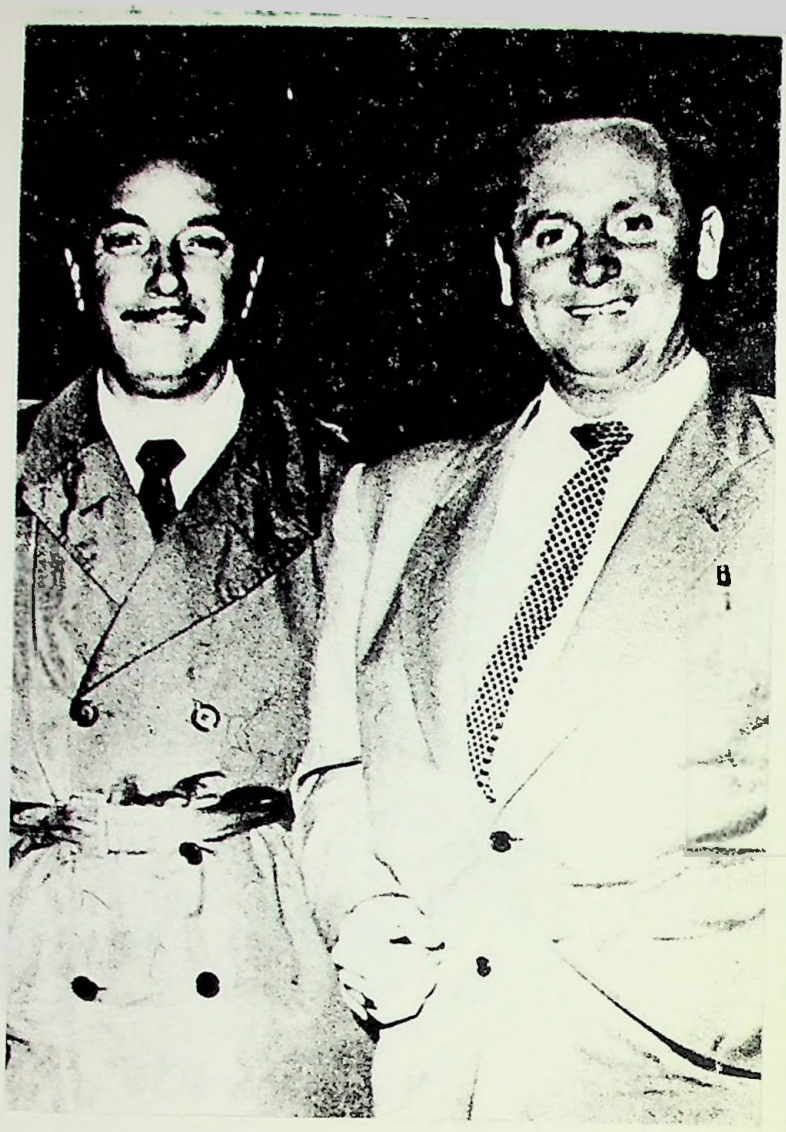
RIGHT: A mid-thirties L-5 displays a new neck and tailpiece.

Firstly, the guitar's body was shaped more like that of a cello than a guitar. The soundboard and the back were arched in a manner that created a much larger space inside the body. This combined with two "F" shaped soundholes positioned on the soundboard gave the instrument double the volume of an ordinary flat top or what was reffered to as "cutting power". Some L-5 advertisements of the twenties claimed that Gibson had used the knowledge of Stradivarius when designing this model. Secondly, another innovation was the joining of the neck to the body at the 14th fret rather than at the 12th fret, which was standard to all previous guitar designs. Joining the neck of the guitar at the 14th fret gave the guitarist a longer playable neck length. Thus more freedom was given to the guitarist to play higher notes and play chords in a higher position.

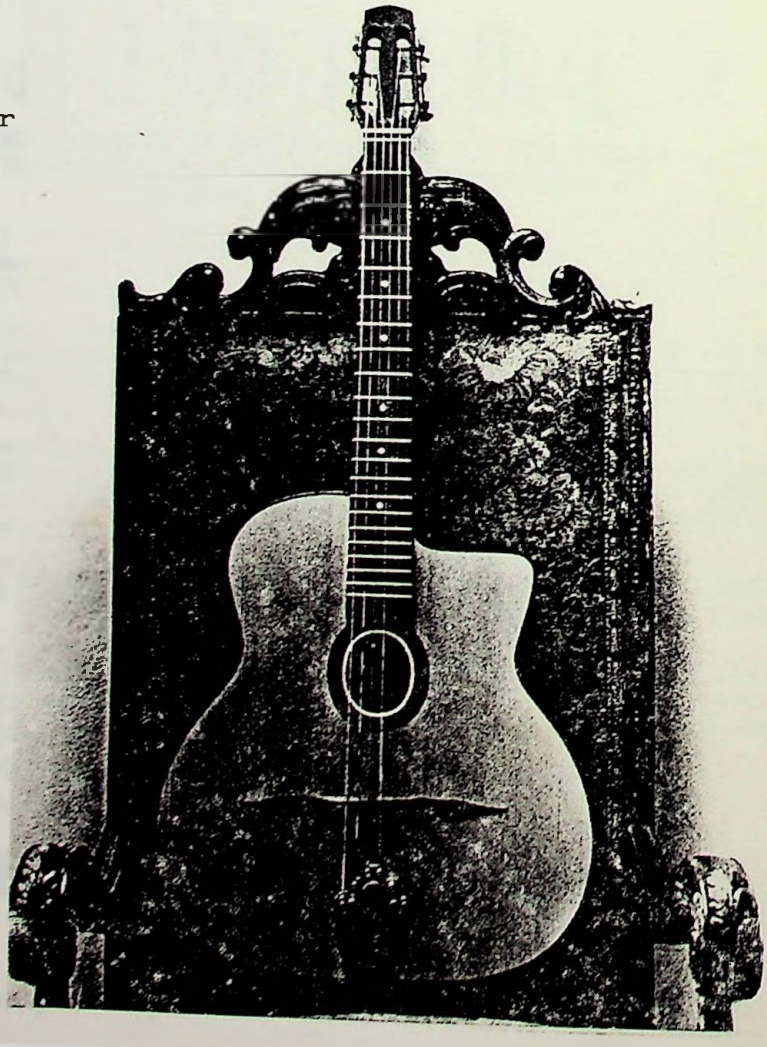
Despite the instrument's unusual appearance it was adopted straight away by jazz guitarists. By the thirties the cello-bodied guitar was used almost exclusively by jazz men and there are two main reasons for this. One reason is that the more sophisticated swing jazz was coming into vogue. By the early thirties the banjo became an unacceptably brash instrument to use and thus the guitar was again revived. Another reason is that jazz was a modern progressive music. In the early thirties jazz had no traditions and it was deemed not only acceptable but desirable to try any new gadgetry, it was a logical design development and this has been proven by the very fact that the jazz guitar as it is seen today is almost identical in shape and appearance to the 1924 production L-5.

Gibson soon began to augment their collection of "F"-hole arched-toped guitars with the L-7, L-12, L-50 and the Super-400. By the mid-thirties various models of the arched-top were manufactured by different companies on the market. The Epiphone Guitar Company commenced production in 1931 and specialised in jazz guitars, but oddly enough did not experiment with electronics until after 1945. However the instruments designed by Epiphone such as the Triumph (1934) and Emperor (1938) displayed an excellence in craftmanship that even the Gibson Company would find difficult to match. The Epiphone Emperor is the epitome of the pre-war jazz guitar. Designed for use in big bands and swing combos, the Emperor was styled very much with a sense of the Art Deco particularly in the shape of the bridge,tail-piece and pickguard and was the largest guitar ever made at the time.

Django Reinhardt and
Les Paul together in 1947



Django's Maccaferri guitar



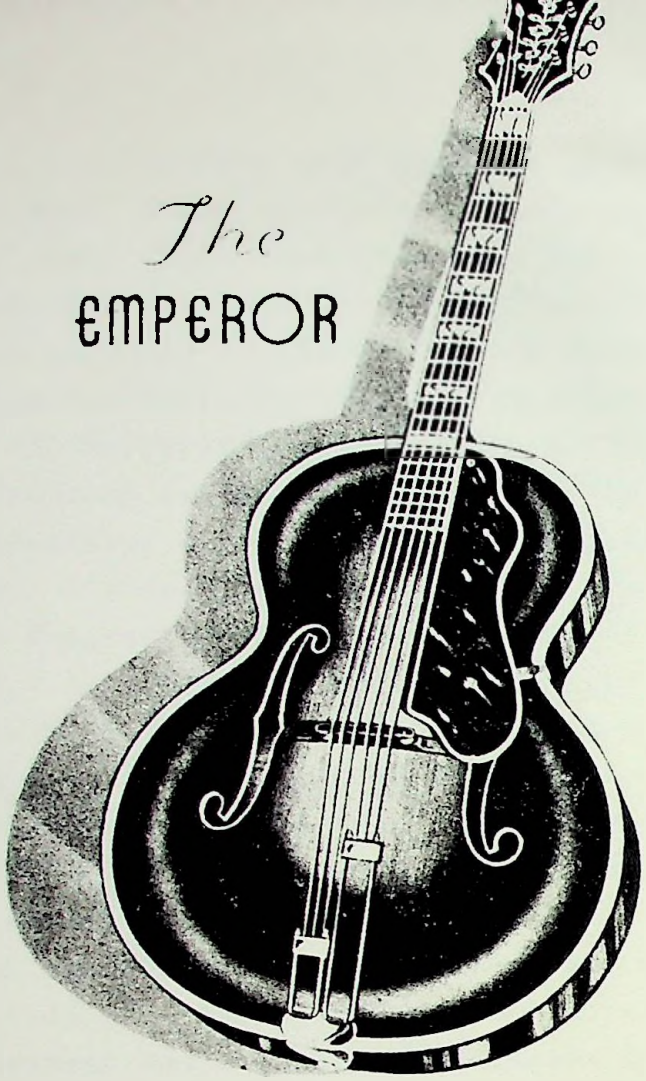
GEORGE VAN EPS

HILTON "NAPPY" LAMARE
with
BOB CROSBY

ROC HILLMAN
with
KAY KYSER

KENNETH WHITE
with
CHAS SPIVAK

The
EMPEROR



the EMPEROR

THE ULTIMATE IN THE EVOLUTION OF THE GUITAR.
THE INSTRUMENT YOU WILL BE PROUD TO PLAY.
ITS TONE IS AN INSPIRATION.

Undoubtedly the finest instrument ever made, the EMPEROR is custom bui and **pre-tested before final finishing** assuring each artist of the uniform quali for which EPIPHONE is world famous.

The finest materials in the world such as individually selected spruce an curly maple and skilled craftsmen combine to make the EMPEROR the maste piece it is. The workmanship in construction and finish is the result of ove fifty years experience in building the best and striving for perfection.

The tone produced by the EMPEROR is in a class by itself and is characte ized by a fullness and richness not obtainable in other instruments. Exactin workmanship and careful design account for its easy playing qualities an ultra responsiveness.

The EMPEROR is the largest guitar made, the body measuring 18½ inche in width and 21¾ inches in length, scientifically proportioned for extra eas in playing.

Finished in a beautifully shaded brown, highlighted, handrubbed to a ver high polish. Framed in entirety by alternate white, black and white edging The FREQUENSATOR frequency compensating tailpiece and all metal part are heavily gold-plated and hand burnished.

EQUIPPED WITH EPIPHONE ENCLOSED TUNING UNITS

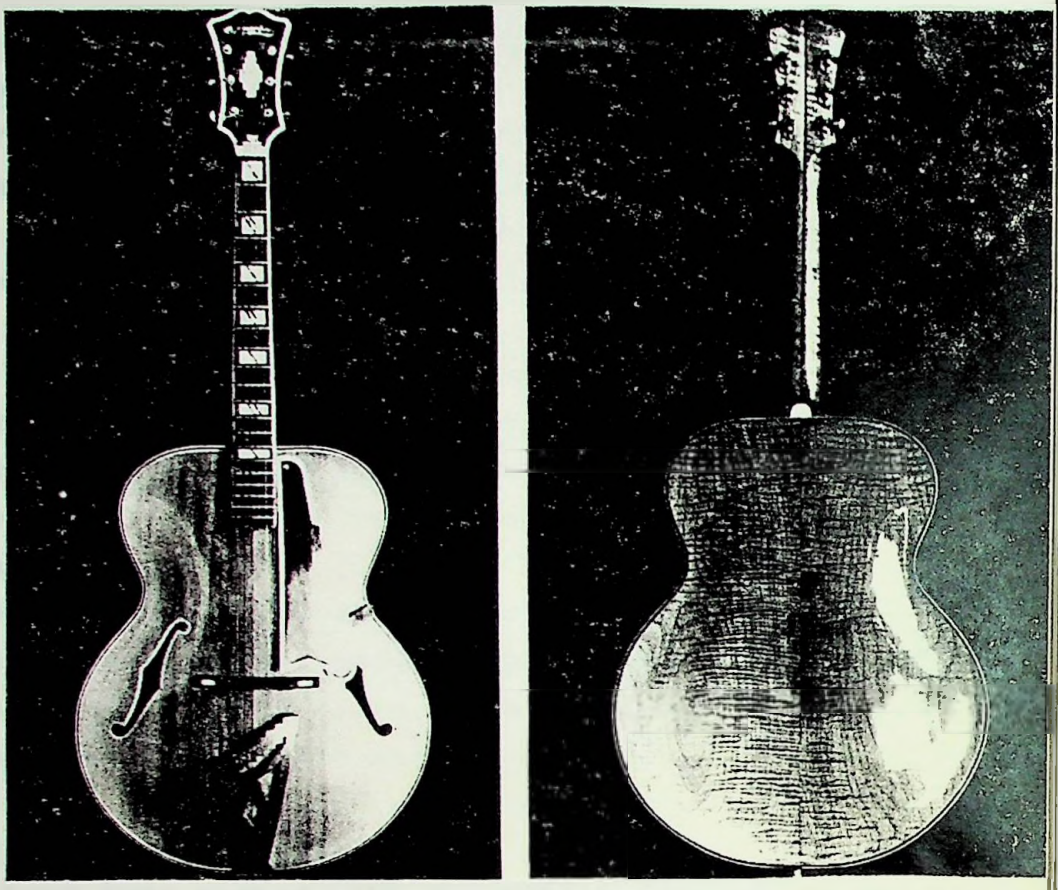
Complete with case and cover illustrated on next page

EPIPHONE

The arched-top guitar was synonymous with jazz and jazz inspired popular music of the thirties. They were simply the best quality guitars available at the time, aside from classical guitars. The pinnacle of the non-electric arched-top in terms of sound quality, volume and innovation was produced by the Maccaferri Company in 1930. Designed by the Italian Mario Maccaferri and produced in Paris from 1939 to 1940 the Maccaferri shows marked difference in design approach to any American designed instrument. The two main innovations with the Maccaferri were, firstly the appearance of what is called a cutaway. Although many publications claim that the cutaway was a Gibson innovation with the introduction of the ES - 150 cutaway in 1942. It seems that as the Maccaferri was introduced in 1930 it was with this guitar that the cutaway became a precadent, and secondly the inclusion of an interior sound box, a seperate resonating chamber inside the body. The idea of designing a cutaway on the lower front portion of the body was to facilitate fingering of almost the entire fingerboard of the instrument. The internal resonating chamber boosted volume thus making the guitar especially suitable for dance combos (see photo). The styling of this instrument was also quite different to other American designs. There were no inlays or embelishments which gave the Maccaferri a clean functional look very similar to the design of Flamenco guitars. This instrument is best known as the guitar played by Django Reinhardt. The Maccaferri guitar was discontinued in 1940 with the outbreak of the Second World War.

The arched-top guitar was the state-of-the-arts in terms of guitar design of the 1930's. Manufacturers of these instruments such as Gibson and Epiphone as well as D'Angelino were attempting to design guitars that could compete in terms of volume with the other band instruments. The success of the guitar in bands was however still inhibited not only by volume bu by it's own "personality". The guitar when un-amplified is only suited to playing jazz effectively when played as a rythm instrument. The very nature of the sound produced by an acoustic guitar makes it an unrealistic intsrument to "solo" on particulary when competing with brass and reed instruments On the other hand people like Eddie Lang and particularly Django Reinhardt proved that the guitar could be "soloed" on extremely effectively in controlled conditions (both played with bands that had no brass or reed musicians, the Quintet de Hot Club du France consisted of three guitars, bass and violin.)

The thirties was however a period of experimentation with electronics. Inventive and imaginative guitarists worked with and experimented with crude pickups and phonograph cartridges, in an attempt to coax an electronically induced sound from their instruments. By the mid-thirties the instrument design was advanced enough to accept electronics. Amplifier technology was no longer primitive, all that was missing was a device to convert the vibrations of the guitar strings into electrical energy and hense into amplified sound.



John D'Angelico of New York City built 1,164 of these carved toped guitars during his career, which started in 1932. During the Big Band era the stars of the guitar world considered themselves lucky to get one, and over the years no name has earned more respect.
The "New Yorker" above was considered the pinnacle of orchestra style guitar design.
Note it's staggered tailpiece.

CHAPTER III.

3.0 EXPERIMENTS IN ELECTRONICS: THE DEVELOPMENT OF THE ELECTROMAGNETIC PICKUP.

Though the first attempt by an individual to coax an electrically amplified sound out of a guitar is lost in the Sargasso Sea of ingenious but ineffective ideas, there does remain a voluminous amount of information regarding the earliest electronics that did work.

In what are shaddowy and fragmented historical records, the most often repeated tale is a sometimes Austrian, sometimes Englishman who made an electric guitar in the 1920's. This is heresay coming from the memories of those persons intimately involved with the electric guitar's birth.

The birth and development of the electric guitar offers an insight into the evolution of artistic and cultural values in Europe and the United States. This maturation of the electric guitar however, was preceded by innovations with acoustic guitars.

3.I LOYD LOAR AND J.D. DeARMOND.

At the time Loyd Loar worked with the Gibson Company in the mid-twenties, many guitarists played with microphones or put microphones onto their guitars and wired them into primitive amplifier/speaker combinations. The resulting sound was often dreadful. Feedback (this occurs when the instrument's strings vibrate sympathetically with the sound coming from the speaker, causing a high piched, shrieking noise) and other unwanted noises were continuing problems. Guitarist Freddie Green of the Count Bassie Orchestra recalls

> "When I joined the Count in 1936 my first time playing was when the orchestra went back to Kansas from a New York run. I had a little Gibson combo (amplifier) and a microphone so I started playing through this. When Earle Warren and the rest of the sax-section blew out the first riff, my combo started screaming like a fire engine..... I never used a micro-phone again."

The larger the band was the less lightly a microhpne could be used effectively and yet it was in the Big Band situations that guitarists needed amplification.

Loyd Loar's L-5 guitar was a step in the right direction. Loar however knew that what was necessary was not even bigger guitars, but an effective method of amplification. In 1923 Loar commenced his experiments with electronics and in the same year he designed the first substantiated pickup for a guitar. It was an electrostatic device with two diaphrams with charged particals made from copper. The device worked by creating a magnetic field around the strings and when the strings were vibrated they disturbed the field causing an electrical impulse. The pickup worked but was awkward and insensitive. Loar and two other Gibson executives left Gibson in 1924 in a dispute with Gibson over amplified instruments. They formed The Vivi Tone Company and introduced several electrics and what was an ingenious electric double bass. A decade or so ahead of their time these efforts failed to arouse public interest and the offshoot company collapsed before any instruments were commercially produced.

Many guitarists' frustration with the major guitar companies, due to their inability or disinterest in producing amplified instruments brought about such ingenious ideas as J.D. De Armonds "pickup guitar" of 1931. This pickup was much more advanced than the one developed by Loyd Loar and was skillfully attached to an L-5 guitar. This was the first real exposure to the musical world of an electric guitar. The pickup was designed using a magnet wound with wire, both ends of which were lead to an amplifier. De Armond, himself a jazz musician was well received by fellow musicians, however companies such as Gibson were still not interested in these"gadgets". De Armond worked with an electrical engineer called Horace Rowe and produced small numbers of these pickups for interested musicians.

3.2 GEORGE BEAUCHAMP AND THE ORANGE COUNTY GROUP.

At the time jazz was the popular music sweeping the East coast of America the West coast remained fairly well unaffected by the jazz era. California had at the same time a rich tradition of instrument making including guitar manufacturing. Folk and in particular Country and Western music flourished in the Western states and guitarists that played these forms of music were very much traditionalists and desired no change from their flat-toped acoustic guitars.

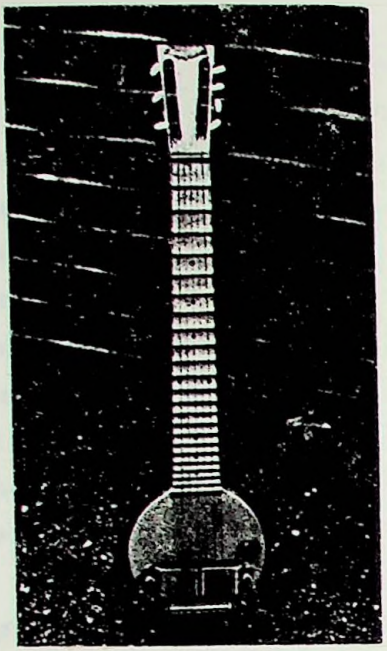
There was however an upsurge in interest in Hawaiian music in the early thirties. Bands emerging from California and Oklahoma achieved plenty of air play and quite an amount of popularity, even in the East coast providing their "twangy" sounding mix between Country and Traditional Hawaiian music.

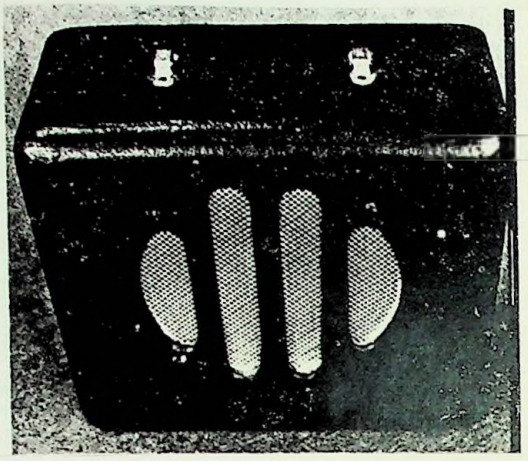
Most West coast musicians had heard about innovations in pickup design and a group of people in Orange County decided to try and create a "pickup instrument" rather like a guitar that would be played "Hawaiian style" using a metal slide. The old guitar manufacturing community of Orange County was a remarkable group of engineers and business men tied to each other through a fairly complex web of professional and personal relationships. Their considerable talents eventually produced the National, Dobro, Richenbacker, Fender, Randall and Music Man companies. A late twenties National catalogue displays photos of eight men who were the backbone of that company. They include Paul Barth, George Beauchamp (pronounced Beechum), Harry Watson and Adolph Richenbecker.

George Beauchamp and Paul Barth made an electric Hawaiian guitar in 1931. Beauchamp worked for a company Richenbacker had set up. Richenbacker owned a tool and die press and when he saw the designs of this guitar he decided on a partnership with Beauchamp and Barth in a new company that would manufacture this instrument under the Richenbacker name.

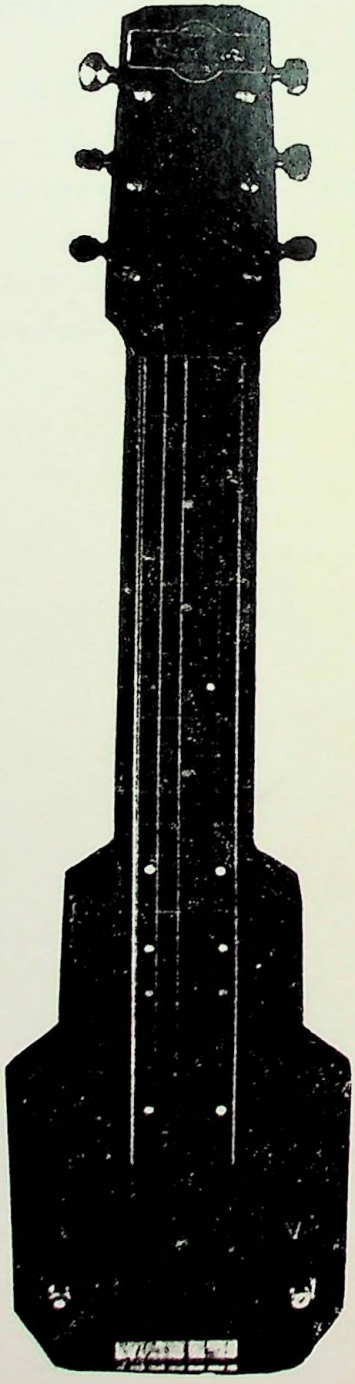
3.3 THE FRYING PAN GUITAR.

The Richenbacker Hawaiian guitar was an interesting experiment in guitar design. Based very strongly on the design of the banjo the A22 and A25 "Frying Pan" guitars had a one piece aluminium cast body and a hollow neck. It had one pickup (almost a direct copy of the Dr. Armond pickup.) that sat under the strings and was positioned near the bridge. The style of this instrument was almost purely funtionalist. All that was necessary in this guitar was a neck, a bridge, a pickup and some means of holding all three together. The sound produced eminated purely by the pickup sensing the string vibrations and as the body was solid die cast aluminium it did not add to the sound in any way.





ABOVE: THE Frying Pan guitar sold for 62 dollars as did it's companion the Electro Amplifier (ABOVE RIGHT) This Hawaiian Guitar spawned a whole species of instrument that throughout the thirties added the electric dimension to already popular Hawaiin music.



RIGHT: The Electar Hawaiian guitar (1937) displays a very strong Art Deco styling with staggered sides of the body.

This instrument was in effect the forerunner to the solid-bodied guitar which was not to appear for another fifteen years. The frying pan guitar was played by moving a metal slide up and down the strings. The instrument was placed in a horizontal position and held flat on the knee with the body facing upwards.

This deign spawned a whole species of instruments throughout the 1930's which added an electric dimension to the already popular Hawaiian music. Country and Western musicians eventuallt started to experiment with it and in time many country musicians took the pickup from the Richenbacker Hawaiian guitar and adopted them to conventional guitars. Sales of the A22 and A25 went so well that even Gibson decided to produce a Hawaiian guitar in 1935. Gibson produced their own pickup but the result, the EM-150 (Electric Hawaiian (guitar) - 150) was very similar to Richenbacker's Frying Pan.

With Gibson's introduction of the EH - 150 in 1935, pickup technology had come of age. At this time however no conventional Spanish style electric guitar was available in commercial quantities Eventually Gibson realised the market potential for such an instrument and in 1935 work commenced on a project to design an electric guitar that would be produced in commercial qualities.

CHAPTER IV.

4.0 THE CREATION OF A NEW INSTRUMENT: THE ELECTRIC CELLO-BODIED GUITAR.

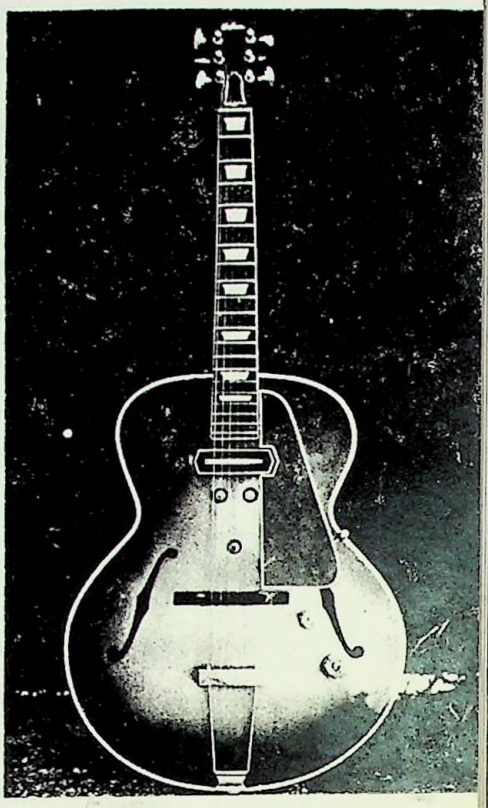
The concept of adapting a cello bodied or arched top guitar to take a pickup had been in circulation amongst musicians and lutnists for many years before the first commercially produced electric guitar came into production. J.D. DeArmond's electrified L-5 was an experiment which showed promise. De Armond had not however foresee enough to know how the very nature of the instrument could be and indeed would be changed with electricity. It was not until a young black musician called Charlie Christian started to play a Gibson electric in 1938 that the possibilities of new styles and techniques brought about the amplification, began to be explored

While designing the Hawaiian EH-150 in 1934 Gibson's electrical engineers were given the task of designing a pickup on the market. Gibson wanted to keep their reputation as a top class guitar manufacturing company and the last thing they wanted to produce was an instrument that was well made but sounded terrible. By using a straight bar magnet encased in Bakalite to avoid electrical interference, Gibson were the first to produce a pickup that was relatively free from noise. The pickup called the 150 pickup was also to be used in another project, the design for commercial production an electric cello-bodied guitar.

4.I THE GIBSON ES-150 AND CHARLIE CHRISTIAN.

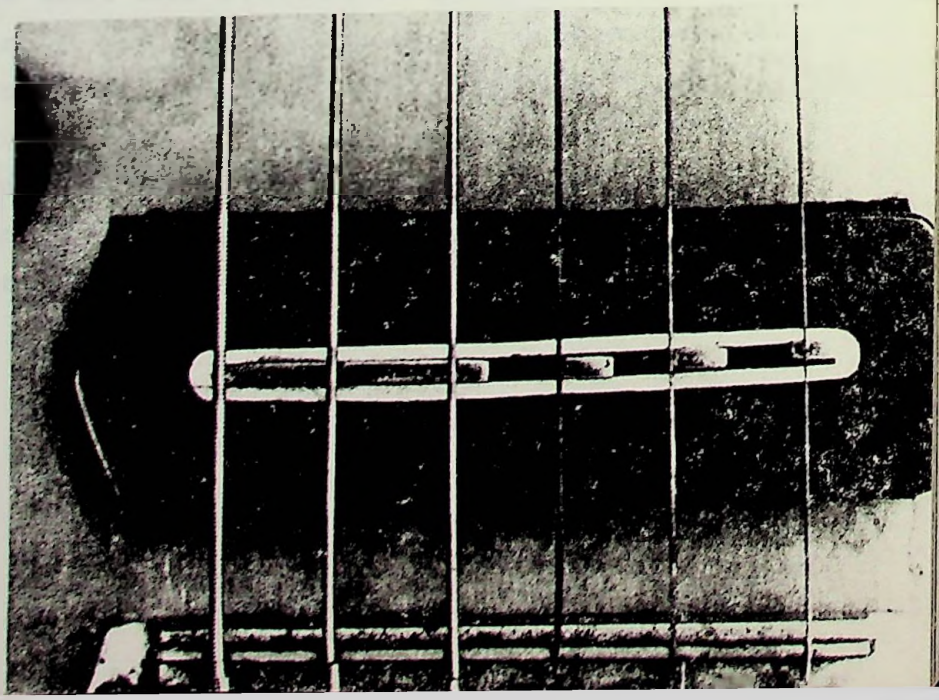
For their first electric Spanish style guitar Gibson decided to opt for a new guitar design rather than convert any of their previous designs to take a pickup. In 1935 the first Electric Spanish - 150 (ES-150) electric guitars rolled off the production lines. This instruments body was very similar in shape and size to an L - 5, with the main changes being with the internal bracings. The pickguard was simplified in shape and the neck head were changed. The pickup was positioned just at the end of the fingerboard and the volume and tone control were built onto the soundboard. In the ES - 150 Gibson produced an unusual mixture of baroque, (in the body designed, arched-top and "F" holes) functionalism, (in the pickguard, tailpiece and bridge design) and Art Deco (in the neck inlays and machine heads) styles.

Charlie Christian.



The controls and pickguard were speciall designed for this historic Gibson ES-150. Gibson also designed Art Deco styled tuning heads for this guitar.

The "Charlie Christian" 150 pickup.



The first well known musician to use this instrument regularly was probably Eddie Durham of the Duke Ellington Big Band however, the first person to make the ES - 150 and indeed the electric guitar famous was Charlie Christian. Christian developed a completely original style of playing through the use of the ES -150. As a member of the Benny Goodman Band from 1939 to 1941, Christian was the first black musician to be admitted to what were then "White Jazz" Big Bands. It was with Goodman that Christian created more than any other person an identity for the electric guitar as a solo instrument. His use of the ES - 150 became so famous that the "150" pickup was nicknamed the "Charlie Christian" pickup and is mainly refered to by this name still.

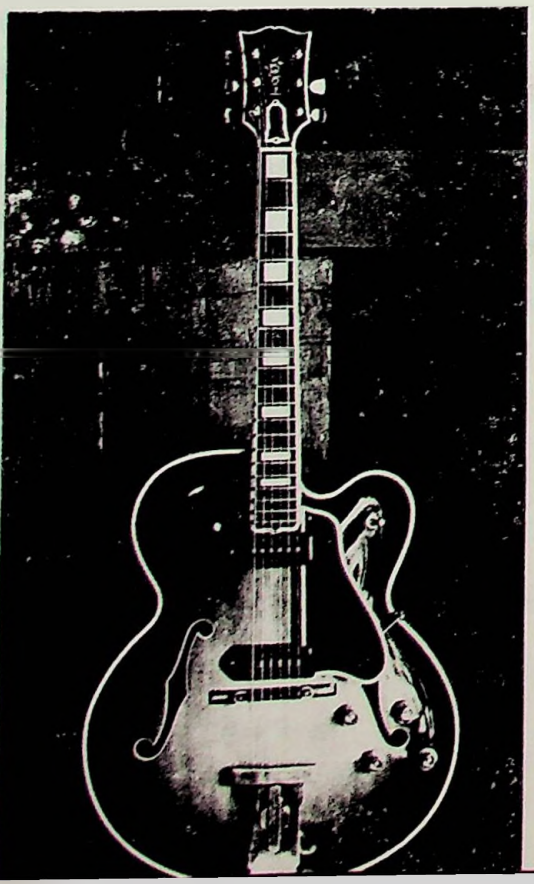
Observers of jazz often quote that there was the guitar before Christian and after Christian, they sound like two different instruments. With the amplified sound an individual note could be sustained for much longer than with an acoustic guitar and thus the early electric guitarists like Christian, Reinheart and Barney Kessel played their instruments like saxophones. In less than five years Charlie Christian caused a revolution in guitar playing technique. At the same time he played a major role in revolutionizing jazz music and help invent the Be Bop style with Dizzy Gilespie, Charlie Parker, Lester Young and others. This is a remarkable set of achievments and seems even more remarkable when it is considered that Christian died in 1943 at the age of twenty-three from tuberculosis.

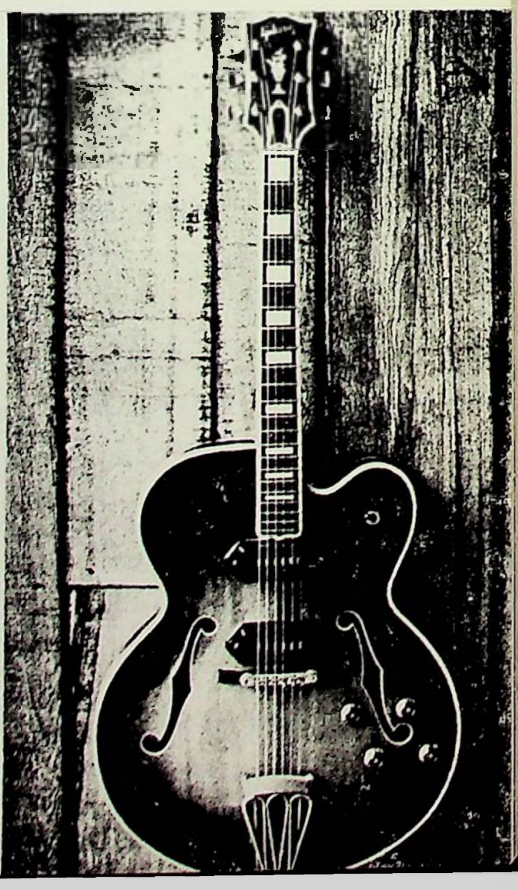
4.2 THE ELECTRIC JAZZ GUITAR AND THE BE BOP ERA.

Many Americans returning home after the war were to hear for the first time the change that had occured in jazz music. From 1942 onwards the Be Bop or Re-Bop revolution had gained great momentum. Swing and Big Band orchestras were on the wane. By 1945 men like alto-saxophone player Charlie Parker, trumpeter Dizzy Gillespie, pianist Art Blakey and guitarist Barney Kessle were in the fore in the creation of the new jazz. Many of the older "swing school" disliked or could not adapt to the disjointed rythms and jagged melody structures.

BARNEY KESSLE playing a Gibson ES-125.

BELOW LEFT: The Gibson L-5 circa. 1950 is extreemly similar to the Birdland L-5 of 1956 (BELOW RIGHT).





The style of guitar playing developed by Charlie Christian on the electric guitar lent itself to Be Bop. The whole sound and status of the instrument had changed but by the late forties most jazz guitarists had changed over to electric guitar and many like Barney Kessle had mastered it's potential. Django Reinhardt, one of the few musicians to adapt to the Be Bop music from Swing, used the ES - 150 with a startling flair. Often sustaining a single note for many seconds at the same volume or playing by harmonics. Harmonics are played by fretting a note and touching the string with the forefinger at the point halfway between the fretted note and the bridge of the guitar and then plucking the string. The resulting note is one octave higher and is very mellow in tone.

In 1947 Gibson produced a variation on the ES -150 and an electric version of the Super 400. Both had single cutaways installed. Now the guitarist had full access to the highest frets of the instrument. The ES - 125 with the "Charlie Christian" pickup became known as the Gibson Barney Kessle.

In 1951 the Gibson L - 5 was revived. The internal bracings were altered and two pickups installed. A rounded cutaway was installed and a new standard Gibson neck was attached.

4.3. THE ES L - 5.

The Gibson L - 5, first produced as an acoustic guitar in 1924 is still in production. This instrument has become the longest lasting guitar in production and probably the most developed. The L - 5 shape is synonimous to the modern jazz guitar. Seen less often than the more common solid-bodied electrics today, the L - 5 is for many almost a bizarre sight. In comparison to a Les Paul or Stratocaster style thin, solid-bodied guitar this instrument appears enormous. The "F" holes look antiquated and this combined with the decorations and embelishments create the feeling that the instrument is somehow an anachronism. Even the design of the switches, controls and pickups look dated in comparison with the high technology oddities that are sold today. In reality however the L - 5 hollow body is a breed of guitar that has evolved to it's fullest extent. Unlike pop and rock music, today jazz is not as influenced by fashion and trends.

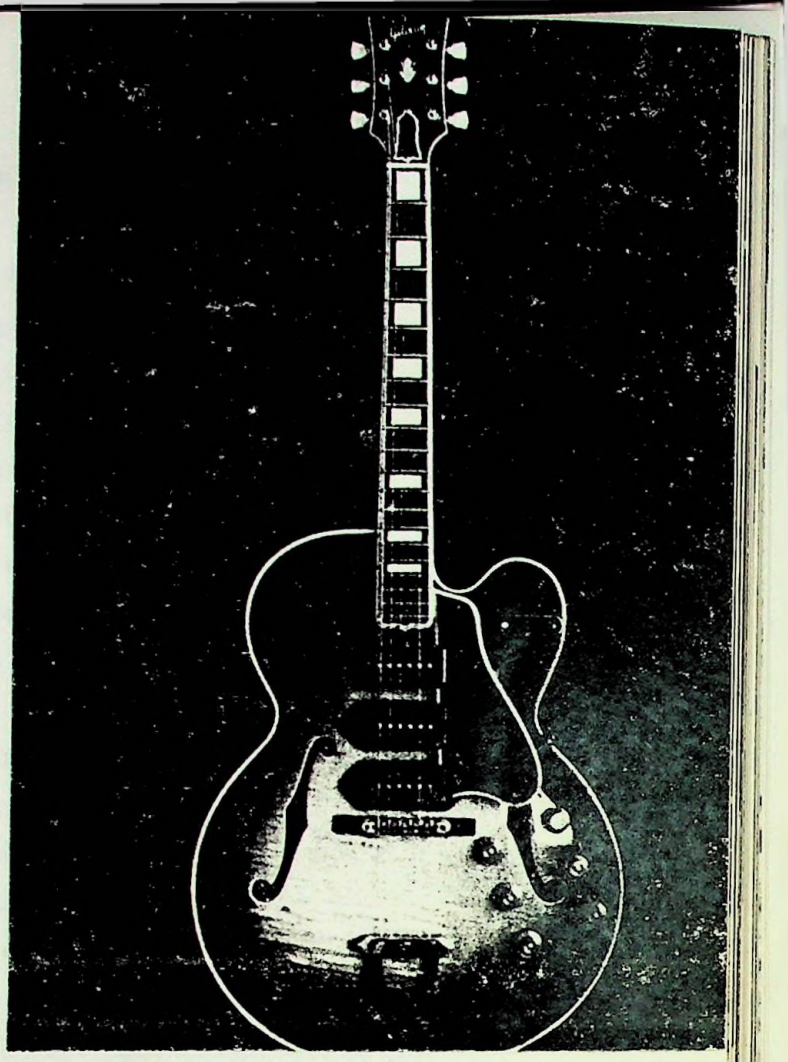
Even jazz music itself in the 1980's is reverting back to the late forties and fifties styles of playing in an attempt to get back on the track. During the sixties jazz became a "dirty word" mainly due to a trend towards avant-garde Free Jazz style of playing with it's lack of coherence and direction. The jazz of the '80's sounds similar to the jazz of the '50's and has also become a respectable and in ways conservative form of music.

A modern L - 5 CES (Cutaway Electric-Spanish) is a specialised instrument suited for little other than jazz. The tone produced is not to distant to the tone from a Spanish guitar in terms of it's richness. For a jazz guitarist this means that when playing a series of notes at high speed, each note can be heard clearly and without distortion. The style of the hollow body electric remains in the vein of the earliest arched-toped acoustics. There are both traditional reasons and acoustical reasons for this. Jazz men are used to playing wide bodied instruments and have the "feel" of their shape in their system. Louis Stewart the famed Irish jazz guitarist told me that he has picked up a Les Paul solid body electric belonging to a friend on occasions, but says that it feels strange, sits poorly and he finds it difficult to play. To demonstrate the difference in tone between a hollow body electric and a solid it should suffice to say that the present day L - 5 and the Les Paul both bear the same type of pickup but both sound completely different. This difference is caused by the hollow body of the L - 5 which enriches and softens the sound considerably.

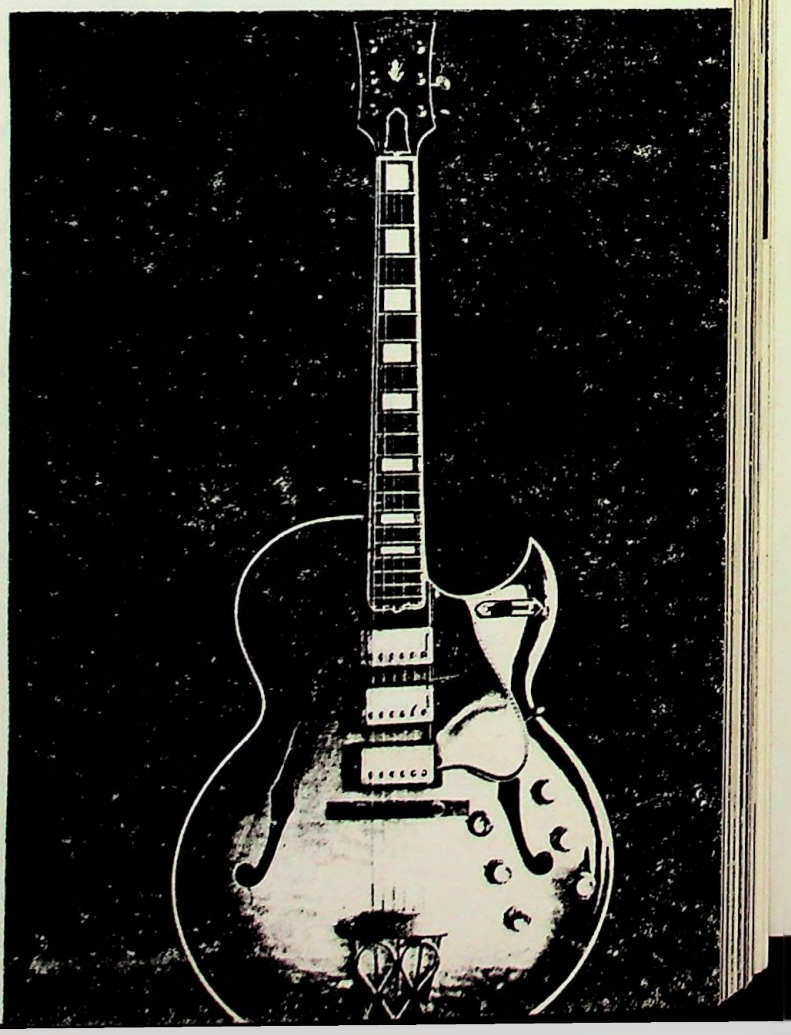
Today Gibson are one of the few manufacturers of hollow bodied jazz guitars with the exception of companies that manufacture Gibson copies and the L - 5 is the standard guitar of the hollow body range. With the exception of the change to never Humbucking pickups the overall style of the latest L - 5 CES is similar to the 1951 L - 5C.

During the fifties there were some modified versions. For example L - 5 Switchmaster was produced with three pickups, a four way toggle switch and seperate volume and tone controls for each. Some Switchmasters had a double cutaway .

Ginson called the ES-5 the "supreme electronic version" of the L-5.



The Gibson "Switchmaster".



This edition was deleted in 1960 however, because of an overt amount of electronic gadgetry. In 1956 Gibson designed the L - 5 Birdland (named for it's designers Billy Bird and Hank Garland.) The Birdland was regarded as the highest quality guitar in Gibsons range. Some L - 5's were made with sharp Florentine style cutaway which gave the instrument a slightly less mellow appearence, but this feature was soon dropped. Another later variation is the Citation (1971). A single pickup instrument with the old style 1924 L - 5 neck, this guitar is hand carved from solid mahogony and is made in limited numbers. It is sold in yearly quantities of eight or nine at a price of $2,515.

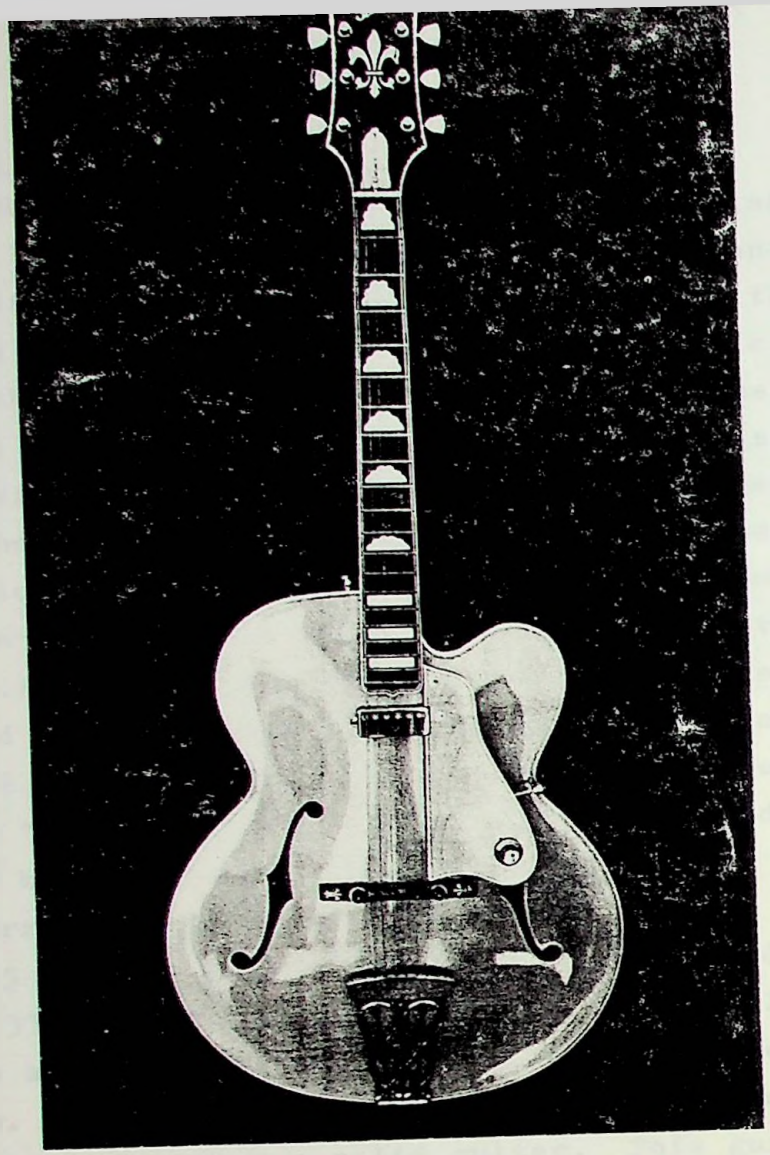
The L - 5 CSN is the latest in a long line of that series. It bears a standard Gibson neck which has been used on most Gibson guitars, solid and hollow body alike since the 1950's. The two pickups are also standard Humbucking pickups. This standardisation enables the price to be kept reasonably moderate on most Gibson makes.

A comparison between the L - 5 of 1924 and the electric L5-CES shows up some marked changes. Aside from the inclusion of electronics the main differences occur on the body with the inclusion on the L - 5 CES of a cutaway and the new standardised neck largle however the general design of the body remains the same, L - 5's had always a wider body than most other hollow bodied guitars and this contributes directly to the high toned quality of the instrument.

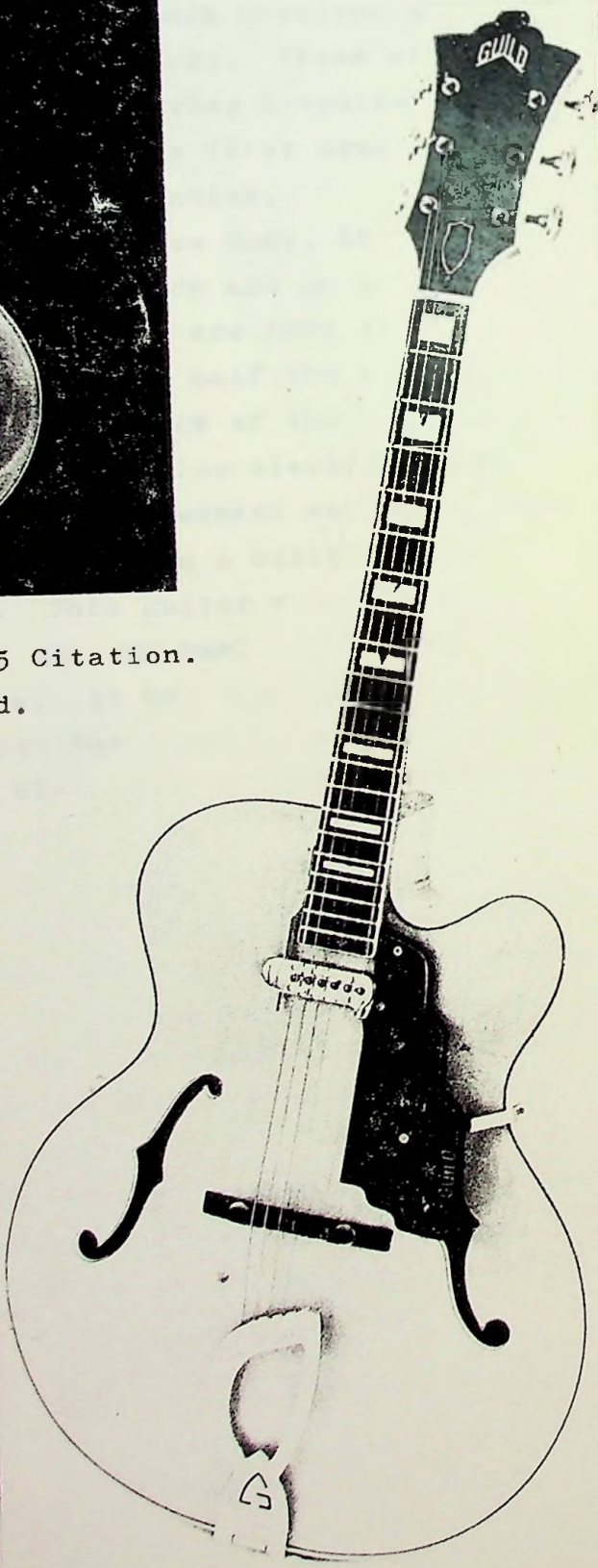
Jazz is a music that has, after nearly sixty years of continuous progression defined itself. The growth of new ideas has slowed down where at one time jazz guitarists were at the fore in technical experimentation, high technology now has completely avoided any contact with the jazz guitar. High technology is no longer needed, jazz musicians got what they wanted when the ES - 150 appeared. Even with the continued development of the L - 5 series many jazz men prefer to use an old ES - 150 or ES - 125, since the forties not much has changed.

RIGHT: The Modern Jazz Guitar.
A Gibson L-5 CES.

RIGHT: An unusual L-5C made in the mid-fifties with a florentine (sharp) cutaway.



BELOW: GUILD are one of the few companies to make original Jazz guitars other than Gibson.



ABOVE: The 2,000 dollar L-5 Citation. Hand crafted from cedarwood.

RIGHT: This is the Gulid Artist Award.

RIGHT: Ibanez are a recently formed Japenese compan who manufacture high-quility copies of Gibson and Fender Guitars. Shown here is an L-5 copy.

THE SEMI SOLID ELECTRIC GUITAR:

With the general introduction of solid bodied guitars in the fifties to suit the needs of Blues, Country and early Rock and Roll guitarists a divide was created between those who played jazz and those who played other forms of music in terms of the guitar they chose to use. Many jazz musicians played other forms of music to which a hollow bodied electric was not suited, thus such musicians required two different instruments. Also wide, hollow bodied guitars continued to have feedback problems when high volumes were required, such as in Big Bands. These were the main factors that influenced Gibson when they invented the semi-solid guitar in 1958. The ES 335T was the first semi solid made and has been widely copied by other companies.

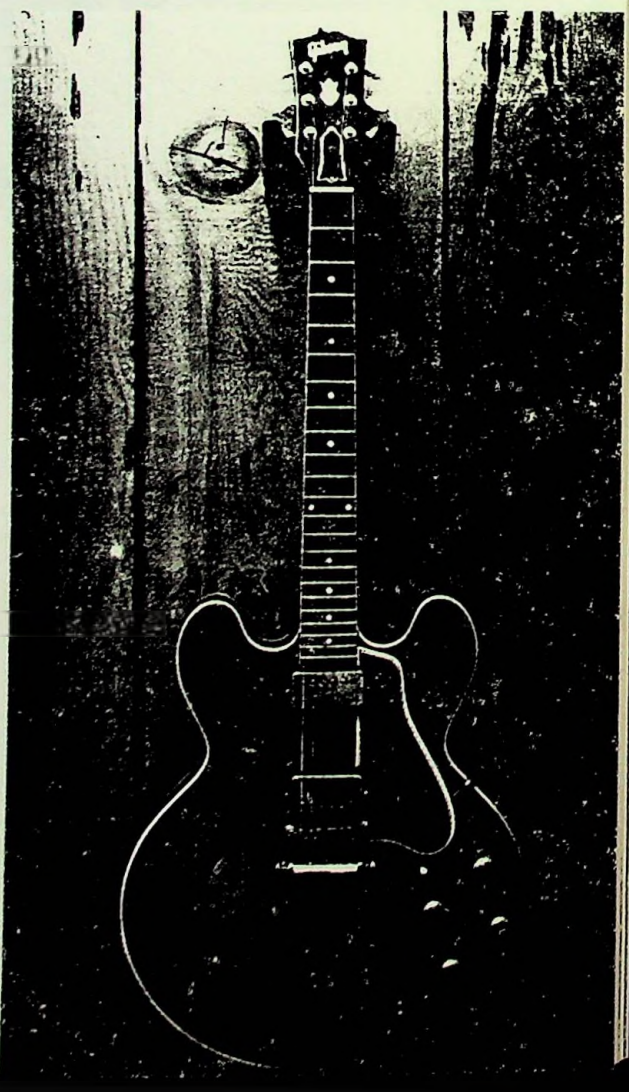
The ES 335T looks similar in ways to a hollow body, in that it has two "F"-holes on it's partially hollow body and an arched top and back. However, the great differences are that it has a much narrower body (4.5cm approx:), less than half the width of an L - 5 and has two cutaways, one at each side of the fretboard. The ES 335T is easier to construct than a hollow electric, there is less strutting in the body and does not feedback easily at high volumes. Ideally the sound is more crisp than a hollow guitar's and more mellow than a solid guitar. This guitar consists of a thin double-cutaway body with arched top and back, "F"-holes and a solid block of wood down the centre. It has like most solids, a detachable neck that is screwed into the block of wood at the back. The pickups also sit in this block and the tailpiece is screwed into it.

The ES-335T has not changed since it's introduction in 1958, although Gibson have introduced variations in what they call the ES 300 series. This instrument is extremely versatile and can cater for the requirements of Jazz, Blues, Country and Rock guitarists alike quite adequately. The semi-solid is a favourite guitar of Blues men particularly B.B. King, he has used many ES-335's ever since that type of guitar was first built.

Many variants of the semi-solid guitar were introduced by companie such as Fender and Richenbacker. These instruments looked more like solid-bodies guitars and the tops and backs were only slightly arched or flat.

B.B. King and friend.

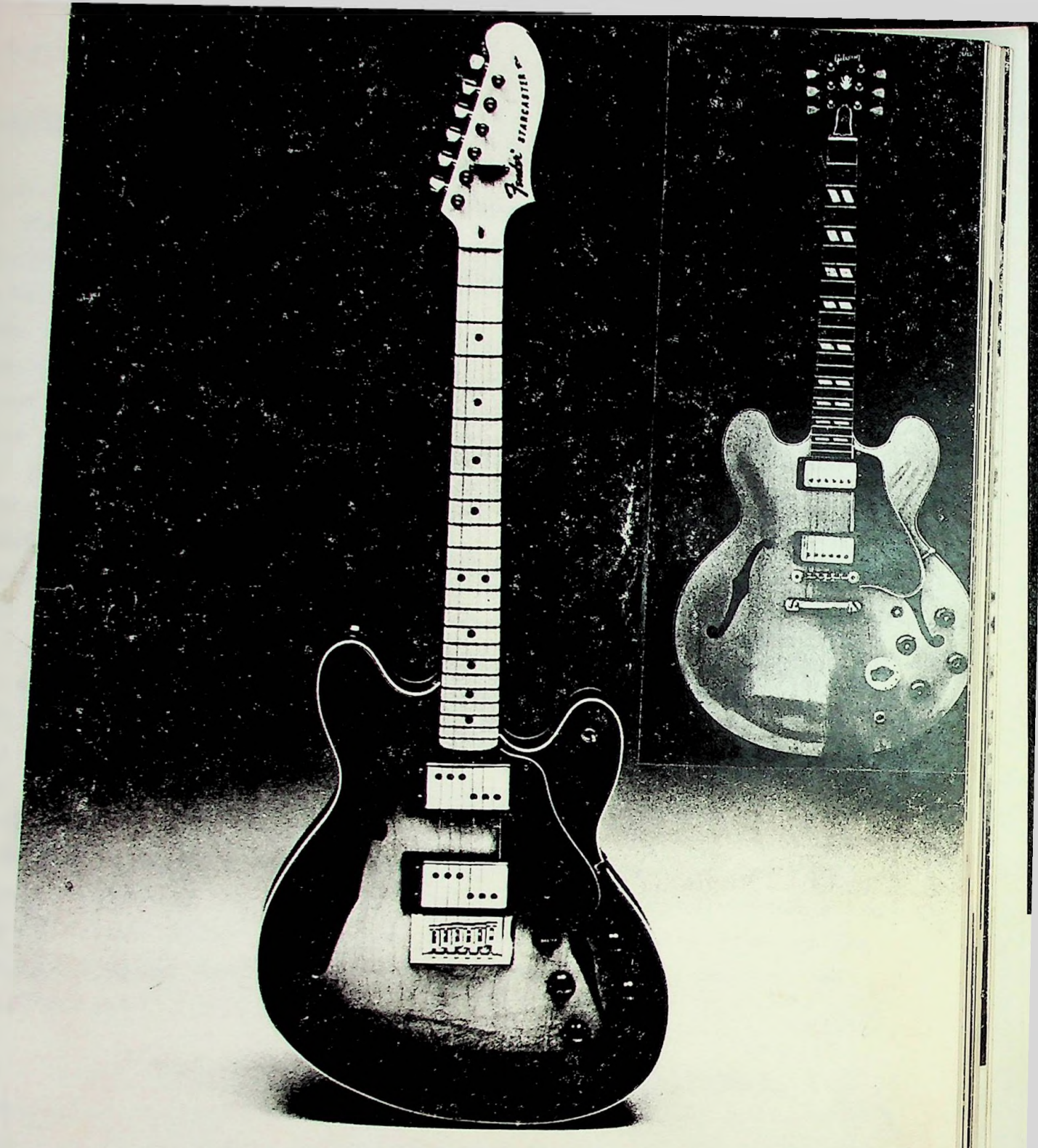
RIGHT: The ES-335T Commonly called "The Dot" because of the unique neck inlays for a Gibson.



Some had one "F"-hole and a few had none. There was a semi-solid version of Fender's famous Telecaster guitar introduced in the early sixties. This instrument was not as brash sounding as the Solid Telecaster and was used mainly by Blues players. The semi-solid Telecaster was however replaced in 1972 with a new Fender design call the Starcaster. Oddly enough this instrument never gained much popularity amongst musicians due mainly to the fact that with the decline in the Blues and Rythm and Blues in Rock music, semi solids have fallen out of favour amongst pop and rock guitarists.

The electric semi-solid guitar has done a lot for the growth of Blues. However in the 1950's in the U.S.A. racism of various sorts confined Blues mainly to the South - the so called Chitlin Circuit and to Chicago and Detroit where Muddy Waters and John Lee Hooker played. These guitarists went largly ignored in America and it was not until European and particularly British guitarists like Jeff Beck, Eric Clapton and John Mayall, that the Blues was revived. Along with the Blues and Rythm and Blues upsurge in popularity there was a similar increase in the popularity of the semi-solid guitar.

With the introduction of the ES-335 in 1958 Gibson applied for and gained a 14 year patent that allowed them to be the sole producers of the semi-solid guitar until 1972. Although disliked by some purist in one or other field of guitar playing the semi-solid is very definitely the most versatile electric guitar available.



ABOVE: The first Fender semi-solid, the Starcaster was brought out in 1975. Very much in the style of other Fender guitars. Fender avoided making this guitar look like a Gibson semi-solid by designing it asymetrically. INSET: The Gibson ES-345. With the Gibson ES-335 these guitars comprise the vast bulk of the semi-solid sales.

CHAPTER V.

5.0 THE BREAKING FROM TRADITIONS: THE SOLID-BODY GUITAR.

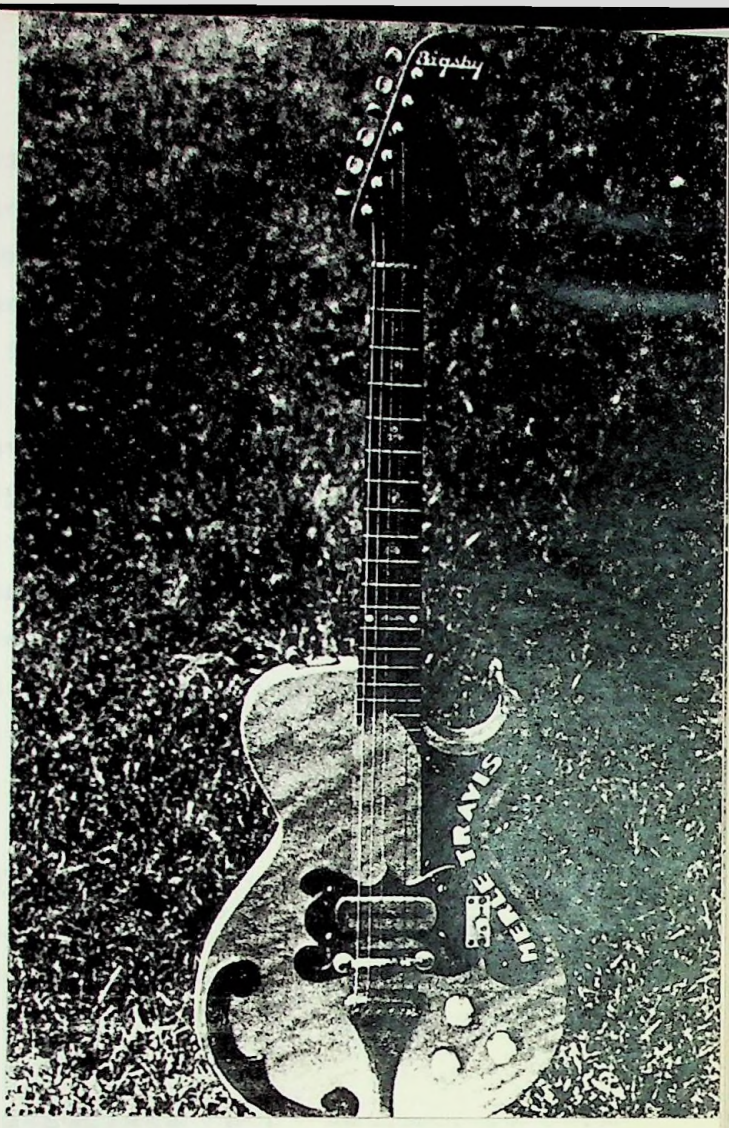
There is and has been for some time quite a large cultural difference between the American East coast and the rest of the country. An example of this would be the fact that touring Big Band Jazz orchestras during the thirties and early forties would tour between New York, Boston, Kansas and maybe as far west as Chicago or Detroit. Jazz was mainly a city music and was largely confined to the East of the Rocky Mountains and north of the state of Carolina. There was some Jazz on the West Coast but was mainly centred around Los Angeles. As the name implies Country and Western music has been popular music for the American West and Mid-West since the First World War. It was specifically for the needs of the Country and Western guitarists that the first solid-body guitars were disigned in the late forties in California. It may seem unusual that the solid-bodied electric guitars like the Telecaster and Stratocaster has their beginings long before the advent of Rock music and that a musical form such as Country and Western a music belittled by many, could boast such a innovation.

The solid-body electric is the most successful of the electric guitar family by far. Since it's birth over thirty-seven years ago this particular instrument has become widely played in the fields of Rock, Soul, Blues, Country and Western, Reggae and "Pop" music.

5.I EARLY DEVELOPMENTS: THE BIGSBY TRAVIS SOLID-BODY.

The solid electric guitar is a development of the much earlier steel and "Frying Pan" Hawaiian style guitars of the thirties. The initial concept of carving a guitar body from solid wood and attaching a neck and pickup, began with experimentation work done just after the Second World War by Paul Bigsby and Merle Travis. Bigsby and Travis worked together in Downey, California with the aim of designing a guitar to be used conventionally (unlike Hawaiian guitars) and would be amplified but without a body space.

RIGHT: The Merle Travis Solidbody was the first "Modern" electric guitar. This guitar is one of six prototypes made.



RIGHT: The Fender Electrical Instruments Company's first catalogue from 1946.

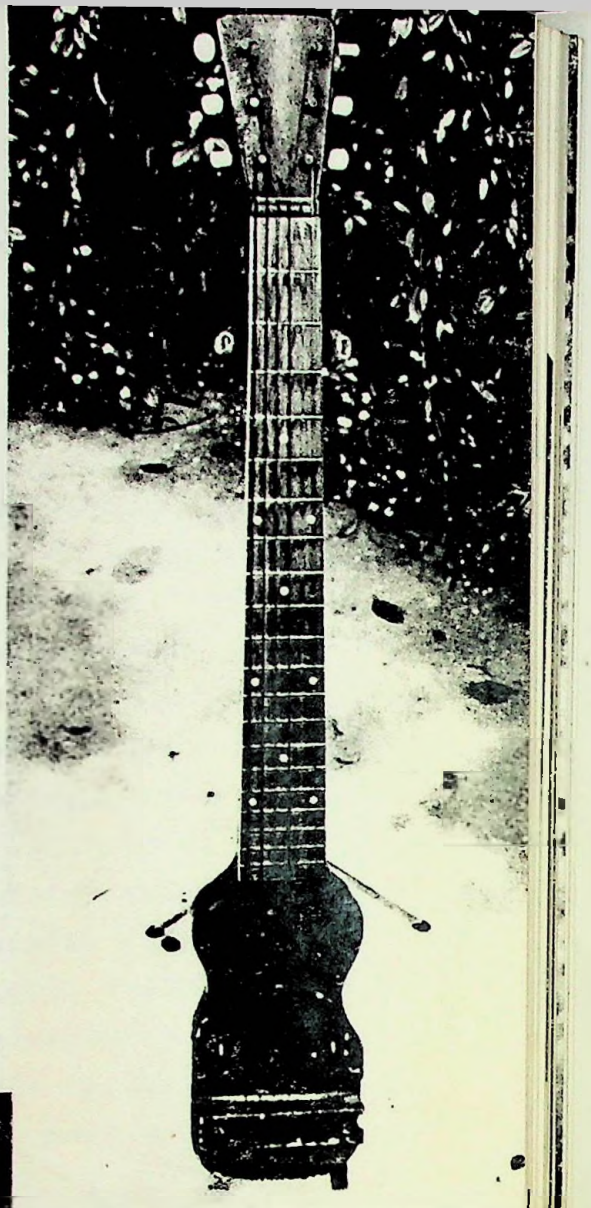
The resulting design is historically significant, in that it is the first example ever of a solid-bodied electric guitar. The Bigsby Travis solid-body as it was called was purely an experimental instrument. The designer Merle Travis got favourable reaction from Country musicians in the vacinity of Downey. He did not however have the finance to produce the solid-body in any large quantities. The Merle Travis design was a result only produced in tiny quantities in 1947 and 1948. The design itself was full of exagerated classical references. The Maple wood body was veneered to look like marble and the violin style head and Florentine style cutaway were popular amongst the Country musicians. Those musicians who did play it were impressed by it's playability and sound quality: the way was open for the marketing of such an instrument.

5.2. FENDER MUSICAL INSTRUMENTS : THE TELECASTER.

Leo Fender is probably the single most influential person in the history of electric guitar design. Fender a designer and electronic engineer, turned his attention to musical instrument design from repairing radios in the mid-forties. In 1944 he joined with former Richenbacker associate "Doc" Kaufman to form K and F Electrical Stringed Instruments and Amplifiers Inc., and immediately designed a steel electric guitar which sold well. After a dispute K and F was disolved, which left Fender in a position to set up his own company. In 1946 Fender along with five assistants from K and F formed Fender Electric Instruments Inc.

Fender claims to have worked out on paper what would happen to the sound of an amplified guitar if the body was solid. A solid block of wood would not absorb string vibrations as much as a hollow-body and this would increase the sustain of the note played. Secondly the feedback problem to which hollow electrics were prone would be eliminated. Finally production costs would be drastically reduced. He was correct on all counts.

RIGHT: Fender's first electric guitar. Patent applied for September 26th 1944.



BELOW: A Fender Broadcaster Serial No. 0022. One of the first production models.

Fender wanted to produce solid electric that would market well. he had studied the Bigsby Travis model but disliked a number of it's features especially the aestetics of the guitar. Therefore he spent seven months on the drawing board perfecting his design. Then in his small workshop in Fullerton, California, a guitar using a single carved piece of ash as a body and a detachable hardrock maple neck was produced.

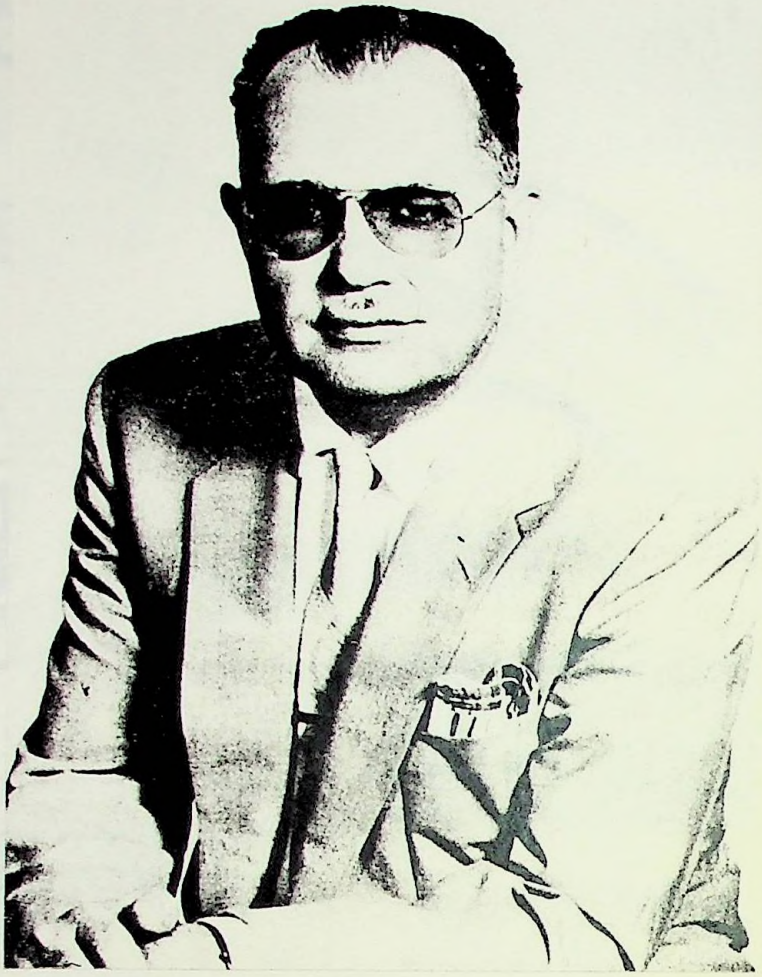
The resulting design named the Broadcaster showed Fender's ability as both designer as well as electronic engineer. The body was only 42mm thich and had a single cutaway. The detachable neck had all six machine heads on the upper side of the neck head. The balance in design between the body and head, always a major deciding factor in the overall look of the instrument was closer to perfection than most other models of guitar before or since.

One of the Broadcasters two pickups was set very close to the brdige of the guitar, giving it it's easily recognisable twangy, treble tone much favoured by Western musicians. The initial cost of the Broadcaster in 1947 was £189.50 (figure courtesy "Guitar Magazine" April '82.) One of the guitars greatest advantages, one which was not immediately recognised is it's durability, even early fifties models are still being widely used and are in near perfect condition today, thirty years on.

The name Broadcaster was soon dropped as the Gretsch Musical Instruments Company already had a line of drums with the same name. Anticipating a conflict with the Gretsch Co., over the use of the name Fender decided to change the name to Telecaster with the advant of television. The Telecaster has become a huge success. Initially Country and Western musicians adopted it but eventually Blues and Popular musicians and much later Rock musicians used it for it's raw "dirty" sound. Since the sixties the Telecaster has been the most popular electric guitar of Rock musicians and has been famed by people like Muddy Waters, Johnny Winter and Rory Gallagher, all of whom have a blues element in their music.

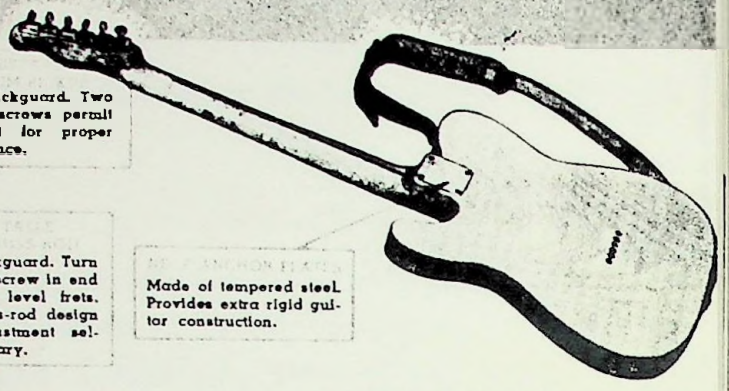
The success of this instrument lies mainly in it's well thought out but simple design and construction, it's durability and above all price, which is well below other quality electric guitars. The Telecaster is still in production, making it the oldest and longest selling solid electric guitar to be market.

LEO FENDER.



Prototype
"Broadcaster"
Model.

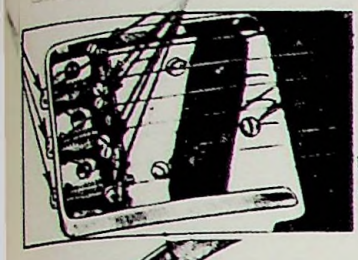
EW Fender ELECTRIC STANDARD "BROADCASTER" MODEL

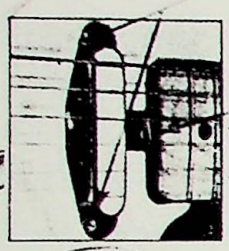


Beneath snap-on cover. Three longitudinal screws for adjusting string length for proper noting. Six elevating screws for adjusting height of each string.

Beneath snap-on cover. Completely adjustable for best tone-balance by means of three elevating screws.

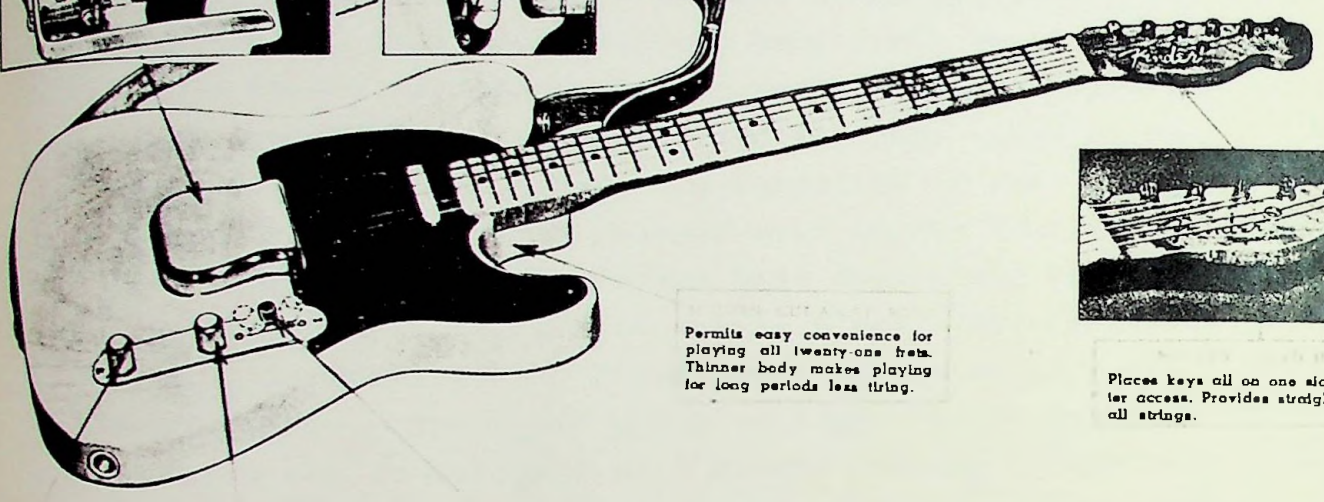
Remove pickguard. Two elevating screws permit adjustment for proper tone balance.





Remove pickguard. Turn slotted cap-screw in end of neck to level frets. Unique truss-rod design makes adjustment seldom necessary.

Made of tempered steel. Provides extra rigid guitar construction.



Permits easy convenience for playing all twenty-one frets. Thinner body makes playing for long periods less tiring.

Places keys all on one side for better access. Provides straight pull for all strings.

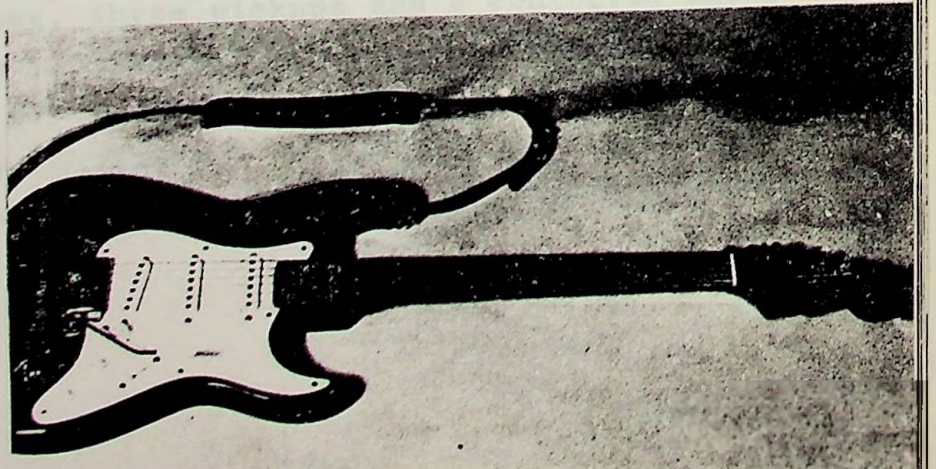
...ions on lead-...ing modifier in ...d position of lever ...ch.

Functions in all positions of lever-switch and tone-control.

Rear position for lead work modified by tone-control. Middle position for straight rhythm work. Forward position for deep soft rhythm.

Fender "Broadcaster" Advertisement from 1948.

RIGHT: First prototype Fender Stratocaster of 1953.



The design has not changed over it's thirty seven years of production to any great degree. With the Telecaster, Leo Fender carved out for himself the space as a world leader in guitar design.

5.3 THE STATOCASTER.

By the early fifties Fender Telecaster sales alone were outstripping the total sales of Gibson electric guitars. Fender still operated from a small 5,400 sq. foot plant at Fullerton in California and had only forty employees in 1953. Fender continued his successes with his design of the first electric bass which changed the bass sound of most bands in five years. With the exception of Jazz bassists, most other bass players changed over to the fretted "Precision" bass from the acoustic upright bass during the fifties.

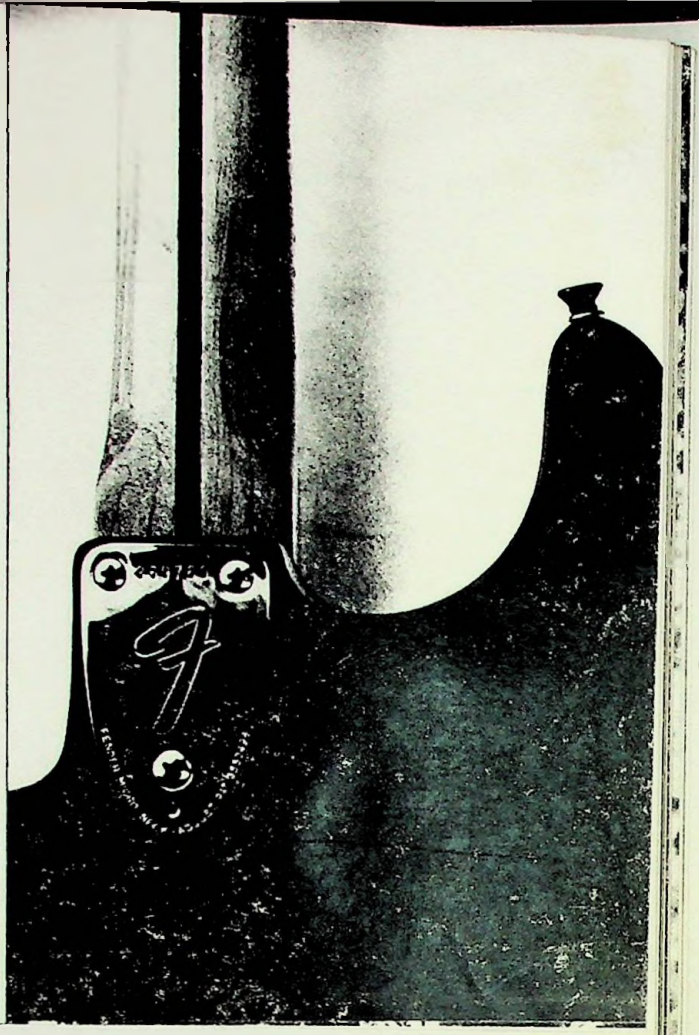
In 1953 Fender decided to create a new electric guitar, not as a replacement to the Telecaster, but as an addition to the Fender range. The brief given to Fender's new designer Freddie Travares was to design a more modern looking guitar with three seperate pickups and Fenders latest invention, the "tremolo arm", (a device attached to the bridge that caused the sounded note to increase or decrease in pitch when pulled or pushed) was to be included on the istrument. The guitar was to be specified as an all rounder, so that most musicians of varying styles could use it.

The result appeared early in 1954. Mr. Travares remarked " I had a marvelous job in those days. I would draw something up on the board and Leo would come along and say "Try something like this", make a rough sketch and I'd fancy it up. He was the owner and his every word was very low, making life very simple for us all." The Stratocaster as the guitar was named, was a high quality guitar, similar in ways to the Telecaster but had a double cutaway, three pickups and a contoured back, giving it a more ergonomical shape. So that it played more comfortably while the musician was standing.

Oddly enough Country and Western musicians were slow to accept the Stratocaster and tended to continue playing and purchasing Telecasters.

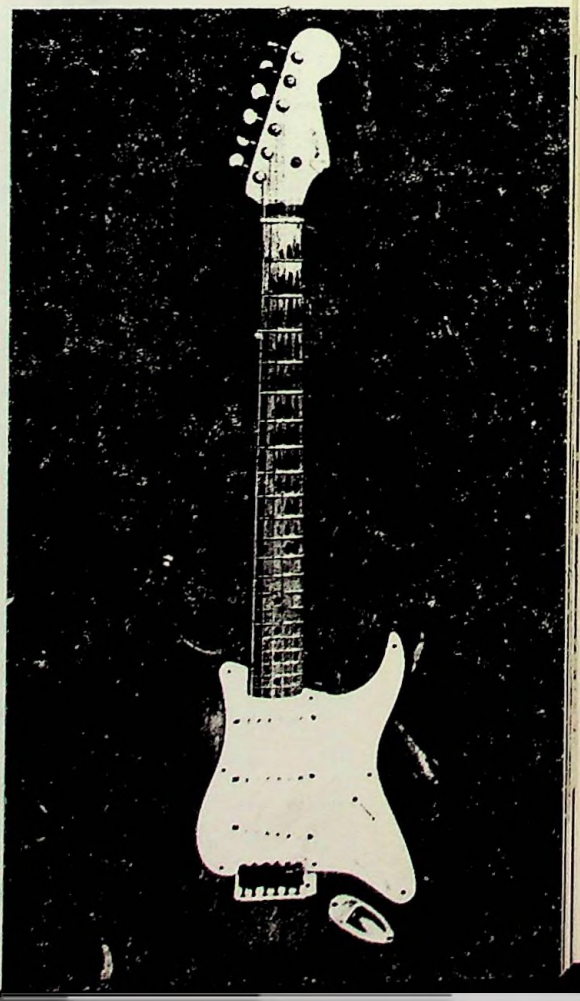
It was not until the sixties with the advent of the Beatles and the Rolling Stones and a host of other Rock bands, that the "Strat" came into the limelight. Now at times it outsells the Telecaster even though it is half as expensive again. The Stratocaster has become since the sixties the symbol of the electric guitar.

The Stratocaster, Telecaster and the Precision bass are the bread and butter of Fender Inc. To this day nothing like the developments of that six year span from 1947 to 1953 have been repeated. It seems that Leo Fender was 20 years ahead of his time.



ABOVE: Played by Rock, Country, Blues and Soul musicians, the Fender Stratocaster has become the most versitile of solid-bodied guitars. The two "wings" (cutaways) were however styled with Country and Western musicians in mind.

RIGHT: A 1954 Fender Stratocaster.



CHAPTER VI.

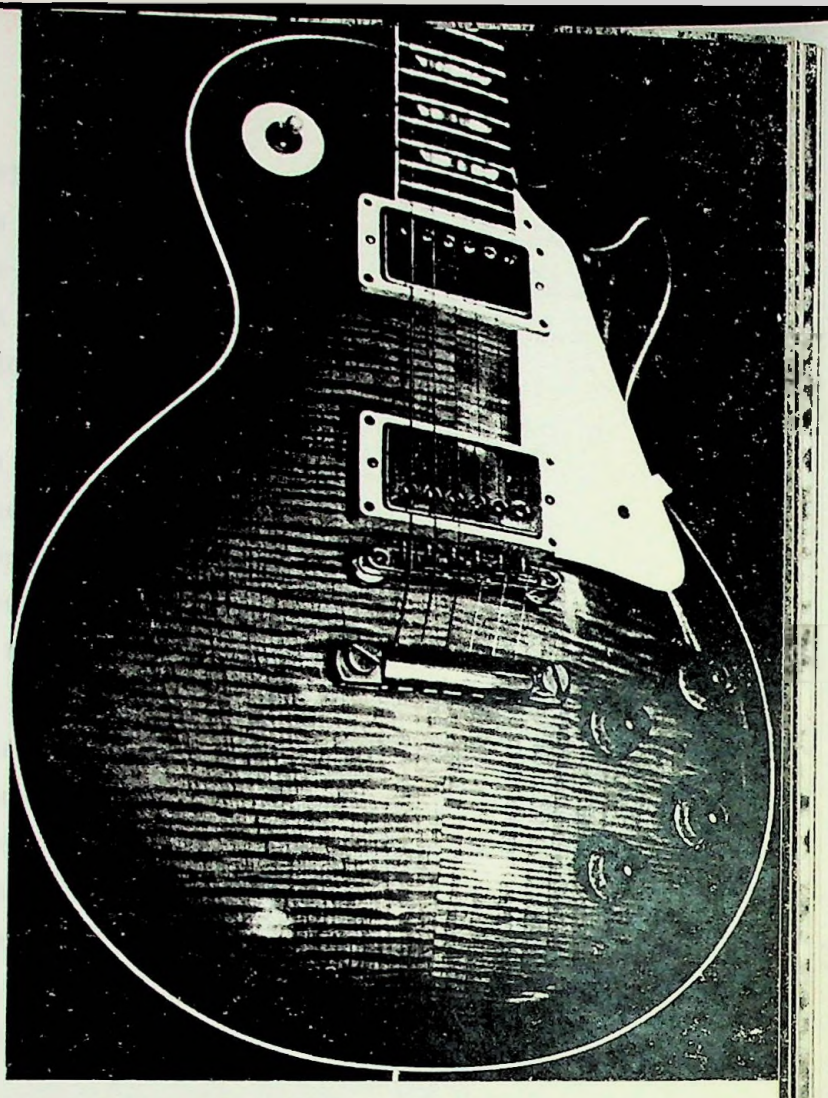
6.0 THE "FRETLESS WONDER": LES PAUL AND THE GIBSON CO.

After the war the Gibson Co. continued to serve the Jazz guitarist with the finest hollow-body electric available. The company looked contemptuously at the Fender success story. Gibson were traditionalists and did not regard Fender's solid-bodied Telecaster as a worthwhile instrument, but as a novelty item that wouldn't last. Gibson had a reputation as the best guitar manufacturing company in the world. To indulge in producing "cheap" solid guitars, it was felt would compromise their reputation.

Les Paul who was quite a famous Jazz guitarist of the forties as well as an engineer, built a solid guitar in the late forties which he called "The Log". Paul brought it to Gibsons then president Ted McCarthy with a view to developing it. McCarthy thought it some kind of joke, told him it looked like a broom-stick and said 'forget it'. The guitar was left at Gibsons and lay around for a few years. McCarthy, worried about Fenders success and realising that Gibsons standing as the world leader in guitar manufacture was falling, asked that Les Paul be signed up in May 1950. Pauls job was to design a "civilised" version of the solid guitar.

Les Paul worked for nearly two years before submitting his final design in 1952. Using an acoustic guitar that was cut in half and filling it with a solid piece of mahogony (later changed to maple), he created the body. The body shape was very much in line with traditional Gibson design. The neck was a standard Gibson neck, modified so that it could be attached using four screws to the back of the body. Like the Telecaster, the Gibson "Les Paul" guitar had two pickups and the electronics and design were simple. Unlike the Telecaster the sound was smooth and mellow. As a result of using a dense heavy wood for the body, the sustain of played notes was greatly increased. At Fender's Research and Development Department guitars were made from solid-marble and Granite. The sustain of these guitars is between 70 and 160 seconds depending on the note played at an initial 20 decibles. Their weight makes them unfeasible to produce.

This Cherry Sunburst finish became popular with the introduction of this Les Paul in 1959.



LES PAUL
De LUX model (1971)

It was initially hoped that the Les Paul would become used by Jazz guitarists, however this was a miscalculation on the part of the Gibson sales department. By the fifties Jazz guitarists had become traditionalist and generally preferred the feel and sound of the L - 5 or ES - 150/125.

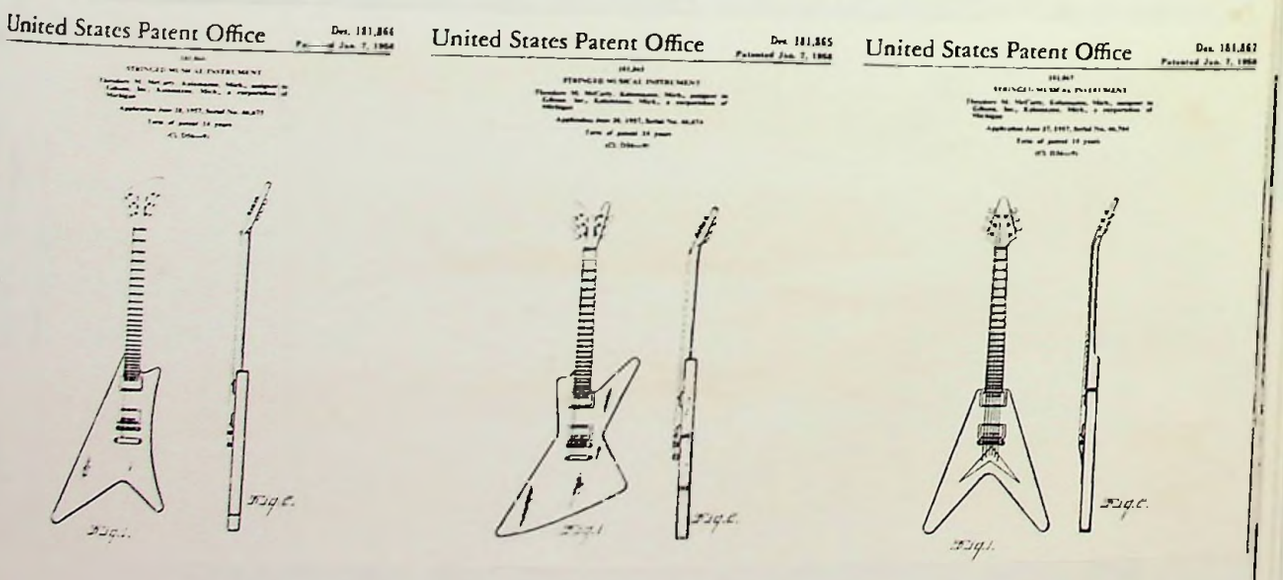
The market for the Les Paul lay with the popular musicians of the day. The Les Paul was an expensive, high quality guitar and again it was not until the sixties that Rock guitarists such as Jimmy Page of Led Zeppelin, Mick Ronson of David Bowie's Spiders from Mars band and Jeff Beck were looking for the sustained "hard rock" sound, that the Les Paul sold big in numbers. By the seventies the Les Paul sold in greater numbers than the Stratocaster, being more suitable for the smooth sounding "middle of the road" American Rock bands. It is an extremely easy guitar to play and with it's very low frets on the fingerboard, it earned the nickname the "Fretless Wonder".

Many variants of the Les Paul have been made. The most significant being the Les Paul Standard or SG Les Paul which has a double sharp cutaway which became very popular with it's introduction in 1961.

The Les Paul guitar is one of three solid-bodied electrics which have been the mainstay of Popular, Rock, Country and Wester, Blues and Soul music from the fifties to the present day, the Telecaster and Stratocaster being the other two.

RIGHT: This LES PAUL was the second prototype built in 1952. It is faithful to the traditional acoustic guitar in shape with the exception of the cutaway. Many features like the tailpiece, the pickups and pickguards are from previous Gibson models. LES PAUL bodies are particularly small but being made of dense woods are very neavy. Due mainly to their mellow tone quality, but also because of their styling LES PAULS sell in larger numbers in the U.S.A. than in Europe.

BELOW: Patent drawings for the Modern, Explorer and Flying V respectively. The Modern was never produced. The Explorer and Flying V are more popular now than they ever were.



CHAPTER VII.

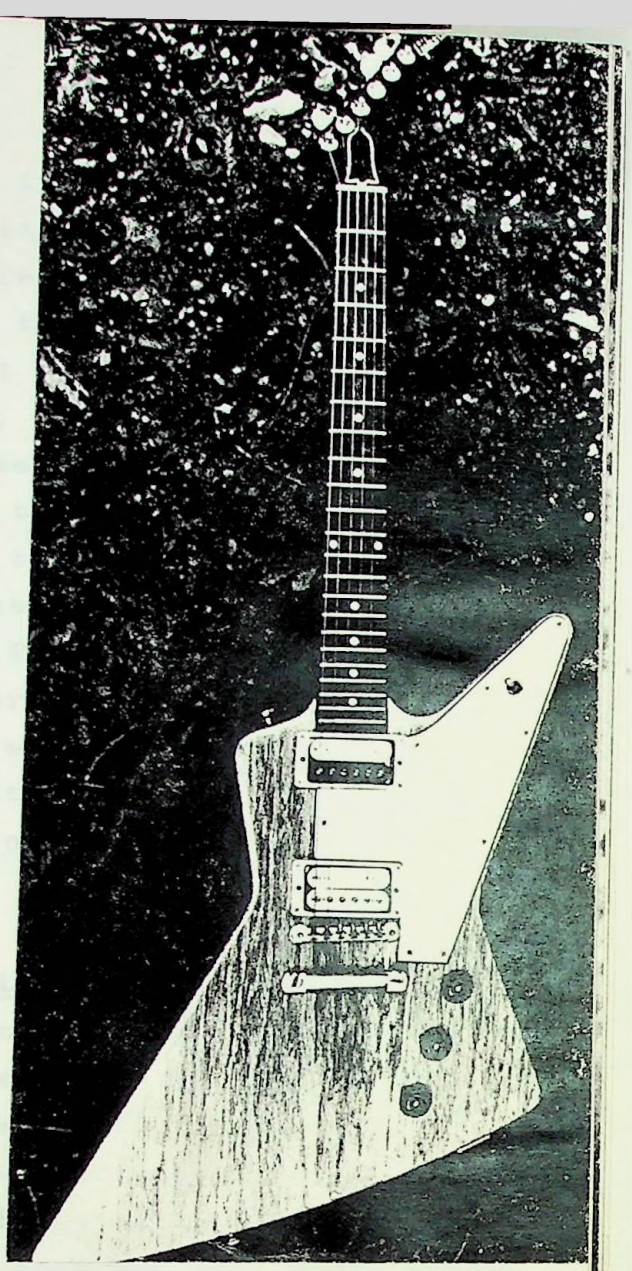
7.0 FIFTIES FUTURISM AND THE BEGINNING OF THE ROCK AND ROLL SYMBOL. THE GIBSON "FLYING V" AND EXPLORER.

With the marketing of the Stratocaster in 1954 by Fender, the key words in the sales promotion were "ultra modern". The Stratocaster with it's double cutaway or wings as they were refered to, had a lot in common with car styling of the day. The instrument was made to look powerful, aggressive and like it could travel at speeds up to match2. Guitars had never been made like this before and by the time the first Telecasters were manufactured, designers realised that a solid-bodied guitar could be designed so that it looked like anything from an automatic rifle to an over-sized phallus. In reference to his design work on the Stratocaster, Freddie Travares remarked, "We wanted something new, something very good, something they'd never seen before. This thing was going to start a new age in guitar design."

Fender's sales were enormous by the mid-fifties. Musicians in the Popular music field regarded the "Strat" as the only guitar to have. Blues players developed their style of music to incredable degrees using the Telecaster. Fender were hard pressed to keep up supply to the levels of demand until the end of the fifties.

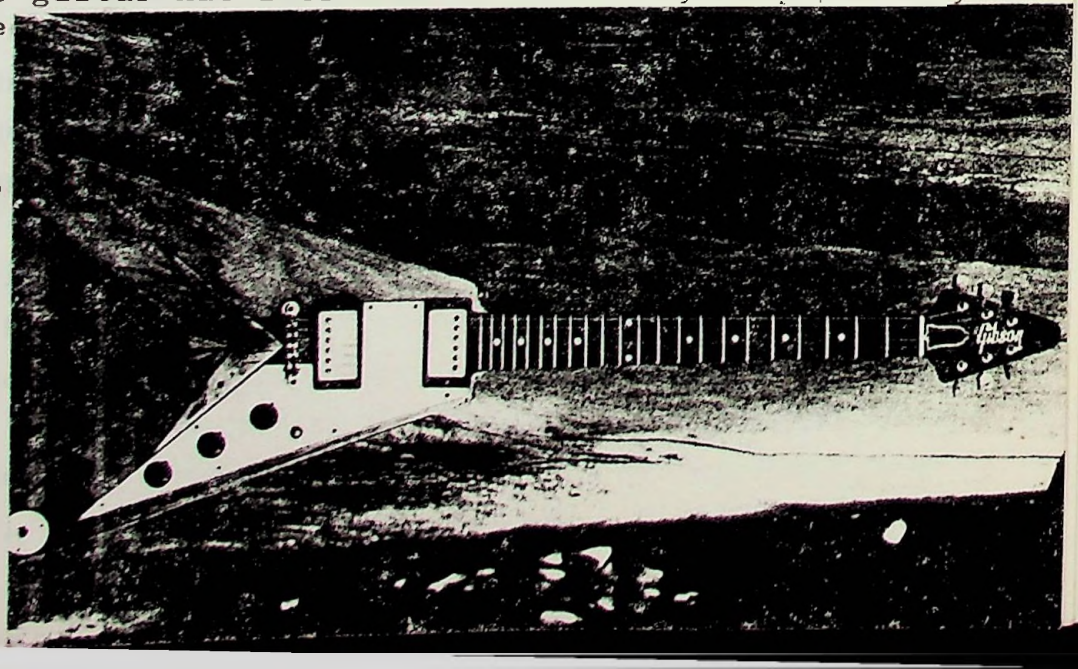
Gibson, under Ted McCarthy's presidentcy decided to throw caution to the wind and attempt to out-do Fender, by designing a guitar that would be in the words of McCarthy "outrageously modern". Tailfins and the Space Age were just around the corner. "We wanted to do something so radical that it would knock them (Fender) out and show that Gibson could be as modern as they were." recalled McCarthy.

In 1957 with the advice of sales manager Clarence Havenga and an artist, McCarthy set about designing many new body shapes in about a hundred sketches. They had one goal, to be as radical as possible. Of perhaps a dozen styles of prototypes that were built, three were selected for introduction The Modern, The Explorer and The Flying V, only the later two went into production.



ABOVE: The first Explorer prototypes (left) of 1957 and the production model (right) are markedly different in many respects. It's designer, President of Gibson, T. McCarthy felt that the neck head needed to be changed to suit the angles of the body. Thus a Fender style head was incorporated with lines parallel to the "wing" giving the instrument a more flowing appearence. The body was widened and the result is indeed extremely well proportioned, since 1977 this guitar has increased dramatically in popularity and has become associate with "New Wave" rock music.

RIGHT: The Flying V: Phallic symbol and space ship all in one.



The Flying V was definately radical in shape. It's "V" shaped body was attached to the body at the last fret, no cutaways were required. The original Flying V's were not taken seriously and the instrument was a complete flop at the New York Music Industry Trade Show of 1958, where it was first shown in public. Sales were poor and the instrument was withdrawn. The Flying V would have to wait until the sixties before it became a success.

The other futuristic instrument was the Explorer. An even more radical shape, this guitar would have to wait for twelve years before it was reintroduced to the market in 1971. This guitar, also shown at the 1958 Music Industry Trade Fare was laughed at. The Explorer along with the Flying V are the principal of Space-Age design, having no real connection with the guitar's traditional shape. They demonstrated that an electric solid-bodied guitar can look whatever way you want it to look. All that is necessary is a neck, fretboard and pickups.

7.I THE ROCK AND ROLL ERA AND THE ELECTRIC GUITAR.

When Elvis Presley first wriggled, quivered and shook in the mid- fifties in front of the first generation of television audiences, the Rock and Roll Era was declared. Despite the sophistication and complexity of post war Jazz and the 'good time' sound of Country and Western music, the guitarist generally went unheard by the majority of Americans. Rock and Roll would change that. Suddenly the guitar was everyehere. The early Rock and Roll bands usually incorporated two guitars, a bass and drums as the complete line up. Chuck Berry, the slick, flashy eyed, Rock and Roller from Alabama was heard on every jukebox thrashing out "Johnny be Good" in 1957. Berry was to be the first so called guitar hero and an inspiration to many who followed, like Keith Richards, Mick Jagger, Marc Bolan and George Harrison and not least Jimi Hendrix.

Beatles manager Brian Epstein was told by a Record Company producer when approached in 1960, that bands with guitars were on the way out. Two years later "Beatlemania" conquered the world. The early sixties also saw the rise of the Rolling Stones, Blues/Rock and Roll sound played at tearaway speed. It was between 1967 and 1969 however that the electric guitar reached the zenith of it's power. The world had never seen or heard anything like the late Jimi Hendrix and no guitarist since had anything like the same effect.

Hendrix became a Sorcerer among guitarists. Alone in his category he made music that was wild and exilerating. His use of electronic effects to engineer different sound patterns and his incredible use and control of feedback has made him the most ledgendary guitarist yet. He played his Stratocaster or Flying V with his teeth, set it on fire and displayed his guitar as a phallic symbol.

Hendrix's death in 1969 left a large gap in guitar playing world. Throughout the '70's Rock bands continued to feature the guitar, some copying the Hendrix style. Since however the instruments position in Popular and Rock bands has declined to what is probably a more realistic role in the rythm section as the synthasizer takes up more melody work.

In a space of the less than fifty year of a life span of the electric guitar has proved itself a formidable and indispensable instrument of almost all forms of contemperary music.

Chuck Berry the father of Rock and Roll

Jimi Hendrix and his reverse strung (left handed) Stratocaster.

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