

PART 85: COMBINATION (D)

An important consideration in the use of combinations is the degree of accuracy required for their success, and this of course largely governs the question as to whether such a shot should be selected for any particular situation.

ACCURACY. In Figure 158 the disks E-1 and F-1 are three feet apart, center to center. If the shooter aims and shoots at F-1 accurately along the line of centers JK of the two disks, the first target disk F-1 will be struck exactly on center and it in turn will hit the second target disk E-1 exactly on center.

However, if as in Figure 159 the shooting line happens to be at LC, a shade more than one inch to left of the line of centers JK, the shooting disk C (shown at instant of impact before glancing off to the left) will drive the first target disk F-3 so as to just miss E-2 (passing it at F-4), and the combination shot will be a failure.

In order for the first disk F-3 to hit the second disk E-2, the shooting line must be within one inch of the center of F-3, whether to left or right.

Considering the two target disks of a combination to be placed at various distances apart, it is not difficult to calculate similarly the accuracy required for the various distances. In the table there are shown typical distances apart and the correspond-

ing limiting amounts by which the shooting line may diverge to right or left and still cause a hit to be made on the second disk.

It is evident that the longer the combination, the greater will be the difficulty of hitting the second disk.

WHAT CHANCES? In general it may be concluded that for separations of three feet the chances are good, for separations of six feet they are low, and for separations of nine feet they are very poor. This does not mean

ACCURACY REQUIRED IN COMBINATIONS

Distance of disks apart, center to center	Limit that shooting line may diverge and still cause hit on second disk
1 foot	3 inches
3 feet	1 inch
6 feet	½ inch
9 feet	¼ inch

that success is impossible for the longer separations, but that the probability of success is lower.

Therefore when a shuffler is about to attempt a combination with the disks nine feet apart, he may well ask himself whether he can reliably count on shooting so as not to miss the center of the first disk by more than one-

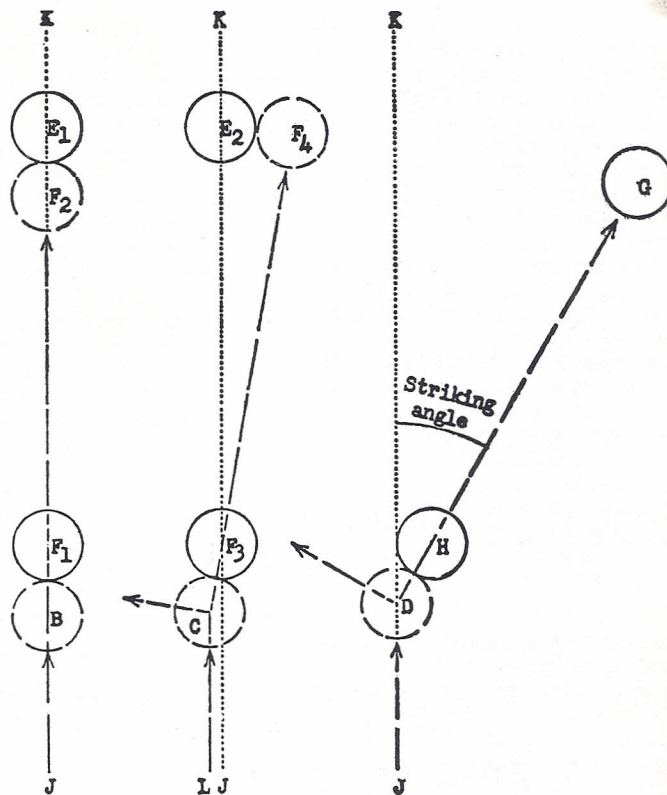


Figure 158 Figure 159 Figure 160

third of an inch.

ANGLE. The foregoing figures apply to the case of a combination in which the aiming line is along the line of centers of the two target disks, that is, when the three disks are lined up on a straight line.

On the other hand, if the com-

bination is made at an angle, as shown in Figure 160, the effect of the angle on accuracy is slight if the angle is small, but for striking angles of over 30 degrees the effect is material, and has the general result of decreasing the accuracy of the play and making the shots less reliable.

PART 86: COMBINATION (E)

In the preceding article there was discussed the degree of accuracy required for success in combination shots. In further pursuance of this idea, the question arises as to what are the actual percentages of success of such shots in the play of experts.

EXPERTS' PERCENTAGES.

Whatis the value of knowing such facts? It is based on the idea of the selection of the best shot to play in any given situation. If a shuffler has a choice between two shots which will gain for him about the same score, and one of the shots is easy and sure with a high percentage of success, while the other is difficult and doubtful with a low percentage of success, of course the choice should be made to play the easy and sure shot.

PERCENTAGES OF SUCCESS IN COMBINATIONS PLAYED BY EXPERTS

Distance apart, center to center, in feet	Number of attempts	Number of hits	Number of misses	Percentage of hits	Proportion of success
0-2	34	30	4	88 pct.	7 in 8
3-4	70	35	35	50 pct.	1 in 2
5-6	47	16	31	34 pct.	1 in 3
7-8	33	12	21	36 pct.	1 in 3
9 or more	16	4	12	25 pct.	1 in 4
TOTALS	200	97	103	48 pct.	1 in 2

OBSERVATION. We have observed and recorded the action in 200 combination shots played in 25 games by 34 experts in statewide tournaments.

The experts observed were winners of places in statewide tournaments, and in most cases were the winners of a number

of tournament places.

All of the records were drawn from the last three rounds of the particular tournaments, that is, quarterfinals, semifinals and finals (including play-offs for third and fourth places).

SURPRISE. The observation of one match was especially inter-

esting and instructive, although in an unexpected way. This occurred in the final match of the National Tower Tournament at Lake Wales January 28, 1956.

The final match was being fought out between two strong teams, one from Sunshine Club of St. Petersburg composed of Carl

Spillman, then five times national champion, and Henry Badum, three times national champion, and the other from Kissimmee, composed of Webster and Janet Smith, each with a national championship.

There were thus a total of 10 national championships among the four players. This appeared to be an opportunity to gather statistics on the subject and to base it on top-level playing.

Accordingly a record was made of every combination attempted. As a surprise development, it was found that every attempt at a combination failed. The fact was that the four experts kept the board so clear throughout the two games of the match that there was only one occasion that called for a combination shot, and that happened to fail.

DATA. Considering the records gathered in the 25 games, among various items of data recorded

for each of the combination shots were the name of the player, the distance between disks and whether the first disk hit or missed the second disk.

The ultimate purpose of the shots, such as to knock away one or both disks, or to kitchen them, to make a score, to clear the kitchen, etc., were too varied to justify tabulation in any way so that statistics could be derived from them. This would therefore mean that a number of the plays classified as hits did in fact fail wholly or partly to accomplish the ultimate purposes of the shots.

The table in the box shows the information found.

COMMENTS. The results are illuminating.

Considering all 200 plays, the experts made just under 50 per cent successful, that is, one success in two tries.

It would of course be expected that for the shorter distances

of two feet or less, the percentages of success would be high, and this is shown to be true, with 88 per cent of hits, and only one miss in eight tries.

However, for distances of three or four feet, the percentage of success in 70 attempts was only 50 per cent, or one shot in two. This is lower than was expected, but appears to be a sound figure.

For five to six feet and for seven to eight feet the percentage is about the same for both, that is, a hit for one shot in three. Otherwise stated, this means that two tries in three were misses.

It would be logical to expect that the percentage of hits for 7-8 feet would be lower than for 5-6 feet, but it happened that the cases actually observed did not bear out this logic. The facts are recorded as they were observed.

For distances of nine feet or more, the percentage of hits was

only 25 per cent, or one shot in four. In other words, there were three misses for each four attempts.

The question must arise as to whether combinations are desirable at distances of five feet or more when the experts miss from 63 to 75 per cent of their attempts.

It should be clear that combinations of nine or more feet should hardly ever be used unless their use is forced by the situation. In fact it is apparent that the experts who were observed used few shots of such lengths.

Of course there are a number of factors to be considered in the selection of the shot for each situation, and the percentage of probable success is one of them. The selection of the best play to use in any case should be the result of consideration of the various factors.

PART 87: COMBINATION (F)

Another situation in which a combination is applicable is shown in Figure 161, in which the opponent has just bunted a black scoring disk E into the 8-area, where it is covered by two disks A and F, one red and one black.

The evident method of spoiling E is to knock one of the other disks A or F against it. At the distance of about four feet it seems that whichever disk is knocked at E may possibly stop against it and remain in place for a score.

Obviously, from the point of view of the shooter Red, it would be disadvantageous to enable F to score in this way, and conversely it would be advantageous for the red disk A to score. So it would normally be preferable to shoot A against E instead of F against E.

However, bearing in mind that A may not hit E, but may miss and go beyond, it would be inadvisable to use kitchen speed for the shot, for the result might be

to put A in the kitchen.

SELECTION. Figure 162 shows another case in which an enemy scoring disk E is covered by two guarding disks F and G, and the shooter has the choice of which disk, F or G, to knock against E. Although he can make a straight shot in playing F, it would normally be preferable and more accurate to make the shorter shot by knocking G against E.

A VARIATION of the foregoing situations that is seen from time to time is that shown in Figure 163 and which occurred in the final of the Full Moon Singles Tournament Dec. 16, 1954.

With only disk A-1 previously on the board, Red had shot to hide C beyond A-1, but it had stopped on the 7-8 cross-line at C-1. Thereupon Black had shot H to block a later attempt to double with C-1. This left three disks on the board, A-1, H and C-1 (all drawn with full lines.)

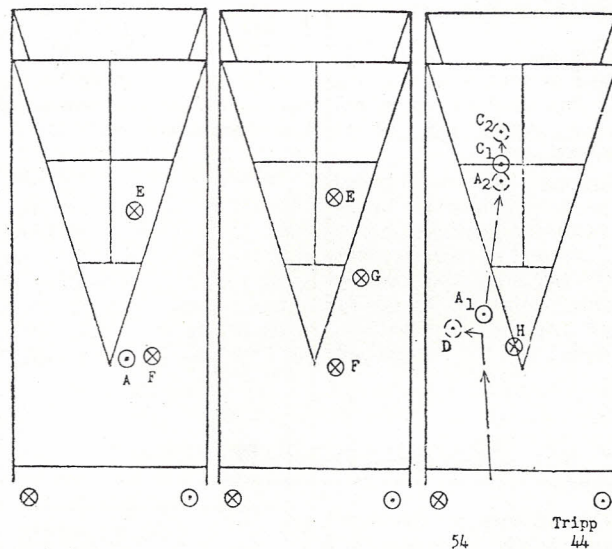


Figure 161

Figure 162

Figure 163

W. D. Tripp, the shooter Red, succeeded, and made a gain of 15 points for the shot and then played a gentle combination shot with the last-shot to knock A-1 against C-1 for a dou-

PART 88: COMBINATION (G)

A situation that is not only suitable for a combination but practically demands one is shown in Figures 164 and 165. This situation occurred in one of the last rounds of the 1957 district-wide Times-Mae Barber Shuffleboard

Tournament at St. Petersburg.

Mary Scalise, shown as playing with the black disks, was leading with a score of 72 to 29, and had a winning score on the board for a 7 at G. Also there were non-scoring disks on the board at E, H,

F, B and C-1.

The shooter Red, on the right, could not see G for a direct hit and could not knock F against it because B was in the way. Nor could he see H to put it in the kitchen.

Her only chances were either to put F in the kitchen or to play a combination. The combination would knock B or C-1 against either G or H or both, hoping to spoil G and perhaps put it in the kitchen, or to put H in the kitch-

en, or perhaps both to spoil G and glance off to put H in the kitchen.

She could point her combination at G, or at H, or between them with the hope of hitting one or both.

She played her shooting disk against C-1 for a combination as in Figure 165, and C was knocked against H, but it stopped on the line at C-2 for no score. H was knocked entirely through the kitchen.

Since there was no change in the score lying on the board, Mary Scalise won the game.

ANOTHER CASE, shown in Figure 166, was described to us by Carl Spillman, topmost all-time shuffler. He was playing against Lew Tansky, also an expert player, in the third and deciding game of the final match of the Florida State Championship Tournament at Sarasota Feb. 6, 1958, and the score was 60 to 41 in his favor.

On the board he had two scor-

ing disks F-1 and G-1, which were protected by two other disks E and H-1. No other disks were on the board. The 14 points on the board represented by F-1 and G-1 would bring his score to 74, and he would have the last-shot in the next frame and probably would win the game and match quickly.

Tansky could not see to hit either F-1 or G-1, but the situation demanded that he play a combination with the objective of spoiling either F-1 or G-1 or both.

His play was apparently to try to knock H-1 so as to hit between F-1 and G-1, using kitchen speed, in the hope of spoiling and kitchening one or both target disks.

H-1 was knocked first against F-1 and glanced to hit G-1, then stopped against G-1 on the center line at H-2. F-1 was knocked into the kitchen at F-2. G-1 stopped on a line at G-2.

Gain for the shot: 24 points. Gain for the half-round: 10 points.

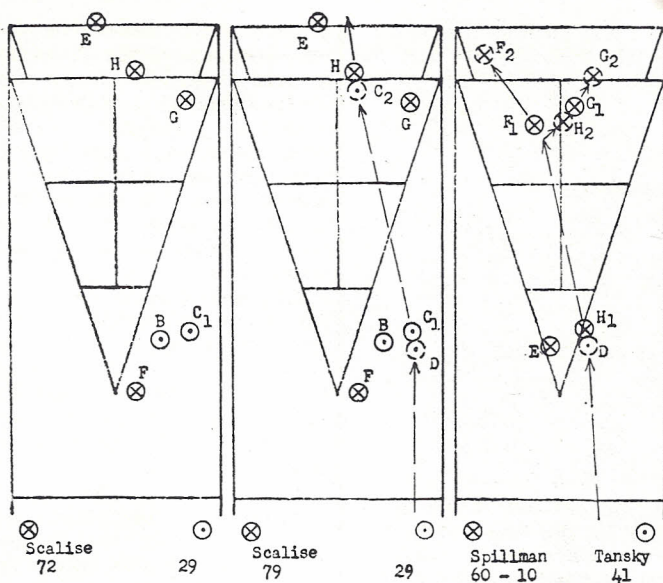


Figure 164

Figure 165

Figure 166

The game was prolonged, but game and match and state champion Carl Spillman eventually won the championship.

PART 89: COMBINATION (H)

Among the various cases in which a combination is played against a double target beyond the first struck disk, the following play has been described to us by Dwight K. Hubbard, one of the all-time greats.

SPECTACULAR FINISH. In the 1939 Sears-Roebuck Tournament (corresponding to the men's division of the present Orlando Singles Tournament) the final was being contested between Harry Woolman of Mirror Lake and Baker of Winter Haven.

As in Figure 167, Baker had on the board an advantage of 30 points, with two of Woolman's red disks A and B in the kitchen for 20-off, and with a black disk H-1 in the 10-area.

At the last-shot, Woolman played the combination that was demanded by the situation, that is, to knock H-1 against both A and B.

His shooting disk hit H-1 with a full hit and stopped in the 10-area at D. H-1 was knocked against both A and B and stopped between and against them in the kitchen at H-2. Both A and B were knocked from the kitchen.

Gain for the shot: 50 points, and with them the game, match and tournament.

REVERSAL. Another combination involving a kitchen shot occurs when one of the players has hit a cripple and put it in the kitchen, stopping the shooting disk in scoring area for a 7, whereupon the opponent reverses the situation, with a gain of up to 34 points for the shot. This type of action was described in Parts 68 and 79.

SPOIL DOUBLE. It was said in Part 42 that the front-and-rear double is vulnerable, in that both disks can often be spoiled with a single shot, a combination. Figure 168 shows a situation that occurred immediately after a front-and-rear double had been made by Henry Badum, three times national champion, in a 1955 Yuletide tournament match against Henry Andringa, also a former national champion.

The score was about even, 23 to 22, and it was the fourth shot of the half-round, to be played by Andringa, the shooter Red.

He shot to knock F-1 against E-1, using kitchen speed so that

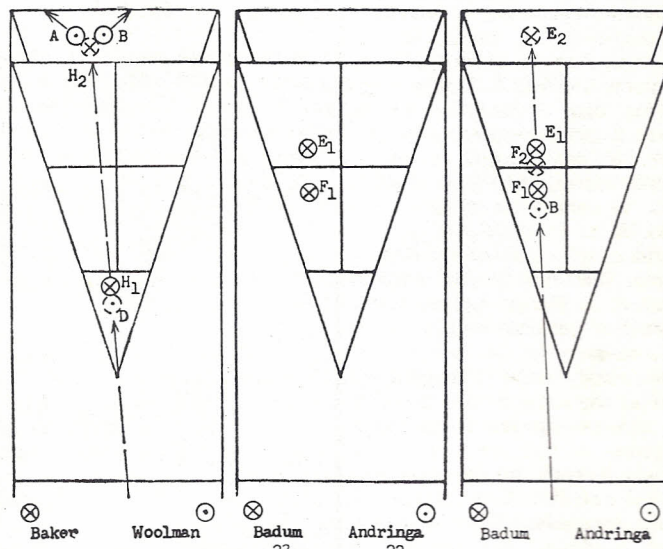


Figure 167

Figure 168

Figure 169

E-1 should be put in the kitchen. The shot was perfectly successful.

As shown in Figure 169, the shooting disk B hit F-1 and stopped as it hit to score an 8. F-1 was knocked directly against

E-1. Since E-1 was less than a disk's width beyond the 7-8 cross-line, F stopped on the 7-8 cross-line at F-2 when it hit E-1. Finally, due to the use of kitchen speed, E-1 was tapped into the kitchen at E-2.

PART 90: COMBINATION (I)

A special type of combination, which approximated the action of disks in contact (Parts 61-64),

is shown in Figure 170, and occurred in a social game. Only two disks A-1 and B-1 were ini-

tially on the board, and lay about three or four inches apart.

The shooter Red played the shooting disk C to hit B-1 on the right side, and then the shooting disk glanced off to the right to

C. B-1 was knocked diagonally to the left against A-1 and then glanced further to the left and stopped in the 10-area at B-2. At the same time A-1 was tapped lightly onward to A-2.

Gain for the shot: 18 points.

ANOTHER COMBINATION, involving disks fairly close together, is shown in Figures 171 and 172. The score was not critical, at 10 to 7. The shooter was Larry Schoch, then national open singles champion, who was playing against Jerry Anderson, another top-level shuffler. It was in the 1954 Dimco-Gray Tournament at Lakeland.

At his last-shot, Larry had a disk C on the board for a 7, as shown in Figure 171, while his opponent had two disks, G-1 and H-1, for 16 potential points, separated by about 8 to 10 inches, edge to edge.

As discussed in Part 82, when a combination is to be made and the first enemy target disk is

driven directly against the center of the second disk, it is liable to stop as it hits, for a score for the opponent, and this can at times be avoided, especially when the two disks are close together, by aiming to hit the first disk off center so that it will in turn hit the second disk off center and glance to the side without scoring.

That was done in this case. The shooting disk was aimed to the right of center of H-1 and glanced off to the right to score an 8 at D, Figure 172. Disk H-1, having been hit to right of center, was driven diagonally to the left to hit G-1 to left of center and then glanced off to the left out of scoring area to H-2. G-1 was moved diagonally to the right and stopped on the intersection of lines at G-2.

The shot was made with gentle force. This allowed D to score instead of glancing out of the scoring diagram as would have occurred for a speedier shot. This also resulted in G not be-

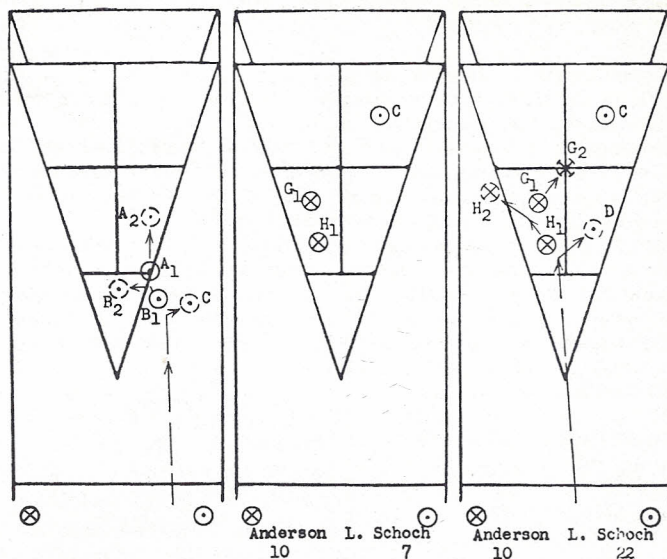


Figure 170

Figure 171

Figure 172

ing driven far enough to hit and spoil the friendly disk C. Gain for the shot: 24 points. Gain for this frame: 15 points.

PART 91: COMBINATION (J)

When a disk is well hidden and must be spoiled, it is sometimes reached more readily by a combination played diagonally from the side than by a long combination that is more nearly in a straight line, as shown in one case in Part 87.

DIAGONAL COMBINATION. In Figure 173 there is shown a situation as seen by Ralph Blackman, the national closed champion of the year, in the Gateway to the Gulf Doubles Tournament at Gulfport, March 17, 1957, in the play-off for third and fourth places.

As indicated in the diagram, with the score 71 to 53 against his side, his immediate opponent Edna Robbins had the advantage. She had a scoring disk G on the board that would bring the black score to 78 points and game if left there, but it was in the open and exposed. There was also a red disk in the kitchen, protected by the double guard composed of H and B.

It was imperative for Red to spoil the black scoring disk G in order to save the game, and also it was of course desirable to put it in the kitchen either directly or by knocking it against the kitchen disk C in order also to drive C from the kitchen.

Blackman played the combination as indicated. The striking angle required was about 45 degrees or a little larger, with an

aiming point about 1½ inches outside the left edge of the first target disk G. The shot was successful, both disks G and C were spoiled and the game was saved.

SACRIFICE? In a tournament game the score was: Black 63, Red 32. Each player had a scoring disk in the 7-area, at B-1 and F, Figure 174, which would bring the score to 70 against 39, putting Black within one scoring shot of winning the game. Also the opponent Black had two disks G and E protecting the scoring disk F.

In this situation it was important for Red to spoil Black's scoring disk F, even at the sacrifice, if need be, of his own scoring disk B-1.

One possible shot was to knock B-1 against F, as in Figure 175. At the striking angle of about 60 degrees, it was necessary to use an aiming point 5¼ inches to left of the left edge of B-1, a very thin shot, in fact so thin that another ¼ inch to the left would result in a miss.

If his shot were to diverge to the right almost two inches, it would still drive B-1 against F because B-1 and F were close together. Also the shooting disk would still pass G without hitting it. The total permissible divergence to left and right would therefore total about 2¾ inches.

In contrast, for a longer combination to drive E against F,

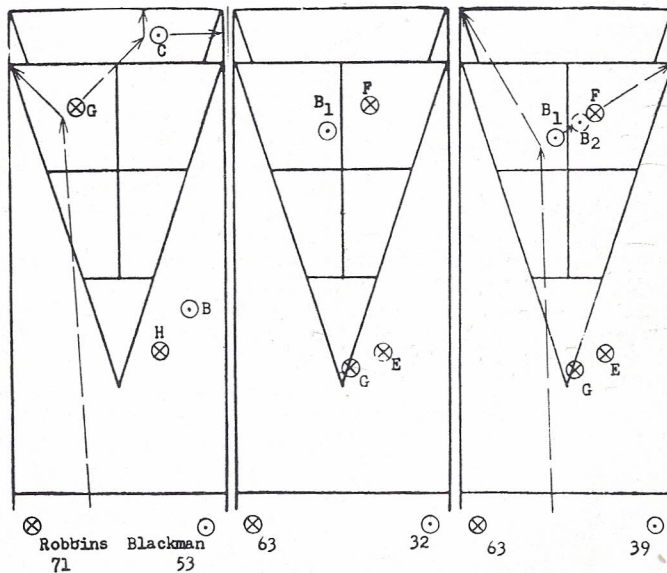


Figure 173

Figure 174

Figure 175

with a distance of about 6½ feet between the disks, it would require the divergence to right or left be less than one-half inch (Part 85), or that the total divergence allowable would be limited to one inch, as compared with 2¾ inches above.

Thus even the thin-hit combination against the side of B-1 would have greater promise of accuracy and success than the longer and straighter combination to drive E against F.

The shooter played to knock

B-1 against F, as in Figure 175. He made his shot and spoiled F, also actually leaving B in scoring area at B-2 after backstopping it against F. So he did not make a sacrifice.

Gain for the shot: 7 important points from the opponent's prospective score.

HANDLE ON IT. Another variation of this type of combination is in the situation after the opponent has put a handle on a hidden disk, as described in Parts 28 and 40.

PART 92: COMBINATION (K)

A spectacular combination was played in the final of the men's doubles of the Full Moon Doubles Tournament at Lakeland Dec. 16, 1954.

The final match was being played between one team composed of Carl Spillman and Ralph Perreault, of Sunshine Shuffleboard Club in St. Petersburg, and another team comprising W. D. Tripp and Ben Arnett of Oakridge Park at Lakeland. All four players were experts, and have since been ranked as 1, 7, 25 and 26, respectively, in our All-Time Roll of Champions. Both teams were outstanding in their doubles teamwork.

The Sunshine team had already won one game, and was leading in the second game by a score of 55 to 6.

Tripp, shown in the diagram on the right, playing Red, was directly opposed to Perreault, while their partners were of course at the other end of the court. As shown in Figure 176, Perreault had a black disk G-1 in the 7-area, well protected by black disk H-1 and red disk B. It was Tripp's last-shot of the frame.

POSSIBLE PLAYS. As we examine this situation, we see that there were several possible plays open to Don Tripp.

He could (1) shoot for a score of 8 on the open left side of the board, in which case the over-all score would reach 63 to 14. But this would bring the opponents closer to the winning score of 75, which would be an advantage for the opponents even though the Oakridge team would gain a little.

Or (2) he could attempt to put the black disk H-1 in the kitchen. This would be a fair idea, but it would be much better if combined with the next possibility.

Or (3) he could try to spoil the red disk G-1 by means of a combination, driving H-1 or B against it.

Or (4) he could combine (2) with (3) by playing a combination to try to put both H-1 and G-1 in the kitchen.

In general, if one disk is driven against another in a combination shot, any one of a number of variations may occur. Either or both disks may score, stop on a line, stop in the kitchen, or leave the board. These results may develop in many different variations. The resulting possible scores will vary widely.

It would require extremely accurate shooting to insure the success of any particular one of the various possible shots. But the shooter would probably try for the most advantageous of the various possibilities and hope to gain by some one of the variations.

Of the various possibilities, it is improbable that Don Tripp considered each one. However, his team was far behind in the score, in a difficult and losing situation, demanding a series of kitchen-playing attempts on the part of his team which are the usual measures to reverse a commanding lead by the opponents.

COMBINATION AND kitchen. So Tripp evidently decided to attempt a combination to put both of the opponent's disks in the kitchen, striking H-1 first.

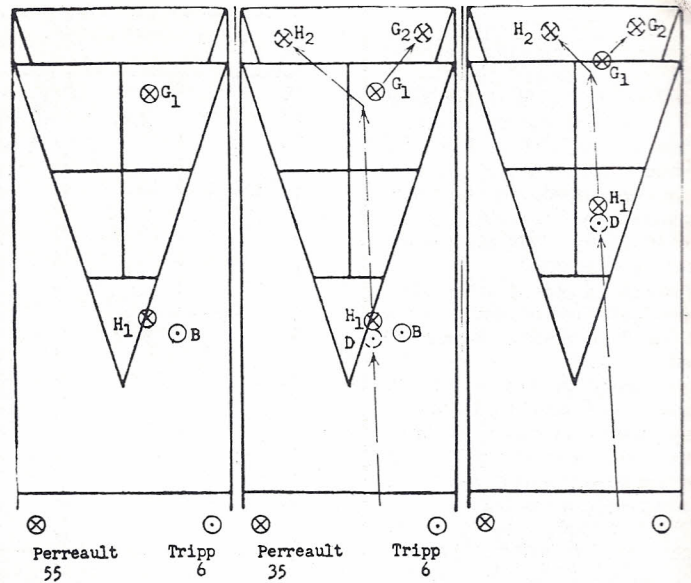


Figure 176

Figure 177

Figure 178

When there is an opportunity for putting two disks in the kitchen with a combination shot, the shuffler does not count on making it, but he tries anyhow, hoping for success once in a while.

Tripp played his combination to drive H-1 against G-1, with approximately kitchen speed. The first disk H-1 was driven at the second disk G-1 with exactly the right angle and speed. Both disks separated widely, Figure 177, and both stopped in the kitchen. The audience was astonished and applauded loudly, and it may be that Don was almost as astonished as the audience.

The net gain for the shot was 27 points. Gain for the half-round: 20 points. Resulting score in the game: 35 to 6.

The Oakridge team then continued to gain on their opponents until they reached the score of

54 to 59, with Oakridge ahead. However, after this the Sunshine team of Spillman and Perreault forged ahead to win the game, the match, and the tournament.

WITH A CRIPPLE, such as G-1 in Figure 178, belonging to the opponent and lying on the near line of the kitchen, and another enemy disk H-1 in scoring position nearer the shooter, a combination to put both disks in the kitchen is invited. The disk H-1 is played to hit G-1 at about the right or left edge.

The percentage of success in such shots is quite low, but a kitchen shot is often tried in such a situation and it costs little to add the possibility of making it two in the kitchen. By repeatedly attempting such shots when the opportunity appears, success is occasionally attained.

PART 93: COMBINATION (L)

Occasionally a situation develops in which a triple combination is possible. In such cases the shooter will usually play for a double combination that is part of the triple combination, and will hope that the triple may result.

A TRIPLE COMBINATION, played against three disks in direct line, was played in The Times Bay Area Tournament, at St. Petersburg, Oct. 20, 1954. The score, in a hard-fought game, was about 52 to 52.

As shown in Figure 179, the shooter Red at the sixth shot of the half-round faced a situation in

which the opponent had a scoring disk E-1 for a 7, well protected by a double guard consisting of a red disk partly on the line at B-1 and a black non-scoring disk at G-1. The three disks were in a straight line.

If G-1 were driven against B-1 it appeared probable that it would tap B-1 into scoring position, and in addition there were chances that B-1 would hit E-1 to spoil the latter and perhaps put it in the kitchen.

The shooter played to make the combination (Figure 180), and succeeded with a most encourag-

ing "pop-pop-pop." The shooting disk hit G-1 on center and stopped at D. G-1 hit B-1 and stopped on the line at G-2. B-1 hit E-1 and stopped at B-2 for a 7. E-1 was knocked out of the 7-area and into the kitchen at E-2.

Gain for the shot: 24 points. The opponent Black did not recover, and shortly afterward the game was won by Red.

FOUR DISKS were involved as targets in a spectacular combination made by R. H. Roby in one of the matches of the Florida State Championship Tournament at Lakeland February 1957, and

was described to us by him.

The opponent had won the first game and was not only far ahead in score in the second, but had a big prospective gain lying on the board which he hoped to retain. As shown in Figure 181, he had a lead on the board of 27 points, having a 7 at F-1, with two of the shooter's disks A and B in the kitchen. These disks were protected by two non-scoring disks H and C-1.

It looked bad for Dick Roby, whose last-shot was then to be played. The court was slow and there was much drift, which was

also variable in amount.

Among the shots that he could play were a double with C-1. In doing so, he could try to point C-1 toward F-1 and the two disks in the kitchen with the hope that it might spoil one or more of them. For the double, he would ordinarily play a rather gentle shot in order that the disks would not fly off the board.

Instead, he played a fast shot, intending rather to spoil as many of the three scoring disks as he could.

As shown in Figure 182, the shooting disk hit C-1 and glanced only slightly to the right, fortunately stopping for an 8 at D. C-1 was driven against F-1, where it stopped for a 7 at C-2.

F-1 happened to be hit at the right angle to drive it between and against A and B, where it stopped in the kitchen at F-2. Finally, A and B were driven out of the kitchen.

Gain for the shot: 52 points. This is the largest gain for a single shot in tournament play of which we have a record.

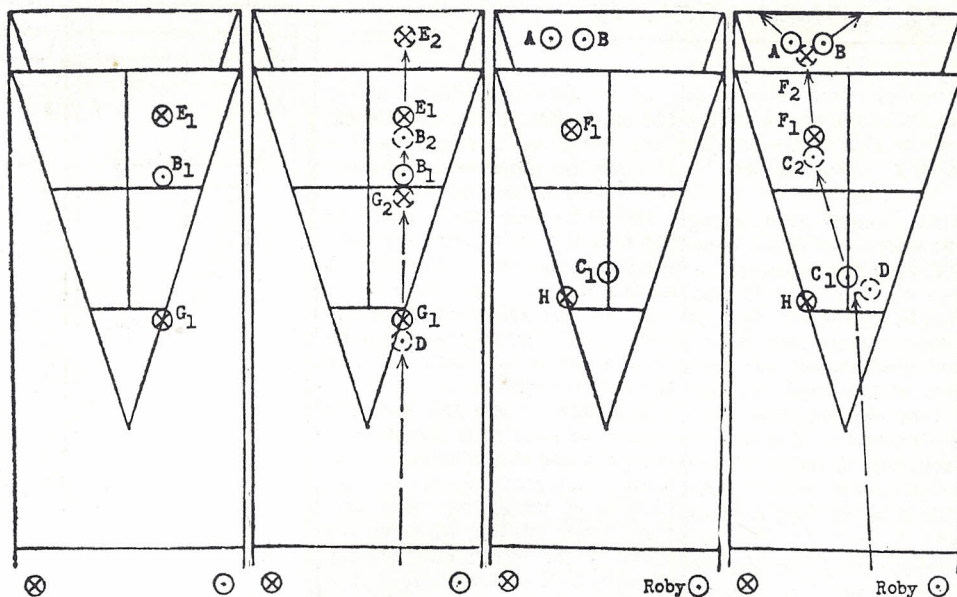


Figure 179

Figure 180

Figure 181

Figure 182

PART 94: COMBINATION (M)

In a minor tournament the shooter Red encountered the situation shown in Figure 183, with his own disk B in the kitchen and one of the opponent's disks E close to it on the near line of the kitchen. Only these two disks were on the board (not disk C).

DANGER. The shooter wanted to knock away his own kitchen disk B, and the obvious way was to knock the enemy disk E against it, a reasonable shot. However, there was danger.

Red shot gently in order to tap E against B and leave E in the kitchen. However, his shooting disk failed to hit E properly, merely grazing it and moving it aside but not off the painted line. His shooting disk glanced off slightly to the left and stopped in the kitchen at C.

The shooting disk therefore had the desired kitchen speed, for it stopped in the kitchen, but it did not follow the desired shooting line. Or perhaps, as discussed in Part 72 and later in the series, there was drift which ruined the shot by swerving the shooting disk to the left side.

COMBINATION, DOUBLE. In the quarterfinals of the Sunshine Skyway Tournament at St. Petersburg, Aug. 30, 1954, Gerald

Anderson, the shooter Red, a top-level player, opposed William Norris, a skillful shuffler. The score was 68 to 73, respectively.

At Anderson's last-shot the situation was as shown in Figure 184, with Norris having an 8 on the board at H which would win the game if left there, so Anderson was forced to spoil H. Also, the shooter needed just one score for himself in order to win the game.

Among his choices he could (1) knock away disk H by direct hit, with a bare chance of putting it in the kitchen and little chance of scoring with the shooting disk.

The six-foot combination (2) to knock B against H had about two to one odds for failure.

The short combination (3) to hit C on the right side and knock it against H, spoil H, and perhaps make a double with the shooting disk and disk C or make a score with either, appeared much more inviting.

He played for the third choice to make the double and combination at the same time. His shooting disk hit C on the right side and knocked it against H to spoil the latter, but he did not succeed in scoring with

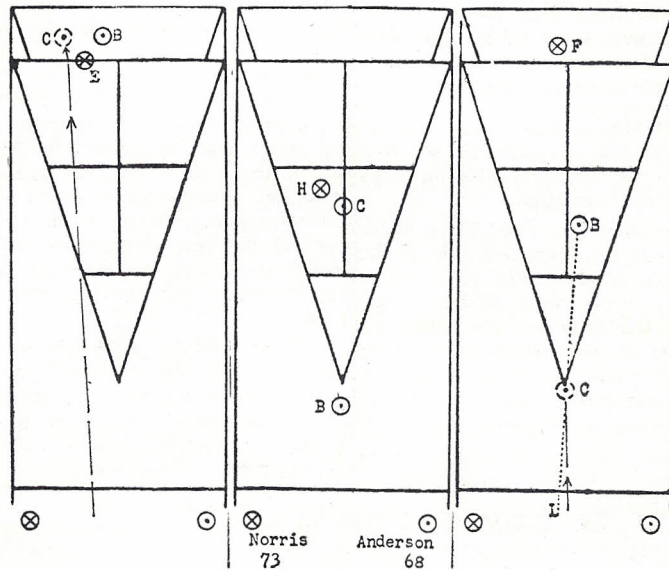


Figure 183

Figure 184

Figure 185

either of his own disks.

Gain for the shot: 8 points, and the game saved.

PREVENTING COMBINATION. In Figure 185 there is shown a situation strongly favoring Red, who has a scoring disk at B, while his opponent has a disk F in the kitchen. No other disk is on the board.

The shooter foresees that at Black's next shot he will try to spoil B or F or preferably both. To spoil both, which would of course give him the largest gain, Black would want to play the combination to knock B

against F.

Accordingly, Red should block the line LB from the center of the opponent's starting area to his disk B, by placing a guard on this line, about at C. This definitely prevents the combination, although it necessarily leaves the way open for Black to shoot directly at F in order to clear away his kitchen disk.

OTHER COMBINATIONS. Later on, under the subject of Tactics — Selection, there will be shown other examples of combinations.

PART 95: CAROM (A)

A carom, as shown in Figure 186 or 187, is a shot in which the shooting disk strikes one disk F, glances off it, and strikes another disk G. It is a glancing hit (Part 19) with the added purpose of hitting a second disk.

USES OF CAROMS. The carom, like the combination, is therefore useful in knocking away two disks. Also, as will be shown later, it may be used for glancing off one disk in order to reach and knock away another disk that is hidden and well protected by a guard (such as one composed of several disks), and which cannot be reached more readily by some other play.

The situations that call for the use of caroms occur less often than those calling for combinations. Also the carom is generally more difficult to accomplish. Therefore the carom is less used than the combination.

ANGLE AND FORCE. The key elements in a carom are, first, to strike the first disk F at an angle which is suitable to cause the shooting disk to glance in the direction of the second disk, and second, to insure that the shooting disk has sufficient remaining

speed to reach the second disk and hit it with enough force to accomplish the desired result.

ANGLE. The most useful angles are those which involve glancing sharply to the side, as in Figures 186 and 187. Because of the inaccuracy and unreliability of thin hits, as have been discussed several times (Parts 10, 50 and 57 to 59), attempts at caroms which involve thin hits, such as shown in Figure 188, should usually be avoided.

There is no certainty and little probability that the shooting disk, after hitting the first disk F in Figure 188, will follow the desired line JL. It is more liable to make a miss, perhaps along the line JM or more widely to the right, or similarly along the line JK or more widely to the left.

Some shufflers will prefer to attain their judgment of where to aim by simple trial and error and by the experience gained that way. However, the next article will discuss this in more detail.

FORCE. As to the matter of speed or force, most of the force of the shooting disk is lost in

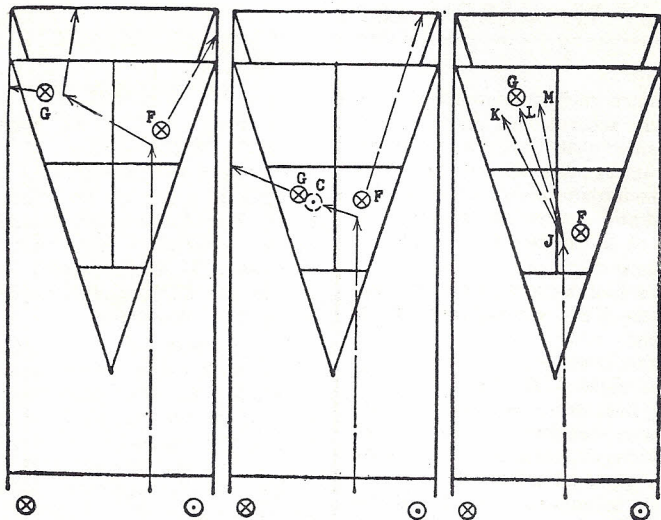


Figure 186

Figure 187

Figure 188

hitting the first target disk F, Figure 186 or 187. The consequence is that, in order to have enough remaining force to carry the shooting disk far enough to hit the second target disk and still be able to drive it as far as necessary, considerable extra force must be put into the shot from the beginning.

This requirement usually necessitates a rather fast shot. And because fast shots tend to be less accurate than shots at slow or

medium speed, there are many misses in carom shots, and the carom is usually difficult unless the disks are close together.

THE DISTANCE between the two target disks is of course an important element in the ease or difficulty of making a carom. It is obviously easier to make a double hit in the situation of Figure 187, with the disks close together, than in that of Figure 186, with a wide separation.

PART 96: CAROM (B)

The angles and aiming points to be used in carom shots are not so simply, accurately and satisfactorily determined as in the case of combinations.

Because a detailed explanation is complicated and involves some approximations, it is omitted, and a method is described here in terms of actual steps to be taken.

METHOD. In Figure 189 the two disks F and G are to be knocked away by a carom.

The first step is to look on the board and to visualize a line FG joining the two disks.

Also visualize a line KF parallel to the cross-lines of the court.

Estimate the angle KFG between the two lines. In Figure 189 it is 20 degrees.

In Figure 190 there are three other angles, 10, 30 and 45 degrees.

The angle KFG has now been estimated. If the disks are more than two feet apart, edge to edge, this is the striking angle.

If the disks are two feet apart, or somewhat less, the estimated angle KFG should be increased by about 10 degrees to obtain the striking angle, as 30 degrees.

If the disks are a foot or less apart, edge to edge, the estimated angle KFG should be increased by about 20 degrees to obtain the striking angle, as about 40 degrees.

Using various striking angles, the corresponding aiming points are the same as for combinations, namely:

Striking angle, degrees	Aiming point, distance from center of disk
10	1 inch
20	2 inches
30	3 inches
45	4 1/4 inches

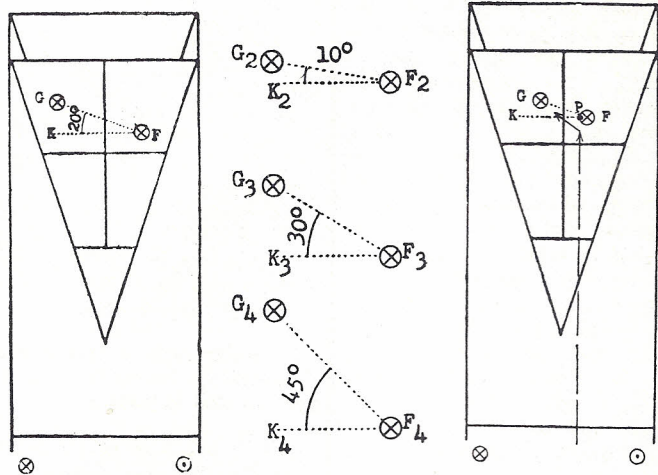


Figure 189

Figure 190

Figure 191

The aiming point is to be located, as shown at P in Figure 191, to left or right according as the carom is to glance to left or right.

Only the above four angles or approximations thereto need ordinarily be considered in estimating angles for caroms.

PART 97: CAROM (C)

Since the combination shot is more accurate and reliable for a head-on shot (Part 85), while the carom is more accurate for shots glancing sharply to the side, the dividing line as to choice is at about 45 degrees, as indicated in Figure 192.

To spoil both E and G, a combination is more suitable than a carom, and to spoil E and F the carom is better.

At about 45 degrees, the dividing line, there is not much advantage either way as far as accuracy is concerned, although the combination will probably be a little more accurate. Either shot involves a rather thin hit.

Near the dividing line, any choice is also affected by other elements of the situation, such as whose disks are to be struck, whether scoring is to be attempted, etc.

For example, in Figures 193 and 194 it is desired in each case

to spoil two disks and each involves a shot with striking angle of about 45 degrees.

In Figure 193, it would be a mistake to use a carom and to glance the shooting disk against the kitchen disk A, because the shooting disk might thereby be left in the kitchen. The combination is more suitable.

On the other hand, in Figure 194 a combination would knock G against F, with some possibility that the G might stop against F for a score. In the use of a carom the shooting disk D might well stop against F for a score, as shown.

In making the choice, another consideration is the area to which the shooting disk will go at the end of the shot; for example, whether it may stop in a protected area for a score.

Still another consideration may

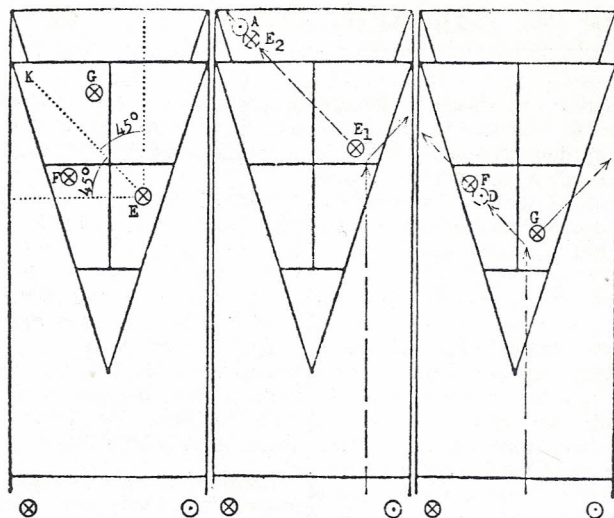


Figure 192 Figure 193 Figure 194

be that one or the other choice may result in driving a disk so as to spoil a friendly scoring

disk. The locations of other disks on the board may also affect the choice in other ways.

PART 98: CAROM (D)

As previously mentioned, a consideration in playing caroms is the distance between the two target disks. For distances of four to five feet, carom shots may be considered as long and difficult.

In the figures shown here the distances are short. In Figure 195 the disks E and F are abreast. The aiming point for a carom is determined as in Part 96. A shot with such an aiming point should result in the shooting disk hitting E with a full hit or nearly full hit and therefore it should stop against E, as at point C.

Also, since the two disks are abreast, the carom would be successful if the first hit were made against E instead of against F. However, the shooting disk C would then be stopped on the center line instead of in scoring area.

Of course, in case the two target disks are abreast and less than six inches apart, as at G and H in Figure 195, so that no disk can be shot between them, the shot is simply a straight shot for the mid-point between the two disks. These two disks then constitute a double backstop, as de-

scribed in Part 18.

REACH BEHIND GUARD. A typical carom is shown in Figure 196. A scoring disk F of the opponent lies in the 8-area and is so well protected by a triple guard composed of disks A, E and G that the shooter Red has no chance of hitting it directly or by combination. The disk C lies off to the side and outside of scoring area.

The shooter can play a carom off C and hit F to spoil the latter, as shown in the figure, and perhaps may also make a score for himself, also as shown.

A similar type of carom might alternatively be made if a disk were located at point X.

ANOTHER interesting carom from the 1954 Gold Medal Tournament is shown in Figure 197. The shooter played his shooting disk against the enemy scoring disk G, knocking it from the board. At the same time his shooting disk glanced to the left to hit B-1 and stop against it for an 8. B-1 was tapped onward to B-2 for a 7. The carom resulted

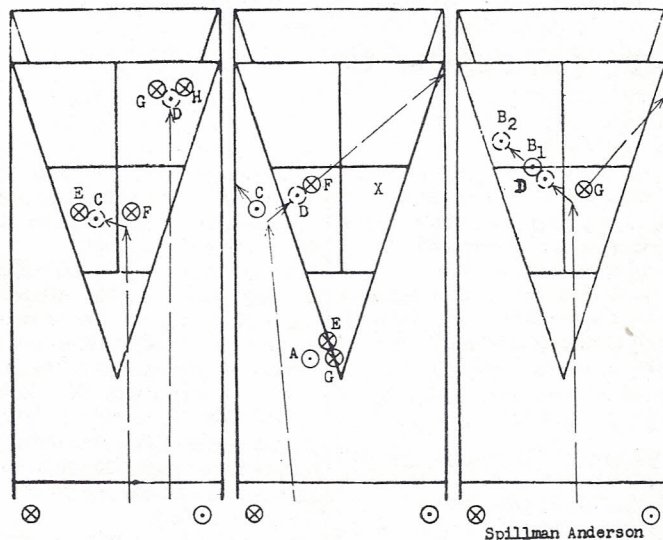


Figure 195 Figure 196 Figure 197

in a double for Red.

Gain for the shot: 23 points.

PREVENT CAROM. When the shooter desires to prevent the opponent from making a carom, the

usual method is to sight to determine how the opponent will attempt the shot and to place a guard to block the line of the probable shot.

PART 99: CLEARING THE BOARD (A)

Clearing the board (also called "cleaning the board") is illustrated in Parts 5 and 74. Keeping the board clear consists of a sequence of shots to knock away disks so that the board remains clear or nearly so, and to continue this process throughout a half-round or a series of half-rounds.

THE PURPOSE is in general to keep from the board any disk or disks liable to be disadvantageous to the shooter because they may offer the opponent an opportunity to gain a score or to gain an advantage leading to a score, as in the case of the cross-guard E in Figure 198, or the Tampa guard F.

The disks knocked away are usually enemy disks, but occasionally friendly disks when these offer advantages to the opponent, such as in the case of a disk stuck at X, beyond which the opponent can hide, or once in a while a disk, such as a cripple at B which the opponent might put in the kitchen (Part 79).

Occasionally the question arises as to whether an enemy guard, as at E in Figure 199, alone on the board, should be knocked away or disregarded. The standard for judging is that the disk should be spoiled if it can or probably will be used by the opponent for scoring or for hiding as at F in such a way as to embarrass the shooter. The decision depends upon the ability of the opponent, and on the drift. If the answer is doubtful, the safest solution is usually to clear away the disk.

THE TYPE OF SHOT is the angle hit (Parts 5, 19, 21, 59 and 74), each shot being aimed usually at the edge of the target disk and preferably at the outer edge, Figure 198. Each shot should be well aimed in order to avoid a full hit and the consequent stick-

ing of the shooting disk.

The shot should use at least medium speed and frequently use fairly high speed, in order to insure that the shooting disk shall leave the board at each shot. Clearing the board is easier and more reliable on a fast court than on a slow one, because on a slow court a shooting disk is more liable to stick.

WHEN USED. A shuffler keeps the board clear when he is ahead in the score or about even (See also Parts 75 and 77.) (If he is materially behind in the score, by about 12 to 15 points or more, he usually avoids clearing the board, as that tends to help the opponent.)

When the shooter is ahead or about even and is to have the last-shot in the frame, he employs his first three turns of the frame to keep the board clear, simply contenting himself with knocking away each of the opponent's disks, wherever placed, if they form any danger or threat, such as a guard E or F, Figure 198, or enemy kitchen-bait F in Figure 200.

For these half-rounds he can reasonably hope to keep the board clear and make scores at the end of most of the frames with his last-shots. This therefore has the effect of deferring the scoring to the last-shot of each frame.

On the other hand, when the shooter is ahead or about even, and the opponent is to have the last-shot and is not on the verge of winning, the action of the shooter is different.

His first play is usually a guard, that is, a cross-guard as at A, Figure 200, or a Tampa. Then for the succeeding shots he usually keeps the board clear of any disks placed by the opponent, as at F, Figure 200. At the same time he is prepared to hide be-

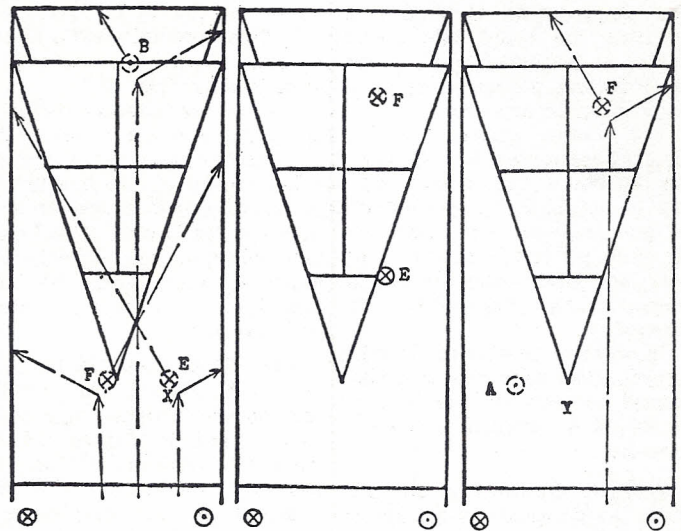


Figure 198

Figure 199

Figure 200

yond the initial guard in case the opponent leaves it there and also allows him a chance to make that shot, or to hide in any other protected area that may develop, or to take advantage of any errors made by the opponent.

At the seventh shot the shooter is liable to be faced with an open board and so with a situation in which he can hardly hope for much success. Any scoring disk that he could place would be fully exposed and perhaps suitable as a backstop or as a target for the kitchen.

His shot is then usually in the nature of a last-resort play. He should generally shoot for a center - short, at or near the point of the scoring triangle, as at Y, Figure 200. The center - short will be discussed in detail later.

SKILL. If the shooter is not reasonably good at simple scores with his last-shots, he should not use this procedure except merely as a method of keeping the opponent's score low.

Also, if the shooter is weak at

clearing the board and frequently misses or sticks, he may be forced to abandon its use until he has practiced further with it, and in the meantime substitute the procedure of filling-in (Parts 36 and 37).

GENERAL USE. Of course, both players can and usually do use this procedure of clearing the board, which tends to reduce the variety of the game somewhat. However, there are still many varied and interesting developments of such play. Most expert shufflers use this type of play.

Among some players there is a prejudice against clearing the board, with which prejudice this writer does not agree.

Those who have watched the energetic and effective clearing of the board regularly used by Miriam McDavid, four times national open singles champion, will smile at the remark she made to us a couple of years ago with a twinkle in her eye, "I don't believe in clearing the board."

PART 100: CLEARING THE BOARD (B)

Keeping the board clear is not easy. In fact it is difficult to do so without slips or failures.

STICKING. The most serious difficulty in keeping the board clear is the sticking of the shooting disk. Even though the opponent's disk is knocked away, when the shooter's disk inadvertently remains stuck in its place, as at A, Figure 201, so that the oppon-

ent can use it as a guard and hide beyond it, that shot is not only a failure but is an assistance to the opponent.

The same thing applies equally when the shooting disk misses the target disk E and leaves it in place as a guard.

No player is exempt from such failures. Even the top experts make them occasionally.

DIVERSION. A surprising as-

pect of the tactics of keeping the board clear is the ease with which a player may be diverted from this type of play. Aside from the simple difficulty in consistently shooting angle shots to clear the board and not leave the stuck disks, there are other and more subtle difficulties.

The appearance of a partly favorable guard inviting the shooter to hide beyond it, as beyond

B in Figure 202 (considered as the only disk on the board), the development of a possible kitchen shot, or other occurrences, may divert the shooter's attention from keeping the board clear, whereupon he finds himself no longer following that procedure.

An example of this was mentioned in Part 75, in which a remark was made concerning the

loss of a lead in score because the shooter was diverted from clearing the board into an attempt at a kitchen shot, whereupon he was promptly put in the kitchen by the opponent.

For another example, in Figure 202, assuming both B and F on the board, the shooter might try to put F in the kitchen and to glance to the left under cover of B, yet fail to glance to the left and thus may leave his shooting disk C exposed to a kitchen shot.

In order to be able to clear the board effectively, the procedure should not only be practiced but it should be applied with determination.

HIDING. However, a diversion from the procedure is not always wrong, for a shuffler should constantly be prepared to take advantage of really good opportunities, especially to hide a scoring disk.

For example, in the 1956 Champion of Champions Tournament (and on other occasions) Carl Spillman was keeping the board clear, while his opponent played kitchen-bait. One of the oppo-

ent's kitchen-bait shots stopped on a cross-line at F, Figure 203.

Spillman promptly hid a disk at C. Most experts play to hide in situations like this.

One of the characteristics of keeping the board clear is that the shuffler who has a well-developed habit of its use will tend to ignore opportunities for scoring (such as beyond B in Figure 202) unless he can make a well-protected score, and he may sometimes even ignore good opportunities.

VALUE. As shown in Parts 74, 75 and 80, clearing the board is the normal defense against a shuffler who is playing the kitchen-bait sequence to put the shooter in the kitchen. It is also a defense against other types of kitchen shooting.

As also later discussed, when there is drift which favors the opponent, the procedure of keeping the board clear in order to spoil the opponent's guards is of special value.

The use of the procedure in the doubles game is discussed later under the subject of "Teamwork in the Doubles Game."

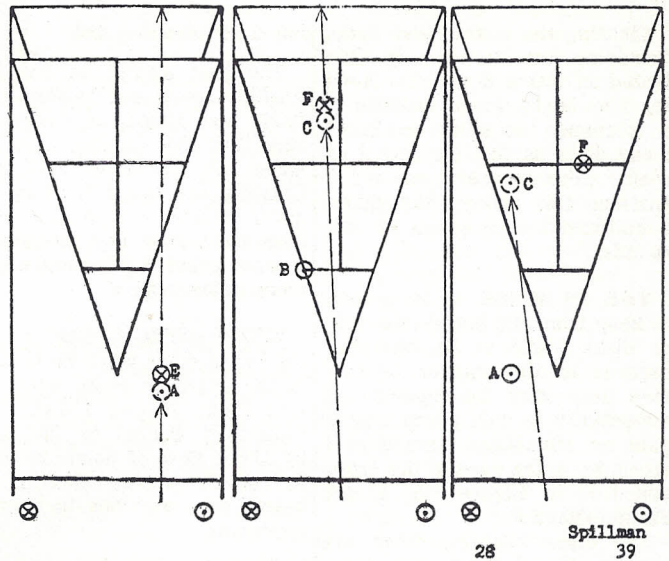


Figure 201

Figure 202

Figure 203

There is great value in the play of keeping the board clear, consistently used. Numerous tournament matches have been

won by using this procedure. It does not always win, for no procedure does this, but it has solid value.

PART 101: CLEARING THE BOARD (C)

The procedure of clearing the board has a great numerical effect upon the score

Whenever a large score is made in a single frame, it must necessarily be accomplished with a number of disks on the board, that is, a player scores with several disks.

FEW DISKS SCORED. If on the other hand the board is kept clear and is clear or essentially so at the last shot of a half-round, one player can score only by simple scoring, usually for 8 or 7 points, and for not more than 10 points. The probable average score is about six points per half-round for each player when he has the last shot, as shown in Part 14.

Largely because of the prevalence of keeping the board clear, the number of scoring disks is generally low. It is interesting to observe how many disks are scored per half-round in important tournaments, as shown in

the box. This table is based upon 736 half-rounds of tournament play.

PROTECT A LEAD. When the shooter has a material lead in score, one of the opponent's best possibilities of catching up in the score is by means of kitchen play, and another is by shots involving several disks to build up

Number disks scored	Number half-rounds	Pct.
0	152	20.7
1	368	50
2	169	22.9
3	33	4.5
4	13	1.8
5	1	0.1
TOTAL	736	100

his score quickly.

The player having the lead in score can therefore do much to protect that lead by keeping the board clear so that the opponent

has no suitable targets for kitchen shots or for doubles, or for complex shots involving possibilities of multiple scores. See also Part 86. Thus the score of each frame is limited to one disk on the last-shot. As Web Smith says, "Keep it simple."

Of course, in forcing this situation on the opponent, the shooter usually also subjects himself to the same general condition, so that in keeping his opponent's score low he also keeps down his own advance in score.

BOTH SCORES ADVANCE. As a result of keeping the board clear, the general effect on the over-all score is for both players, if they score a reasonable percentage of their last-shots, to increase their scores slowly, without large jumps, toward the final game score.

Since they may expect to advance about equally under such conditions, the player who has a material advantage in score

should expect to maintain that advantage, and should hope to reach the end of the game while retaining that advantage.

For example, suppose that the score is: Red 54, Black 13. If Red keeps the board clear so that each player makes an 8 or 7 on each round, alternating with the possession of the last-shot, in two half-rounds the score will probably advance to about 62 to 21, then in two more half-rounds to about 69 to 29, and shortly afterward to game at about 76.

Again, if the shooter is to have the last-shot and is within one score of winning, that is, with a score of 67 or more, he should normally keep the board clear with the expectation of winning the last-shot. This applies in general, regardless of what may be the score of the opponent.

NOT INFALLIBLE. Still, it must be remembered that the procedure of keeping the board clear is not infallible, because many things can happen.