Sept. 19, 1967 R. K. WALDO 3,342,489

WEIGHTED HANDLE FOR A BILLIARD CUE

Filed March 10, 1964

FIG. 1

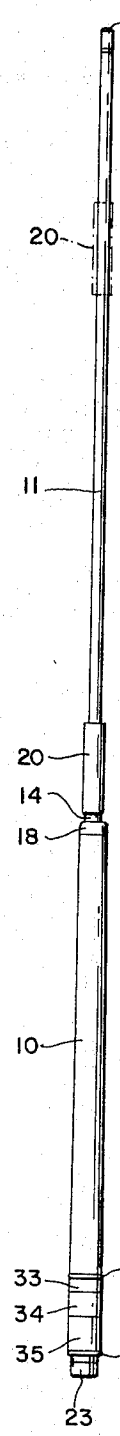



FIG. 2

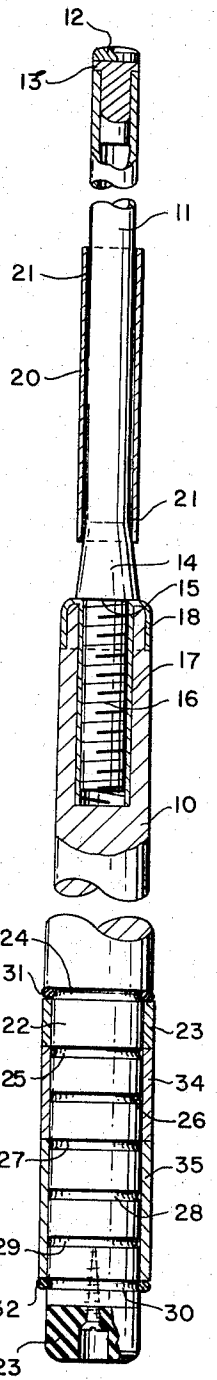



FIG. 3

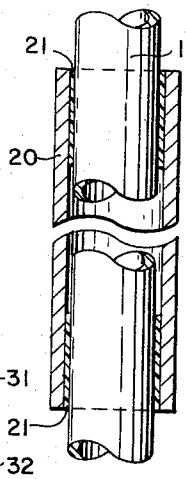
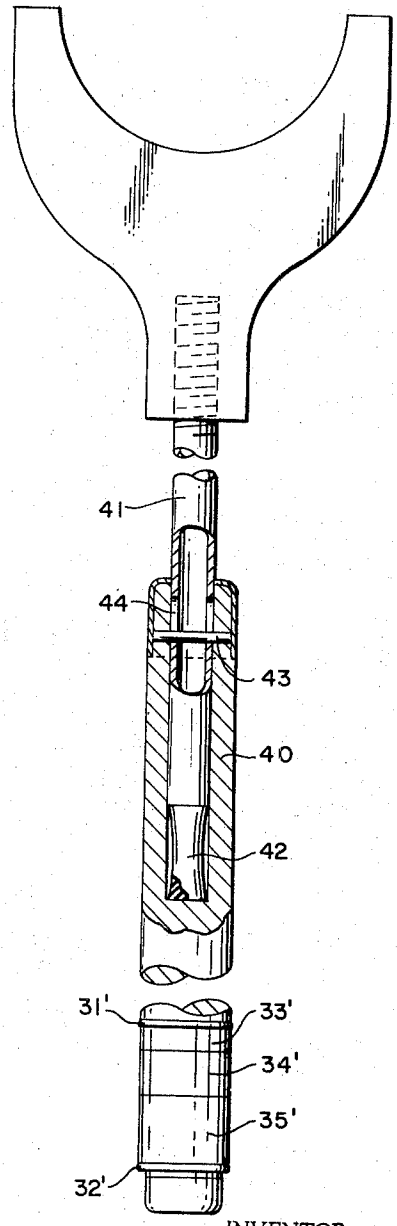



FIG. 4




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# WEIGHTED HANDLE FOR A BILLIARD CUE

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This invention relates to a billiard cue, and as one of its objects aims to provide a cue having a stick portion of uniform rather than the tapering diameter which characterizes the customary billiard cue.

Ancillary to the above, it is a further and particular object to provide a billiard cue having a bridging sleeve mounted for endwise sliding motion upon said stick portion.

As a further and important object still, the invention aims to provide a billiard cue so constructed that its weight may be easily and quickly altered within an accepted range of minimum and maximum norms and thus permit a single cue to adapt itself to the weight desires of a number of billiard players.

With the above objects and advantages in view, and further looking to the provision of a billiard cue of perfected design which may be inexpensively produced, all of which will appear and be understood in the course of the following description and claims, the invention consists in the novel construction and in the adaptation and combination of parts hereinafter described and claimed.

In the accompanying drawing:

FIGURE 1 is an elevational view showing a billiard cue embodying preferred teachings of the present invention.

FIG. 2 is a fragmentary enlarged-scale longitudinal sectional view thereof with parts in elevation.

FIG. 3 is a fragmentary longitudinal sectional view drawn to a yet larger scale; and

FIG. 4 is an elevational view showing a shuffleboard stick constructed to incorporate teachings of the present invention.

The billiard cue of the present invention is comprised of separable butt and shaft sections designated in the drawing by the numerals **10** and **11**, respectively. The shaft is formed from a length of metal tubing, aluminum by preference, and presents the usual tip **12** of leather or other like or suitable material. This tip is or may be cemented to the outer face of a headed tenon **13** which is securely socketed in the front or striking end of the shaft.

Other than for a tapered collar **14** which is sweated or otherwise fixedly secured upon the shaft in spaced proximity of its rear extremity, the shaft has a uniform diameter throughout its length. The taper of the collar, between a feather edge which faces to the front and an abrupt shoulder **15** which faces to the rear, is quite moderate, desirably no more than 10°. The portion **16** of the shaft's rear end which protrudes beyond said shoulder is externally threaded to fit the internally threaded socket-piece **17** of a metal ferrule **18** which is provided upon the front end of the cue's butt section **10**. In threading the shaft section into said socket-piece the shoulder **15** is brought to bear against the exposed face of the ferrule.

A bridging sleeve **20** is received for endwise slide motion upon the shaft. Bushings **21** of Teflon or other like or suitable material are provided in the two ends to produce friction-free slide journals. When the bridging sleeve is not in use the bridge may be either removed from the shaft or held in an out-of-the-way position—as shown in FIGS. 1 and 3—by pressing the same onto the front end of the tapered collar **14**. The uniform diameter of the shaft is significant not only in allowing use of the bridging sleeve. It also permits a player, should he prefer



to "bridge" with his forefinger, to form a more efficient bridging loop with such forefinger. This follows from the fact that such loop need not "give" during the course of a shot. When using cues having customary tapering shafts, the bridge must give in compensation of the cue's changing diameter.

The butt section **10** is desirably composed of wood and is or may be tapered. At the rear end it is necked down as at **22** for a distance of, say, 3½", and has a disc **23** of rubber screwed or otherwise fixed in place upon the butt's rear extremity to serve as a buffer. The diameter of the rubber buffer corresponds to that of the neck so as to permit weighting sleeves, hereinafter described, to be slipped over the same.

The sleeve-seating portion **22** of the neck presents a plurality of circumferential grooves, six in number. There is also provided a groove **24** located at the forward extremity of the neck. The six grooves, denoted by grooves **25–26–27–28–29–30**, are spaced at generally equidistant intervals between said terminal groove and a rear extremity of the seat located a moderate distance to the front of the neck's rear extremity. A fixed O-ring **31** is lodged in the groove **24** and may, if desired, be cemented in place in that it functions only as a compressible shoulder. An O-ring **32** is removably lodged in a selected one of the other grooves, its purpose being that of a keeper for the weighting sleeves. There are three of these sleeves, all three having the same diameters to give a slip fit upon the neck **22** and to be flush, or approximately flush, with the tapered part of the butt section **10** at its point of juncture with the neck.

The three sleeves are of different lengths to provide different weights. One sleeve **33** is a 1-ounce sleeve, with its length corresponding to a given module, say ½". A second sleeve **34** is a 2-ounce sleeve, twice the length of the module. The third sleeve **35** is a 3-ounce sleeve with a length three times that of the module. Billiard cues customarily have a fixed weight, ranging between minimum and maximums of 15 and 21 ounces. The present cue is constructed with a base weight of said minimum, namely 15 ounces. This can be quickly altered at the will of a player by means of the weighting sleeves. Applying the 1-ounce sleeve **33**, and lodging the ring **32** in the groove **25** as a keeper therefor, produces a 16-ounce cue. Groove **26** similarly receives the keeper ring when the 2-ounce weight is used. Groove **27** receives the keeper ring when the 3-ounce weight is used. Should it be desired to add four ounces to the cue's base weight, the weights **33** and **35** are used and are held in position by lodging the keeper ring in the groove **28**. The groove **29** accommodates a combination of the weights **34** and **35**, groove **30** a combination of all three weights. The grooves **25–26–27–28–29–30** are each so spaced from the end groove **24** that the fixed O-ring **31** must be slightly compressed in order to lodge the keeper ring **32** in its proper groove. This tensions the O-rings against the weights and serves the important end of stabilizing the applied weights against liability of even the most minor shifting motion while a shot is being made. Modified only in the slight degree necessary to obtain said compression of the O-ring **31**, said spacings of the grooves **25** through **30** from the groove **24** are, in order, 1 to 1, 2 to 1, etc. multiples of the given module.

The described adjustable weighting of a handle part also lends itself to other handles, those of sports equipment in particular, and such for example as the shuffleboard stick illustrated in FIG. 4. In this application I denote the weighting sleeves by **33′**, **34′** and **35′**, and the two O-rings by **31′** and **32′**. It is desirable in a shuffleboard stick that a cushioning interconnection be provided between the handle **40** and the stick proper **41**. Shown

for this purpose is a block of elastic rubber 42 used in conjunction with a cross-pin 43 working in a slot 44 to prescribe for the stick end limits of permitted relative endwise motion.

It is believed that the invention will have been clearly understood from the foregoing detailed description of my now-preferred illustrated embodiments. Changes in the details of construction may be resorted to without departing from the spirit of the invention and it is accordingly my intention that no limitations be implied and that the hereto annexed claims be given the broadest interpretation to which the employed language fairly admits.

What I claim is:

1. A handle formed at its rear end with a cylindrical seat having a length which is a multiple of a given module and providing within the length of said seat circumferential grooves separating the several modular sections, elastic O-ring means adapted to fit a selected one of said grooves, and a set of sleeve means sized to fit the seat and slidably applied thereto from the rear end of the handle, the sleeves being used singly or in combinations to vary the weight of the handle, the set having a combined length corresponding to the length of the seat, the sleeve means in said set each having a different length with that of one corresponding to the module and the length of the others being evenly stepped multiples of said module, the O-ring means being lodged in an exposed one of said grooves to bear against and serve a keeper function for the applied weighting sleeve means.



2. Structure according to claim 1 in which the seat has a circumferential groove at its extreme front end, and an elastic O-ring for said front-end groove caused to be compressed by application of the first-named O-ring in a keeper position bearing against the applied weighting sleeve means.


**References Cited**

UNITED STATES PATENTS

| | | | |
|---|---|---|---|
| 529,731 | 11/1894 | Gschwendtner | 273—68 X |
| 1,139,340 | 5/1915 | Ciarlelli | 273—70 |
| 1,522,321 | 1/1925 | Nyhagen | 273—68 |
| 1,554,508 | 9/1925 | Kaiser | 273—68 |
| 1,560,456 | 11/1925 | Wolpert | 273—68 |
| 3,232,613 | 2/1966 | Laube | 273—68 |

FOREIGN PATENTS

| | | |
|---|---|---|
| 688,022 | 5/1930 | France. |

OTHER REFERENCES

Zimmerman et al.: Handbook of Material Trade Names, Supplement III to the 1953 edition, 1960, Industrial Research Service Inc., Dover, N.H., TP151 Z5, p. 250 relied on.



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