

Feb. 25, 1964

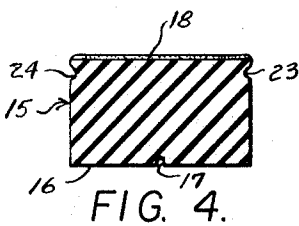
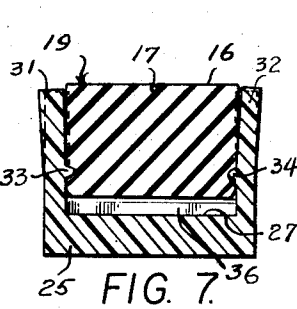
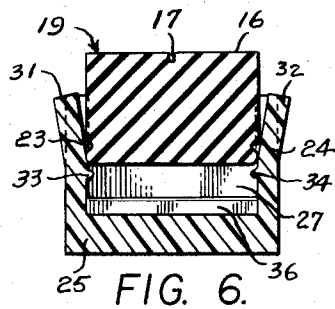
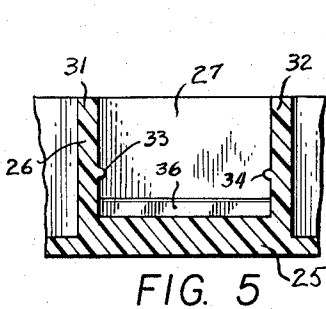
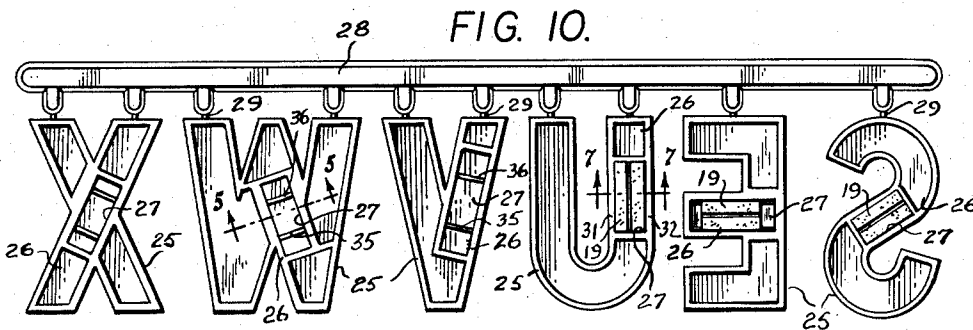
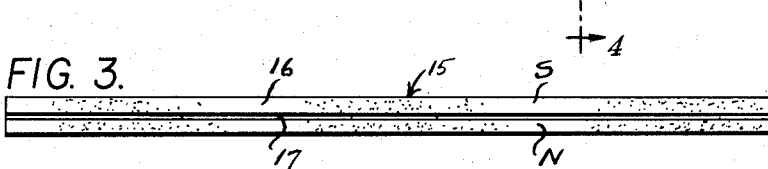
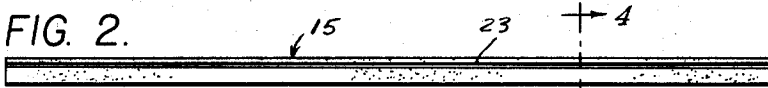
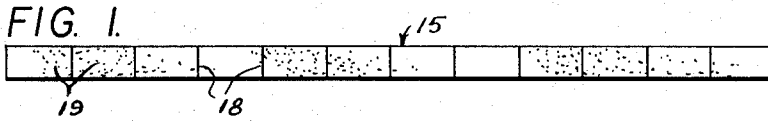
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3,122,684

MAGNETIZED GAME BOARD CONFIGURATIONS

Filed Aug. 10, 1961

2 Sheets-Sheet 1



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MAGNETIZED GAME BOARD CONFIGURATIONS

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2 Sheets-Sheet 2

FIG. 11.

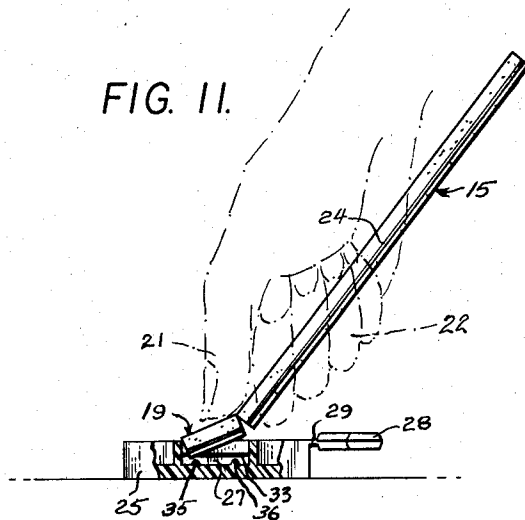


FIG. 12.

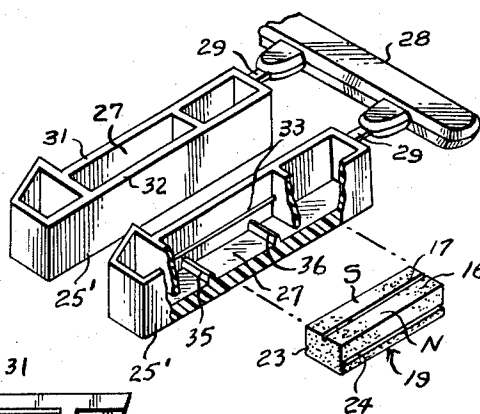


FIG. 8.

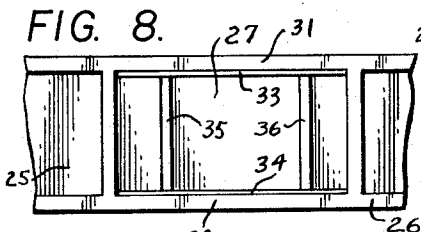
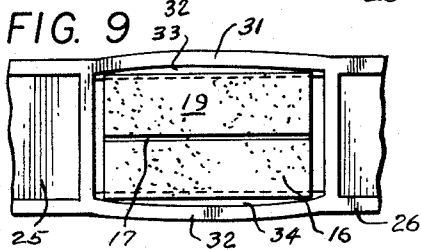


FIG. 9



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3,122,684

**MAGNETIZED GAME BOARD CONFIGURATIONS**  
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Filed Aug. 10, 1961, Ser. No. 130,686

1 Claim. (Cl. 317-159)

This invention relates to magnetized game board configurations and more particularly to the construction thereof.

It is the principal object of the present invention to provide a magnetized game board configuration which is so formed, shaped and designed and made of such materials both as to the configuration and to the magnet as to permit quick, easy and secure assembly of the magnet into the configuration with the assurance that the magnet will stay secure in the configuration and not easily separated therefrom upon the configurations being given rough treatment.

It is another object of the present invention to provide a game board configuration of closed contour on its face and in which the magnet can be easily assembled thereinto from its rear face and into a pocket confined in the run of the configuration without requiring added width or length to the configuration and readily adapted to contain a magnet piece of bar shape.

It is still another object of the invention to provide a magnetized game board configuration or element of plastic material in which the side walls of the pocket provided for the magnet can yield slightly to permit the assembly thereinto of an oversize magnetic bar piece which is made of compressible or yieldable rubber-like material having magnetic particles embedded therein and wherein the pocket walls are provided with run projections that extend into grooves in the rubber-like magnetic piece upon the magnetic piece being depressed into the pocket of the configuration, the walls of the pocket and the magnetic piece giving sufficiently whereby the magnetic piece will be mechanically, compressibly and frictionally locked in a grip-tight manner within the pocket of the configuration and not easily removable therefrom.

It is a still further object of the invention to provide a magnetized game board configuration with which the magnetic bar piece can be assembled into the configuration by a snap fitting operation as by the breaking of the magnetic piece from a long strip by the application with pressure from the thumb while holding the long strip of the magnetized material in the hand, whereby the handling and assembling of the bar piece into the configurations and between pocket walls will be greatly facilitated.

Other objects of the invention are to provide a magnetized game board configuration, which, while having the above objects in mind, is of simple construction, has a minimum number of parts, easy to assemble, light in weight, of pleasing appearance, will hold its shape and have rigidity and a flush magnetized face for engagement with the magnetic game board surface, efficient and effective in use.

For a better understanding of the invention, reference may be had to the following detailed description taken in connection with the accompanying drawing, in which

FIGURES 1, 2 and 3 are respectively top, side and bottom views of the magnetized rubber-like strip from which the magnetic bar pieces are broken as the assembler applies pressure with the thumb to break off and force the magnetic piece into a configuration well,

FIG. 4 is an enlarged cross-sectional view of the magnetic piece as viewed on line 4-4 of FIG. 2,

FIG. 5 is an enlarged fragmentary cross-sectional view of a letter configuration as viewed across the width of the pocket well thereof in which the magnetic piece is inserted and as viewed on line 5-5 of FIG. 10,

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FIG. 6 is a cross-sectional view taken across the run of one of the letter configurations as viewed on line 7-7 of FIG. 10 and illustrating the manner in which the side walls of the pocket or well are expanded while the magnetic piece is being forced thereinto,

FIG. 7 is a cross-sectional view of the configuration of FIG. 6 with the magnetic piece fully assembled thereinto, the view being taken on line 7-7 thereof,

FIG. 8 is a fragmentary bottom plan view of the configuration shown in FIGS. 6, 7 and 10, and looking into the empty pocket well into which the magnetic bar piece is to be contained,

FIG. 9 is a fragmentary bottom plan view looking upon the configuration with the magnetic piece fully assembled therein with some exaggeration being made as to the manner in which the sides of the configuration pocket will have been expanded to assemble the run projections of the pocket side walls within the side grooves of the magnetic piece,

FIG. 10 is a bottom plan view of a collection of miscellaneous letter configurations still united with the mold scrap and the pocket of some of the configurations having been filled with the magnetic pieces while the pocket of others are yet unfilled,

FIG. 11 is a fragmentary elevational view of a numeral configuration broken away and with illustration being made in detail as to how the thumb is applied while retaining the magnetic assembling piece length in the hand to effect the breaking off and the forcing of the magnetic piece into the pocket well of the configuration, and

FIG. 12 is a perspective view of two plastic numeral configurations held together by their molding scrap and one of the configurations being broken away and the magnet separated therefrom to show the shape and interior of the pocket well thereof.

In a pending application of Robert I. Genin and Murray D. Zak, Serial No. 112,725, filed May 25, 1961, there is disclosed a method of preparing the magnetized rubber-like pieces shown in FIGS. 1, 2 and 3 from a roll of magnetized rubber-like strip extruded at the supply source into continuous lengths of one hundred feet or more and the affixing of the work piece into the game-board configuration of a manner also illustrated herein in FIG. 11 of the present application. The present invention deals with the actual mechanical structure of the configuration, its material adapted to flex as the magnet bar piece is pressed or forced into the configuration pocket or well and to the shape, size and compressibility of the magnetic piece.

The magnetic bar stick lengths indicated generally at 15 in FIGS. 1, 2, 3 and 11 are extruded from more or less brittle rubber-like, compressible and yieldable material. They are provided on their underface 16 with magnetized metal filings embedded therein. The polarity of opposite nature N and S lies on opposite sides of the longitudinally-extending groove 17 running continuously throughout the magnetic length and formed therein from the initial extruding of the rubber-like material from which the sticks or length 15 are made as in the manner described in the above pending application. The stick lengths at the time they will have been made up are scored transversely as indicated at 18 so that magnetic bar pieces 19 will be broken evenly from the stick length of material when pressure is applied by the thumb 21 in the manner illustrated in FIG. 11 while the fingers 22 of the hand have grasped the magnetic stick length 15.

The stick lengths 15 are also provided in the extruding operation with side assembly grooves 23 and 24 running adjacent to the bottom 16 or the stick piece 15 and for a purpose to be more clearly set forth.

Configurations 25 defining letters, which may as well define numerals or any other shapes which are of closed

contour on their front face to appear smooth but are open on their rear or bottom face to provide hollow runs 26 and within which intermediate the length these hollow runs are provided with pocket wells 27 adapted to contain the magnetic bar pieces 19 in such a manner that they are grip tight and cannot be easily released therefrom and so that their bottom faces 16 and polar areas N and S at the opposite sides of the groove 17 will lie only slightly extended from the bottom edges of the configuration and will engage with flat game board surface layers of magnetizable material, and by which the letter, numeral or other type configurations can be disposed and supported upon the game board in the exact place to which it has been put. These configurations with the magnets in them being in effect magnets which will cling with force to the magnetizable game board surface. These configurations are molded in groups and in FIG. 10, there is shown these configurations as taken from the plastic mold and still bearing scrap plastic 28 and their attachings 29 therewith, leaving the letters attached to the scrap they are better handled for mass loading or assembly with the magnet bar pieces 19 while being conveyed past a loading station at which the worker is applying in the manner shown in FIG. 11, the magnetic bar pieces to the configurations 25 from the stick lengths 15. This procedure is better illustrated in the above-pending application and claimed therein.

The pocket wells 27 are deep and are provided with semi-yieldable side walls 31 and 32 of greater length than the width of the pocket well 27 and which as best illustrated in FIGS. 6 and 9 can give or yield due to the plastic being often of polyethylene and slightly flexible or semi-rigid. The width of the pocket well 27 is slightly less than the width of the bar compressible rubber-like magnetic bar piece 19, the difference being of the order of ten- to fifteen-thousandths of an inch. Thus, when the magnetic bar piece 19 is forced into the pocket well 27 in the manner illustrated in FIG. 11, the side walls 31 and 32 of the pocket well will be expanded as illustrated in FIGS. 6 and 9 to a slight amount and the magnetic piece being compressed a slight amount so that the magnetic bar piece when once inserted in the configuration pocket or well 27 will be resiliently and frictionally gripped so that the magnetic piece will at all times remain in the configuration and not be subject to easy dislodgment. To further grip the magnetic piece and mechanically lock the magnetic piece within the well 27, opposing ribs 33 and 34 are provided on the respective side walls 31 and 32 and are adapted to be seated respectively in the respective side grooves 23 and 24 of the magnetic bar piece 19 when the bar piece has been forced home within the pocket well 27, FIGS. 7 and 9.

To limit the extent to which the magnetic piece 19 is forced into the pocket well 27 and to insure engagement of the wall ribs 33 and 34 with the grooves 23 and 24 of the magnetic piece 19 to mechanically lock the magnetic piece 19 within the pocket well 27, longitudinally-spaced transversely-extending ribs 35 and 36 are provided in the bottom of the pocket well 27 against which the top smooth face of the magnetic piece will come to rest on being forced home as best seen in FIGS. 7, 8 and 12.

Due to a slight oversize in the width of the magnetic piece as best shown in an exaggerated manner in FIG. 9, the side walls 31 and 32 of the configuration pocket well 27 will be slightly bulged and placed in tension to insure longitudinal gripping action and the mechanical seating of the ribs 33 and 34 in the grooves in an out-

ward direction and normal to the run 26 of the configuration 25.

In FIG. 10, it will be noticed that the run 26 of the letter configurations can extend in any direction according to the particular letter configuration but generally longitudinal or inclined and transversely as with the letters "S" and "E." In a numeral "1" configuration as shown at 25' in FIG. 12, the run is longitudinal and these numerals can have scrap 28 and the breakable attaching portions 29 that relieve numeral configurations 25' from the scrap 28. These numerals have the same pocket wells 27 as the letter configurations and their walls are expanded in the same manner upon forcing the magnetic piece 19 thereinto and against the bottom space ribs 35 and 36 and such that grooves 23 and 24 receive the ribs 33 and 34 on the opposite side walls of the pocket well 27.

It will be noted that when the magnetic bar piece 19 is forced into the pocket well 27 of the letter or numeral configuration 25 or 25' as illustrated in FIG. 11 that it is most easily started by locating one end first of the stick length into the well 27, this effecting the initial expansion and giving of the side walls of the pocket well and as well the compression of the magnetic bar piece so that with further application of force with the thumb 21 the magnetic bar piece 19, can be easily snapped into place and driven home into the well.

While various changes may be made in the detail construction, it shall be within the spirit and scope of the present invention as defined by the appended claim.

What is claimed is:

In combination, a configuration body of semi-rigid plastic material having an elongated pocket well extending upwardly from the bottom thereof, said pocket well having side walls adapted to be slightly expanded and outwardly bulged and having an open top, a bar magnet of rectangular cross section having top, bottom and side faces, and being formed of compressible rubber-like material with magnetized metal particles embedded therein, said bar magnet having a width slightly larger than the normal width of the pocket well whereby upon the insertion of the magnet into the pocket well the side walls will be expanded and the bar magnet will be slightly compressed so that the bar magnet will be contained within the configuration pocket by adequate gripping and frictional action, at least one side of the elongated pocket well having a rib extending parallel to the open top, said rubber-like bar magnet having a corresponding groove on its side face parallel to its top face for receiving said rib when the bar magnet has been forced home in the pocket well, the bottom of said pocket well having spaced raised ribs, and said bar magnet being so dimensioned that when its bottom face engages said raised ribs the groove in the side face thereof will receive the rib on the side of the pocket, and the top face of the magnet will be flush with the open top of the pocket well and exposed for juxtaposition to an adjacent metal surface

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