S. L. GOSSARD.

HOSPITAL MATTRESS.

APPLICATION FILED DEC. 14, 1916.

1,302,915. Patented May 6, 1919.

Fig. 1.

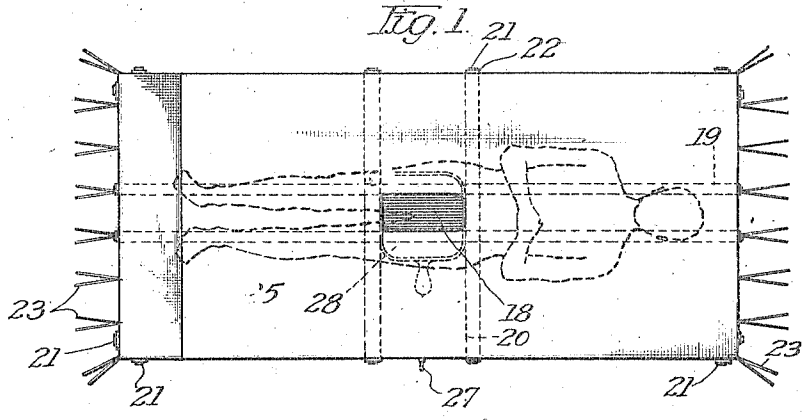


Fig. 2.

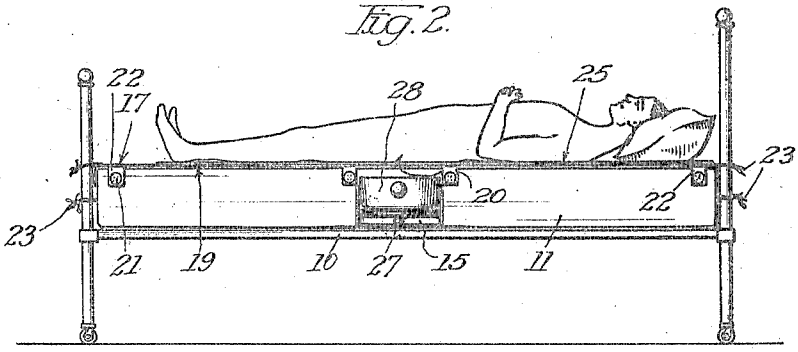


Fig. 3.

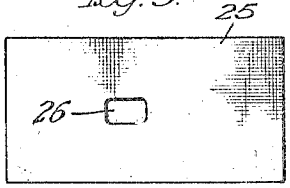


Fig. 4.

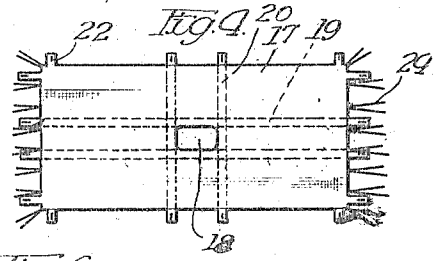


Fig. 5.

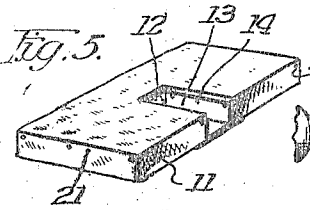
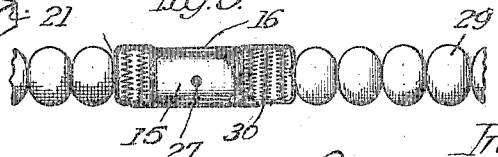


Fig. 6.



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UNITED STATES PATENT OFFICE.

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HOSPITAL-MATTRESS.

1,302,915. Specification of Letters Patent. Patented May 6, 1919.

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To all whom it may concern:

Be it known that I, SARAH L. GOSSARD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Hospital-Mattresses, of which the following is a specification.

My invention relates particularly to mattresses for use in hospitals or similar institutions, although it may be employed, if desired, in private homes on beds occupied by invalids or convalescents in general.

Certain classes of patients, such as obstetrical cases and where major operations have been performed, require to be maintained in an absolutely immovable position for considerable periods, often several days, after an operation. Such immobility of the patient is necessary in order to avoid hemorrhages, disturbance of the bandages or dressings, or opening up of the wounds before the flesh has properly united. Under conditions existing before my invention it has been considered impossible to avoid moving the person of the patient to a considerable extent preparatory and subsequent to a bowel movement or an evacuatory movement of the other organs. This is due to the fact that the patient must be lifted by the legs and hips in order to permit the insertion and removal of the ordinary bed pan or chamber for receiving the evacuations. A similar difficulty exists when it is desired to administer an enema or perform any other operation which requires access to the underside of the patient. There have been thousands of instances in which such unavoidable moving or shifting of the patient has resulted in the loss of the patient's life.

The principal objects of my invention are, to provide an improved mattress so constructed that access to the under side of the patient resting thereon may be had at any time without disturbing any part of the body or limbs of the patient; to provide a mattress of the class described so organized as to furnish at all times the desired comfortable support for the body and limbs of the patient; to provide a mattress which shall be sanitary, that is, capable of being cleaned, sterilized, or disinfected without serious trouble; to provide a mattress so organized that the inconvenience to the patient and the labor and trouble on the part of the attendants is reduced to a minimum; to provide a mattress of the class described which shall be simple in design, and economical to manufacture; and, in general, to provide an improved mattress of the character referred to.

Broadly stated, my invention consists in the provision of a recess in the mattress beneath the patient, access to said recess being given by means of a conduit or passageway leading from the recess outwardly, and a filler for the recess which may be removed, collapsed, or depressed when attending to the patient.

In the drawings which illustrate one application of my invention—

Figure 1 is a plan view of my improved mattress and associated parts;

Fig. 2 is a side elevation of the mattress supported on an ordinary bedstead and supporting a patient who is being attended to;

Fig. 3 is a plan view of a sheet immediately beneath the patient;

Fig. 4 is a plan view of a canvas or waterproof cover for the top of the mattress;

Fig. 5 is a perspective view of the mattress with the flexible filler or cushion collapsed; and

Fig. 6 is a section through a modified type of mattress showing the normal position of the flexible filler.

Referring to the drawings, 10 represents as a whole an ordinary iron bedstead equipped with the usual head and foot ends, side rails, and flexible or resilient spring upon which the mattress 11 is supported. As shown in the figures, a recess 12 is made in the mattress immediately below that portion of the patient to which access is desired, access to said recess being obtained by extending the opening outwardly to the edge of the mattress in the form of a conduit or passageway which thus constitutes a lateral or transverse continuation or extension of said recess.

For sanitary reasons, the sides and inner end of the recess 12 are faced with a trough-shaped waterproof lining 13 which, for convenience, is buttoned or secured to the body of the mattress by suitable means, such as clasps 14. The recess and conduit are ordinarily filled to the level of the top of the mattress by means of a flexible filler or cushion, such as the pneumatic pillow 15, on the top of which may be supported a removable pad or cloth 16. The cloth or pad 16 may of course be waterproof on its upper surface, or, if desired, the cloth may be re-

moved and replaced with a clean new one whenever it becomes soiled.

17 represents a stout sheet made of canvas or waterproof material which extends over the entire upper surface of the mattress and the recess, with the exception of a small area of the recess exposed by an aperture 18 in the canvas. If desired, the canvas at the ends and sides of said recess 18 may be strengthened by means of stout bands or straps, as at 19 and 20, of heavy webbing or similar material. The edges of the said canvas or rubber sheeting 17 are secured to the mattress by means of buttons 21 sewed to the mattress and coöperating with button holes formed in tabs of the sheet 17, as shown at 22. The mattress itself is securely fastened to the filler rods and corner posts of the bedstead by means of tapes or strings 23 in order to preserve the shape of the mattress, and, if desired, the canvas 17 may be tied to the bedstead by similar strings 24. One of the objects of the canvas 17 is to aid in the support of the temporarily unsupported portion of the patient whenever the rubber cushion 15 is collapsed. An ordinary sheet 25 with a longitudinal aperture 26 may be spread over the canvas sheet 17, if desired.

The purpose and effect of my improvements will be apparent. Ordinarily, that portion of the patient located over the recess 12 is supported by the inflated air cushion 15. When it is desired to place the bed pan under the patient, or to perform any other necessary duty or operation involving access to the under side of the patient, the rubber cushion is deflated by opening the valve 27, thus allowing the cushion to collapse, as indicated in Fig. 2. It is then a simple matter to insert the bed pan 28 through the transverse opening thus established, and it may be removed with equal convenience. It will be observed that the insertion and removal of the bed pan, or any other operation, may be accomplished without touching or moving the patient in the slightest degree, the patient being meanwhile supported by the sides of the recess and to some extent by the canvas 17. When the needs of the patient have been attended to, the cushion is re-inflated through the valve 27, thus causing it to reassume its normal function of supporting the patient.

In Fig. 6 I have indicated a particular form of mattress construction which may be effectively employed in carrying out my invention. Such mattress is constructed of a series of transverse sections or rolls 29 sewed together along the middle plane of the mattress, which materially facilitates the rolling up and removal of the mattress when occasion requires. In applying my invention to such a mattress, I furnish the sections which lie on the side of the recess 12 with a series of rows of coil springs 30 which assist materially in preventing undue depression or collapsing of the said mattress sections, due to the extra pressure imposed thereon when the rubber cushion 15 is deflated.

To those skilled in the art, it will be patent that the described details of construction may be modified considerably to suit individual requirements, without any sacrifice of efficiency. The scope of the invention must, therefore, be determined by referring to the appended claims.

I claim—

1. A mattress provided with a transverse slot of sufficient cross-sectional dimensions to admit a bed pan and extending from beneath the occupant and outwardly to and through the side of the mattress, a portion of the inner end of said slot being open at the top to provide access to the under side of the patient, a depressible means normally filling that portion of the slot beneath the patient and normally supporting said patient, and a thin inextensible flexible member extending across an outer portion of said slot for temporarily supporting said patient in the absence of said collapsible means.

2. A hospital mattress provided with a transverse slot extending vertically through the thickness of the mattress and wide enough to admit a bed pan and extending from beneath the occupant outwardly to and through the side of the mattress, the inner end of said slot being open at the top to provide access to the under side of the patient, depressible means normally filling the slot and normally supporting said patient, and an inextensible flexible fabric secured to the mattress at opposite sides of said slot and extending over the outer portion thereof for temporarily supporting the patient at the side of said opening in the absence of said collapsible means, said depressible means when raised serving to support that portion of the patient resting upon the fabric.

SARAH L. GOSSARD.