E. L. ROBERTS.

Ventilating Beds.

No. 153,723. Patented Aug. 4, 1874.

Fig. 1.

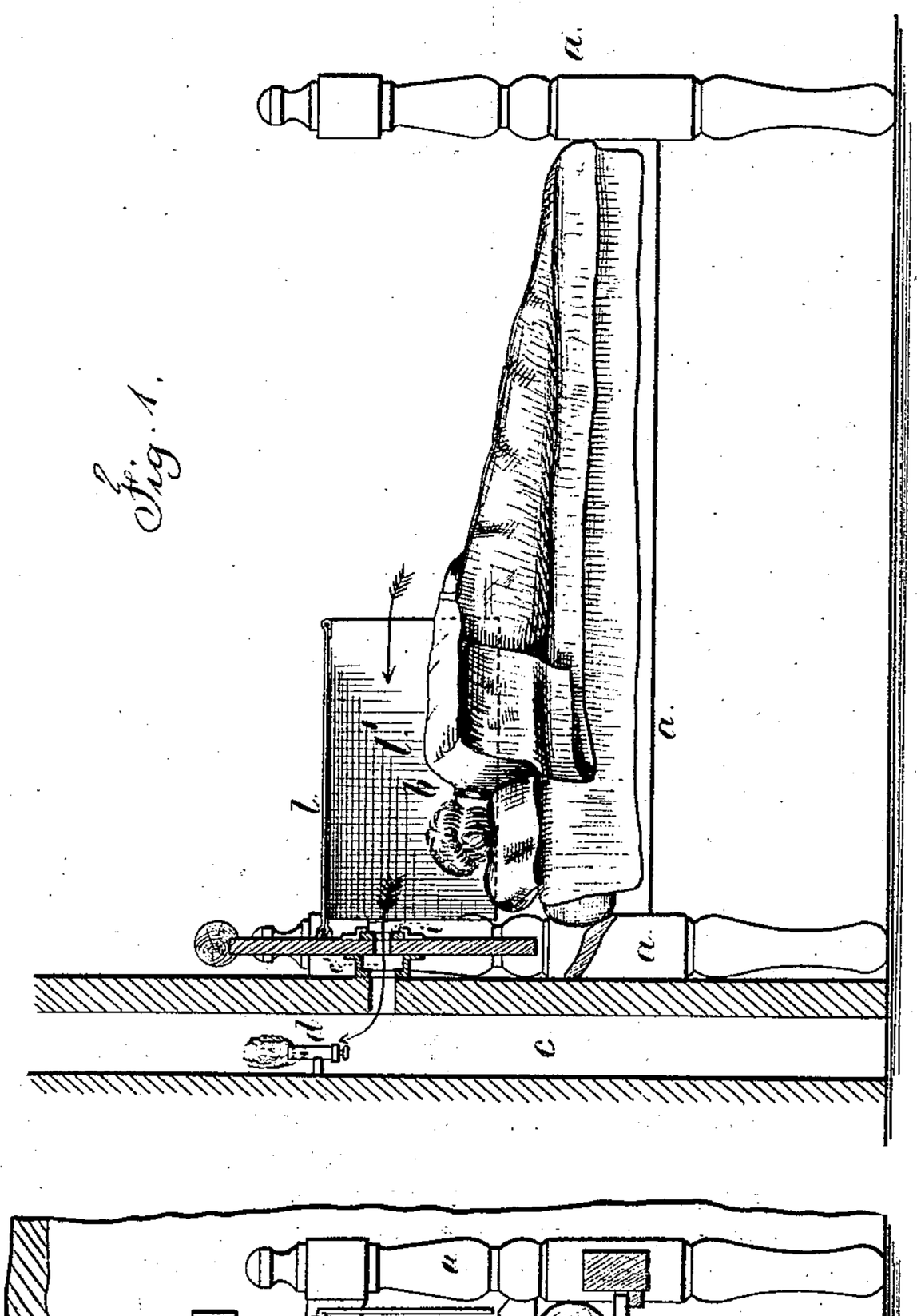
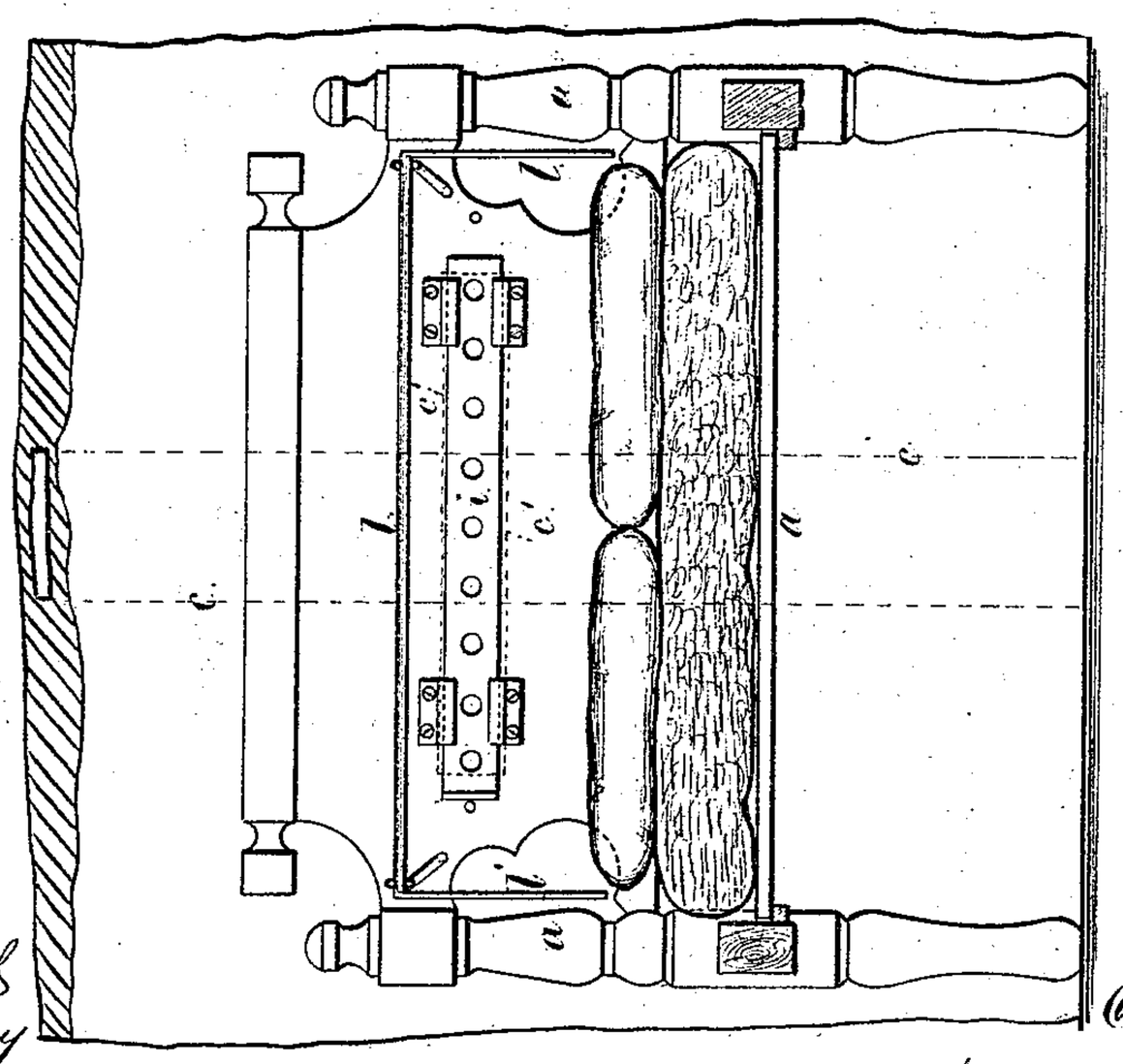


Fig. 2.



Witnesses

Chas. H. Smith

Geo. T. Pinckney

Inventor

Ebenezer L. Roberts

per L. W. Serrell

Atty.

UNITED STATES PATENT OFFICE.

EBENEZER L. ROBERTS, OF PLAINFIELD, NEW JERSEY.

IMPROVEMENT IN VENTILATING BEDS.

Specification forming part of Letters Patent No. **153,723**, dated August 4, 1874; application filed April 25, 1874.

To all whom it may concern:

Be it known that I, EBENEZER L. ROBERTS, of Plainfield, in the county of Union and State of New Jersey, have invented an Improvement in Ventilating Hospital and other Beds, of which the following is a specification:

It is well known that during sleep the body emits vapors that are detrimental to health, if breathed by a person; and these arise from perspiration exhaled from the skin, as well as from the breath in expiration. In hospitals and during sickness these vapors are constantly arising, and often are of the most poisonous and contagious character, and frequently the rooms of hospitals become infected with venomous matter to such an extent as to produce diseases which are often fatal.

My invention is made for the purpose of promoting healthful sleep, aiding in the recovery of the sick, and for preventing the spread of contagion.

I make use of a ventilating-flue mouth at the head of the bed, immediately contiguous to the pillows or head-rest, and in this flue an ascending current is maintained, the object being to convey away from the person on the bed all the exhalations from the breath or from perspiration as they arise, and thereby remove the impure or noxious vapors, and bring at the same time fresh atmosphere directly to the face of the person on the bed.

When a window is opened, a current of air may pass either into or out of an apartment, and portions thereof out of the line of motion of the air will not be ventilated; and when ventilators are applied the same difficulties arise, and the atmosphere is changed near the ventilator, but not at a distance therefrom, except in the line of inlet and delivery; hence, in sleeping-apartments a person is often exposed to a draft and liable to catch cold, or else the atmosphere immediately around his person remains unchanged, and becomes vitiated both by the breath and the exhalations from the body that pass out from between the bed-clothes.

My aforesaid invention prevents any risk from currents of cold air, and at the same time insures all the benefit from a supply of fresh air to the person. The horizontal flue-mouth, being directly at the head of the bed, and contiguous to the pillows or head-rest, should extend laterally the width of the bed, in order to receive the exhalations from the person when lying at either side of the bed, and a hood extending out horizontally, or nearly so, and slightly above the flue-mouth, confines all exhalations, so that there is little or no risk of contagious or venomous matter being disseminated in the apartment.

In the drawing, Figure 1 is a section of a bedstead with my improvement applied, and Fig. 2 is a cross-section of such bedstead with the ventilating device in elevation.

The bedstead *a* is of any usual construction, and at *b* is represented the head of a person lying upon such bed. The flue *c* is contiguous to the head of the bed. It will generally be best to make the same in the wall, and to provide a gas-pipe and Bunsen burner, *d*, or other means for warming the air, so as to insure a rapid upward current of atmosphere. This is especially required in warm weather, when there is but little difference between the temperature of the apartment and the external atmosphere. This flue *c*, opening near to the head of the person upon the bed, will convey away the exhalations of the body, as aforesaid. In order to regulate the extent of circulating atmospheric current, a damper or register is provided at the lower end of the flue. It will usually be preferable to extend the horizontal mouth of the flue laterally to the width of the bed, or nearly so, to more directly act in drawing the atmosphere from around the head and from between the bed-clothes, whether the person is lying at one part of the bed or the other. I have shown the slide *i* with holes corresponding with holes that enter the horizontal mouth *c'* of the flue *c*, so as to act as a register. This horizontal mouth may be upon the head-board of the bedstead, or upon the wall. The hood *l* is made of flexible material, by preference, upon a suitable frame that should be hinged at the back, and hang down sufficiently to receive the exhalations and direct them toward the flue *c*. At the ends of this hood flexible curtains *l'* may be employed. The hood should be made so as to swing up out of the way, when required, and to be lowered to a greater or less extent at pleasure.

I am aware that a room has been made with

a three-sided recess for a bedstead and a ventilating-opening in the ceiling.

I claim as my invention—

1. The combination, with a bedstead provided with a ventilating-flue mouth in the head contiguous to the pillows or head-rest, of a register or damper at the flue-mouth for regulating the quantity of atmosphere conveyed directly away from the head of the bed, substantially as set forth.

2. The combination, with a bedstead provided with a ventilating-flue mouth contiguous to the head-rest, as described, of a hood attached to the head of the bedstead and projecting horizontally, or nearly so, substantially as and for the purposes specified.

Signed by me this 21st day of April, A. D. 1874.

E. L. ROBERTS.

Witnesses:

GEO. T. PINCKNEY,

CHAS. H. SMITH.