

(No Model.)

C. G. GÜMPEL.
SPINAL BRACE.

No. 479,326.

Patented July 19, 1892.

Fig. 3

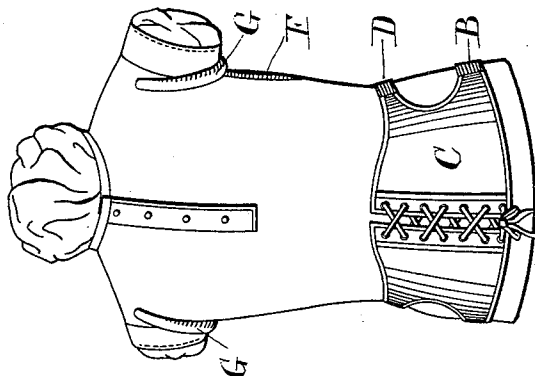


Fig. 2.

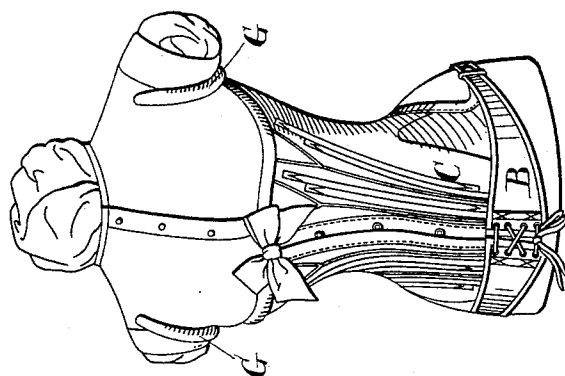
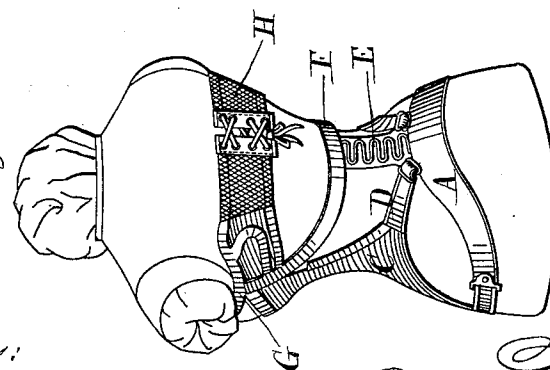


Fig. 1.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES GODFREY GÜMPPEL, OF LONDON, ENGLAND.

SPINAL BRACE.

SPECIFICATION forming part of Letters Patent No. 479,326, dated July 19, 1892.

Application filed May 11, 1892, Serial No. 432,604. (No model.)

To all whom it may concern:

Be it known that I, CHARLES GODFREY GÜMPPEL, a citizen of England, residing at 70 Newman Street, Oxford Street, London, England, have invented new and useful Improvements in Apparatus for Supporting the Human Spine, of which the following is a specification.

My invention relates to apparatus for supporting the human body in that part of it usually designated as the "spine," to hold the body in a normal upright position while exerting a more or less strong pressure in the lumbar region—that is, the hollow of the waist—yet yielding to any movement which the body may perform. For this purpose I adapt a metal band across the back of the pelvis from hip to hip. On this band at the center of the spine I fix in an upward direction one or more metal spring or springs, made, by preference, of steel wire and bent in a snake or zigzag form, and to the upper end of this spring or springs I attach a rod or rods or strips of steel (or of other suitable metal) which extend to the armpits, where they are provided with metal crutches for the arms to rest on. By means of straps, lacing-bands, stay-fronts, or other similar contrivances made of either elastic or non-elastic material and fastened to the above-described metal frame in a suitable manner this latter is held against the back of the wearer, and by the action of the spring or springs a pressure of any desirable degree is exerted in the hollow of the waist, while the crutches tend to support the shoulders and upper part of the body. The spring or springs enable the body to bend or twist without displacing or deranging the apparatus.

Figures 1 and 2 of the accompanying drawings show by way of example a construction of the above-described apparatus as applied, in combination with a corset-front, for supporting the spine. Fig. 1 shows a back view, and Fig. 2 a front view. Fig. 3 is also a front view.

A is a metal band passing across the back of the pelvis and having its ends attached to an adjustable belt B, forming part of the corset-front C, which is also connected by ad-

justable straps D to intermediate points of the band A. To the middle of the latter is fixed the one end of a steel spring E of zigzag form, as shown, the upper end of which is fixed to the middle of a second band F, of steel or other suitable material, that curves upward to the armpits, where it is provided with metal crutches G, that extend round to the front of the arms, as shown at Fig. 2, and thus afford the body an effectual support. The stay-front is attached to the upper part of the apparatus just below the crutches, and these latter are connected together by an adjustable belt H, passing across the back.

It will be seen that by the attachments B C D H the parts A, E, F, and G are held closely against the body of the wearer and the spring E is made to fit into the hollow of the back, thus affording effectual support to the spine, while yielding in every way to the free movements of the body.

Fig. 3 shows a front view of a modified form of attachment, more particularly suitable for children, the broad belt C being attached by the straps B to the ends of the metal band A, Fig. 1, and by the straps D passing over the hips to carry the apparatus to intermediate points at the back thereof. The other parts A, E, F, G, and H are of the same construction as shown at Fig. 1.

Having thus described the nature of this invention and the best means I know of carrying the same into practical effect, I claim—

1. In apparatus for supporting the spine, the combination of a supporting-band, such as A, adapted to be secured around the body, the spring E, having its lower end secured to the central portion of said band A and adapted to fit into the hollow of the back, the metal band or rod F, centrally secured to the upper end of said spring and having its ends curved upward to the armpits, and crutches G, attached to the ends of the band or rod F and adapted to fit under the arms of the wearer, substantially as and for the purpose described.

2. In apparatus for supporting the spine, the combination of the supporting-band A, the adjustable belt B, the corset-front C, attached to said belt and provided with straps D for attachment to the band A, the spring E,

having its lower end secured to the central portion of said band and adapted to fit into the hollow of the back, the metal band or rod F, centrally secured to the upper end of said
5 spring and having its ends curved upward to the armpits, crutches G G, attached to the ends of the band or rod F and adapted to fit under the arms of the wearer, and an adjustable belt or band H, connecting said crutches,
10 as and for the purpose described.

In testimony whereof I have signed my name to this specification, in the presence of

two subscribing witnesses, this 25th day of April, A. D. 1892.

CHARLES GODFREY GÜMPEL.

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