June 29, 1943. A. T. SENESAC 2,323,157

CHANGEABLE SIGN

Filed Oct. 14, 1941 3 Sheets-Sheet 1

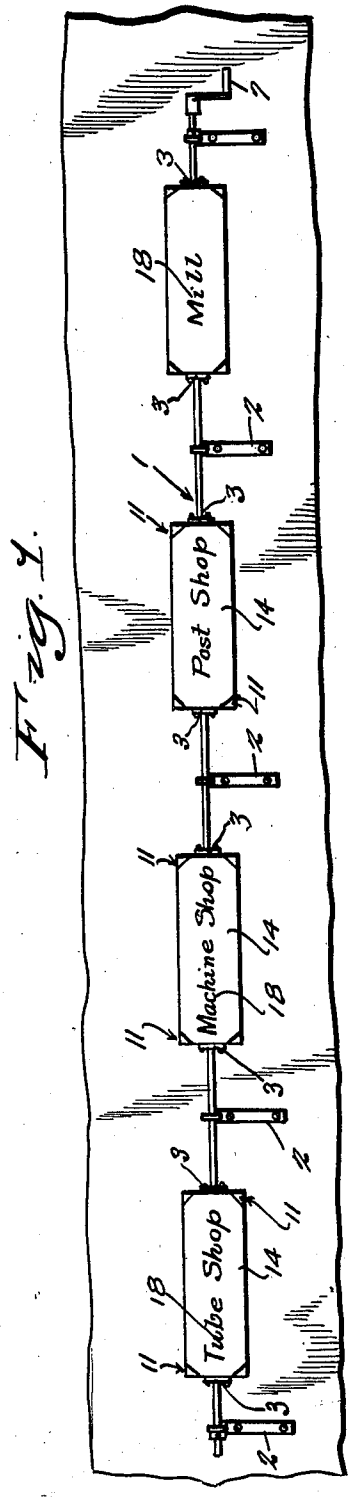


Fig. 1.

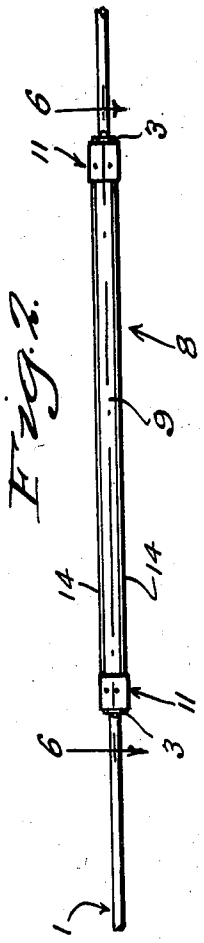


Fig. 2.

Fig. 4.

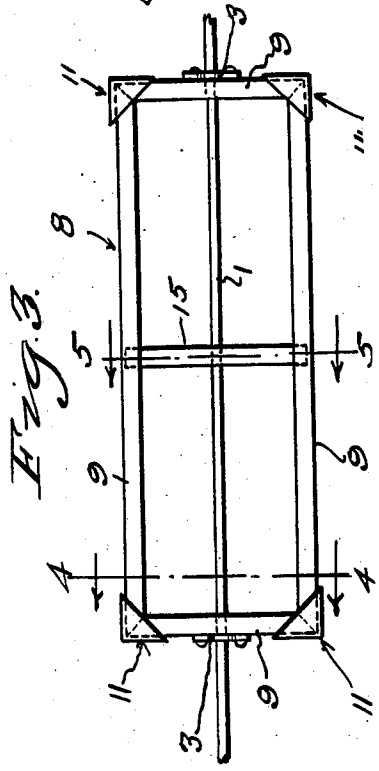


Fig. 3.

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CHANGEABLE SIGN

Filed Oct. 14, 1941 3 Sheets-Sheet 2

Fig. 5.

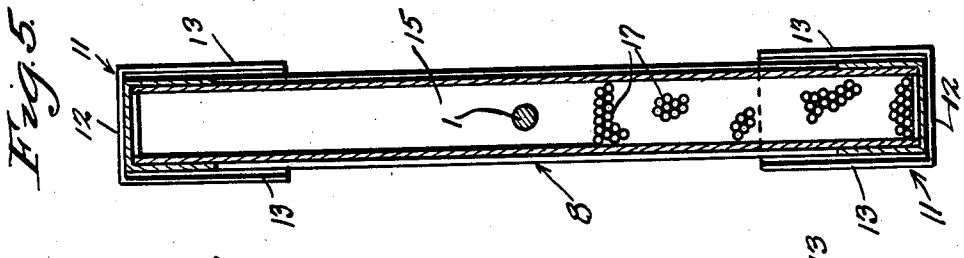


Fig. 4.

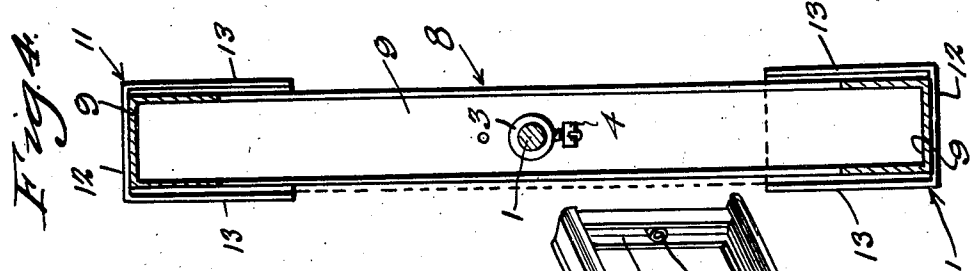


Fig. 6.

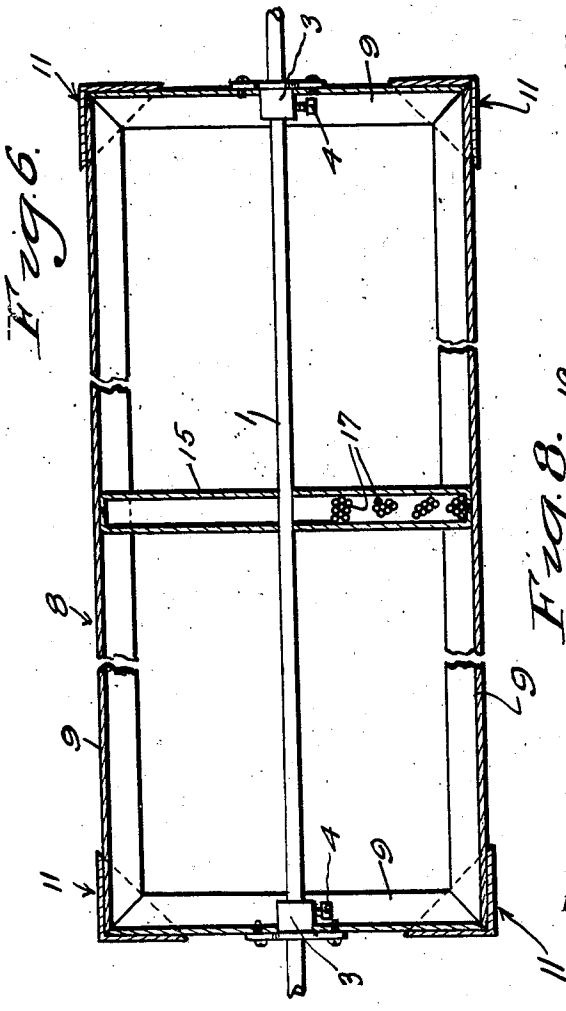


Fig. 13.

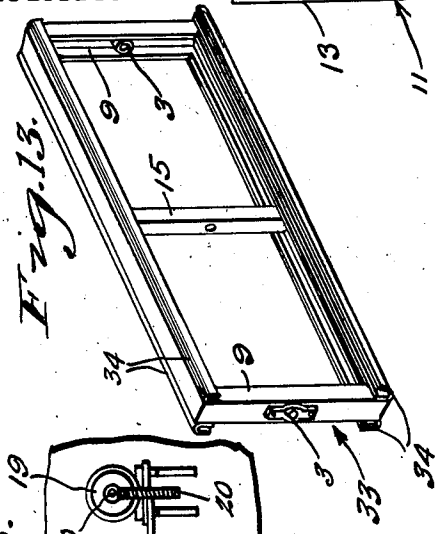
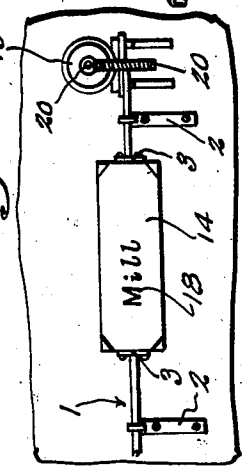


Fig. 8.



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CHANGEABLE SIGN

Filed Oct. 14, 1941 3 Sheets-Sheet 3

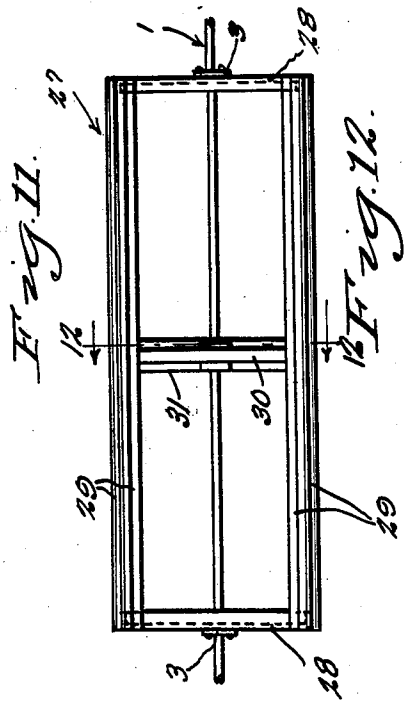


Fig. 11.

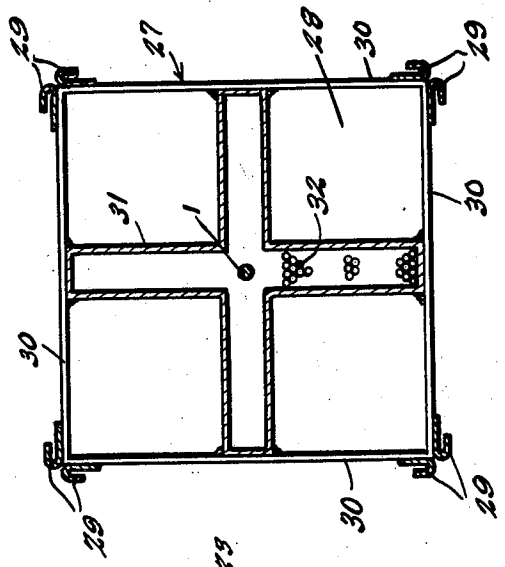


Fig. 12.

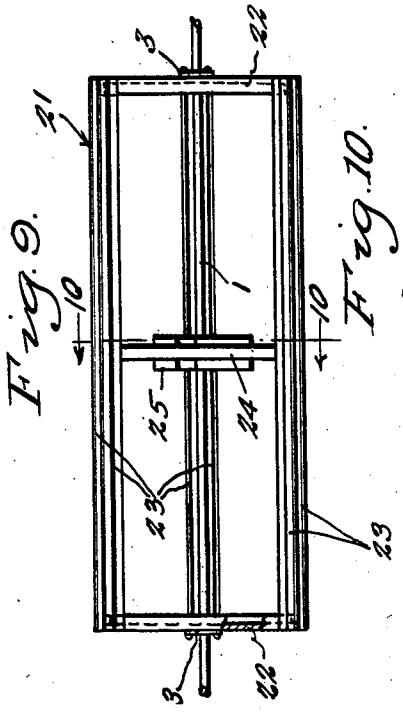


Fig. 9.

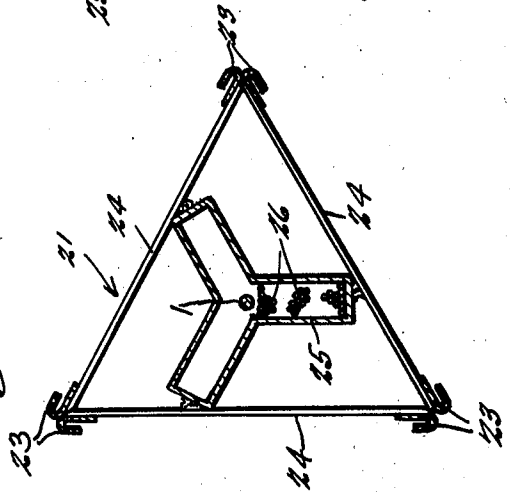


Fig. 10.

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2,323,157

UNITED STATES PATENT OFFICE

2,323,157

CHANGEABLE SIGN

Adelor T. Senesac, Chicago Heights, Ill., assignor of one-third to Stanley A. Wilczynski and one-third to Robert A. G. Engelhart, both of Chicago Heights, Ill.

Application October 14, 1941, Serial No. 414,944

5 Claims. (Cl. 40—68)

The present invention relates to new and useful improvements in signs particularly for bowling establishments and has for its primary object to provide, in a manner as hereinafter set forth, a novel apparatus for conveniently and clearly indicating the names of the teams using the alleys.

Another very important object of the invention is to provide a bowling alley sign of the aforementioned character comprising a unique construction and arrangement whereby the indicia being displayed may be expeditiously changed as desired.

Still another very important object of the invention is to provide, in a changeable sign rotatable in a vertical plane, novel means for retaining the device in its different positions.

Other objects of the invention are to provide a changeable sign of the character described which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, attractive in appearance and which may be manufactured and installed at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in front elevation of an embodiment of the invention.

Figure 2 is a top plan view of one of the sign units.

Figure 3 is a view in front elevation of one of the units with the removable cards omitted.

Figure 4 is a cross sectional view, taken substantially on the line 4—4 of Figure 3.

Figure 5 is a cross sectional view, taken substantially on the line 5—5 of Figure 3.

Figure 6 is a view in vertical longitudinal section, taken substantially on the line 6—6 of Figure 2.

Figure 7 is a detail view in perspective of one of the metallic corner caps.

Figure 8 is a view in front elevation, showing a motor drive for rotating the signs.

Figure 9 is a view in front elevation of another modification.

Figure 10 is a cross sectional view, taken substantially on the line 10—10 of Figure 9.

Figure 11 is a view in front elevation of still another modification.

Figure 12 is a cross sectional view taken substantially on the line 12—12 of Figure 11.

Figure 13 is a perspective view, showing another form of the invention.

Referring now to the drawings in detail, reference character 1 designates a horizontal shaft which is journaled on supporting brackets 2 at the forward end of a series of bowling alleys. An operating crank 7 is provided on one end of the shaft 1.

Mounted at longitudinally spaced points on the shaft 1 are substantially rectangular frames 8 of suitable channel iron bars 9. The frames 8 have mounted in their end portions sleeves 3 which are secured by set screws 4 on the shaft 1.

Mounted on the corner portions of the frames 8 are metallic caps 11. The caps 11 include right angularly extending plates 12 which are secured to the bars 9 of the frames 8. Extending between the plates 12 are integral side walls 13 which are spaced outwardly from the sides of the frames 8. Thus, pockets are provided for the reception of the corner portions of removable indicia bearing cards 14.

Extending between the longitudinal bars 9 of the frames 8 are tubular braces 15. Also shown to advantage in Figure 6 of the drawings, the shaft 1 passes through openings provided therefor in the tubular braces 15. Then, the frames 8 are weighted with shot 17 placed in the tubular braces 15.

It is thought that the manner in which the device functions will be readily apparent from a consideration of the foregoing. Briefly, the cards 14, bearing the desired indicia 18, are mounted on the frames 8, one on each side. One of the frames 8 is provided above each of the bowling alleys. In Figure 1 of the drawings, the names of the different teams using the alleys appear on the cards 14. Of course, any other indicia or matter may be placed on the cards 14. The cards on the reverse sides of the frames 8 may be conveniently brought into view by simply rotating the shaft 1 a half of a revolution. When this is done the shot 17 flows by gravity to the other end portion of the tubular braces 15. The construction and arrangement is such that the cards 14 may be conveniently removed from the frames 8 for replacement.

In Figure 8 of the drawings, an electric motor for rotating the shaft 1 is indicated at 19. Gears 20 connect the shaft 1 to the electric motor 19 for actuation thereby. Any suitable means may be provided for controlling the electric motor 19.

In Figures 9 and 10 of the drawings a three-sided frame or holder is designated generally by reference numeral 21. This embodiment com-

prises a pair of triangular end plates 22 which are ssecured on the shaft 1. Extending longitudinally between the plates 22 are pairs of card holders 23 in the form of metallic bars of substantially channel shaped cross section adapted to slidably receive the longitudinal marginal portions of the cards. Extending between the bars 23 are braces 24. Then, secured to the braces 24 is a brace in the form of a spider 25 of tubular cross section which is weighted with shot 26.

Of course, the shaft 1 is rotated or adjusted to bring the desired card on any of the three sides of the frame 21 into view. When this is done the shot 26 gravitates into the lowermost leg of the spider brace 25 for retaining the sign in set or adjusted position. Obviously, the bars 23 permit the cards to be conveniently inserted and removed.

In Figures 11 and 12 of the drawings, a frame of substantially square cross section is designated generally by reference numeral 27. This frame includes substantially square end plates 28 which are secured on the shaft 1. Mounted on the corner portions of the plates 28 are longitudinally extending pairs of opposed channel members 29 constituting holders adapted to slidably receive the longitudinal marginal portions of the removable cards. Extending between the members 29 at an intermediate point are bars 30. Then, mounted on the bars 30 within the frame 27 is a substantially cross shaped brace 31 of tubular cross section adapted to receive the shot 32.

As will be readily apparent, the frame 27, being four sided, is adapted to receive four of the removable cards. When the frame 27 is rotated to display the desired sign the shot 32 flows by gravity into the lowermost leg of substantially cross shaped brace 31 for retaining the sign in adjusted position.

Figure 13 of the drawings illustrates a frame 33 substantally similar to the frame 8. Mounted longitudinally on the upper and lower portions of the opposite side of the frame 33 are channel members 34, similar to the members 23 and 29, for the reception of the cards 14.

It is believed that the many advantages of a changeable sign constructed in accordance with the present invention will be readily understood and although preferred embodiments are as illustrated and described, it is to be understood that further modifications and changes in the details of construction may be resorted to which will fall within the scope of the invention as claimed.

Having described the invention, what is claimed as new is:

1. A changeable sign of the character described comprising a shaft rotatable in a vertical plane, a frame fixed on said shaft, means for securing a plurality of cards on said frame, a tubular brace in the frame, and weight means movable by gravity in said brace for retaining the frame in position.

2. A changeable sign of the class described comprising a shaft rotatable in a vertical plane, a frame fixed on said shaft for rotation therewith, means for securing a a plurality of cards on said frame, a tubular brace mounted on the shaft and secured to the frame, and weight means operable by gravity in the brace for retaining the frame in adjusted position against rotation.

3. A changeable sign of the character described comprising a shaft, and a frame of substantially triangular cross section fixed on said shaft, said frame including triangular end plates mounted on the shaft, pairs of bars extending longitudinally between said plates, said bars constituting holders for removable cards, and means operable by gravity for retaining the frame in adjusted position against idle rotation, said means comprising bars connecting the first-named bars, a brace in the form of a spider mounted on the shaft and having its legs secured to the last-named bars, said brace of tubular cross section and shiftable weight means in said brace.

4. A changeable sign comprising a shaft rotatable in a vertical plane, a frame mounted on the shaft and rotatable therewith, said frame including end plates fixed to the shaft, pairs of substantially channel-shaped bars, for the reception of removable cards, extending longitudinally between said plates, bars extending between the first-named bars, a brace of tubular cross section mounted on the shaft and including branches fixed to the second-named bars, and shot operable in the brace for retaining the frame in adjusted position by gravity against idle rotation.

5. A changeable sign of the character described comprising a shaft rotatable in a vertical plane, a frame mounted on said shaft for rotation therewith, said frame including a pair of substantially square end plates fixed on the shaft, pairs of longitudinal bars for the reception of removable cards, mounted longitudinally on the corner portions of said end plates, bars extending between the first-named bars, and a substantially cross shaped brace of tubular cross section mounted on the shaft and having the ends of its branches secured to the second-named bars, said brace being for the reception of a weight medium.

ADELOR T. SENESAC.