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H. E. GRAY

2,492,423

MAGNETIC PUCK PROJECTOR

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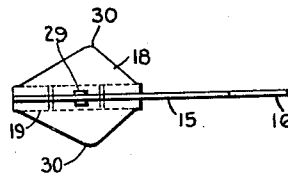
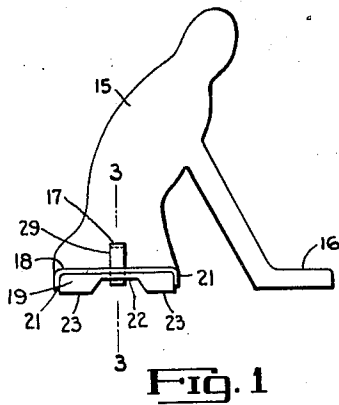


Fig. 2

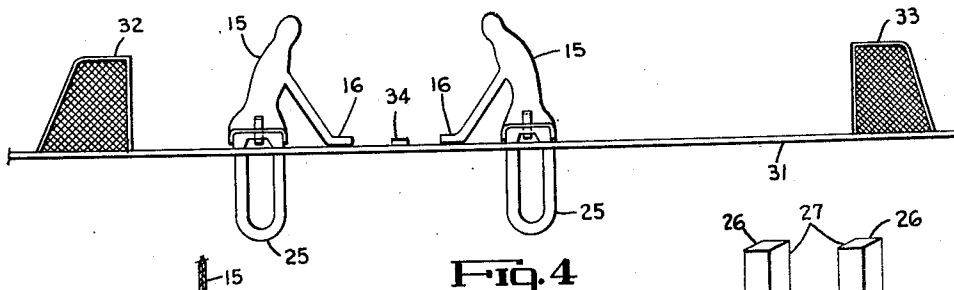


Fig. 4

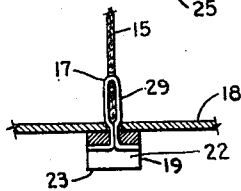


Fig. 3

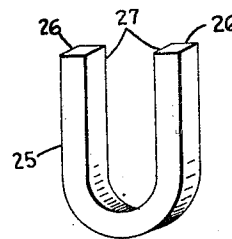


Fig. 5

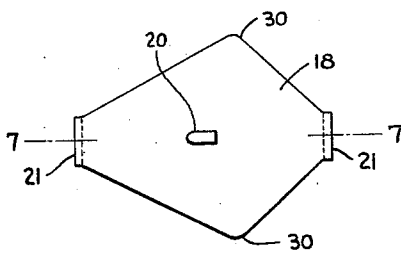


Fig. 6

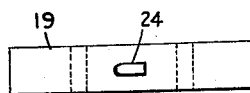


Fig. 8

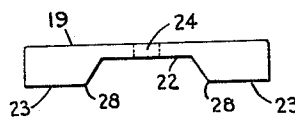


Fig. 9

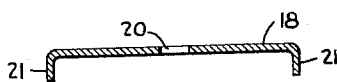


Fig. 7

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## UNITED STATES PATENT OFFICE

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## MAGNETIC PUCK PROJECTOR

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3 Claims. (Cl. 273-129)

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The invention relates to improvements in markers for games and the like as described in the present specification and illustrated in the accompanying drawings that form a part of the same.

The invention consists essentially of improvements in markers for games and the like, as pointed out broadly and specifically in the claims for novelty following a description in detail of an acceptable form of the invention.

The objects of the invention are to devise markers which can be used for various types of game boards, playing miniature hockey, soccer, golf, curling, bowling, croquet, and in fact, any game which utilizes the movement of markers for forming propulsion means to any member capable of being rolled or pushed; to construct a marker which may be easily and quickly moved on a surface in any direction by means of a magnet underneath the said surface; to devise a marker which may be quickly moved from one position to another without pulling the magnet clear of the marker; to construct a marker which will fall in a predetermined position permitting same to be brought easily and quickly to an upright position by means of a magnet underneath the surface on which the marker rests; to devise a marker having a base so designed as to provide the maximum attraction for a magnet; and generally to provide markers for a game that can be manufactured either economically or expensively, according to the taste of the patron, and which will be of a comparatively durable construction, attractive in appearance and efficient for its purpose.

In the drawings:

Figure 1 is a side elevation of a member.

Figure 2 is a plan view of Figure 1.

Figure 3 is a vertical sectional view as taken on the lines 3-3 in Figure 1.

Figure 4 is a side elevation showing the markers on a game board and their relative position with respect to the magnets.

Figure 5 is a perspective view of an acceptable type of magnet.

Figure 6 is a plan view of a stabilizer member or shield which is mounted on the base of the marker.

Figure 7 is a sectional view as taken on the line 7-7 in Figure 6.

Figure 8 is a plan view of a metallic base for a marker.

Figure 9 is a side elevation of Figure 8.

Like numerals of reference indicate corresponding parts in the various figures.

Referring to the drawings, the markers have been disclosed as being for a miniature hockey

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game, but it will be understood that with slight modifications, other types of games may be played through the use of the same features as are used in the markers as illustrated.

5 The marker consists of an upright member as indicated by the numeral 15. This upright member may be made of any suitable material, such as papier-mâché, cardboard, fibre, plastics, and the like, but is preferably made of fibre of a predetermined thickness which will provide sufficient stability, and at the same time being light in weight to permit free movement of same on a board. The upright member or marker 15 is made in the shape of a hockey player having an extended portion which represents a hockey stick 16. While this upright member 15 represents a hockey player it may be made any particular shape to suit a number of different games. This upright member 15 has an aperture 17 centrally located a predetermined distance from the bottom edge of same, providing means for securing the upright member 15 to a base.

The base consists of a stabilizer member or shield 18 which rests on a metallic base bar 19.

25 The shield 18 is made of any suitable material of predetermined size and thickness, being somewhat angularly shaped at each side thereof. This shield may be made of either a conductive metal or non-conductive material, and has an aperture 20 centrally located in the body of same. The flanges 21 on the shield 18 extend partially down over the ends of the base 19, providing means to assist in securing this shield substantially to the same.

35 The base 19 is a predetermined size and shape and made of a conductive metal, or having a substance therein which is attractive to magnets and the like. This base has a recessed portion 22 in the bottom surface of same producing a conductive bar having two individual rectangular bottom surfaces 23. This recessed portion 22 may be rectangular in shape or there may be one or more recessed portions of any desired shape which would provide a plurality of clearly defined edges 40 along the bottom surface of the base 19. While the base is shown in one piece having a recessed portion in the bottom surface thereof, it could be made in any other suitable manner, such as having a horizontal plate with two individual blocks 45 longitudinally spaced and secured thereto. The base 19 has an aperture 24 centrally located in the body of same.

This base 19 having the bottom surfaces 23 with clearly defined edges on same permit a magnet 55 25 to have greater control over this base 19, as the plurality of edges on the base offer greater attraction to the magnet 25. If the shape of the

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bar or base were flat or plain, the base would not be adequately sensitive to the movement of a magnet, and a quick movement of the magnet would pull it altogether clear of the base leaving the marker stranded on a game board.

The base 19 having the two individual bottom surfaces 23 will also facilitate turning the upright member 15 in any desired position on the game board.

The magnet 25 is U-shaped or may be any other design which will permit same to perform its duties in an efficient manner. The poles 26 of the magnet are designed so that the inner edges 27 of the poles are longitudinally spaced to coincide with the inner edges 28 of the bottom surfaces 23 on the base 19. While these edges 27 and 28 of the magnet and base respectively coincide with one another, the bottom surfaces 23 of the base 19 are smaller in cross-sectional area than the surface of the poles 26 of the magnet.

In the assembly of the marker a securing strip 29 which is made of metal or any other suitable material is inserted in the aperture 17 and folded downward and inward adjacent to each side of the upright member 15. The ends of this strip 29 extend downward past the lower edge of the upright member 15 and are pressed in adjacent to one another. The ends of the strip 29 then extend through the aperture 20 in the shield 18, and through the aperture 24 in the base 19. The ends of this strip 29 are then drawn through the aperture 24 sufficiently taut to hold the upright member 15, the shield 18 and the base 19 securely in assembled position. The ends of the strip 29 then are split apart and flanged outwardly adjacent to the underside of the recessed portion 22 of the base 19.

The upright member or marker 15 is placed on the shield 18 in such a position so that this shield provides a supporting flange at right angles to the marker on each side thereof. Each of these flanges is angularly shaped, the apex 30 of which is offset, being located forwardly from the central portion of the base 19.

The apex 30 of these flanges is located at the forward portion of the base 19, which is towards the hockey stick 16. Should the player be knocked over, it will fall towards the rear, as the greater portion of the weight on the base 19 is to the rear of the apex 30 of the flanges on the shield 18. Thus placing the hockey stick 16 in mid-air, facilitating bringing the player back to an upright position by means of a slow lateral movement of the magnet 25 in the direction of the fallen player. If the player could not be quickly and easily righted the game would be slowed up considerably as the player is frequently knocked over during the course of a play. The shield 18 and the manner in which it is assembled in the marker assure practically uninterrupted play.

The material used to form the game board 31 may be any type of fibre or other material providing that it is a suitable thickness with a smooth surface and does not contain any elements which would interfere with the attracting powers of the magnets 25. Nets 32 and 33 may be placed at the ends of the game board 31. In this instance 34 is a puck which may be made of any suitable non-conductive material. The game board 31 may be supported in any suitable manner provided that the underside is accessible to enable manual operation of the magnets 25.

The objects of the game are briefly to manipulate the markers or players on the game board,

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by manually moving the magnets underneath same, the players thus moving the puck to and fro on the board with the ultimate aim of placing it in the opponent's goal net. Any desired number of players may be placed on the game board and an equal number of magnets provided for the same.

It will be seen from the foregoing that a marker for a game board has been designed which will facilitate the playing of various games as described herein, and that a marker of this type efficiently performing its duties will greatly popularize games having the same principle of play.

What I claim is:

1. A game piece comprising an elongated straight bar consisting of material susceptible to magnetic attraction, said bar having its lower face transversely recessed to provide a plurality of discontinuous, flat, game board-engaging surfaces lying in the same plane, said surfaces having sharply defined straight edges for magnetic attraction, a supporting plate surmounting the bar and mounted in fixed relation thereon, said plate having a flange on each side thereof extending laterally outwardly of the bar and tending to resist overturning movement of the bar, and a playing member surmounting the plate and mounted in fixed relation on the plate and bar.

2. In a game having a game board, a game piece therefore comprising an elongated straight bar consisting of material susceptible to magnetic attraction, said bar having its lower face transversely recessed to provide a plurality of discontinuous, flat, game board-engaging surfaces lying in the same plane, said surfaces having sharply defined straight edges for magnetic attraction, a supporting plate surmounting the bar and mounted in fixed relation thereon, said plate having a triangularly shaped flange on each side thereof with the apex of each flange being located laterally outwardly of the bar, said apex being forwardly offset from the medial portion of the bar, said flanges tending to resist overturning movement of the bar and acting to place said bar in predetermined relation to the game board when the bar is overturned, and a playing member surmounting the plate and mounted in fixed relation on the plate and bar.

3. In a game having a game board, a game piece therefore comprising an elongated straight bar consisting of material susceptible to magnetic attraction, said bar having its lower face transversely recessed to provide a plurality of discontinuous, flat, game board-engaging surfaces lying in the same plane, said surfaces having sharply defined straight edges for magnetic attraction, a supporting plate surmounting the bar, a playing member surmounting the plate, and a clip extending through said playing member, plate and bar and having its ends engaging the surface of the recess to hold said member, plate and bar in fixed relation, said plate having a flange on each side thereof extending laterally outwardly of the bar for engagement with the game board to resist lateral overturning movement of the bar, said member comprising flat sheet material arranged in parallel longitudinal relation to the bar, said sheet material extending forwardly beyond the forward end of the bar.

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