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(54) **URINAL MAT WITH LIMITED APERTURE AREA AND LEGIBLE INDICIA**

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(57) **ABSTRACT**

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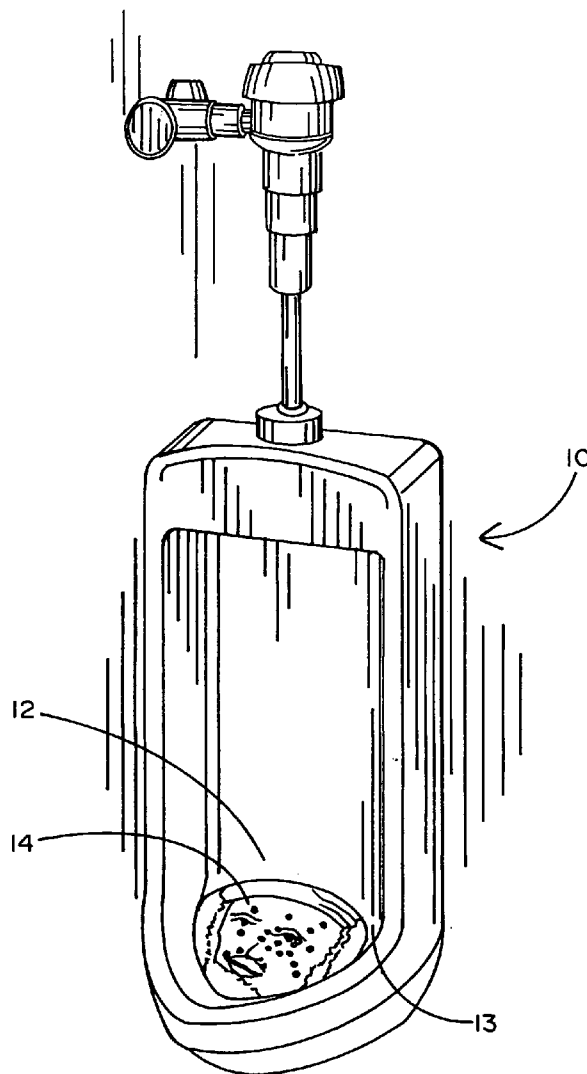
A low cost urinal mat that has entertainment value by virtue of matter printed thereon in a sufficiently legible and substantially unobscured form. Preferably, the printed matter consists of an image of a universally recognized person, symbol, flag, etc. for which there is common dislike, derision or even hatred. By way of example, an image of a radical terrorist or of a dictatorial foreign political leader would be a likely candidate for a suitable image. A key aspect of the present invention, aside from the content of the image, is that of providing drainage apertures in a number and size which, while permitting adequate drainage through the mat, does not substantially obscure the image to the point where the content becomes not readily identifiable. It has been found that by providing an image that uses over 90% of the mat surface area, by limiting the hole count to less than about 30 and limiting the cumulative area of the holes to about 10% to 15% of the surface area of the mat, a readily legible and recognizable image is obtained while still permitting proper drainage.

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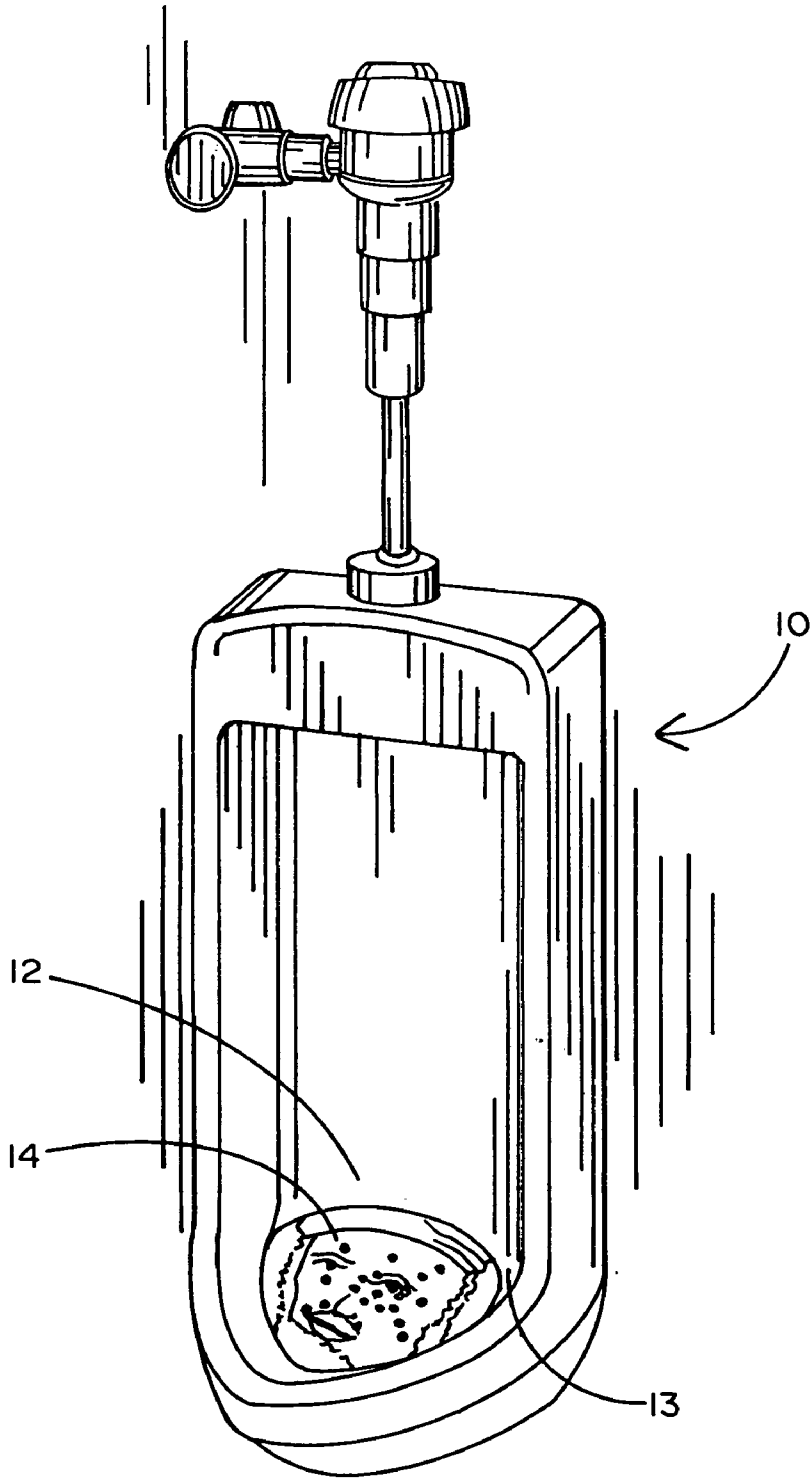


FIG. 1

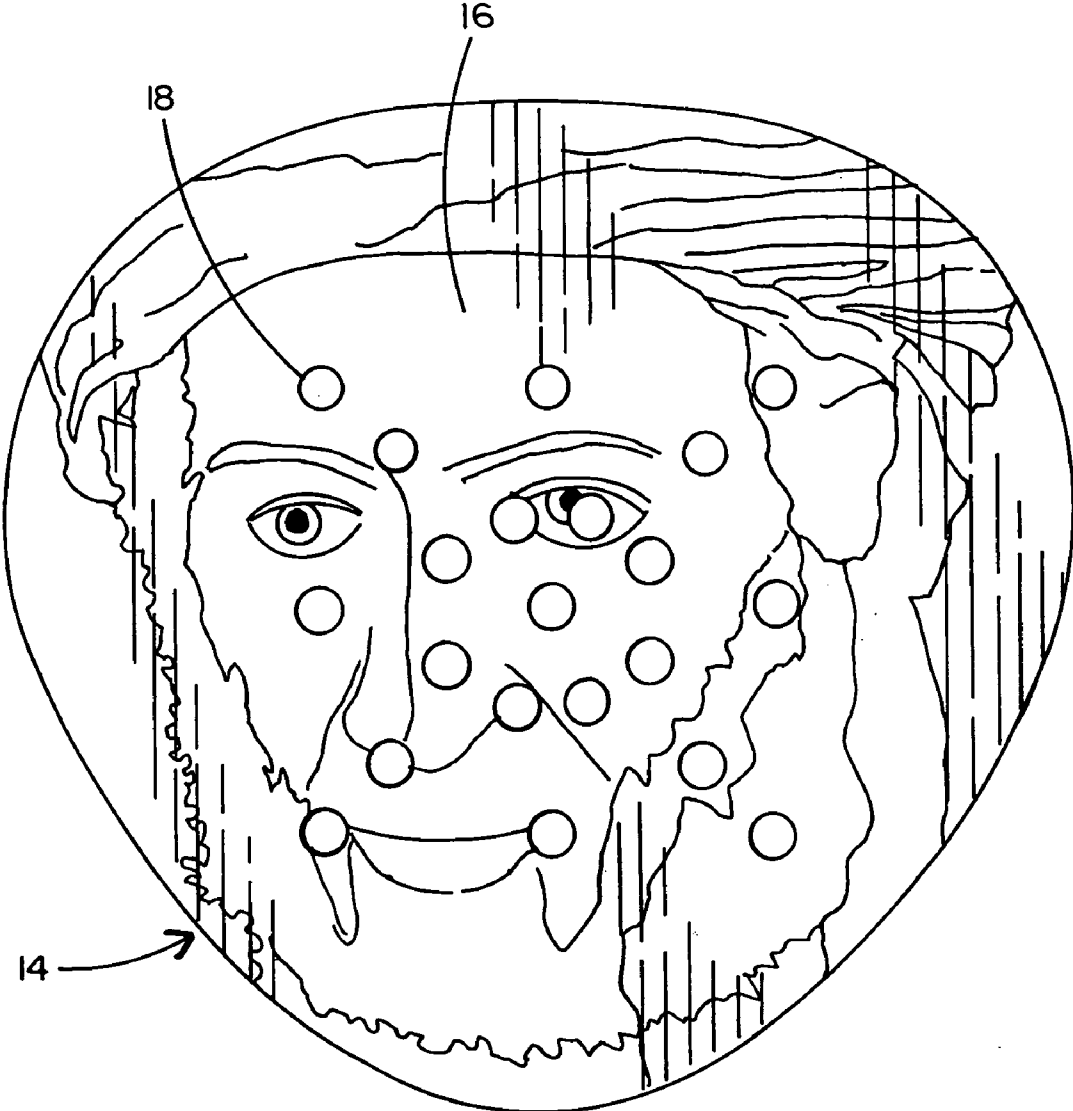


FIG. 2

## URINAL MAT WITH LIMITED APERTURE AREA AND LEGIBLE INDICIA

### BACKGROUND OF THE INVENTION

**[0001]** 1. Field of the Invention

**[0002]** The present invention relates generally to urinal mats that are typically employed for hygienic purposes to prevent splashing during urination in commercial or public restrooms. The invention herein relates more specifically to such mats with printed matter thereon and a limited number and size of apertures to permit adequate drainage through the mat without significantly obfuscating the printed matter.

**[0003]** 2. Background Art

**[0004]** A search of the relevant prior art has revealed the following previous issued U.S. Patents.

5,809,590	Williams et al
5,867,848	Ort
6,513,173	Sykes
6,640,350	Deutsch
6,908,392	Friedman et al

**[0005]** Each of the above-listed patents discloses a urinal device which provides an image or word message, some fixed and some in response to the high temperature of urine which impinges on the device. One example of these patents is U.S. Pat. No. 6,640,350 to Deutsch issued in 2003. This patent discloses a so-called user interactive urinal mat that is rather complex and has one embodiment shown in FIGS. 4 and 5 which include a disk having indicia thereon. However, the holes on that disk are to overlap sensors and LED lights to activate a display. U.S. Pat. No. 5,809,590 to Williams et al shows a thermochromic urinal mat having an image and apertures to control the wash direction of water and urine. However, the holes appear to be outside the image area rather than distributed throughout the image.

**[0006]** While the aforementioned prior art recognize the potential novelty or entertainment value of a urinal mat with printed matter or other similar features, they employ rather complex ways of achieving those aspects, such as electronic components or temperature sensitive ink. Such complicated mats tend to be costly and therefore unlikely to be successfully commercialized, particularly for the limited purpose of providing an entertaining diversion in a publicly accessible restroom.

### SUMMARY OF THE INVENTION

**[0007]** The present invention overcomes the noted deficiencies of the prior art by providing a rather low cost urinal mat that has entertainment value by virtue of matter printed thereon in a sufficiently legible and substantially unobscured form. More specifically, the present invention preferably employs printed matter consisting of an image of a universally recognized person, symbol, flag, etc. for which there is common dislike, derision or even hatred. By way of example, an image of a radical terrorist or of a dictatorial political leader would be a likely candidate of a suitable image. A key aspect of the present invention, aside from the content of the image, is that of providing drainage apertures in a number and size which, while permitting adequate drainage through the mat, does not substantially obscure the image to the point where the content becomes not readily identifiable. By way of

example, in a standard urinal mat having maximum dimensions of about 7.5 inches, there are typically about 80 to 90 drainage holes, each of about 0.25 inches diameter. This number and size of drainage holes would account for over 40% of the surface area of the mat. Moreover, the holes in a standard urinal mat tend to be grouped near the central area of the mat with typical  $\frac{3}{8}$ " spacing between adjacent holes in common rows and columns. Such a large number of apertures, such a large portion of the mat surface area devoted to providing drainage holes, and such a close grouping of the holes, would make it virtually impossible to provide an image that was sufficiently unobscured to permit it to be recognizable.

**[0008]** In the present invention, it has been found that by providing an image that uses over 90% of the mat surface area, by limiting the hole count to less than about 30 and limiting the area of the holes to about 10% to 15% of the surface area of the mat, a readily legible and recognizable image is obtained.

### BRIEF DESCRIPTION OF THE DRAWINGS

**[0009]** The aforementioned objects and advantages of the present invention, as well as additional objects and advantages thereof, will be more fully understood herein after as a result of a detailed description of a preferred embodiment when taken in conjunction with the following drawings in which:

**[0010]** FIG. 1 is a three-dimensional view of a urinal having installed therein a urinal mat in accordance with a preferred embodiment of the present invention; and

**[0011]** FIG. 2 is an enlarged view of the urinal mat shown in FIG. 1.

### DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

**[0012]** Referring to the accompanying drawings, it will be seen that in a urinal **10**, the interior **12** thereof terminates in a drainage area **13** in which there is located a urinal mat **14** as shown in FIG. 1.

**[0013]** The preferred embodiment of the mat **14** is shown in plan view in FIG. 2. As seen therein, mat **14** has a large printed image which occupies substantially the entire upper surface of the mat **16**, and a plurality of drainage holes **18**. In the illustrated embodiment of mat **14**, there are **21** such holes **18**, each of which is about 0.25 inches in diameter. With a typical mat geometry having a maximum linear dimension of about 7.5 inches, each such drainage hole constitutes about 0.5% of the total area of the mat. That means that **21** such holes constitute about 10% of the overall mat area.

**[0014]** It will be understood that the entertainment value of the present invention relies on having a readily perceptible image on the upper surface of the urinal mat. The inventor hereof has determined that in order to provide a readily legible image, particularly an image of the head or face of a known individual, it is preferable to limit the size and number of drainage holes so that the number of holes is no greater than about 30 and the size of each is such that the total hole area is no greater than about 15% of the surface area of the mat. In the illustrated embodiment of FIG. 2, the number of 0.25 inch diameter holes could be increased, if needed for adequate

drainage, to about 30 without obscuring the image to the point where it would become unrecognizable. However, the inventor herein prefers to minimize the number and size of drainage holes to just what is required for satisfactory drainage so as to limit the impact on image recognizability and thus to promote the entertainment value of the mat.

**[0015]** It will thus be understood that the present invention relates to a urinal mat on which there is printed matter for purposes of entertainment and on which there is a plurality of drainage holes, the number and size of which meet certain criteria to avoid undue obfuscation of the printed matter. More specifically, the present invention is a urinal mat having no more than about 30 drainage holes each having an area which is about 0.5% of the total area of the mat. In the preferred embodiment the total drainage hole area is in the range of about 10% to 15% of the mat area. Those having skill in the relevant art will now perceive various modifications and additions which may be made to the illustrated embodiment. Accordingly, the scope hereof is to be limited only by the appended claims and their equivalents.

I claim:

**1.** A urinal mat having an image printed on an upper surface thereof and comprising a plurality of drainage holes there-through;

said drainage holes being provided in size and number to preclude substantial obfuscation of said image.

**2.** The urinal mat recited in claim **1** wherein said hole size is limited to correspond to an area no more than about 0.5% of the area of said mat surface.

**3.** The urinal mat recited in claim **1** wherein said number is limited to be no greater than about 30.

**4.** The urinal mat recited in claim **1** wherein said size and number are limited to provide a cumulative hole area which is no greater than about 15% of the mat surface area.

**5.** The urinal mat recited in claim **1** wherein said size is limited to correspond to an area no more than about 0.5% of the area of said mat surface and said number is limited to be no greater than about 30.

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