July 15, 1969 W. E. WILLINGHAM, JR 3,455,273

POCKET SCORING DEVICE

Filed July 17, 1967 2 Sheets-Sheet 1

FIG. 1.

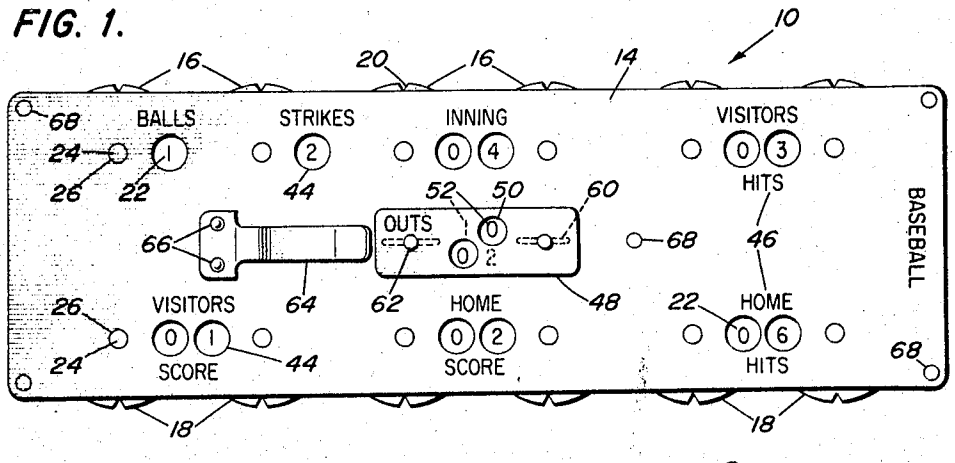
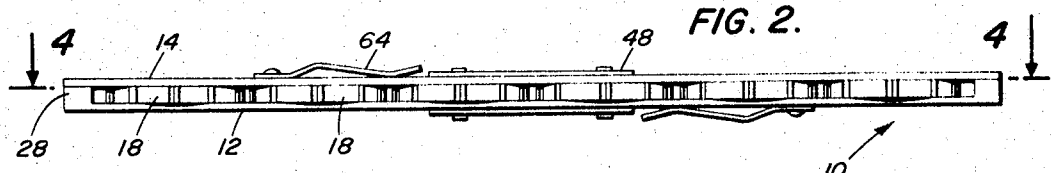


FIG. 2.



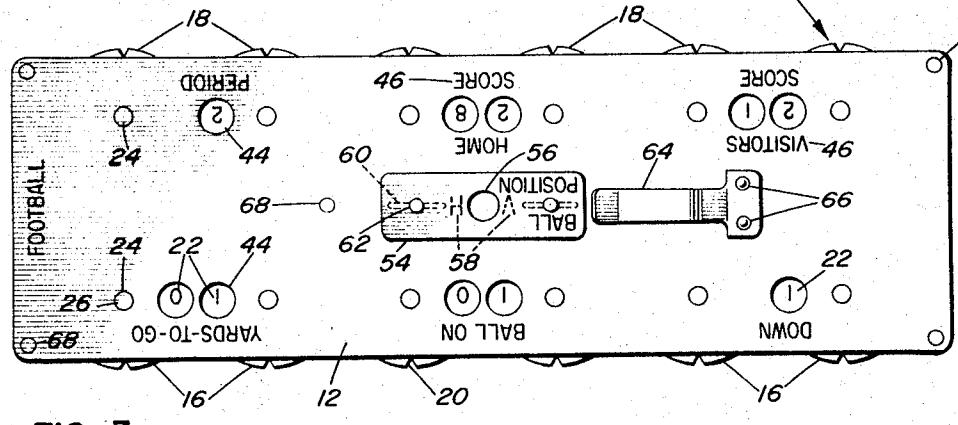


FIG. 3.

WILLIAM E. WILLINGHAM, JR.
INVENTOR

BY Walter G. Finch
ATTORNEY

July 15, 1969 W. E. WILLINGHAM, JR 3,455,273

POCKET SCORING DEVICE

Filed July 17, 1967 2 Sheets-Sheet 2

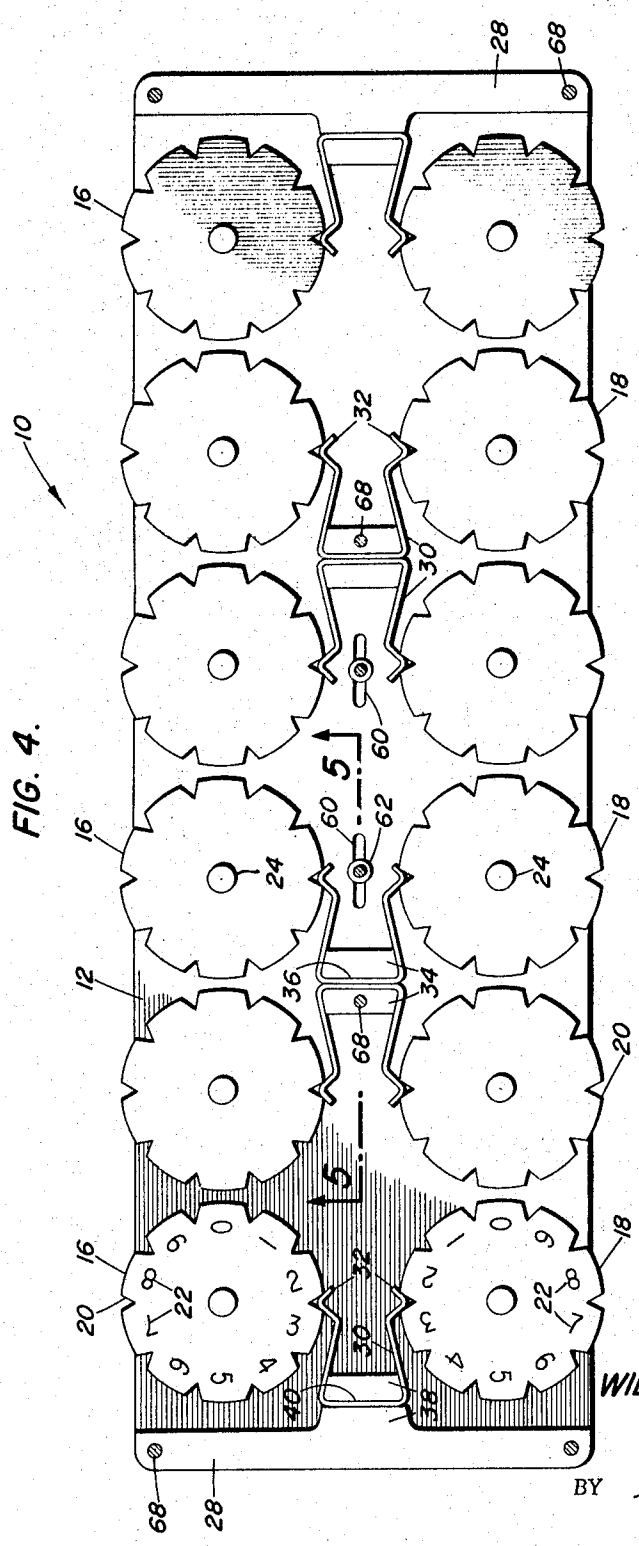


FIG. 4.

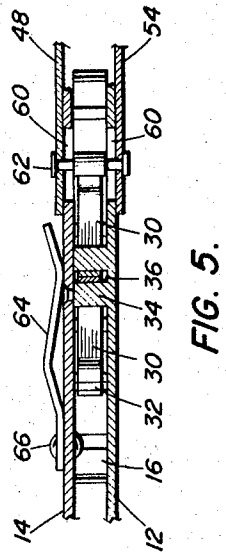


FIG. 5.

INVENTOR
WILLIAM E. WILLINGHAM, JR

BY Walter J. Finch
ATTORNEY

United States Patent Office 3,455,273 Patented July 15, 1969

3,455,273

POCKET SCORING DEVICE

William E. Willingham, Jr., Frederick Ave. and Thistle Road, Baltimore, Md. 21228

Filed July 17, 1967, Ser. No. 653,987
Int. Cl. G09f 9/00
U.S. Cl. 116—133 3 Claims

ABSTRACT OF THE DISCLOSURE

A registering device is here described which is particularly suited for high volume production from plastic. Independently rotatable indicia wheels are retained between plates in a sandwich assembly and viewed through windows on both sides. Peripheral notches are provided on the wheels, both for thumb friction and for detent spring engagement. The detent springs are U-shaped and each is shared by two wheels. Slotted raised bosses on the base plate retain the detent springs and serve as spacers and ends. A pair of slide plates translate together on opposite sides of the assembly and have three positions where window apertures uncover indicia on the sandwich plate surfaces. Serving both as pocket clips and independently-acting detents for the slide plates are two spring clips, one on each side of the assembly. The indicia shown is for the games of baseball and football but any other sports or activities may be registered with suitable indicia.

This invention relates generally to indicators, and more particularly it pertains to a pocket device for temporarily registering information especially that of numerical type as for game scores. Pocket type wheel score cards have in the past been of thin celluloid sheet construction and subject to almost certain breakage in a pocket. The finger actuated wheels, too, were sources of trouble with reliance only on friction to retain a setting and lacking adequate finger purchase.

It is a primary object of this invention, therefore, to provide in a scoring device the application of interacting and combined utility features to make possible a more rugged arrangement of cast plastic for low cost and improved performance.

Another object of this invention is to provide a base plate for sandwich structure complete with raised bosses which retain detent springs securely and function as spacers and end walls for functionally retaining indicia wheels.

Still another object of this invention resides in the provision of windowed slide plates translatable from one side of the assembly to the other and bi-functional clips for detenting the same in three locations.

Other objects and attendant advantages of this invention will become more readily apparent and understood from the detailed specification and accompanying drawings in which:

FIGS. 1, 2, and 3 are respectively top, side, and bottom views of a pocket scoring device incorporating features of this invention;

FIG. 4 depicts the interior of the pocket scoring device viewed in the direction of the arrows of line 4—4 of FIG. 2; and

FIG. 5 is a sectional detail view taken on line 5—5 of FIG. 4.

Referring now to the details of the invention as shown in FIGS. 1 and 2, reference numeral **10** indicates generally a pocket scoring device. This scoring device **10** consists of a molded plastic lower, or base plate **12**, and an upper, or cover plate **14**. Sandwiched between these plates **12** and **14** a plurality of scoring wheels **16** are retained on stub shafts **24** in journal holes **26** along one longitudinal

edge with a portion of their periphery projecting. Similarly, another and equal plurality of scoring wheels **18** are mounted adjacent the opposite edge.

Each wheel **16** and **18** is provided with numerals **22** on both faces arranged in a circle. Notches **20** are provided in the periphery of each wheel **16** and **18** equal in quantity to the numerals **22** thereon as best shown in FIG. 4.

Raised portions somewhat higher than the thickness of the wheels **16** and **18** in the form of bosses **34** and end bosses **38** are integral with the base plate **12** along its longitudinal center line. Slots **36** are formed in the bosses **34** and similar slots **40** in the end bosses **38** to frictionally retain U-shaped springs **30**. Each spring **30** has a detent **32** at opposite ends. One detent **32** of one spring **30** thus engages the notches **20** of a scoring wheel **16**, the other engaging the notches **20** of a scoring wheel **18** positioned oppositely. The end bosses **38** merge into endwalls **28** which extend the entire width of the base plate **12** and close the ends of the assembly as best shown in FIG. 2.

Both plates **12** and **14** have windows **44** positioned so the numerals **22** on wheels **16** and **18** may be observed, one at a time, as advanced detent-by-detent notches **20**.

The outer faces of the plates **12** and **14** have indicia **46** to identify these windows **44**. Other indicia **52** and **58** are located on plates **14** and **12**, respectively. Here, respective slide plates **48** and **54** are arranged to translate thereover together with tie-spacers **62**. These tie-spacers **62** as best shown in FIGS. 4 and 5 extend serially through parallel slots **60** in the plates **14** and **12** and are hot peened at their ends to retain them to the slide plates **48** and **54**.

Windows **50** and **56** in the plates **48** and **54** allow three different insignia **52** (or **58**) each to be sequentially viewed corresponding to right hand, center and left hand translations. These positions are assured by a pair of combination pocket and detent clips **64**, one secured by rivets **66** on plate **12**, the other similarly on plate **14** but not in opposition.

Thus, one clip **64** captures the slide plate assembly upon a left translation, whereas an opposite hand translation results in capture by the other clip **64**. Being on opposite sides, one of the clips **64** is always handy for pocket engagement.

The bosses **44** and the end walls **28** have upstanding pins **68**. These pins **68** extend through matching holes in the cover plate **14** and are hot-peened on their ends to secure the entire assembly of the pocket scoring device together in a rigid manner.

If desired, instead of using plastic for the construction of the pocket scoring device **10**, light weight metal can be utilized.

Obviously many modifications and variations of the present invention are possible in light of the above teachings. It is, therefore, to be understood that within the scope of the appended claims the invention may be practiced otherwise than as specifically described.

What is claimed is:

1. In a pocket scoring device, comprising, a pair of parallel and juxtapositioned spaced plates, a plurality of scoring wheels positioned between said plates and mounted for rotation, each said scoring wheel having a portion of its periphery projecting outwardly past the edges of said plates, each said scoring wheel being provided with indicia on both faces thereof arranged in a predetermined manner, each said scoring wheel having notches provided in its periphery equal in quantity to the indicia on said wheel, and spring means for selectively engaging the notches in each said scoring wheel to hold said wheel in a predetermined position, said plates having windows positioned therein so that said indicia on said scoring wheels can be observed, the improvement comprising: slide plates

positioned on the outer faces of said pair of spaced plates, said slide plates having spaced windows provided therein for sequentially viewing indicia on the outer faces of said pair of parallel spaced plates, and means for retaining said slide plates in predetermined positions on said pair of spaced plates.

2. In a scoring device as recited in claim 1, the said slide plates affixedly assembled to each other through parallel slide slots in said spaced plates, and said means for retaining comprising a clip mounted on one of said spaced plates and adapted to detain one end of the said slide plate assembly and a second clip mounted on the other of said spaced plates and adapted to detain the opposite end of the said slide plate assembly.

3. In a scoring device as recited in claim 2, each said clip having one end thereof affixed to the exterior of a said spaced plate and having the opposite end thereof outwardly bent and sprung against the spaced plate, whereby

when the said slide plate assembly is positioned away from a clip, the said clip is adapted for use as a pocket engagement clip for storing said device.

References Cited

UNITED STATES PATENTS

1,985,652	12/1934	Campbell	235—114
2,874,672	2/1959	Hamm	116—133
2,996,247	8/1961	Shell	235—114
3,017,087	1/1962	Bodeen	116—133 XR
3,268,168	8/1966	Staller et al.	235—114
3,297,249	1/1967	Light	235—114

LOUIS J. CAPOZI, Primary Examiner

U.S. Cl. X.R.

40—62