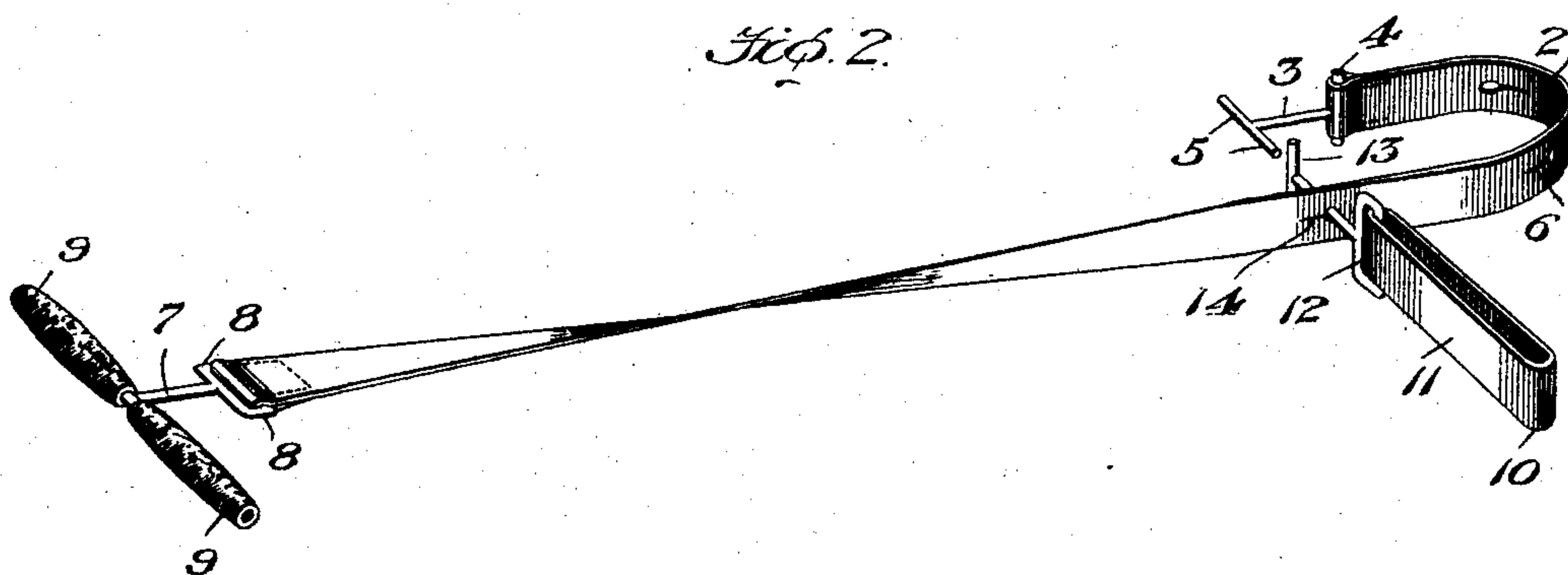
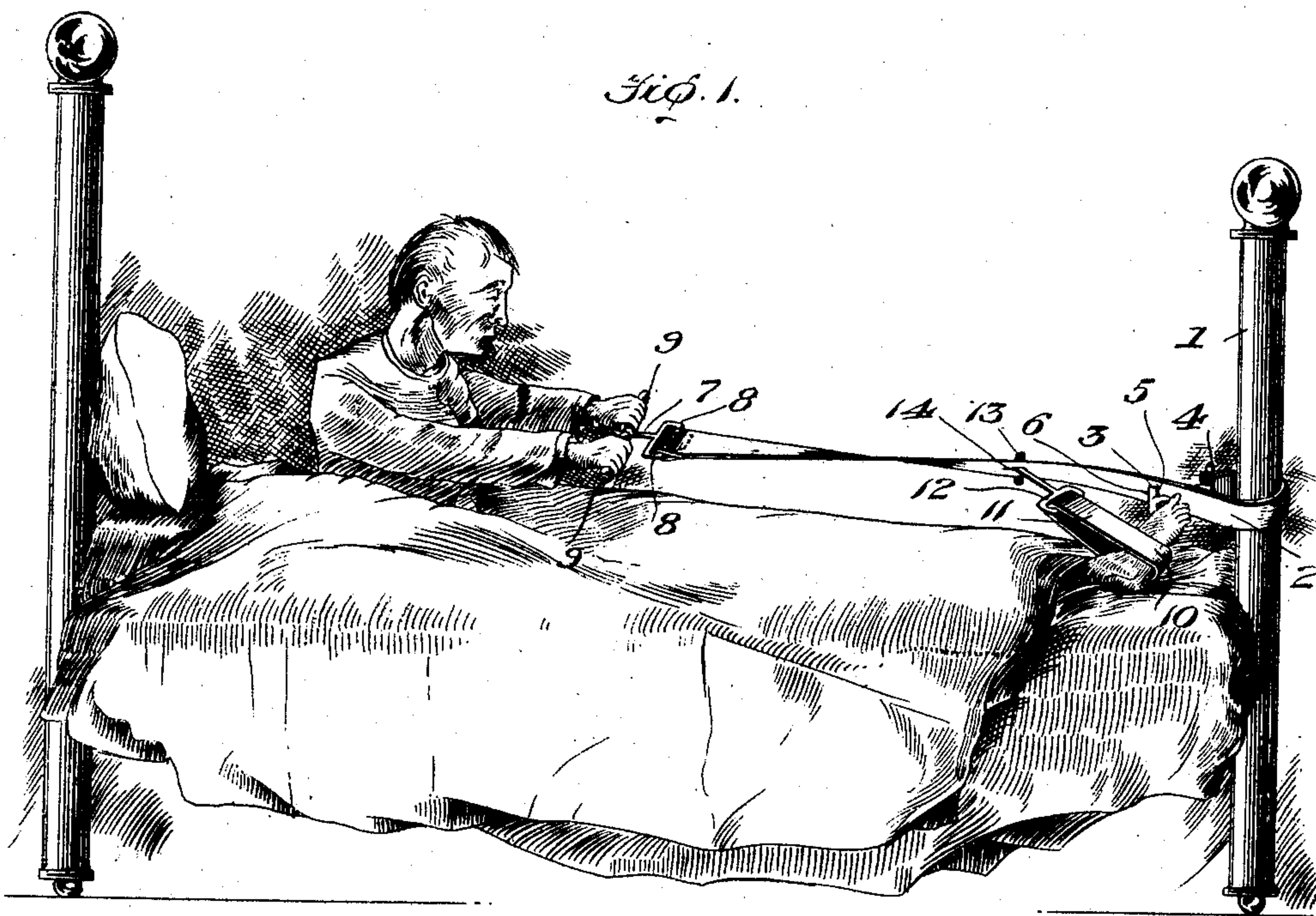


908,845.

Fig. 1.



**Witnesses**

Edwin L. Bradford  
Anne B. Johnson

*Denis Curtin*

విషయము

Attorneys



# UNITED STATES PATENT OFFICE.

DENIS CURTIN, OF VILLANOVA, PENNSYLVANIA.

## LIFT-STRAP FOR RECUMBENT PATIENTS.

No. 908,845.

Specification of Letters Patent.

Patented Jan. 5, 1909.

Application filed July 11, 1908. Serial No. 443,151.

*To all whom it may concern:*

Be it known that I, DENIS CURTIN, a citizen of the United States, residing at Villanova, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Lift-Straps for Recumbent Patients; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

I have produced a lift-strap designed for attachment to the foot-post or rail of a bedstead for use in assisting the sick occupant to raise himself or herself from a recumbent to a sitting position and thereby greatly relieve or aid the nurse in this laborious duty.

The device is adapted to be anchored to the bedstead post and to be grasped by the hands of and engaged by the foot of the patient by which both a pulling and a pushing force is exerted and the patient rendered thereby self raising to a sitting position and held in such position for rest, for eating, and for exercise as may be desired and in its exercising function as a means of strengthening the vertebral column, and the organs of motion of the arms and limbs these exercising and lifting movements being under the free control of the patient and who may thereby easily effect a change of position in the bed without undue exertion, and in the appended claims I will point out the novel construction of the lift-strap device in connection with the accompanying drawings, in which—

Figure 1 shows in side view the bedstead and the lift-strap anchored to the foot-post thereof. Fig. 2 shows the strap with its anchoring end, its pulling hand-grasp and its foot-engaging pushing-loop.

Preferably a strong leather strap is used having one end adapted to be looped around the foot-post 1 of a bedstead the loop 2 for convenience being preferably formed by the end of the strap and a double T shaped coupling 3 the arms 4 of one end of which being fastened by stitching to the lapped end of the strap, while the arms 5 of the other end of the coupling are caused to engage the strap by a slitted opening 6 to receive the coupling bar so that the latter can be freely inserted through the opening in the strap and turned so that the arms of the coupling will stand across the slit to secure the connection. This renders it convenient to connect and disconnect the strap to the post or to the foot-

rail and for this purpose the strap may have a plurality of slitted openings, the slits standing lengthwise of the strap. The other end of the strap has a double T shaped coupling 7 the arms 8 at one end being slotted to receive the lapped and stitched end of the strap, while at its other end the coupling-bar forms a double-hand-grasp 9 preferably of cork-handles by which the patient by a pulling function of the arms can raise and lower him or herself in the bed and be held in a sitting position as may be desired and with liberty to use either hand while being so held under a pulling function on the anchored strap.

Between the anchoring and the pulling end of the strap provision is made for attaching to it preferably near its anchored end, one or more detachable foot-engaging loops or stirrups 10 preferably formed by a strap 11 and a double T shaped coupling into a slotted arm 12 of which, the strap is looped while the other arm 13 of the coupling is engaged with a slitted opening 14 of the strap, and the loop extending therefrom toward the anchored end of the strap serves to receive the foot of the patient who is thereby allowed to exert a pushing force by his legs the effect of which is to cause a pulling force on the strap toward its anchoring end, while the pulling force of the patient's arms on the strap is in the opposite direction that is, from its anchoring-point. The advantage of the pushing function of the foot in opposition to the pulling function of the arms is, that while the pulling function of the arms tends to cause the patient to slide on the bed, the pushing force of the foot serves to counteract this sliding movement and to assist the patient to raise him or herself from a recumbent position and the two forces thus rendered active even in a patient's weakened condition by sickness, is made efficient as the means by which the patient may raise him or herself to a sitting position without the aid of a nurse. In this double lifting force the patient is lifted so as to sit up with ease and comfort by reason of the two forces of the patient's arms and feet while being exerted in opposite directions are both controlled in their lifting action from the hand-holds of the patient. Obviously the patient may use both feet in the stirrup-strap, or a stirrup-strap may be provided for each foot. When the stirrup-strap cannot be used it can be removed, and it can be quickly applied and for this purpose the anchoring-strap may have slitted openings



for a pair of stirrup-straps, and for the adjustment of the anchoring loop for the post or for the rail. In applying or disengaging the coupling it is only required to turn its arms to present them endwise to the slitted opening and when inserted the slit closes over the armed coupling.

I claim:

1. A lift-strap for a recumbent patient, consisting of a hand-pulled strap having a double T shaped coupling at one end, a plurality of slitted openings adapted to receive the arm of said coupling to form a loop for anchoring the strap to the bedstead, the other end of said strap having a double T shaped coupling one end of which has a slot to receive said strap, the other end of said coupling terminating in a duplex handhold.

2. A lift-strap for a recumbent patient, consisting of a hand-pulled strap having a coupling at one end, slitted openings adapted to receive such coupling for anchoring the strap to the bedstead, the other end of said strap having a hand-grasp, and a stirrup

for the foot supplementing the hand-pulled strap.

3. A lift-strap for a recumbent patient, consisting of a hand-pulled strap having a coupling at one end, slitted openings adapted to receive such coupling for anchoring the strap to the bedstead, the other end terminating in a hand-grasp, and a strap stirrup for the foot having a coupling adapted for detachable engagement with the hand-pulled strap.

4. A lift-strap for a recumbent patient, consisting of a strap provided at one end with a hand-hold, and at the other end with an anchoring loop and a foot attachment or stirrup.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DENIS CURTIN.

Witnesses:

P. A. HART,  
HARRY T. LEEDOM.