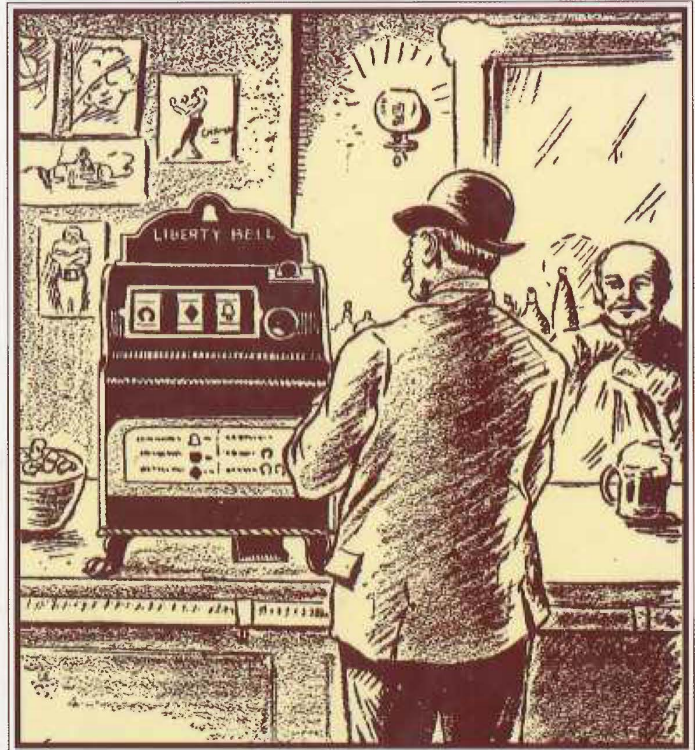


SLOT MACHINES

*A Pictorial
History of
the First
100 Years*

Fifth Edition

Marshall Fey



\$29.95

SLOT MACHINES

by Marshall Fey

256 pp; 630 photographs, 504 in full color, mathematics; mechanisms; advertisements; line drawings; maps; index; bibliography.

It is all here! The complete and colorful story of coin-operated chance machines from the time they first became prevalent in the early 1890's up to the coin gaming found in today's casinos. Included in the exciting history of this major industry are the pioneers, inventors, manufacturers, and operators. There is also over 400 photographs, mostly in full color, of slot machines of every imaginable genre.

The slot's destiny rose and fell with the changing moods of the nation. The Roaring Twenties brought the notorious speakeasys, a logical home for the ubiquitous slots, while the Depression years of the 1930's saw record productions and the most beautiful and brilliant machines ever designed, now highly collectable. The Golden Age of slots ended in 1950 with the passing of far-reaching federal legislation confining their use. But the growth of casinos in Nevada and Atlantic City, plus recent legalization in more states, has resulted in a resurgence of the slot machine.

Slots, highly regarded collectables, are not only a good investment, but are fun to play. Every important slot manufactured during the first 100 years is carefully represented both in text and by more than 600 photographs and newspaper articles, all serving to chronicle this colorful segment of Americana



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Dedication

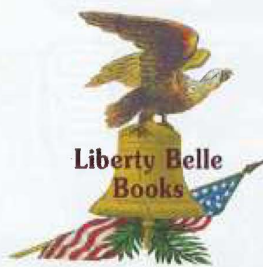
"History has its great and near great warriors, its statesmen and its moral leaders. Coin machines too, have their great, near great and even legendary characters from whence came our coin machines in the first place. They were Charles Fey, H.S. Mills, Adolph Caille and Thomas Watling. Each gave to posterity the benefits of a life of study and sacrifice in the field they liked best."
Coin Machine Journal, July 1949

SLOT MACHINES



by Marshall Fey

A Pictorial History
of the First 100 Years



4250 South Virginia St.
Reno, Nevada 89502

First Printing 1983
Second Printing 1989
Third Printing 1991
Fourth Printing 1994
Fifth Printing 1997

Library of Congress Number 93-081047
ISBN Number 1-889243-00-0

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Adopting Slot Machines for Casino Play



Token
For \$100
Slot Machines

The 1951 Johnson Act virtually eliminated slot machine sales in nearly all states, pushing its sales potential down to the lowest in the industry's history. The remnant market mostly consisted of Nevada with its rapidly growing casinos, England, West Germany, France, Sweden, Denmark, Norway, Australia and a few African and Asian countries. During the 1950's and early 1960's the three remaining major manufacturers—Mills, Jennings and Pace—vied for sales in those areas.

The Mills Bell-O-Matic Corporation, which had been manufacturing slots in their Reno plant since 1951, had a geographical advantage and a reputation for building a quality product. Unfortunately, they were hesitant to make any major changes in the High Top line, which had been first introduced with the JEWEL BELL in 1947. Until the end of the run in 1962, the High Tops still utilized the same basic mechanism as in their 1931 SILENT BELL. In the late 1950's the Mills firm finally offered a light-up High Top, with a western motif, and two additional light-up models named the THREE-7-CROWN and the FOUR-7-CROWN. These were three and four-reelers respectively, using an unattractive case which resembled the 1933 Mills EXTRAORDINARY. Implementing the Crown series was definitely a case of too little too late, and was even poor competition for contemporary Mills machines. These machines were the last to use the out of vogue bell designation for the reel slot, although the firm continued to manufacture as the Mills Bell-O-Matic Company into the 1970's.

The Jennings Company had become the innovative forerunner with their brilliantly illuminated and highly decorative SUN CHIEF series which culminated in their BUCKAROO. Introduced in 1955, this was the first post-war, four-reel machine and it offered a tantalizing 5,000-coin jackpot. This machine's outstanding success immediately prompted both Mills and Pace to develop four-reelers. As the multi-reel concept grew, Jennings was the only factory to offer a side-by-side double, which was a casino favorite in the 1960's. A single 20-stop, three-reeler had 8,000 possible combinations, the four-reeler had 160,000, and with two three-reelers Siamesed together, the number grew to 64 million combinations. Although the company had shrunk from 700 employees during its heyday of the 1930's to a mere 60 at the time of O. D. Jennings' death in November 1953, the Jennings company still did very well in domestic and foreign sales, producing about fifty machines



Introduced in 1954 at the Las Vegas Sands Hotel, the ROTO-SLOT, a circular cocktail table with a built-in Mills mechanism, could be played in six positions by lifting the knob on the right and rotating the playing unit. During the late 1950's and early 1960's built-in three reel slot bars were operating in Reno at the Golden Hotel and Mac's Club.

daily. In 1955 the firm was purchased by American Machine and Science Company, a Chicago conglomerate owned by Wallace Carroll. The slot firm's acquisition paid for a good portion of the parent company's expansion, influencing it to further enlarge their gambling interests by purchasing both Mills Bell-O-Matic and J. H. Keeney and Company, plus investing in part interest in the Tropicana Hotel in Las Vegas.

The Pace machine, with few changes since the pre-war DELUXE COMET, had a quick succession of owners after Ed Pace retired in 1951 at age 74. Veteran slot manufacturer Harold Baker produced the Pace machine for the following two years until he died. The manufacturing of Pace slots was then continued by the Ace Manufacturing Company of Franklin Park, Illinois, by the father and son team of Casey and Norbe Michaels. In 1958 they opened facilities in both Reno and Glen Burnie, Maryland, where slots were still legal in Anne Arundel, Calvert, Charles and St. Mary's Counties for another ten years. In 1961 the company folded, closing both branches. The Ace machine closely resembled its predecessor except for some improvements designed for casino use which included plastic reel strips, a large award card and a redesigned bottom front casting to accommodate a new large money tray. It was copied from the one already in use at Harold's Club, with a built-in drink holder and ashtray.

The Michaels' greatest contribution to the casino slot came in 1956 when they developed the modern front-opening case. Access through the front alleviated the necessity of rotating the machine to get to the mechanism. Another popular innovation on the Ace front-opening case was the illuminated front door featuring two light-up plastic displays—a large one on the door's bottom for the payout awards and another above the reels for the club's logo. The new case was originally designed for Harold's Club, but the conservative Smith family chose to remain with the red Pace COMET which had been their hallmark since the late 1930's. Realizing the virtues of the front-opening Ace, the nearby Club Primadonna purchased a large number of them.

Nevada Air Products, a Reno manufacturer, followed with the first all-steel case built primarily to recase Pace machines. When they ceased production Joe Baldechi, a former employee, continued making these cases. The need for a front-opening, light-up case induced some Mills operators to use a Pace coin head or a custom coin entry to adapt the Mills mechanism to the case, and these conversions were very popular during the early 1960's.

By 1962 Mills was no longer the industry's pacesetter, but they were determined to regain that distinction. They tried to accomplish this with the introduction of an illuminated all-steel front-opening machine dubbed the Mills COMPACT. Its small case utilized the old mechanism resting on a pull-out baseplate on a rotating turnstile, allowing it to be pivoted for repair without removing it from the cabinet. These attractive new machines, costing between \$600 and \$700, sold well throughout Nevada. Many casinos bought them outright, while to remain current other operators recased their obsolete Mills High Top mechanisms in the COMPACT case. The following year Jennings began using a similar case and their parent company, American Machine and Science, to avoid competition purchased the Bell-O-Matic Corporation from the Mills family for \$500,000. The remaining Mills heirs at the time of the sale were the sole surviving brother Ralph, who died a year later, and Tony and John, sons of Herb Jr. who had died in July 1959. Triner

Mills 1958
THREE-SEVEN-CROWN



The Crown series, designed to compete with the brightly lit Jennings, received poor acceptance.

Scales, Jennings and Mills formed the TJM Corporation, with Keeney later joining the group to manage the coin machine division for the parent company AM & S.

Bally Manufacturing, which had been in the coin machine business since 1931, introduced a revolutionary machine called MONEY HONEY in 1963. Using an updated mechanism from their floor consoles cased in a front-opening cabinet, this new machine vaulted them into the casino slot market. A hopper payout unit was added, designated the "bottomless payout," with a capacity of 2,500 dimes. Bally added a larger hopper in the mid-1970's capable of holding 2,500 quarters. It had the capability of accurately paying out numerous variable sized jackpots as well as multiple coin and line pays, creating a major improvement over the 20-coin maximum of the slide pay. Bally's electro-mechanical machine utilized multi-contact boards which could sense more than 50 different payout combinations. These features led the way to multiple-coin, three and five-line machines, as well as left-to-right and right-to-left payouts.

Shortly after the Bally slot invasion, the Space Company was reincarnated from the old Ace firm by Earl Missler in Glen Burnie, Maryland. They introduced an unsuccessful front-opening hopper-payout machine using the basic Pace mechanism. At Reno's Palace Club the short-lived machine had a tragic debut because the hoppers would involuntarily empty their loads of coins. The new company tried to continue with the mechanical Pace, but the diminishing market led to its failure within the decade. The Pace-Ace-Space line had finally expired after 40 years.

In 1966 Vern Juenke introduced another new slot concept, the original solid state machine. Juenke, an ingenious electrical engineer then working for Nevada Air Products in Reno, created the handleless machine which had only one moving part—the payout hopper. The prototype model, with its symbols displayed by electronic read-out units, received a trial run in Reno's Liberty Belle and later at the California Hotel in Las Vegas. The machine operated flawlessly, but the unconventional operation received poor public acceptance, leading to the project's abandonment. Raven Electronics followed in 1968 with a similar production model which also enjoyed only meager success.

The Mills-Jennings group (TJM), rapidly losing sales in Nevada to Bally, desperately endeavored to compete by making numerous machine model changes during 1965-1973. Mills first offered the hopper, mounted beneath the compact case, as an accessory to pay jackpots only. Later Mills incorporated the hopper inside the case eliminating the payout slides. In an attempted comeback Jennings developed the PANAMA, an electro-mechanical machine which adapted a hopper pay to a completely redesigned mechanism. The latter machines proved to be unacceptable to the Nevada market, and so they were unloaded in foreign countries.

In 1968 Mills built their first electro-mechanical slot, the MARK SEVEN, using the new Jennings PANAMA mechanism in a newly-designed steel case. They built fifty prototype machines and placed them on a trial basis in various casinos, but they were all returned with only two sold the following year, both discounted to the Liberty Belle. The rest of the machines were dismantled as that electrical components could be used in the SIERRA, Mills' next ill-fated model. Introduced in 1970, the SIERRA used the standard Mills mechanism and featured solid state

Ace 1956
FRONT OPEN



In tune with casino action, Ace was the first manufacturer to offer a front-opening case, a large illuminated award display, and plastic reel strips.

Mills 1962
COMPACT



Mills extremely successful front-opening case, using their standard mechanism, was miniaturized by putting the money bowl and the cash can in the stand below.

modular components in an all new case. There were less than 500 of these slots manufactured with the majority again sold overseas. All these machine variations proved to be futile, as they still incorporated the obsolete payout fingers limited to only nine functions. It was impossible for these models to compete with the versatility of the new electric circuitry employed by Bally.

The TJM Corporation realized that if they were to compete in the slot machine industry they needed a machine with the appeal and diversity of Bally's. In the fall of 1973 they responded with the Jennings 400 series, a line of electrics featuring solid state modular components, contact circuit boards which replaced the payout fingers, and motor-driven reels stopped by solenoids. The first experimental model, a five-line CRISS CROSS, was originally tested at the Liberty Belle. The 400 series was not an instant success, although as refinements were made they gained impetus and enjoyed many sales in Atlantic City. In February 1977 TJM shut down the Linden Street factory in Reno and moved the equipment to Chicago where slot manufacturing continued. The same year Joe Finnegan bought the distributorship of the Mills-Jennings machines. He acquired the manufacturing rights in 1979, operating as the OTX Corporation with himself as major stockholder. With the introduction of the Jennings electric, TJM discontinued manufacturing the Mills Line with the exception of filling overseas military orders. The company turned out the last Mills machine in 1979, then sold the tooling two years later to Ben Coleman of Sparks, Nevada. Doing business as Ben's Coin Machine Service, Coleman manufactured replacement parts for collectors who possessed innumerable Mills machines which had been built since 1931.

In 1973, with Pace gone and Mills removed from the domestic market, the Jennings machine remained as the only competition to the Bally giant. During that year the J. P. Seeburg Corporation introduced another electro-mechanical slot. Well-known since 1907 as manufacturers of coin-operated pianos, juke boxes and amusement machines, Seeburg's venture into slots proved to be little competition until 1978 when New Jersey legalized gaming. The company renamed its slot division GDI (Gaming Devices Inc.) and briefly enjoyed fair sales. Also enticed by the New Jersey market and entering into the manufacture of microprocessor slot machines were Concorde (Encore Industries Inc.), Gamex Industries Inc., Omega Products and Summit Systems Inc. In the mid-1970's Fortune Coin Company, formed by Walt Fraley and Stan Fulton, developed the first video slot. International Game Technology (IGT) purchased the company in 1978, which soon utilized the long-odds capability of a video slot to promote the giant jackpot craze of the early 1980's. In 1982 IGT began distributing the Ainsworth REEL machine made in Australia. Bell-Fruit Manufacturing, an English company which produced both microprocessor reel and video slots, also entered the Nevada and New Jersey markets.

The basic mechanics of the bell slot remained virtually unchanged from that of the original LIBERTY BELL machine until Bally's popularization of electricity in slot machines in the mid-1960's. Since then there has been a number of transmutations; changes have been in the hopper pay, minimized mechanical components, and almost universal multi-coin play, a feature which has magnified both player appeal and the machine's earning capacity. In the 15 years from 1965 to 1980 the number of slot machines operating in Nevada has multiplied three and a half times and the annual earnings have soared from approximately \$100 million to more than a

billion. Prices have increased in similar proportion. In 1967 a single coin Bally model 742 cost only \$795 and the five-coin 809 multiplier brought \$895. In 1982 the electro-mechanical 809 sold for \$2,800, the E model counterpart brought \$3,400 and the wide-reel dollar slot costs \$5,195. Similarly, a Jennings model 721 starts at \$4,400.

Another consequential change has been the continued escalation of player win. Before 1950 the general payout percentage was under 80%. The standard payout of a pre-1975 Bally machine was 84-85%, with an optional liberal percentage of 87-88%. This changed drastically with the success of the 93-97% high-win dollar machines, popularized after 1976, which influenced competitive casinos to alter the payout of smaller denomination machines. In the summer of 1980 Harold's Club in Reno started an advertising campaign flaunting high slot pay-back up to 97.5% to the customer. Today they claim there are no longer any machines in the club that retain more than eight percent.

The popularity of casino slots also has continued to soar. In mid-1983 a survey revealed that given the choice, 37% of the patrons preferred to play slot machines. The casino's former most popular games, twenty-one and craps, trailed badly at 22% and 16% respectively. The slot machine in the casino age has come alive!

Bally Revolutionizes the Casino Slot

In 1963 Illinois repealed its law prohibiting the manufacture of gambling devices, thus enabling Bally of Chicago to produce bell machines which would ultimately revolutionize the casino slot. The end product was an adaption of features they had first used on the 1941 CLUB BELLS console, a three-coin multiplier which they continued to use for another ten years until the implementation of the 1951 federal Johnson Act. After 1963 Bally used the same basic mechanism as well as the electro-mechanical circuitry, multiple-coin play, and a payout unit capable of dispensing numerous different pays in various amounts.

Conversion of these features from a console slot to a casino slot was reasonably simple once Bally had perfected the hopper payout, which replaced the single-coin slicer used on all the early console machines. With only a few refinements, the mechanism was fitted into a front-opening case, thus spawning the modern casino slot. The first machines, developed from their original MONEY HONEY made a large impact upon Las Vegas in 1964.

The dynamic impact occurred in 1967 when they introduced the 809, a five-coin multiplier, following a year later with the 831, the first three-line machine. These two slot machines popularized the multiple-coin play now universally adopted in casinos.

By 1969, though in the slot manufacturing business only six years, Bally virtually monopolized the Nevada market for new machines. Their immense success was due to the electro-mechanical circuitry and the large reserve of coins in the hopper which was capable of paying the numerous jackpots obtainable in multipliers and the multi-line machines. Meanwhile the long established Mills and Jennings firms maintained the awareness of an ostrich, refusing until 1973 to abandon the obsolete pay fingers which severely limited the variety of machines which they could build. Their new machine development was unimaginative, resorting to imitation and offering only three, five and eight coin multipliers plus a double progressive.

Bally 1967
809



A landmark machine, this first factory built 5-coin multiplier set the stage for universal multiple coin play.

In stark contrast, Bally Manufacturing was a master of innovation, development, manufacturing and salesmanship, all of which had been perfected during their long-time leadership among pin games, arcade machines and numerous pre-1950 coin-operated gaming devices. The Chicago factory received a large input for designing new machines from C. D. "Doc" Kaufman, Nevada's Bally factory representative, and Si Redd, owner of the Bally Distributing Company in Nevada. Redd purchased the Reno distributorship in 1967 from Dick Graves, former owner of the Sparks Nugget, and the Las Vegas distributorship from Mickey Wichinsky five years later. In 1971 "Handsome but Honest" John Wylie opened a branch office in Elko to serve that community and the rapidly developing northeast border towns.

Bally bought back the distributorships in 1975 with Redd remaining on as president for another three years.

The resulting deluge of different machines, unparalleled in the development of the bell slot, continued in 1969 with the 847 CONTINENTAL, a four-reel six-coin multiplier which pioneered the left-to-right and right-to-left pay; the 873, a five-line machine; a complete line of multiple-coin progressive slots; the 1005, a three-line five-coin multiplier that accepted up to 15 coins; and the 1019 BIG WIN, a five-reel six-coin nickel machine which offered a \$3,000 jackpot. Another important first occurred in 1975 when Bally transformed a single-coin 742 into a high percentage payout jackpots-only dollar machine. A circle of these machines were placed in Karl's Silver Club in Sparks in February 1975, giving birth to the first dollar carousel. This concept was a tremendous success, although the frequency of payouts required two attendants to keep the hoppers full.

The dollar machine play boomed when Bally followed with the 1088, 1090, 1091 and the 1096, a series of high-pay frequency machines which created phenomenal player appeal. The wide three-reel mechanisms used with these slots were placed in a five-reel cabinet. Later in 1976 Bally introduced companion low-boy models using an intermediate reel size in a four-reel cabinet. Both of these configurations enormously popularized the dollar machine play, and carousels sprang up in casinos throughout the state. These machines were also extremely popular as quarter machines, with the reel combinations later adapted to nickel play.

The next well-received application of dollar play was in 1980 with the model 1202, a five-reel three-coin progressive

unit. The "link progressive" carousels made possible giant jackpots of up to \$385,000 as offered in the Hilton Hotel's "Pot of Gold." The ultimate machine for "high rollers" came in 1982 when a single-coin, four-reel Bally was rebuilt for the Tropicana Hotel in Las Vegas to accept a \$100 token made of one troy ounce of .999 fine silver. The awards, using baccarat symbols, are four 2's pay \$500; four 5's = \$2,000; four 8's = \$80,000; and four 9's = \$90,000.

During the 1970's Bally manufactured about 90% of the slot machines used in Nevada and outsold any single competitor in Atlantic City. Their machines are also distributed in every foreign country where slots operate legally, making their overseas sales even larger than the domestic ones. To update their machine and maintain a competitive lead, the Series E was introduced in 1980, which replaced the electromechanical circuitry with a microprocessor. To the player, Bally's new slot operates like any of the previous models, with the same familiar "feel" of the handle and reel action. The advantages of the electronic slot are increased security,

Bally 1968
831



The 3-line concept, previously used on consoles, soon became a standard feature in the industry.

reliability, simplified maintenance and a greater versatility of machine variations. The Series E made possible the 1212, the first ten-way machine, a five-line model which pays left-to-right and right-to-left. Fifty different E models were available two years after its introduction, and the Bally firm plan to offer up to 250 model variations in the future.

In 1982 the Sound Machines, a new line of E models, were designated as the 2000E Series. A music chip added to the microprocessor provided a brief melody with each coin insertion, again when the reels spin and once more with each payout. These attention-getting slots are accompanied by brilliant futuristic graphics.

The Bally video slot was approved by the Nevada State Gaming Commission in December of 1982. Early the following year these machines were enhanced with clever animation, a practice already in use in their video arcade games. When a cherry pay is hit, three smiling faces appear on the fruit; on a bell award the clapper clangs back and forth; and when the bars align jackpot symbols explode. The Buck Rogers Age has visited the slot machine!

The first Bally video carousel was installed in the Las Vegas Golden Nugget. The 22-machine link progressive jackpot was started at \$1,001,000, tantalizing players with the dream of becoming an instant millionaire.

Bally, operating initially as Lion Manufacturing Corporation, has enjoyed instant success from the time they introduced their first machine, a pin game called BALLYHOO, in 1931. Ray Maloney, founder and president for almost three decades until his death, oversaw an endless string of amusement devices which included arcade equipment, kiddie rides, beverage vendors, popcorn vendors, gun games, bowling and shuffleboard machines. In the gaming field before the Johnson Act of 1951, Bally produced numerous counter games, horse race machines, console slots, trade stimulators and a combination nickel-quarter slot called the DOUBLE BELL.

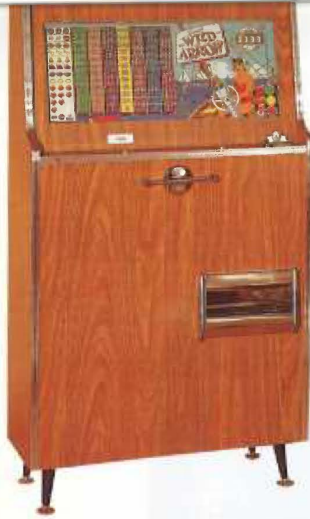
In 1962 the Bally company was purchased by a group of investors headed by William O'Donnell, who had been the sales manager since 1958. The progressive company continued on with their large variety of coin-controlled machines, and innovation exploded in the mid-1960's with the development of numerous pace-setting slot machines. In December 1979 Bally further diversified by opening Park Place, a \$300 million resort hotel casino complex in Atlantic City, New Jersey. This proved to be unfortunate for O'Donnell, as he was denied a license by the New Jersey Casino Control Commission, forcing him to divest his interest in Bally and resign as board chairman. He was replaced by Robert Mullane. In 1981 Bally produced 96,000 Pac-Man machines, the biggest-selling video game ever until they sold more than 110,000 Ms. Pac-Man machines the following year.

Operating Bally's Park Place in Atlantic City introduced Bally to the potential of the hotel casino business. In the mid-1980's they increased their gaming properties purchasing the MGM Grands in Las Vegas and Reno - renaming them Bally's. In 1988 they acquired their fourth casino, the Atlantic City Golden Nugget, from Stephen Wynn. Concurrently, Bally began losing their monopoly in the production of slots after the advent of stepper driven reel machines. They received strong competition in this field from new companies that included Casino Electronic Inc., Sigma Games, Takasago, and especially International Game Technology and Universal Distributing. All the former manufacturers plus several others are also vying for the fast growing video slot market, which includes the increasingly popular draw poker machines.

Bally 1969
CONTINENTAL



A third dynamic change, left to right and right to left pay, revolutionized the format of modern bell slots.



Filling the Void

After the government outlawed the interstate shipment of slot machines in 1951, Keeney introduced multiple-coin console machines, with three rear projection read-out units that displayed the symbols. Because they didn't look like a conventional slot and paid out in free games they were able to operate in marginal areas. The Keeney multiple-coin, free play pin games, using bingo cards, also met the demand for gaming machines during this era.



Mills, Jennings & Keeney: Former Greats Merge

In 1930 Jennings developed the first electrically operated bell machine, the short-lived ELECTROVENDER. It was unique in that a motor activated the mechanism while a button replaced the handle. The Bally firm 33 years later returned to electricity, introducing a free-spinning reel bell slot utilizing electro-mechanical circuitry and hopper pay, making possible many machine variations. In an attempt to emulate their competition, both the Mills MARK VII and the Jennings PANAMA adopted the electro-mechanical circuitry and hopper pay in the late 1960's, though unfortunately retaining the obsolete payout fingers which limited the different models which they could build.

The TJM Corporation, owner of both Mills and Jennings, realized the need for an updated machine to compete with Bally. They discontinued both the Jennings and Mills electro-mechanical machines to pool all of their efforts into an all-new Jennings slot. The model 400, introduced in 1973, featured advanced solid state modular components with motor-driven reels and solenoid-actuated reel stop arms. This machine emerged seven years ahead of the electronic Bally Series E, but unfortunately Jennings lagged an equal number of years behind in exploiting the potential of possible machine variations available with electronic circuitry.

During these seven years the models offered were limited to a single-coin; 2, 3, and 5-coin multipliers a double progressive and 3 and 5-line machines. They did not capitalize on left-to-right and right-to-left pay, wide reels, or the high-frequency dollar slots with which Bally had been so successful. The company remedied this situation in 1980 when they introduced the 721 series, offering all of these features.

The Jennings 400 was developed by the TJM Corporation, a subsidiary of American Machine and Science owned by Wallace Carroll. The parent company purchased the Triner Scale, Jennings, Mills and Keeney companies, all coin-operated machine manufacturers, and combined them to form TJM. In 1977 the corporation closed the Mills factory at 135 Linden Street in Reno and moved all the Mills and Jennings tooling to Elgin, Illinois where they continued to manufacture the Jennings Electric. In December of the same year the OTX Corporation, later renamed Mills Jennings, headed by Joseph Finnegan, purchased the Nevada distributorship rights to the TJM machines. They opened an office with a warehouse at 120 Linden Street, Reno, and the following year opened another office in Las Vegas. In January 1979 OTX became the distributor for Jennings machines in New Jersey and three months later purchased the TJM Corporation from AM&S, with the latter retaining 28% of the common stock.

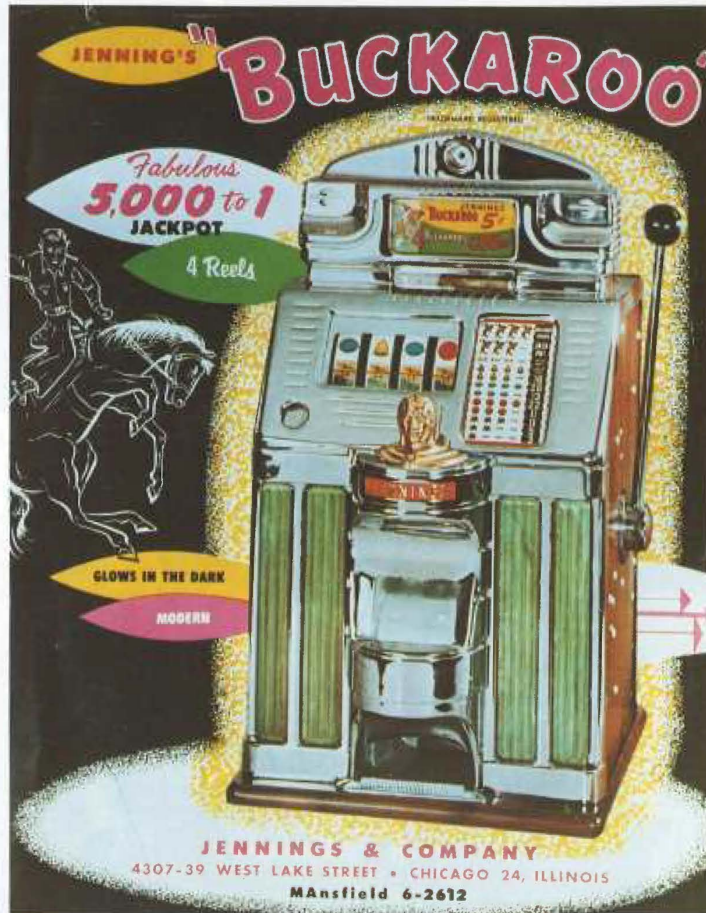
The poor sales of the Jennings 400, hindered by a limited number of models, reached a low in 1977 with total annual revenue of \$17,458. The following year Reno's growth boom soared sales to \$2.7 million but this dropped the next year to \$1.1 million when production was curtailed during ownership transition. OTX's banner year of 1980 saw the sale of 1,500 machines with revenues of \$8.8 million. The dramatic increase in business resulted from the New Jersey Casino Control Commission adopting a regulation which provides that no casino may purchase more than 50% of its slot machines from any single manufacturer. Jennings supplied approximately half of all the slot machines to Caesar's Boardwalk Regency, the Sands, Harrah's Marina, the Golden Nugget, Playboy and the Claridge casinos. During the year 1980 Jennings regained their former position of second largest producer of bell slot machines, although the following year sales declined. They continued selling a limited number of conventional 3-reelers to Atlantic City and Maryland. After the mid 1980's Mills-Jennings began specializing in video Keno, Draw Poker and Twenty-One slots

Jennings Bucks Ahead



Succeeding the Sun Chief Series in 1959 was the Jennings Eldorado line with new top castings featuring a large light-up sign.

A member of the Sun Chief family, this slot was the first conventional 4-reel bell. Four buckaroo symbols paid \$250 on nickel play and then-amazing \$5,000 on a dollar machine. The Nevada Club capitalized on the machine, advertising it in the local newspaper on New Year's Eve, 1955.



HOME OF THE NEW 4-REEL "BUCKAROO"

REGULAR 3 REEL PAYOFFS PLUS 4 REEL BONUS

NO LEMONS OR OTHER BLANKS

\$25,000 NEW KENO LIMIT

RENO'S FAMOUS
NEVADA CLUB
224 North Virginia

Ace 1956
FOUR REELER



Tony Mills, the last of the family to run their 72-year old business, stands in the Linden Street plant in Reno in 1963. Also pictured are the mechanisms used in their new front-opening COMPACT machine. Updated for casino play, this old Pace slot redesigned with a large award card had a club handle and a new bottom front casting.



During the 1960's doubles reached the height of their popularity, enticing players with the large jackpots offered by the multiple reels. Operators also benefitted as the state was only levying taxes per handle.

Mills 1968
DOUBLE

The last of the Pace-Ace-Space line, the dependable ELECTRIC (right) sold in only limited quantities in Maryland and in the overseas markets.

A Little Too Late

Once Bally began to dominate the Nevada market with their revolutionary bell slot, Space, Jennings and Mills all attempted to make a successful electro-mechanical machine with a similar hopper pay. All three manufacturers failed as they continued to use obsolete payout fingers which could not perform the multiple functions of the Bally slots. The overwhelming acceptance of Bally machines even influenced the designs on the cabinets of their competitors.

Space 1968
ELECTRIC



Jennings 1967
INDIANA

Although sophisticated and dependable, the electromechanical Jennings never caught on in Nevada. The firm mostly sold the INDIANA to overseas customers.

Mills 1970
SIERRA



In 1968 Mills built an entirely new solid state machine dubbed the MARK VII (p. 230), a colossal failure. Two years later they retooled, using the same electric components and styling it after a Bally. Less than 600 machines reached the market.



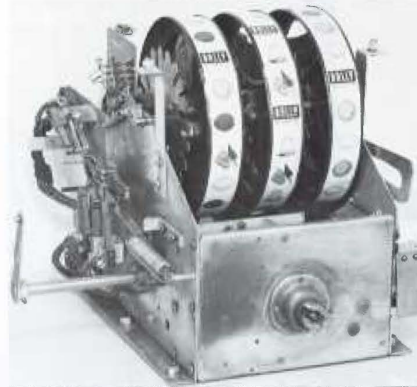
Birth of the Bally

Bally 1947
TRIPLE BELL



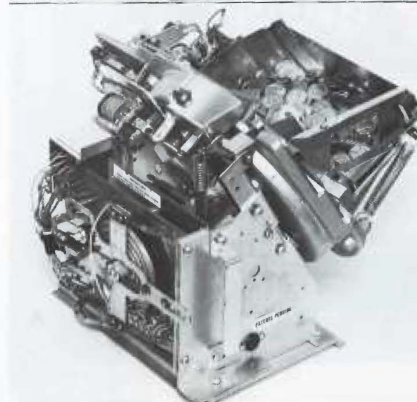
The mechanism used on the 1947 Bally TRIPLE BELL is essentially the same as that used in the current bell machines (below). All that was needed was the adaption of a new case and the addition of a hopper payout unit.

1947 Bally TRIPLE BELL mechanism



Bally 1964
742A

1964 Bally
Hopper

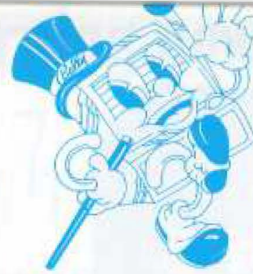


Bally 1975
1090



Dollar Play Surges

The secret of the sensational dollar machine play is the high frequency of pays and the abundance of small jackpots coupled with up to a 97.5% payout. The two most popular dollar slots are the 1090 above, a 3-coin multiplier, and the 1088 3-COIN BUY. Both of these machines are the backbone of modern carousel play.



Significant Bally Slot Machines 1963-1981

Year	Model Name	Description
1963	742 Money Honey	3-reel, 1-coin
1964	785	3-reel, 1-coin progressive
1965	791 Side-By-Side	Two 3-reel, 1-coin machines siamesed
	808 Double Up	3-reel, 2-coin multiplier
1967	809	3-reel, 5-coin multiplier
1968	815 Liberty Bell	4-reel, 1-coin
	831	3-reel, 3-line pay
1969	847 Continental	4-reel, 6-coin multiplier, pays both ways
	873	3-reel, 5-line pay
1970	889	3-reel, 3-line pay, progressive
1971	922	3-reel, 5-line pay, progressive
1972	937 Lucky Twin	5-reel, operates as two 3-coin multipliers
1973	950 Big Shot	4-reel, 3-line pay, progressive JP only
	952	4-reel, 5-coin multi., progress.
	988 Deluxe Progressive	4-reel, 3-line pay, progressive
1974	1005	3-reel, 3-line pay, 15-coin multiplier
	1008 Deluxe Multiplier	4-reel, 6-coin multiplier
	1019 Big Win	5-reel, 6-coin multiplier
	1034 Lucky Sevens	3-reel, 6-coin multiplier
1975	1044 Gold Rush	3-wide-reel, 3-line pay, western symbols
	1077 Bounty	3-wide-reel, 3-line pay, fruit symbols
	1088	3-wide-reel, 3-coin buys-a-pay
	1090	3-wide-reel, 3-coin multiplier
	1091	3-wide-reel, 3-line pay
	1096	3-wide-reel, 5-coin multiplier
1976	1102	3-reel, low boy, 1-coin dollar JP only
	1112	3-reel, low-boy, 5-coin multi.
	1113	3-reel, low-boy, 3-coin buys-a-pay
	1114	3-reel, low-boy, 3-coin multi.
	1115	3-reel, low-boy, 3-line pay
1977	1128 Medalist	5-reel, 3-coin, plays as three machines
1980	1202	5-reel, 3-line pay, progressive
	1203	4-reel, 3-line pay, progressive
	E1208	4-reel, 6-coin multiplier
	E1209	3-reel, 5-coin multiplier
1981	E1212	3-reel, 5-line pay, pays both ways
	E1224	3-reel, 3-line pay, pays both ways
1982	2000E Sound Machines	E models with sound effects
	V Video Machines	Video reel machines with animation

The Series E microprocessor slots, the sound and the video machines are available in most of the previous models. These new lines are designated with an E, V or a 2. The 1090 would become an E1090, a V1090 or a 2090E.

The Big Win

Win a million for three dollars! This Bally model E1238 and its companion the 1202, both 5-reel 3-line pays, were made for a carousel of slots connected to one progressive jackpot. When five 7's are obtained on the bottom line of a Hilton Hotel "Pot-O-Gold" slot the player can win up to a quarter million. The lucky individual is then eligible for the yearly Slot Championship Tournament playoffs in which the winner receives \$1 million.



Bally 1980
E1238

In the early 1970's Bally began a series of progressive slots, with two jackpot meters, that utilized 3, 4 or 5 reels combined with 3 and 5-line pay.



Bally 1970
889

Bally 1983
E2088



Bally Manufacturing Company in 1968 revived the famous Liberty Bell name which was first used on the Fey counterpart seven decades earlier.

The first coin buys the cherries, the next coin the oranges, bells and plums, the third coin the bars and the last coin plays for the giant 1,000 coin jackpot. This machine evolved from the highly successful model 1088 3-COIN BUY which introduced the first three coin functions.

You'll tip your  to earning power of new

LIBERTY BELL SPECIAL

4 REEL SLOT MACHINE BY *Bally*

**5000 COINS
TOP JACKPOT**

LIBERTY BELL SPECIAL	
ON CENTER LINE pays	\$250.00 TOTAL
ON CENTER LINE pays	\$10.00 TOTAL
ON CENTER LINE pays	\$7.50 TOTAL
ON CENTER LINE pays	\$7.50 TOTAL

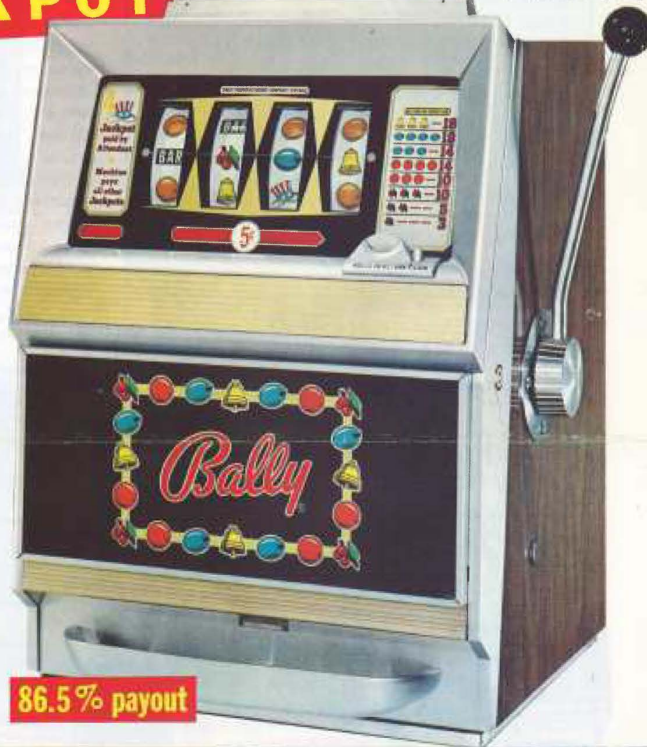
Only 23¼ in. wide,
including handle
17½ in. deep
33¼ in. high,
including Top Sign

Four Uncle Sam Hats, brilliant as a red-white-and-blue banner on center line, ring up* 5000 coins—a whopping \$250.00 on the nickel play machine. Other juicy jackpots automatically tumble out of the Bally Bottomless Payout Hopper for three Hats, four Liberty Bells, three Bars. Plenty of old favorite bell fruit wins keep the E-Z Pull Handle busy between jackpots.

Famous Features

LIBERTY BELL SPECIAL includes all the elegant styling, mechanical perfection and other famous features of Bally 3-reel models, the world's top selling slot machine.

Give patrons the added attraction of a fourth Bally-bright reel, the extra thrill of going for gigantic jackpots. Enjoy record-smashing play and profit. Order sensational Bally LIBERTY BELL SPECIAL now.



*Paid by attendant

BALLY DISTRIBUTING CO.
A DIVISION OF CURRENCY GAMING DEVICES

1980: Electro-Mechanical Slots Succumb to Microprocessors



Summit Systems, Inc., a California based company, sold a limited number of microprocessor conversion kits, small enough to fit in a pair of hands, to replace the more than 400 electro-mechanical parts used in a pre-1980 Bally slot



Bally
E 1000
Series
1980
to
1982

*E-1209
5-Coin
Multiplier*



The traditional all-mechanical slot, limited by its slide & finger pay, became obsolete after Bally introduced the electro-mechanical slot in 1964. Then sixteen years later, Bally, continuing the use of the same mechanism, hopper and case, replaced the electro-mechanical components of these machines with microprocessor technology, naming the new line Series E. For two decades Bally slots dominated the market. Then after 1985 slots with stepper motor-driven reels, with an almost unlimited combination potential, began replacing the prevalent Bally fruit machines. Orange, plum and bell symbols were no longer used, because the stepper slots, operating like "jackpot only" machines, needed a blank between every symbol to enable enormous wins of thousands of coins, or even millions.

Bally E 2000 Series 1983-1986

E-2209 5-Coin Multiplier

E-2212 5-Line Pay

E-2226 3-Coin Multiplier

E-2224 3-Line Pay



The Mills Jennings Company

Mills and Jennings companies, the two biggest names in the slot machine industry for five decades, were sold to the TJM Corporation and merged in the 1960's, were no longer competitive in the 1970's and ceased production by the mid-1980's.



Jennings 1973
400 SERIES

The all new 400 electric featured solid state modular components that enabled any model to be easily converted to another. Using the same cabinet, mechanism and electronic components as its predecessor, the model 700 below was redesigned to utilize the already popular wide reels, left to right and right to left pay, and high frequency payout combinations.

Jennings 1980
700 SERIES



The mechanism incorporates motor driven reels, solenoid stop arms, and contact assembly boards to register the symbols on the reels. This unit is connected to the solid state logic control board, the brain of the machine, which controls all the functions of the slot.



The 4-reel, 3-line FORTUNE video machine, top left, was the ideal slot for progressive jackpots. Million dollar carousels, with these machine linked together set the stage for Megabucks. The 1966 Raven Electronic KENO machine, left, was the forerunner of today's microprocessor counterpart.



On March 6, 1986 a network of 125 MEGABUCKS 3-coin dollar progressive slots linked together in nine casinos around Nevada made its debut. Three years later carousels were located in over 100 casinos and had paid off many jackpots between 2.2 and 6.8 million plus more than 600 Mega-Mini jackpots which have reached over \$12,000. I.G.T. owns the slots and pays the large wins with an annuity spread over 20 years.



The success of MEGABUCKS led to a similar inter-casino linking of 2-coin quarter stepper slots (P.2) initiated in February of 1989 and dubbed QUARTERMANIA.. The large jackpot starts on these very popular IGT machines at \$400,000 and has reached over one million..



Adapted for the small coin player, NEVADA NICKELS uses the same inter-casino concept. The 3-line 5 cent slots are capable of building a progressive win over \$200,000



Embellished with a 1950's juke box theme, the FABULOUS 50's, 2-coin, 50 cent, linked slots were introduced in 1991. The large jackpot, in the theoretical \$2 million dollar range, starts at \$750,000, and is obtained by lining up four 50's platter symbols.



The Electronic Age

The age of electronic casino games was inaugurated in 1964 with the Nevada Electronics solid state twenty-one machines. These sit-down slots were built in both two- and four-player configurations.

By the mid-1970's other manufacturers had built solid state twenty-one, dice, roulette, horse race and poker machines. The most successful of these was the Dale Electronics' POKER-MATIC slot introduced in 1970. Built in Las Vegas, these high-earning machines remained popular throughout the decade. Four years later Dale introduced a classic dice machine, dubbed the AUTO CRAPS, which they soon abandoned due to weak earnings. By the mid-1970's Bally Distributing had taken over the Raven line, and it began to manufacture COMPUTER TWENTY ONE, poker and their own dice machine named REDD's DICE. In addition they made the BIG BERTHA, a giant seven-foot machine which became an attention getter in many casinos.

Another by-product of the computer age emerged in 1966 when Wendell Reich's Nevada Air Products developed the first solid state three reel bell machine which substituted rear projection read-out units for the reels. After the first prototype was tested, financial problems and lukewarm public acceptance led to abandonment of the project. Dick Raven and Paul Lempke joined by Bill Pennington of Raven Electronics produced a similar handleless solid state bell slot in 1968. The frequency of various payout combinations was determined in time increments randomly selected and then projected on the face of the machine. Raven produced a thousand of these machines which included both a three-line and a five-coin multiplier. Production stopped with these thousand machines in 1971 when manufacturing costs exceeded the \$1,800 selling price and their player appeal was not competitive with the Bally slot. Raven Electronics sold out to Bally Distributing in 1971-72. That firm also figured prominently in the electronic twenty-one machine.

A milestone for electronic slots occurred in 1975 when Walt Fraley and Stan Fulton's Fortune Coin introduced the first video bell slot in Las Vegas. Although the \$2,500 solid state machine operated flawlessly, it originally received mild acceptance by the casinos who mostly purchased it as a novelty machine. It was not until near the end of the decade that its real worth would be apparent, first when casinos utilized it in the giant jackpot carousels and later when it was converted to a draw

Nevada Air Products 1966
ELECTRONIC



Rear projection read-out units were substituted for the mechanical reels on this first video slot. Only one handleless solid state prototype was constructed, unfortunately ahead of its time.

poker machine. In July 1976 Bally built a black and white video draw poker, and eight months later Fortune Coin countered with a colored version of the same game.

A new slot manufacturing giant emerged in 1975, guided by the foresight and coin machine expertise of its founder, William "Si" Redd. After selling the Nevada Distributing Company to Bally Manufacturing, Redd arranged for \$1.5 million to be subtracted from the purchase price so that he could keep the rights to the electronic games, including the video slots, the Raven machines, BIG BERTHAS, and the COMPUTER TWENTY ONE and blackjack machines. The new enterprise, dubbed

A-1 Supply, acquired Nutting Enterprises, a pioneer video game manufacturer, and the new company began to make blackjack and draw poker console machines. On September 1, 1977, A-1 incorporated a subsidiary called the Antique Gambler to restore and sell large quantities of collector's machines. The following year A-1 mushroomed with the acquisition of Fortune Coin and the lucrative Pennington and Bennett slot route. The company renamed its new slot route Casino Services; combined with existing locations it yielded revenues of \$7.8 million during the next year. This vaulted to \$18 million in 1981, and it became by far Nevada's largest slot route, operating 4,800 units. In 1979 the flourishing business, operating facilities in Reno and Las Vegas adopted the acronym Sircoma (SI Redd COin MACHines). In 1981 Redd changed the name again—this time to IGT (International Game Technology) and the company went public with a stock offering in September. By year's end it enjoyed revenues of \$60 million; it had become the video gaming giant of the industry.

IGT's Fortune video slots, especially the model 701 draw poker, became an overwhelming success as the 1980's began. With a monopoly on video draw poker machines, the company listed the selling price as high as \$12,500 per unit which resulted in protecting their operating route. Because of their tremendous earning potential, the cost was not a deterrent to many clubs which purchased these machines, thus contributing to product sales reaching \$32.6 million in 1981. Such a large selling price lured a dozen more companies to enter

the lucrative video game market including Bally, who in July 1982 developed a video draw poker machine selling for \$6000. No machines were sold, however, because IGT contested Bally's right to sale on grounds of a breach of an earlier contract with "Si" Redd, and litigation ensued. The matter was resolved in December 1982 when Bally agreed to pay IGT \$2.5 million in damages. Six months later Bally reintroduced their poker machine.

The video slot, still in its pioneer stage, has already undergone many alterations with the change from solid state electronics to the microcomputer. This sophisticated circuitry produces a clearer picture image, greatly magnifying the potential variations of the machine; and with the use of a multi-processor all the different games can be consolidated into one basic computer. Synthesizers create animation capable of imitating the sounds of the cards being shuffled, the dealer talking to the player, and the sound of stopping reels.

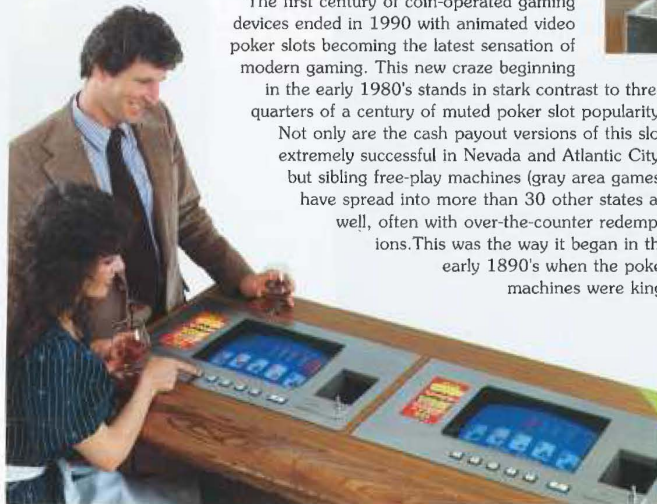
Computer use on the video bell slots has greatly influenced the long odds and the variation of slot pays. The original Fortune Coin machine was available in 45 and 64 stops. The IGT-produced video slot in 1982 had 25, 35, 52, 63 or 84 stops. The Nevada Gaming Commission prohibits the use of 84 stops on the four-reeler, for the long-shot odds could extend to 150 million (84⁴ × 3) on a three-coin machine. The 84 stops on a video three-reel three-line machine still reaches 1.8 million, while on a similar conventional 22-stop reel machine the odds are limited to 32,000.

The Fortune machine was ideal for the giant jackpot carousels popularized during the early 1980's. Model 611, selling for \$6,850 in 1982, made possible the million dollar jackpot. The machine provides the illusion that it is easier to line up four jackpot symbols on the video slot than the five symbols on a mechanical reel machine. Actually the odds are reversed, for on the three-line, 22-stop five-reel Bally model 1202, popularized by the Hilton Hotel's "Pot of Gold," the maximum odds are 15.5 million, while the possible odds on the 63-stop four-reel video are three times as great. The first time the dollar carousel paid the large prize was in July 1981 at Caesar's Palace, Lake Tahoe. The machine hit the jackpot when the meter reached \$992,012.15, but the club officials generously decided to round off the *near* million to an *even* million dollars. During 1981 the successful progressive carousel concept spread to both poker and twenty-one video games.

In 1982 the video slot represented approximately 10% of the total coin-operated gaming machines in use. This proportion will increase as more sophisticated video games are introduced, replacing a portion of both the conventional slots and the live table games. The trend toward slot machines replacing the traditional dealer table games is gradually developing because of high labor costs. The familiar live keno games need many personnel to operate, consuming about eight minutes between tickets, while the keno slot takes only about 12 to 15 seconds to play the same game. Also machines may be adjusted to pay out higher percentages—between 85% and 92%—against only about 70% for the "live" game. Perhaps in a few decades the gambler may look back at "live" games as part of the industry's Stone Age.

The first century of coin-operated gaming devices ended in 1990 with animated video poker slots becoming the latest sensation of modern gaming. This new craze beginning in the early 1980's stands in stark contrast to three quarters of a century of muted poker slot popularity.

Not only are the cash payout versions of this slot extremely successful in Nevada and Atlantic City, but sibling free-play machines (gray area games) have spread into more than 30 other states as well, often with over-the-counter redemptions. This was the way it began in the early 1890's when the poker machines were king.



The first production video 3-reel slot machine used solid state electronics and read-out units instead of mechanical reels. The two most popular models were the 5-coin MULTIPLIER and the 3-LINE PAY, which paved the way for future video TV slots.

Raven 1968
THREE LINE



By the mid 1980's video poker slots were installed in nearly all the casino bars and most of the neighborhood taverns throughout Nevada. The fascination and convenience of built-in bar poker had soon developed into a mania.



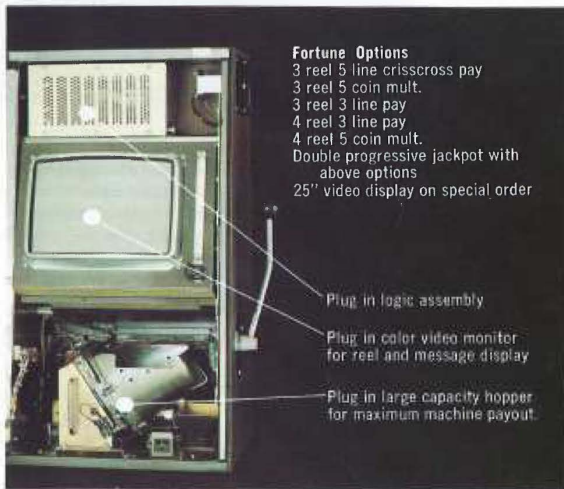
A sixth coin is added to inter-casino linked video poker slots to build a progressive jackpot that is won by lining up a Royal Flush in sequence: 10 through Ace.



First TV Slot

Fortune Coin 1975
THREE LINE PAY

Developed in 1975 by Walt Fraley in Las Vegas, Fortune Coin Slots were the first to use a television screen. Although casinos generally regarded them as novelty machines, these slots functioned flawlessly. The Fortune Coin video slot has only three basic components—a solid state logic assembly, a television set, and a hopper. The latter and the handle are the only two moving parts. At the time of its introduction it was a mathematicians delight with 45 symbol positions per reel enabling 91,125 total combinations.



International Game Technology's most important acquisition was its 1978 purchase of Fortune Coin Company. They adapted the latter's machines to a wide range of video slots by changing the logic assembly and the front door components. Sales of its machines then soared, catapulting IGT into the second largest manufacturer in the slot industry, though specializing only in video slots.



William "Si" Redd owned Bally Distributing in Nevada prior to his founding IGT. His foresight in purchasing Fortune Coin was proven out by the rapid development of video games.

Poker Mania

IGT 1979
DRAW POKER

Draw Poker, America's favorite home gambling pastime, has always been a popular coin-operated gambling device. The 1901 Fey DRAW POKER slot was the first in a long line of card machines without cash payouts. It was not until 1970 that Dale Electronics introduced their automatic payout POKER MATIC, with machines then becoming prevalent in Nevada casinos. The popularity of the Dale slot lasted a decade until the advent of the new IGT video poker. Banks of these machines operated in all casinos as well as one or two units in small locations.

The photo, taken in the Liberty Bell in Reno for an IGT advertisement, promotes their amusement Draw 80 Poker. This very popular game is sold nationally.





Dale 1970
POKERMATIC

IGT 1978
TWENTY-ONE

The first popular automatic paying draw poker slot kicked off the poker machine craze when it was brought out in 1970. The solid state machine, a 4-coin multiplier, used read-out units for the numbers and suit symbols of the cards.



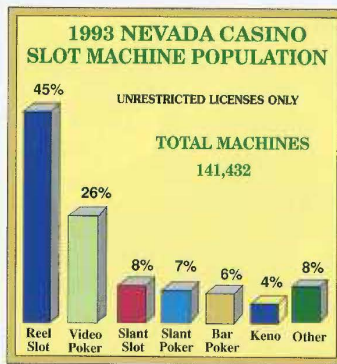
Delivering most of the action of a live 21 game, the player can bet one to eight coins, double down, and win on six cards totalling 21 or less.

Electronic Casino Games



IGT 1979
BIG RED KENO

Replacing Raven's button-controlled Keno, IGT's video game used a light pen to select the numbers. Players can choose 1 to 4 coin play and 2 to 10 spot tickets, with the latter paying up to 40,000 coins.



Here a player can bet 1 to 20 coins on a single roll of the dice by betting on 7, 11, 12, 6 or lower, 8 or higher, the field or "any craps." Winnings can be held in the machine allowing a maximum bet of 500 coins, with the largest possible win awarding 33-to-1 for a possible maximum award of 15,500 coins.



Built by Dale Electronics in Las Vegas, this was a complete dice game allowing up to 15 different bets to be made. The too-liberal solid state machine was abandoned due to poor "box hold," or net earnings.



Dale 1974
AUTO-CRAPS

1985
Sigma
DERBY

The 10 player realistic horse race game, found in over 30 of the major casinos, is a prominent focal point because of its large size and the audio and visual animation as five horses gallop around the track. A player can bet 1 to 20 coins on 10 different horse combinations.



Games of Nevada
1985 POST TIME

The video horse race game features a micro computer laser disc player controlling five races with the exciting sounds of horses thundering down the track and an announcer calling the game.

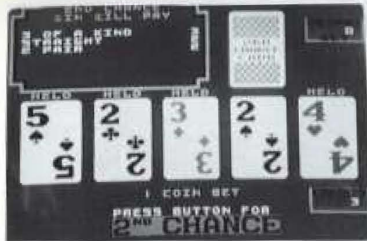


Games of Nevada
1988 AUTO ROULETTE

In Electronic roulette, a single person game, a player selects numbers and / or combinations by touching a computerized pad that duplicates a felt roulette table. A wooden roulette wheel spins after the player pushes a button that fires the ball. The wins pay the same odds as in a "live" game.

IGT 1981
TV DICE





**Second Chance
Featured When
One Added Card
Can Result In A
Straight or Better**

After completing a regular game of video draw poker with the standard awards credited; if one added card can result in a straight or better the upper portion of the screen changes displaying the wins possible with the sixth card. The player can then bet multiple credits or coins that the additional "2nd Chance Card" will improve his hand.



Bally 1988
2ND CHANCE
DRAW POKER
V 5000 plus



Bally 1965
REEL DEAL

Gimme a Second Chance!

The Model 816 symbols are all facsimiles of playing cards. Payouts are awarded when 3 cards of the same rank appear on the center-line. After a no win spin, a Hold signal is lit. The player may then press the Hold button or buttons to hold desired reels, play a second coin and spin reels not held to try for a second chance of winning. The same second chance feature was also used on the 1965 QUICK DRAW, Model 802, which had standard fruit symbols.



Caille 1905
HY-LOW
The first coin played in the slot on the right spins all five reels, but on a second draw to revolve any other reel or reels to fill any particular hand, an extra coin has to be played in each slot which are numbered to correspond with each reel. Although, made for nickel play, they were also an ideal penny machine, as players will draw to more hands and take extra "chances."

Meet the Dealer



The microprocessor boards, right, control the operations of each poker hand.

Video poker machines use the three basic components as the original 1975 Fortune Coin slots (page 216) - a television monitor, a coin hopper and a logic assembly. Today the latter is a microprocessor as pictured below. The top half of the left board drives the motors and various functions necessary for the slot's operation and the board beneath regulates the sound. The right board is the brain performing all the duties of a dealer. It shuffles the cards, deals, registers the cards held, flips out the additional "hits" requested: then with each win calculates the appropriate coins to pay and sends a command to energize the hopper motor which drives the coins up and out of the long payout chute.



The hopper unit, above, controls the vital banking functions.

A New Look for the Nineties

IGT
1991



The new style cabinet, with the rounded top, gives these games a distinctive appearance that resulted in popularity with both the player and today's opulent casinos.

Slant Top Machines, with a 30 degree incline, are available in both poker and standard reel slot configurations. Not only are they very attractive, they have added player comfort allowing a player to sit or stand while playing the game. In two years, 1991 to 1993, the ratio of Slant Tops in casinos increased from 9% to 15% of the total mix of machines.

Standard equipment for the machines of the nineties, the Bill Acceptor not only illuminates an enthusiastic player for stopping play for change, but also reduces the number of change personnel necessary.

Bally
1993





Belly glasses used by Aristocrat, Bally, IGT & Universal during the early 1990's

STEPPER SLOTS



Stepper motor-driven reel slots were first manufactured by JPM in Wales, U.K. for use on the Nudge machines that are popular in the British pubs. The name is derived from the option of moving reels back or forward after they have stopped. In 1985 Universal Co. of Japan introduced a slot, utilizing stepper motor-driven reels and all jackpot symbol reel strips, that took the industry by surprise. IGT, Bally and new companys began producing the popular stepper slots that were soon replacing the prevalent Bally fruit machines.

JPM 1982 SILVER GHOST IGT Reel Mechanism



After the money is inserted, and the reels are spinning, a random number generator selects the stopping position for each reel. The reels are driven and stopped by a stepper motor which receives a signal from an optic sensor. Although the reels have 22 symbol locations, there are generally 32 or 64 stopping positions. The stepper-motors stops are in degree increments allowing the same symbol to be shown in three different positions on the pay line.



Early Lottery Type Machine

The player inserted a coin on the 1938 Mills TICKETTE, pushed in the slide and selected one of the nine holes in the base with a punch. Under these holes is a ticket with nine spaces, of which one or two are printed with awards. The player then pulls the ticket out advancing the ticket into sight to check for a winner.

Lottery Slot of the Nineties

On this video machine, the player may choose up to ten games. They include Poker, Bingo, Blackjack, Keno, 3-reel Slot, Pull Tabs, Magic Symbols or Instant Scratch Off.

Poker machines appeared in Australia as early as 1898. The AUSTRALIA, below, was patterned after the 1902 ROYAL TRADER (p. 10). Ainsworth Aristocrat began manufacturing machines, including the 1968 5 WAY Special, after 3-reel slots (dubbed poker machines) were legalized in 1953.



Inventions by Edmund Fey

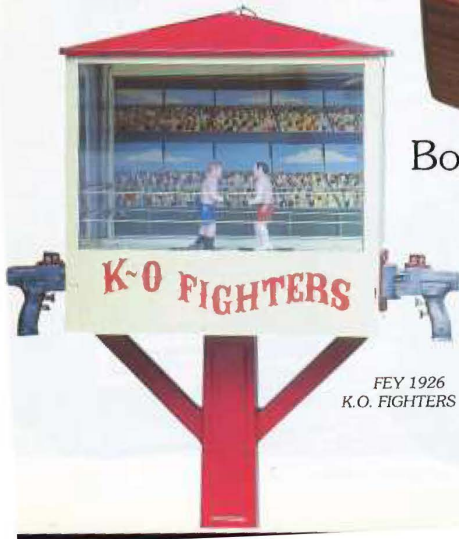
Shooting Gallery



Fey 1926
ELECTROFIRE

From observing the shooting gallery at the San Francisco beach, Ed Fey developed the idea of a coin operated rifle range. Built in his father's slot machine factory, a Caille PUCK case was used for the cabinet. the game was played by inserting a penny and shooting at the six ducks moving on a continuous chain driven by an electric motor. A hit was obtained, if the gun was properly aimed, when an electric circuit closed through the trigger activating a solenoid on the duck. The shriek of the dying bird was imitated by an automobile klaxon "ooga" horn.

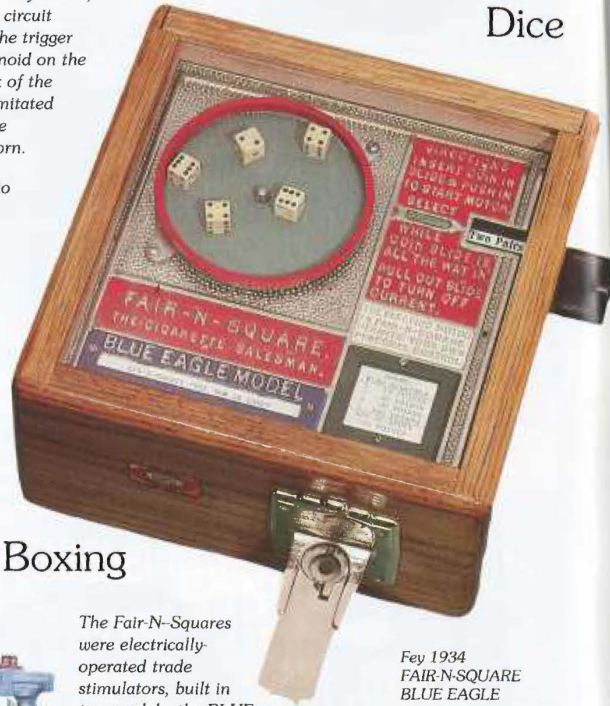
On September 23, 1926 Ed Fey listened to the radio broadcast of the World Heavyweight title fight in which Gene Tunney defeated Jack Dempsey. That night he decided that a sensational coin-operated game could be made with two boxers and at once worked out the mechanics, filing for a patent in November. Foreign patents followed in Canada, France, Australia and the United Kingdom. For three decades the K.O. FIGHTER could be found in almost any arcade worldwide.



Fey 1926
K.O. FIGHTERS



Dice



Boxing

The Fair-N-Squares were electrically-operated trade stimulators, built in two models: the BLUE EAGLE and the CIGARETTE SALESMAN. With the former, the coin slide activated a motor driven turntable which shook five dice. A pre-selected winning hand paid from 10 to 100 points with over the counter redemption. The CIGARETTE SALESMAN used an electric driven arrow; if stopping on the pre-selected brand, awarded one package of cigarettes.

Fey 1934
FAIR-N-SQUARE
BLUE EAGLE