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Gambling

BIG WHEEL

B-I-N-G-O

Gambling Devices

... or, when is a
pinball machine not
a pinball machine?

By

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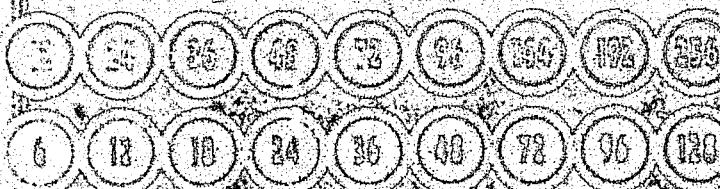
Washington, D.C.

The prevailing view today in most jurisdictions, including the Federal judicial system, is that "pinball" machines are legal. There exists one device, often mistaken for a pinball machine, which is almost universally regarded as a gambling device and which is subject to the Federal gambling device tax. This is the multiple-coin electromechanical bingo-type gambling machine known as a "bingo" machine. Unfortunately, many officers are unfamiliar with bingo machines and do not recognize them for what they are. This article will alert officers to the manner in which bingo machines are used in a gambling enterprise and point out the identifying features which distinguish them from their innocent look-alikes—pinball machines.

DOUBLE OR NOTHING GAME

2 NUMBERS UP
IN RED SCORES

2 NUMBERS UP
IN GREEN SCORES



3 in RED
4 in YELLOW
5 in GREEN

3 in YELLOW
4 in GREEN
3 in GREEN

Illegally operated gambling devices of all types had a gross "take" of approximately \$2 billion in 1950.¹ Today, these devices are observed less frequently than at any time in the last 50 years. This decline is a result of the efforts of the law enforcement community, improved State and Federal legislation designed to prohibit gambling paraphernalia, and generally favorable court decisions. Still, the Gambling Unit of the FBI Laboratory continues to encounter regularly illegal operations involving the large-scale use of gambling devices. These devices consist, primarily, of slot machines (both the "one-arm bandit" and "upright" varieties) and bingo-type gambling machines. While the slot machines are quickly recognized for what they are, the same cannot be said for the latter. In *Moyerly v. Deskin*, the court stated:

*"In no field of reprehensible endeavor has the ingenuity of man been more exerted than in the invention of devices to comply with the letter, but to do violence to the spirit and thwart the beneficent objects and purposes of the laws designed to suppress the vice of gambling."*²

That was in 1913 when man was only just beginning to demonstrate his ingenuity in this field. However, it wasn't until the 1950's that bingo machines made their appearance on the gambling scene in the United States. To this day, these burrs under the saddle of law enforcement reign supreme as the most innocent-appearing devices, yet designed to relieve gamblers of their money. The reason is that bingo machines don't look like gambling devices—they look like pinball machines.

Pinball machines were first marketed about 1930. They were simply refined versions of bagatelle, a Victorian parlor game, in which steel balls were propelled with a stick similar to a pool cue onto a playfield where they could drop into numbered holes indicating a cumulative score. With the advent of electrification, they evolved into the still familiar amusement machines characterized by bright flashing lights and clanging bells, multicolored

vertical backglass and horizontal playfield areas, and frenzied action during play as steel balls are bounced and thrown around the playfield accumulating points. In 1935, pinball machines began to be equipped with a new feature destined to become the heart of their gambling counterpart—the "free game," or "free replay." This feature served as an incentive to play the machines by holding out the possibility of one or more free games to players achieving predetermined minimum scores.

"Bingo machines . . . are almost universally recognized by the courts as gambling devices and are subject to the Federal gambling device tax."

Initially, some jurisdictions refused to recognize the free replay variety of pinball machine as a bona fide amusement device. The courts holding this view ruled that the free game constituted the third element in the "payment of a price [or consideration] for a chance to gain a prize" definition of gambling.³ The basic question confronting the courts was whether the amusement represented by a free game on a pinball machine had value. One persuasive argument for the "free replay as a value" doctrine is found in the Ohio case, *Kraus v. Cleveland*:

*Amusement is a thing of value. Were it not so, it would not be commercialized. . . . Since amusement has value, and added amusement has additional value, and since it is subject to be procured by chance without the payment of additional consideration therefor, there is involved in the game three elements of gambling, namely chance, price [consideration], and a prize."*⁴

In a similar argument it was held that since the player of a pinball machine is initially willing to pay a specified price for a pinball game, it may be presumed that this amount is the value he places on the amusement of additional games. Thus, if he wins free replays, he has been awarded something of a fixed value.⁵

Many State and Federal courts, however, have reached contrary decisions in concluding that free replays have no intrinsic value. In *State v. One "Jack and Jill" Pinball Machine*, the court ruled that:

*"To be allowed to do a useless thing free does not make that privilege property or 'a thing of value' because one has previously paid for doing another useless thing. There is a vast difference between cost and value. Permission to use a useless device is not property or 'a thing of value,' though the device used cost money to construct."*⁶

Other courts have ruled that amusement devices giving free replays only are not illegal because amusement is not, per se, a "thing of value."⁷

As stated earlier, the prevailing view today in most jurisdictions, including the Federal judicial system, is that pinball machines are legal. Bingo machines, on the other hand, are almost universally recognized by the courts as gambling devices and are subject to the Federal gambling device tax.

The family of gambling devices referred to as bingo machines consists of about 70 individual models. While there are some variations from model to model as a result of improved technology (e.g., some of the newer models employ solid state circuitry) and model updating, there are no significant physical distinctions from a gambling standpoint. They are all designed to resemble pinball machines. The resemblance, however, is very superficial, and the differences in function and appearance are pronounced when examined in any but the most cursory manner. In fact, a person possessing either the sense of sight, touch, or hearing should encounter little difficulty

in unerringly detecting their differences for they do not look, feel, or sound the same.

The "games" played on bingo and pinball machines are very different. Success at pinball depends upon the ability of the player to accumulate a minimum score. This is accomplished by shooting steel balls onto an inclined playfield with a spring-loaded plunger and keeping the balls "alive" (in play) on the playfield for as long as possible while hitting "targets" or passing through "alleys" having large score values. The balls are kept alive longer through the skillful use of rubber bats, called "flippers," controlled by the player. The flippers, in addition to being used to keep the balls alive, may also be used to great advantage by the player in directing the balls to high score areas on the playboard.

The object of play on bingo machines is entirely different. Play of the bingo machines is roughly analogous to the more traditional form of bingo from which they derive their name. In regular bingo, each player plays one or more cards on which appear more-or-less random mixtures of 24 numbers and 1 free space. The numbers are arranged in five columns under the

letters "B-I-N-G-O." The "card" on a bingo machine appears on the vertical backglass of the machine and normally consists of either a 4 by 5 or a 5 by 5 rectangular matrix of an apparently random arrangement of the numbers 1 to 20 or 1 to 25, respectively. (See fig. 1.) A few machines have departed slightly from this format by using numbers arranged in a circular pattern. Still others have contained as many as six individual cards on a single backglass. Other essential elements of these machines are the same as the single, rectangular card, bingo machine.

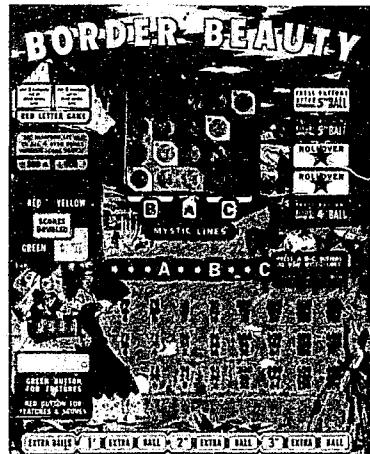
The numbers on bingo machine cards correspond to sequentially numbered holes arranged in a triangular pattern on the inclined playfield. (See fig. 2.) Balls propelled onto the playfield respond to gravity by rolling down the playfield until they come to rest in one of the numbered holes or fall through the ball-return hole, in which case they again become available to the player. It is noted that each of the numbered holes is guarded by a stationary bumper in such a manner that it is extremely improbable that a ball will come to rest in a hole without first striking at least one bumper.

The bingo machine player's objec-

tive is to shoot five balls into numbered holes to light corresponding numbers on the backglass card. After shooting five balls, a player may, on some bingo machine models, obtain up to three extra balls by depositing additional coins. To be a winner, the player must light three or more adjacent numbers in a row, column, or major diagonal (for "in-line" bingo machines), or he must light three or more numbers in one of four different color zones (for "in-color" bingo machine models). In-line models generally employ the 5 by 5 cards, while in-color models use a 4 by 5 card.

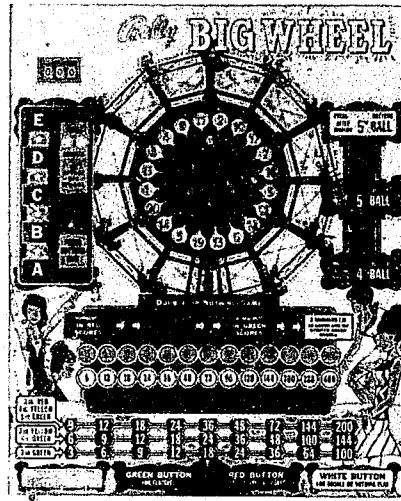
In addition to the card, the backglasses of bingo machines generally contain at least three other areas—scores (commonly referred to as "odds"), features, and a replay register. The scores correspond to the number of so-called replays or free games a player may win for particular arrangements of lighted numbers on the card. On one popular variety of machine, a player can win from 4 to 600 replays for a winning combination, depending on how far he has advanced his scores. For example, in the first step of scores, a player might receive 4 re-

Figure 1



Bingo machine with typical vertical backglass and 4 x 5 bingo card located top center.

This device employs a number matrix having a circular pattern with three color zones. Play of this machine is essentially the same as one having a 4 x 5 number matrix.



plays for 3 in a line or 3 in a color zone, 16 replays for 4 in a line or color zone, and 75 replays for 5 lighted numbers in a line or color zone. Players who are able to advance the scores to the final step would be eligible to receive 192, 480, or 600 replays for 3, 4, or 5 lighted numbers in a line or color zone, respectively. The following is typical of an 8-step score chart showing the number of replays a player would win for 3, 4, or 5 lighted numbers in a line or color zone.

SCORE ADVANCEMENT STEPS

Balls

in a

Line/

color	1	2	8	4	5	6	7	8
3	4	6	8	16	32	64	120	192
4	16	20	24	50	96	144	240	480
5	75	75	96	96	200	300	450	600

Bingo machine features consist of additional modes of winning and certain game advantages which increase the player's chances of success. Numerous features have appeared on the backglasses of bingo machines over the years. A frequently encountered example is the "four-corners" feature, whereby a player lighting all the numbers in the corners of his card scores the same as he would score for 5 in a

line or 5 in a color zone. Another popular feature is one which allows the player to shift some or all of the numbers appearing on his card to different positions, e.g., exchanging positions of the numbers in columns 1 and 2, and columns 4 and 5, and moving the numbers in column 3 up or down a space. This feature, of course, greatly increases the number of winning alignments available to the player.

Replay registers of bingo machines are visible through apertures in their backglasses. These are normally

awarded for successful play. These scores may be used for additional activations of the machine or as an indication of the amount of payoff to which the player is entitled. The size of the payoff is determined by multiplying the cost for a single activation of the machine, say 25 cents, by the number appearing in the replay register (if any) at the time the player decides to stop playing, say 100. In this example the payoff would be $.25 \times 100 = \$25.00$.

One of the most distinguishing characteristics of bingo machines is that they are multiple-coin gambling devices. Although a player is entitled to play a complete game by the deposit of a single coin or use of a single available replay, this type of play is rare. Indeed, most players use many coins and/or replays prior to shooting the first ball, and there is generally no limit on the number of coins which may be used. A few models do have a limit. For example, one model introduced within recent years had a limit of six coins per game. Each coin activated the electrical circuits for one additional card. As in regular bingo, the more cards available to a player, the better his chances of winning.

The purpose of multiple-coin play, in addition to increasing machine profits, is to give the player a chance for higher scores and to qualify for additional features. The initial coin or replay which is played into the machine activates the machine and establishes the electrical circuits necessary to provide the player the minimum guaranteed scores for successful play. Thereafter each coin or replay again activates the machine, setting in motion certain internal, chance-selection circuits which may or may not advance the player's scores or provide additional features. The player has absolutely no control over whether he receives or does not receive the additional game advantages he seeks. The result is that the player may, and usually does, engage in a number of individual gambling events before the first ball is shot.

Figure 2



Triangular arrangement of sequentially numbered holes on an inclined playfield.

It is interesting to note that bingo machines are usually equipped with a built-in governor which automatically adjusts the chances of obtaining greater scores and features. Such a governor was described in *United States v. 18 Gambling Devices*:

"The machines have a governor built into them called the reflex unit which adjusts the chances of obtaining advanced scores and/or features, depending upon the previous history of the machine. When replays are won and recorded on the replay register the reflex unit operates in such a manner that circuits are removed. The reflex unit operates in a manner to restore circuits upon each activation of the machine by either coin or replay."⁸

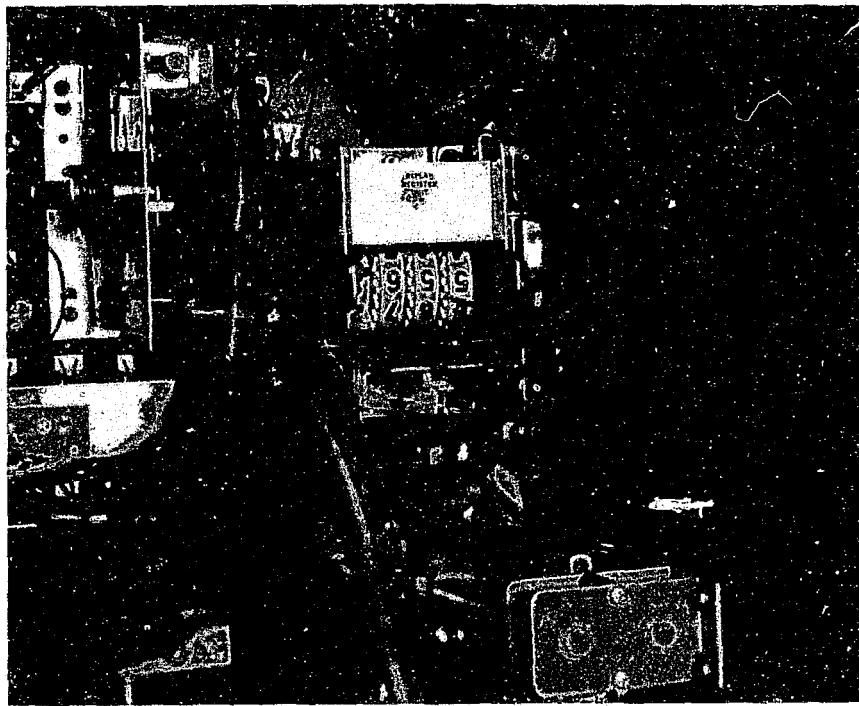
It has been argued, by persons claiming that bingo machines are not gambling devices, that the purpose of governors is to adjust the difficulty of the machine to coincide with the ability of the player, thereby presenting a greater challenge. This greater chal-

lenge, so the argument goes, is supposed to enhance player enjoyment and create a desire to play the machine more. Nonsense! The governor is not functioning during actual play of

"One of the most distinguishing characteristics of bingo machines is that they are multiple-coin gambling devices."

the game, when a change in difficulty of the basic game could change the challenge to the player. It is operative only during the period when the player is pumping coins and/or replay credits into the machine in an effort to increase his scores or get additional features. The basic play of the machine, i.e., the shooting and play of the steel

balls, is not affected at all by the governor. From the standpoint of gambling technology, the governor serves a very useful purpose. By altering the probability of obtaining additional scores and features, the governor is effectively able to control the profit level of the machine. If a player has been winning, the governor will cause the machine to "tighten up" and become less likely to award large payoffs. After the machine has recovered from any losses on its part, the governor will "loosen up" and allow the player a better possibility of winning. It should be kept in mind that in order to be profitable, a gambling device must offer the appearance of being a good investment. This is accomplished by actually paying off on a significant percentage of machine plays. Generally, a machine will return about 70 to 80 percent of the money paid into it. This percentage range will entice additional machine play, increasing overall profits. A machine which never pays off or pays off only sparingly will quickly put itself out of



Internal view of a bingo machine shows a 4-digit "credit" (replay) register. Amusement pinballs normally have a single-digit register, two digits at most.

Figure 3**Distinguishing Features of Pinball Machines and Bingo Machines**

Characteristic	Pinball Machines	Bingo-type Gambling Devices
Motive for play	Amusement	Primarily gambling
Object of play	Accumulate as many points as possible—keep balls in play for as long as possible	To obtain certain arrangements of lighted numbers on "bingo" card(s)
Number of coins required to play	One per game	At least one, but many more are generally used each game to build up "scores" and "features" (These are multiple-coin devices)
Number of players per game	Normally one, but some have provision for competition between two to four players	One
Size of machine	Relatively smaller	Relatively larger
Features	May offer more points to player who hits lighted target, bumper, alley, etc.	Will have features such as moveable numbers in card, "4-corners," "double or nothing," "4 star numbers score red 5-in-line," etc.
Flippers	Yes	No
Possibility for player to control ball during play	Considerable, with skillful use of flippers	Very limited
Playing Surface	Has large illuminated plastic "thumper bumpers" and "kickers" which propel the balls electrically when the balls strike them, drop-through holes, kick-out holes, wire and plastic rollovers, metal and plastic targets, etc.	Primarily consists of 20 or 25 holes in triangular pattern and many stationary "bumpers"
Sound of machine during play	Very noisy—bells, buzzers, and chimes sound as balls are propelled about the playing surface	Relatively quiet
Number of "free plays" (credits) which may be won	Generally 26 or less—most have maximum of 5 or 10	As many as 600
"Free-play" (credit)	One or two digits	Three or four digits
Internal circuitry	Relatively simple	Relatively complex
Governor (reflex) unit	None	Most have
"Free-play" (credit) clearing circuit	None	Will have capability to clear all free plays appearing on the register through use of a "knock-off" circuit

business. The governor, by controlling the availability of scores and features, maintains the delicate balance essential for the machine to be profitable.

Figure 3 shows the primary distinguishing characteristics of pinball and bingo-type gambling devices. There are some characteristics, mostly dealing with the internal circuitry, which are not listed. Also, there are some exceptions to the listed characteristics insofar as some individual machine models are concerned. The list will, however, enable an officer to identify quickly the vast majority of bingo machines encountered.

In the event that devices of a type similar to the machines described herein are found operating in a community, the FBI Laboratory is prepared to assist local authorities. The Laboratory has experts in the field of gambling who are available for consultation regarding all types of illegal gambling devices, including the bingo machines discussed in this article. If large quantities of bulky devices are seized, a field examination of the evidence may be requested by corresponding with the Laboratory. Expert witness testimony

regarding gambling devices and how they are used in illegal gambling is also available from the FBI Laboratory if required.

FBI

Footnotes

¹Rufus King, *Gambling and Organized Crime*, Public Affairs Press, Washington, D.C. (1968).

²*Moberly v. Deskin*, 169 Mo. App. 678, 155 S.W. 844 (1913).

³*Westervelt Co. v. City of Cincinnati*, 165 Ohio St. 327, 135 N.W. 2d 318 (1956).

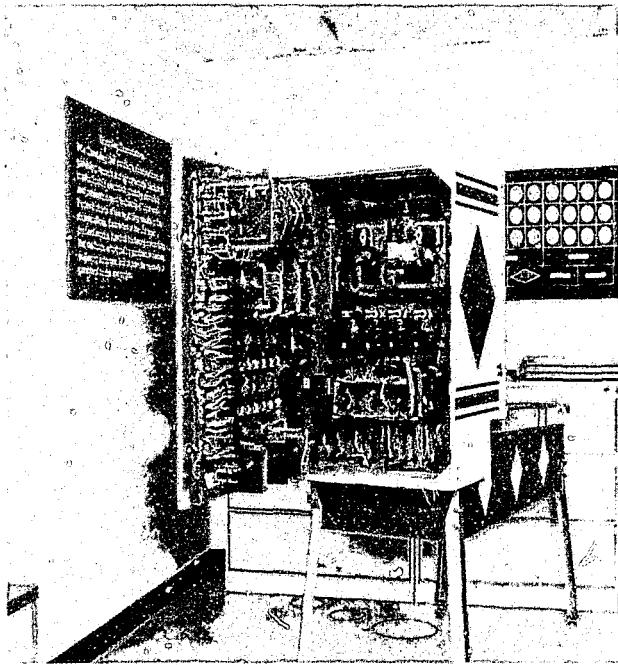
⁴*Kraus v. Cleveland*, 135 Ohio St. 46, 19 N.W. 2d 159 (1939).

⁵*State v. Wiley*, 232 Iowa 443, 3 N.W. 2d 620 (1942).

⁶*State v. One "Jack and Jill" Pinball Machine*, 224 S.W. 2d 861 (Mo. Ct. App. 1949).

⁷*Washington Coin Machine Association v. Callahan*, 142 F. 2d 97 (C.A.D.C., 1944).

⁸*United States v. 18 Gambling Devices*, 347 F. Supp. 660 (1972).



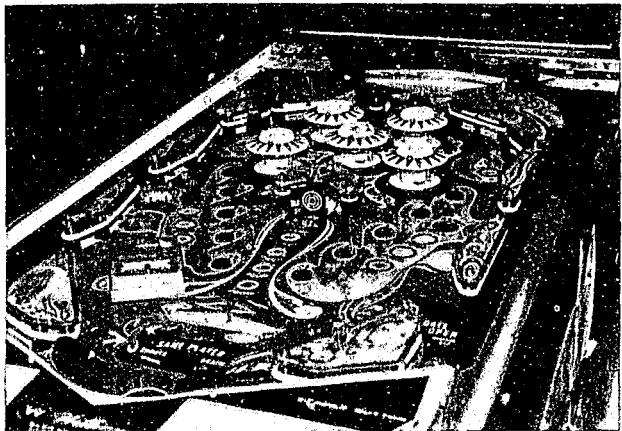
The internal circuitry of a modern bingo gambling device is very complex.



An examiner assigned to the Laboratory's Gambling Unit indicates the location of the "scores" portion of the vertical backglass. Machine "features" are located along the left side of the backglass along with the 4-digit "credit" register.



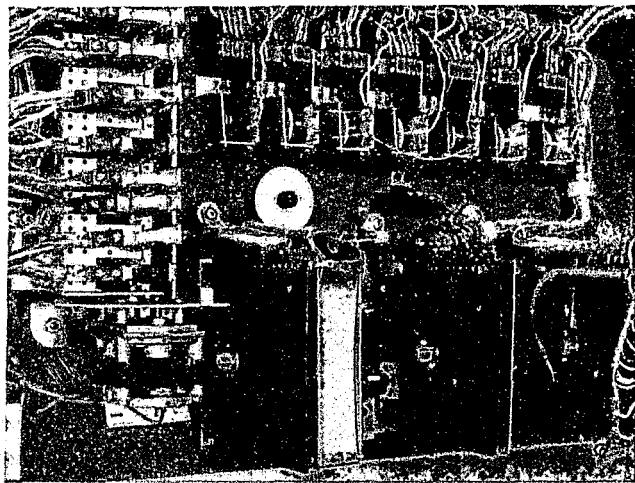
These pinball machines are typical of the amusement variety of pinball which, with few exceptions, are not now regarded as gambling devices.



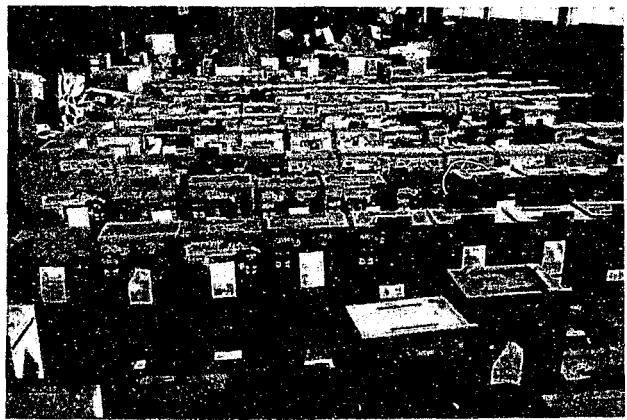
Even amusement pinballs can be used as part of a gambling scheme. This particular model was rigged for radio control by the addition of one of the popular electronic garage door openers. The hand-held transmitter used for triggering the control unit can be seen on the playfield in front of the left flipper. The scheme involved wagers as to how many points a player would score during a game.



The vertical backglasses of amusement pinball machines are relatively simple in design. This non-gambling machine permits up to four players to compete against each other. Note the tiny single-digit credit register near the center of the backglass.



The governor (reflex) unit automatically adjusts the payoff rate of bingo machines. Spare gears above unit can be used to change the chances a player has of receiving a payoff.



Warehouse full of bingo machines seized in a major federal gambling investigation in a southern city.