

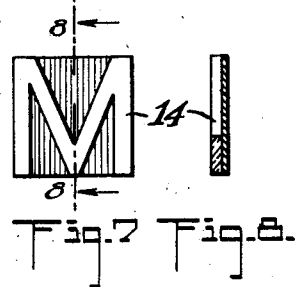
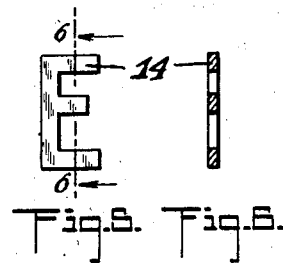
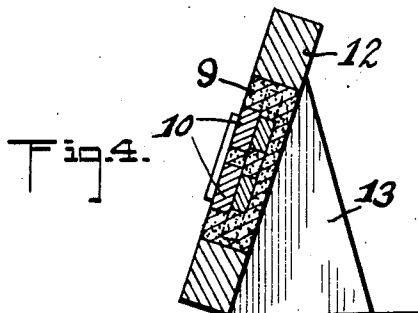
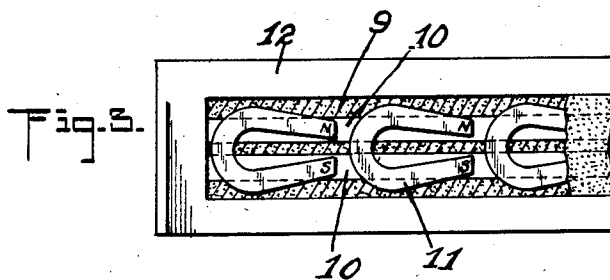
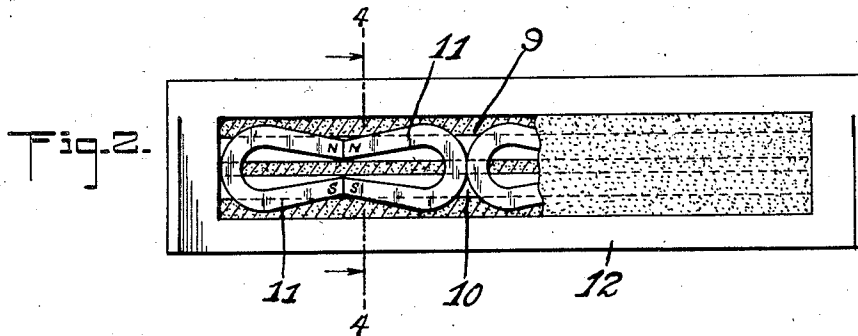
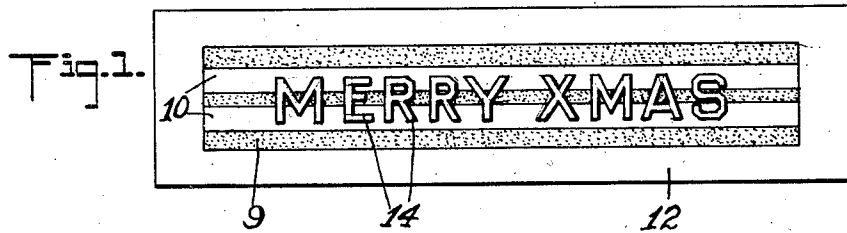
July 24, 1928.

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INTERCHANGEABLE SIGN OR BULLETIN BOARD

Filed Nov. 11, 1927



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UNITED STATES PATENT OFFICE.

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INTERCHANGEABLE SIGN OR BULLETIN BOARD.

Application filed November 11, 1927. Serial No. 232,502.

This invention relates to signs and bulletin board devices wherein the symbols, such as letters, are adapted to be removably or interchangeably assembled thereon, and it is the object of the invention to provide a sign or bulletin board device of this character in which the symbols or letters are retained assembled upon the board by magnetic attraction, and to provide a device for this purpose which is simple and cheap in structure and efficient in use.

In carrying out the invention I provide a plate of non-magnetic material preferably mounted in a frame, although this is not absolutely essential, and inlay in said plate strips of magnetizable material in spaced and parallel relation with a surface of the strips exposed and flush with a surface of the plate, said strips being in the nature of pole pieces for magnets also carried by the plate with the poles of the respective magnets arranged in parallel and intimate contact with the pole pieces, symbols, such as letters, made of magnetizable material, or of nonmagnetic material having a magnetizable portion, being adapted to be assembled upon the plate in contact with and bridging relation to the strips and retained assembled on the plate by magnetic attraction through the strips.

In the drawing accompanying and forming a part of this application, Figure 1 is a front elevation of a sign or bulletin board embodying the invention.

Figure 2 is a rear elevation with a portion broken away to show an arrangement of the magnets in relation to the magnetizable strips.

Figure 3 is a view similar to Figure 2, of a portion of the device showing a modified arrangement of the magnets.

Figure 4 is a cross sectional view taken on the line 4—4 of Figure 2 looking in the direction of the arrows, and showing the same arranged with a support.

Figure 5 is an elevational view of a letter or symbol of magnetizable material to be assembled upon the plate.

Figure 6 is a sectional view taken on the line 6—6 of Figure 5 looking in the direction of the arrow.

Figure 7 is an elevational view of a modified arrangement of a letter or symbol for assembling upon the plate; and

Figure 8 is a cross sectional view taken on

the line 8—8 of Figure 7 looking in the direction of the arrows.

In the embodiment of the invention illustrated there is provided a plate 9 of non-magnetic material. This plate may be of wood or other suitable material, but is preferably made of a molded material, such as wax, bakelite, etc. This plate has inlaid therein in parallel and spaced relation strips in the form of bars 10 of magnetizable material, such as soft iron, with a surface exposed and in flush relation with one surface, to constitute the front, of the plate, as shown in Figure 4. These strips are magnetized by means of magnets 11 carried by the plate, shown as permanent magnets of the horseshoe type. These magnets are arranged in sidewise intimate contact with the strips 10 with the poles of the magnets arranged in parallel, as indicated by the characters N and S on the respective pole portions of the magnets. As shown in Figure 2, which is the preferred form of the arrangement of the magnets, these magnets are arranged in pairs with the poles in contact and opposed relation, that is the north poles and south poles are opposed to each other. In the arrangement shown in Figure 3 the poles are in opposed relation to the bend of an adjacent magnet and spaced therefrom so that the attractive force of a magnet will not be dissipated and tend to act as an attractive force on an adjacent magnet. By this arrangement the magnetizable strips are adapted to serve as pole pieces for the respective magnets, the one strip being common to one pole, as the positive pole to the respective magnets, while the other strip is common to the other pole, as the negative pole of the magnets.

When the plate is made of wood or the like non-magnetic material the magnets and strips are mounted in recesses arranged therein. However, when the plate is made of molded material they are molded directly into the material of the plate in embedded relation thereto and the magnets entirely surrounded by the material of the plate with the exception of the portions thereof in contact with the strips. The plate is preferably mounted in a frame 12, although this is not absolutely essential, as the plate itself may function as a sign or bulletin board without the use of a frame. To support the sign or bulletin board in a substantially per-

pendicular position or slightly inclined to the perpendicular it is arranged with what is in the nature of an easel support and comprising triangular blocks 13 (Figure 4) attached to the back of the plate.

Symbols, such as letters 14, are adapted to be assembled upon the plate and retained assembled thereon through the magnetic force transmitted to the strips 10 by the magnets 11. For this purpose the symbols are made of magnetizable material, such as iron, as by stamping from a sheet, as shown in Figures 5 and 6. However, the symbols may be made of non-magnetic material, such as celluloid, pyralin, bakelite and the like and in order that they may be retained assembled upon the plate through magnetic attraction they are arranged with a portion of magnetizable material, preferably in the form of a backing plate of iron, as shown at 15 in Figures 7 and 8, and upon which the symbols are mounted. In the assembling of the symbols or letters upon the board they are arranged so that they will bridge and be in contact with a pair of strips associated with a series of alined magnets.

While I have illustrated the invention as embodying a single pair of the magnetizable strips 10 and a row of magnets associated therewith, it will be obvious that a plurality of pairs of magnetizable strips and magnets may be utilized and arranged in series, in which case in the assembling of the symbols upon the plate they may be arranged so that a portion thereof is in contact with one strip of a pair of strips associated with one row of magnets and a strip of an adjacent pair of strips in the series so that the symbols will bridge and be in contact with a strip of one pair of strips in contact with one pole of a row of magnets, such as the south pole, and with a strip of another pair of strips in contact with one pole, such as the north pole of an adjacent row of magnets.

It will be obvious that various modifications may be made in construction and arrangement of parts, and portions of the invention may be used without others, without

departing from the scope of the invention. Having thus described my invention I claim:

1. In a sign, a plate of non-magnetic material, strips of magnetizable material inlaid in the plate in spaced and parallel relation, and magnets arranged with the poles in parallel and having one pole in contact with one strip and the other pole with another strip.

2. A sign as claimed in claim 1, wherein the magnets are arranged in sidewise relation to the strips with one pole portion of the magnets in contact with one strip and the other pole portion in contact with another strip and the magnets arranged with the poles in parallel.

3. A sign as claimed in claim 1, wherein the magnets are arranged with the positive pole of each magnet in contact with one strip and the negative pole of each magnet in contact with another strip, and the plate is formed of molded material with the magnets and strips embedded therein and having one face of the strip exposed and in flush relation with a surface of the plate.

4. In a sign as claimed in claim 1, symbols assembled upon the plate in contact with and bridging the strips and adapted to be retained assembled on the plate by magnetic attraction through the strips.

5. In a sign, a plate of non-magnetic material, strips of magnetizable material inlaid in spaced and parallel relation in the plate and having one face exposed and flush with the surface of the plate, magnets carried by the plate arranged with the poles in parallel and a pole in contact with one strip and the other pole in contact with the other strip whereby the strips are adapted to serve as pole pieces for the magnets, and symbols adapted to be assembled upon the plate in contact with and bridging the strips and retained assembled on the plate by magnetic attraction through the strips.

Signed at the city of New York, in the county of New York and State of New York this 7th day of November, 1927.

CHRISTIAN HANSEN.