M. CASE.

Machine for Treating Spine Diseases.

No. 198,871. Patented Jan. 1, 1878.

Fig. 1.

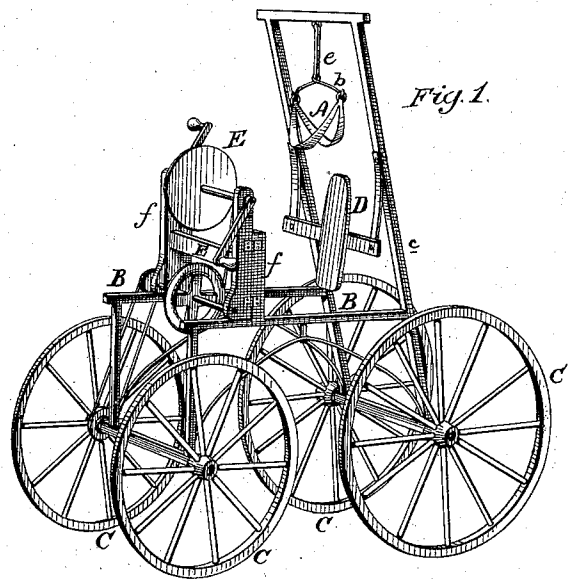


Fig. 2.

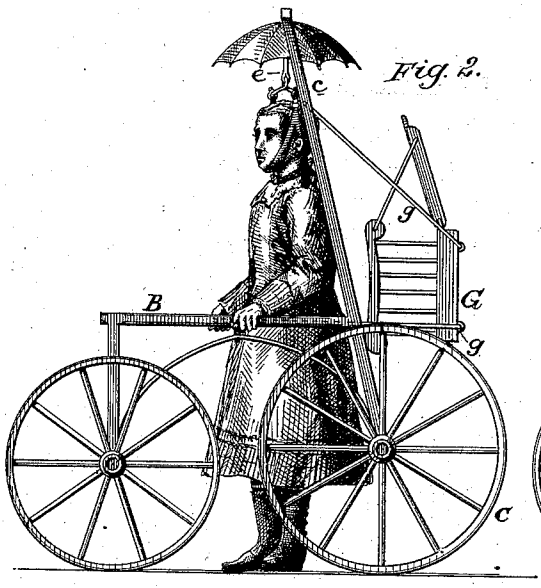
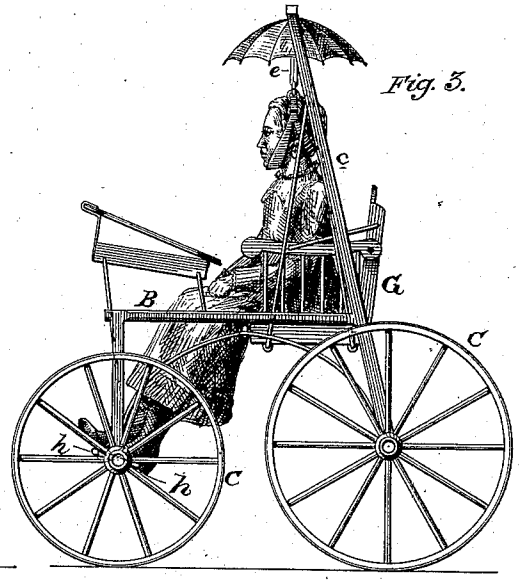


Fig. 3.



WITNESSES:

C. Clarence Poole

Aug. L. Fordian

INVENTOR:

Meigs Case

By his atty

R. D. O. Smith

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

MEIGS CASE, OF ONEONTA, NEW YORK.

IMPROVEMENT IN MACHINES FOR TREATING SPINE DISEASES.

Specification forming part of Letters Patent No. **198,871**, dated January 1, 1878; application filed July 24, 1877.

To all whom it may concern:

Be it known that I, MEIGS CASE, of Oneonta, Otsego county, in the State of New York, have invented a new and useful Improvement in Apparatus for the Treatment of Diseases of the Spine, &c.; and that the following is a full and exact description of the same, reference being had to the annexed drawings, wherein—

Figure 1 represents my apparatus fitted for propulsion, and for producing passive motion of the arms. Figs. 2 and 3 represent the same fitted for standing or sitting propulsion, and for passive motion of the lower limbs.

The principle of treatment is that of elongation produced by partial suspension by the head; and my invention has for its object the application of that treatment, by apparatus supported independently of the body, *i. e.*, upon the ground or floor; and this method of suspension may be coupled with capacity for propulsion, so that the patient may not only be partly suspended, but may also be enabled to move about during treatment.

I am aware that the principle of treatment by elongation produced by partly suspending the body by the head has heretofore been suggested, and that an apparatus for supporting the head, to be attached to and supported by the body of the patient, has been devised, and also apparatus for similar purpose, to rest upon the floor, and support the patient in a sitting or reclining posture. It is evident, however, that the apparatus first named could not affect any portion of the spine, except that between the shoulders and skull, and that the apparatus named in the second place would prevent any attempt at locomotion. Therefore I do not claim, broadly, to have discovered this principle of treatment, but only the method of application by means of suspensory apparatus resting upon and supported by the floor or ground, and independently of the person of the patient.

That others may fully understand my invention, I will particularly describe it.

A is the sling, the straps whereof pass under the chin and occiput, and join at points above the ears, where they are attached to a swiveled whiffletree or stretcher, *b*, which is supported at its middle by an elastic support, *e*, of some suitable structure, attached to a standard or frame-work, which extends down to the ground, and rests thereon.

However short the duration of treatment at one time, it is desirable to divest it of its objectionable features as far as possible, and I therefore consider it preferable to mount the frame B upon wheels C, as in Fig. 1, and then, while the patient is undergoing treatment, he may be enabled to move about, and possibly attend to his vocation.

Sometimes it is desirable to support the spine from behind, during the time of extension, and for that purpose the elastic pad D is attached to the standard *c*.

When paralysis of the upper limbs is present, passive motion has been found to be beneficial, and I have, therefore, attached the cranks E to the standards *f* at the front of the frame B, and connect one of said cranks to one of the wheels C, by suitable gearing or pulleys and belts, so that, as the carriage is propelled forward, a slow rotary motion is given to said cranks, and if the hands grasp the handles of said cranks, a gentle passive motion will be imparted to the hands and arms.

A similar arrangement for imparting passive motion to the lower limbs is shown in cranks and treadles attached to the front axle at *h*, Fig. 3, whereby the feet may be moved back and forth as said axle revolves. These may also be used for propulsion.

In case of partial paralysis of the lower limbs, or when for any other reason it is desirable that the patient should be enabled to sit, I provide an adjustable seat, G, which, when in use, is suspended by the rods *g g* from the standard *c*, as in Fig. 3, and when not in use may be kept back out of the way, by detaching the upper end of the most forward of said rods, and re-attaching the same to the side bar of frame B, as shown in Fig. 2.

The methods of constructing my apparatus are various, and will readily occur to any skilled person who may wish to change the same, or adapt it to any special circumstances. Therefore I do not deem it necessary that I should do more than exhibit the principle of the invention and particular mode in which I propose to carry it into execution.

Having described my invention, what I claim as new is—

1. An elastic suspensory apparatus adapted to support the head, as shown, combined with a supporting-frame independent of the body, and mounted upon wheels, so as to permit locomotion during treatment.

2. An elastic suspensory apparatus, adapted to support the head, as shown, supported upon a wheeled carriage, and combined with a supplemental elastic support for the shoulders, as set forth.

3. An elastic suspensory apparatus, adapted to support the head, as shown, mounted upon a wheeled carriage, and combined with a supplemental crank-wheel, to impart passive motion to the limbs, as set forth.

4. An elastic suspensory apparatus, adapted to support the head, as shown, mounted upon a wheeled carriage, and combined with an adjustable seat, whereby the position from standing to sitting may be changed, as set forth.

MEIGS CASE, M. D.

Witnesses:
M. S. KINNEY,
NATHAN PIERCE.