

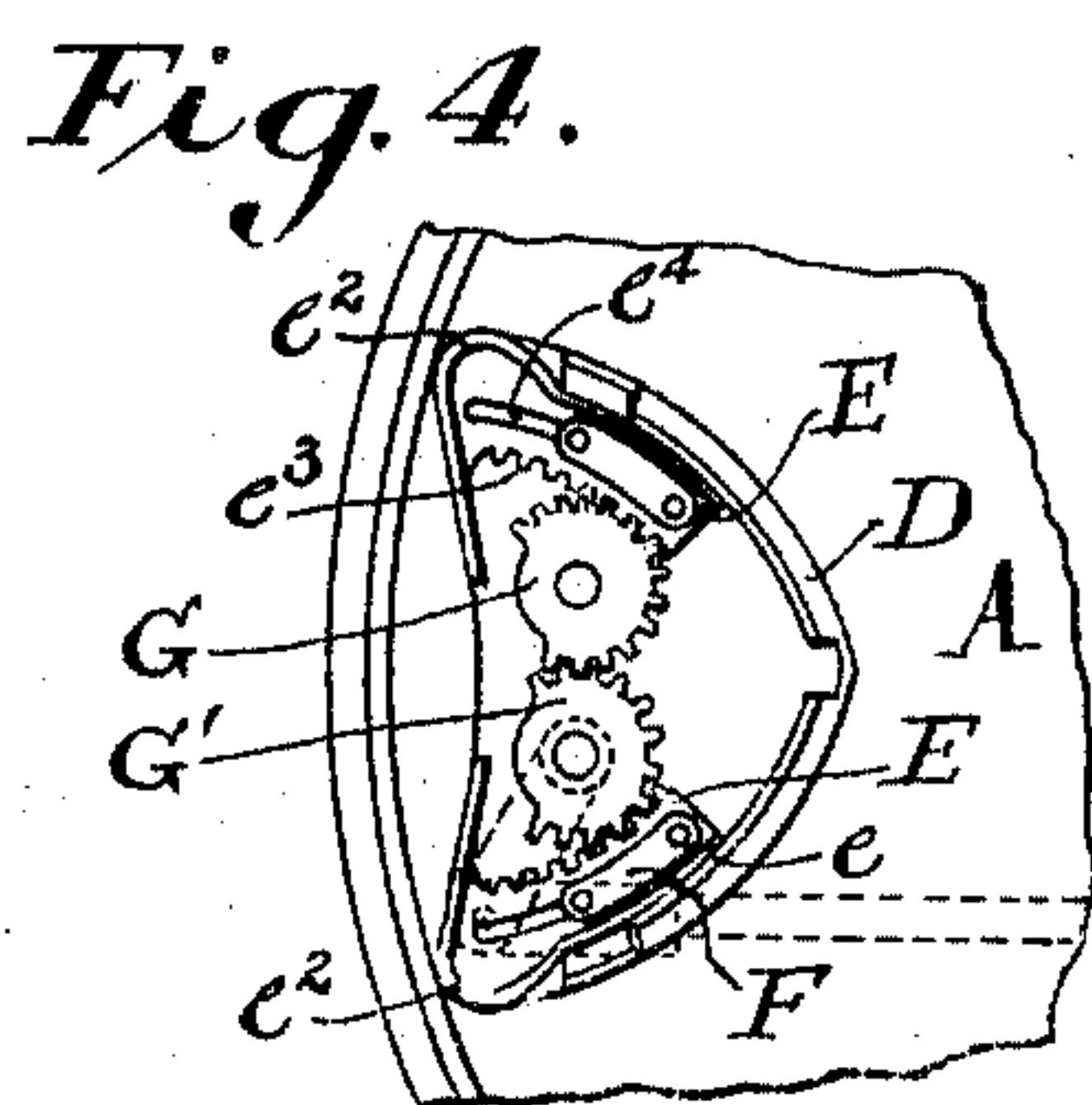
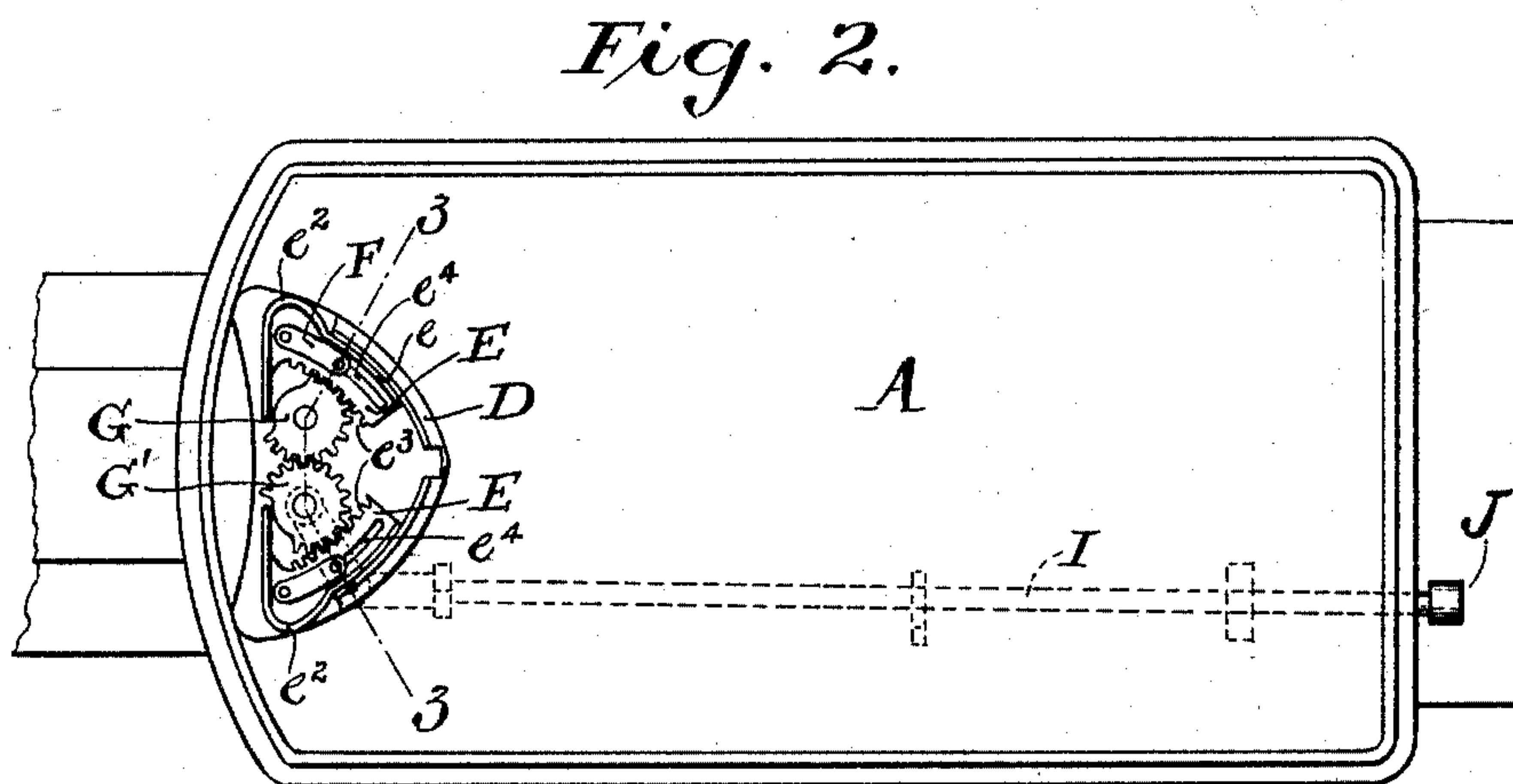
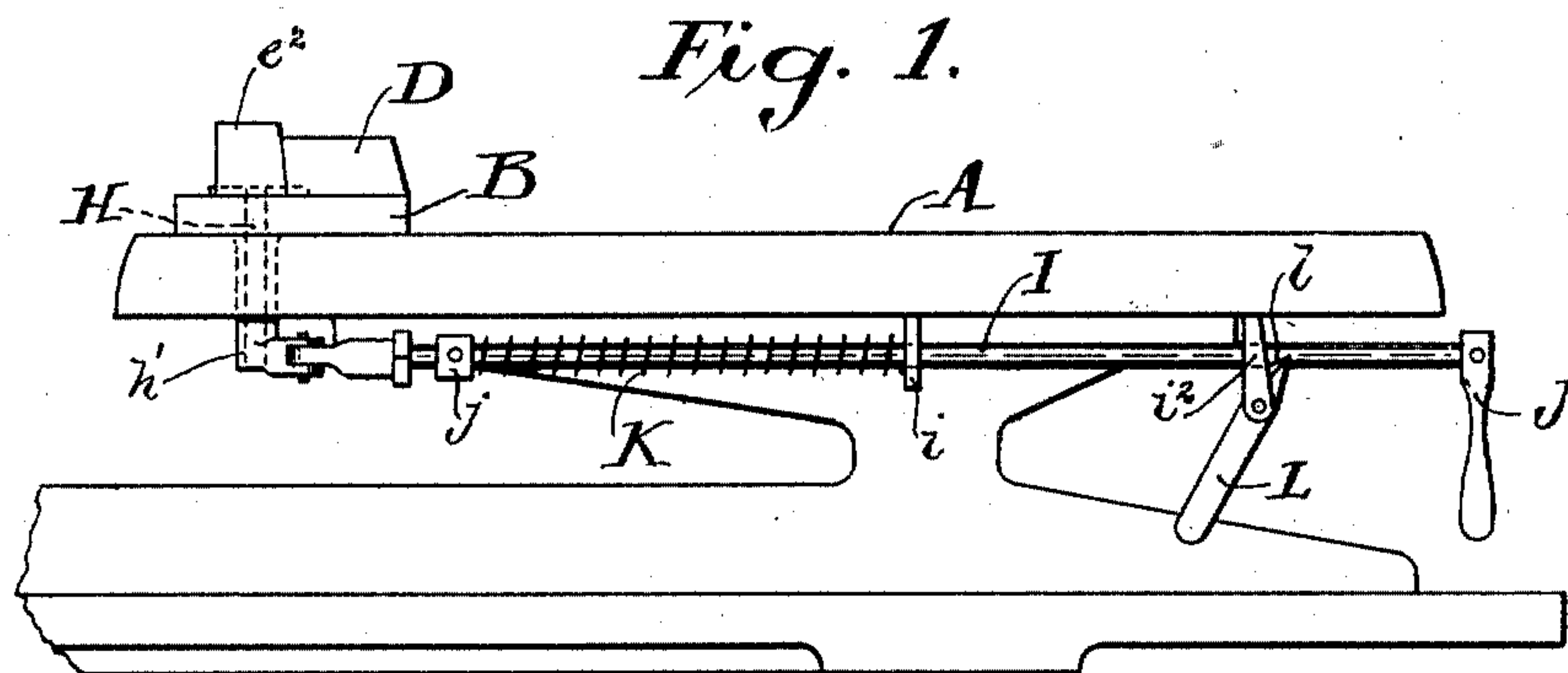
No. 776,166.

PATENTED NOV. 29, 1904.

W. M. BARNES.
NECKBAND STRETCHER.

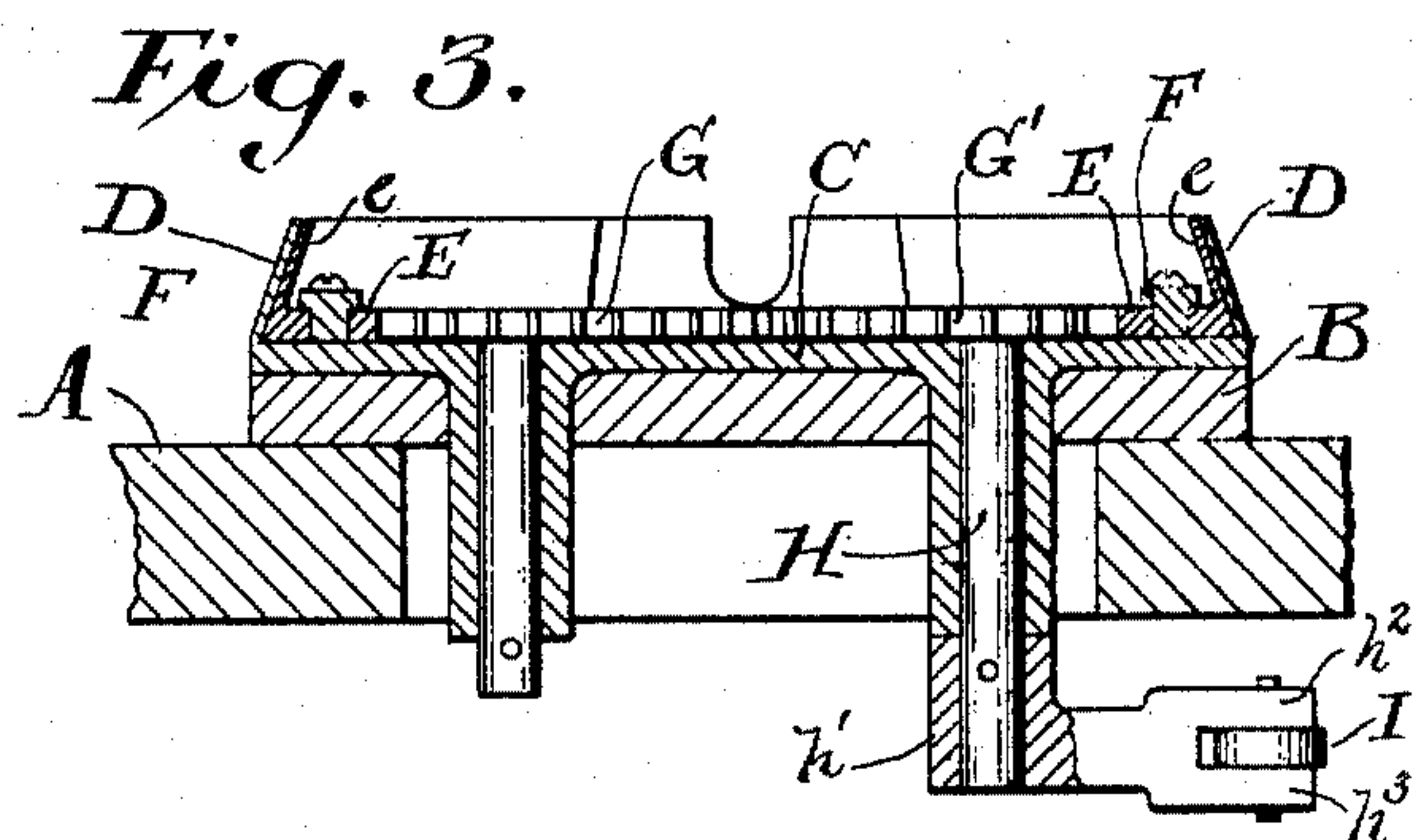
APPLICATION FILED DEC. 27, 1902.

NO MODEL.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM M. BARNES, OF PHILADELPHIA, PENNSYLVANIA.

NECKBAND-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 776,166, dated November 29, 1904.

Application filed December 27, 1902. Serial No. 136,776. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. BARNES, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Neckband-Stretchers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention has for its object the production of a neckband-stretcher which will be adapted for different-size neckbands, maintain the neckband stretched, and maintain the curve of the neckband.

I will first describe the embodiment of my invention illustrated in the accompanying drawings and then point out the invention in the claims.

In the drawings, Figure 1 is a side elevation of ironing-table and neckband-stretcher. Fig. 2 is a top plan view of same, showing stretcher in its contracted position. Fig. 3 is a detail section on line 3 3, Fig. 2. Fig. 4 is a view similar to portion of Fig. 2, showing stretcher in its extended position.

A is the ironing-table; B the base of neckband-stretcher, secured to the ironing-table.

The neckband-stretcher consists of the base-plate C, connected to the base B, having the curved flanges D, these flanges being curved to the curvature of a shirt-neckband and, as shown, are curved eccentrically to each other. On each side of the plate C are the plates E, curved concentrically with and extending beyond the curved flanges D. These plates have vertical flanges e , also curved concentrically with and extending beyond the curved flanges D. The ends of these flanges e where extending beyond the flanges D are projected outward, as at e^2 , to conform to the radius of the flanges D. The plates E have the slots e^4 curved concentrically with the plates E. In these slots e^4 are the blocks F, secured to the plate C and conforming to said slots e^4 . The inner surface of the plates E have the teeth e^3 , forming segmental racks.

G G' are segmental gears meshing with each other and each with the rack on the inner surface of one of the plates E.

H is the vertical shaft for the segmental gear G', and h' is crank attached to this shaft H. This crank h' has the bifurcated end having ears $h^2 h^3$, between which is secured the rod I, held in bearings $i i^2$, suspended from the bottom of the ironing table or bed A. On the end of this rod I is the handle J. K is a spiral spring wound around said rod, one end being confined against the adjustable stop j , secured to the rod I, and the other end resting against the bearing i .

L is a weighted pawl pivotally connected to the hanger i^2 and having its active end held against the rod I.

l is a notch in the rod I, into which when in line with pawl L the pawl drops, holding the rod.

As may be seen, the portion of the neckband-stretcher around which the neckband of the shirt is placed consists of four parts, the two parts on each side being curved concentrically, the central part on each side being fixed, the other part on each side being movable at the end of its corresponding fixed part and enabling the size of the stretcher to be expanded. The pawl holds the rod in such position that the neckband-stretcher is in its most contracted position. The neckband of a shirt is then placed around the stretcher and the pawl released, when, through the action of the spring, the rod will act upon the crank, operating the segmental gears, the racks, and the movable plates, expanding the neckband-stretcher until the neckband is firmly held. The projecting portions e^2 of flanges e being of the same radius as flanges D enables a neckband of any size to be stretched, maintaining in all cases a like curve of the neckband.

When it is desired to release the garment, the rod I is pulled, contracting the neckband-stretcher until the rod reaches the position where the neckband-stretcher is in its most contracted position, when the pawl enters the notch l , holding the rod.

Having now fully described my invention, what I claim, and desire to protect by Letters Patent, is—

1. In a neckband-stretcher, in combination, 5
a fixed curved central portion one half of which is eccentric with the other half, wings extending from the ends of said central portion, said wings being curved concentrically with the curvature of the contiguous central portion and having a movement in the arc of a circle concentric with the contiguous curved central portion. 10

2. In a neckband-stretcher, in combination with a fixed curved central portion, wings extending from the ends of said central portion said wings having a movement in arcs of circles and eccentric with each other. 15

3. In a neckband-stretcher, in combination, a fixed curved central portion one half of which is eccentric with the other half, wings extending from the ends of said central portion, said wings being curved concentrically with the curvature of the contiguous central portion and having a movement in the arc of a circle concentric with the contiguous curved central portion, and a spring tending to move said wings in a direction away from said central portion. 20 25

4. In a neckband-stretcher, in combination 30
with a fixed curved central portion, wings extending from the ends of said central portion, said wings having a movement in the arcs of circles eccentric with each other, and a spring tending to move said wings in a direction away from said central portion. 35

5. In a neckband-stretcher, in combination, a fixed curved central portion one half of which is eccentric with the other half, wings extending from the ends of said central portion, said wings being curved concentrically with the curvature of the contiguous central portion and having a movement in the arc of a circle concentric with the contiguous curved central portion, a spring tending to move said wings in a direction away from said central portion, and means to hold said neckband-stretcher in its contracted position against the action of said spring. 40 45

6. In a neckband-stretcher, in combination 50
with a fixed curved central portion, wings extending from the ends of said central portion, said wings having a movement in the arcs of circles eccentric with each other, a spring tending to move said wings in a direction away from said central portion, and means to hold said neckband-stretcher in its contracted position against the action of said spring. 55

7. In a neckband-stretcher, in combination with a fixed curved central portion, one half of which is eccentric with the other half, wings extending from the ends of said central portion, said wings being curved concentrically 60

with the curvature of the contiguous central portion, said wings each having a portion provided with a slot curved concentrically with the contiguous central portion, a fixed block in each of said slots and a spring tending to move the slotted portions of said wings in a direction away from said contiguous central portion. 65 70

8. In a neckband-stretcher, in combination, a fixed curved central portion one half of which is eccentric with the other half, wings extending from the ends of said central portion, said wings being curved concentrically with the curvature of the contiguous central portion, said wings each having a portion provided with a slot curved concentrically with the contiguous central portion, a fixed block in each of said slots and means to move said slotted portions of the wings away from the central portion. 75 80

9. In a neckband-stretcher, in combination, a fixed curved central portion one half of which is eccentric with the other half, wings extending from the ends of said central portion, said wings being curved concentrically with the curvature of the contiguous central portion, said wings each having a portion provided with a slot curved concentrically with the contiguous central portion, a fixed block in each of said slots, a spring tending to move the slotted portions of said wings in a direction away from the contiguous central portion, and means to hold said slotted portions of the wings in their most contracted position against the action of the spring. 85 90 95

10. In a neckband-stretcher, in combination, a fixed curved central portion, one half of which is eccentric with the other half, wings extending from the ends of said central portion, said wings being curved concentrically with the curvature of the contiguous central portion, said wings each having a portion provided with a slot curved concentrically with the contiguous central portion, a fixed block in each of said slots, teeth on the edge of said slotted portions of the wings, a gear for each slotted portion, each gear meshing with its respective slotted-portion teeth, and the two gears meshing with each other, and means to move one of said gears. 100 105 110

11. In a neckband-stretcher, in combination, a fixed curved central portion one half of which is eccentric with the other half, wings extending from the ends of said central portion, said wings being curved concentrically with the curvature of the contiguous central portion, said wings each having a portion provided with a slot curved concentrically with the contiguous central portion, a fixed block in each of said slots, teeth on the edge of said slotted portions of the wings, a gear for each slotted portion, each gear meshing with its 115 120

respective slotted-portion teeth and the two gears meshing with each other, and a spring to move one of said gears.

12. In a neckband-stretcher, in combination, a fixed curved central portion one half of which is eccentric with the other half, wings extending from the ends of said central portion, said wings being curved concentrically with the curvature of the contiguous central portion, said wings each having a portion provided with a slot curved concentrically with the contiguous central portion, a fixed block in each of said slots, teeth on the edge of said slotted portions of the wings, a gear for each slotted portion, each gear meshing with its respective slotted-portion teeth and the two gears meshing with each other, a spring to move one of said gears, and means to hold said gears fixed against the action of said spring.

13. In a neckband-stretcher, in combination, a fixed curved central portion one half of which is eccentric with the other half, wings extending from the ends of said central portion, said wings being curved concentrically with the curvature of the contiguous central portion, said wings each having a portion provided with a slot curved concentrically with the contiguous central portion, a fixed block in each of said slots, teeth on the edge of said slotted portions of the wings, a gear for each slotted portion, each gear meshing with its respective slotted-portion teeth and the two gears meshing with each other, a crank on the shaft of one of said gears, and a rod to operate said crank.

14. In a neckband-stretcher, in combination, a fixed curved central portion one half of which is eccentric with the other half, wings extending from the ends of said central portion, said wings being curved concentrically with the curvature of the contiguous central portion, said wings each having a portion provided with a slot curved concentrically with the contiguous central portion, a fixed block in said slots, teeth on the edge of said slotted portions of the wings, a gear for each slotted portion, each gear meshing with its respective slotted-portion teeth and the two gears meshing with each other, a crank on the shaft of one of said gears, a rod to operate said crank, and a spring to move the rod in one direction.

15. In a neckband-stretcher, in combination, a fixed curved central portion one half of which is eccentric with the other half, wings extending from the ends of said central portion, said wings being curved concentrically with the curvature of the contiguous central portion, said wings each having a portion provided with a slot curved concentrically with the contiguous central portion, a fixed block in said slots, teeth on the edge of said slotted portions of the wings, a gear for each slotted portion, each gear meshing with its respective slotted-portion teeth and the two gears meshing with each other, a crank on the shaft of one of said gears, a rod to operate said crank, and a spring to move the rod in one direction.

tions of the wings, a gear for each slotted portion, each gear meshing with its respective slotted-portion teeth and the two gears meshing with each other, a crank on the shaft of one of said gears, a rod to operate said crank, a spring tending to move the rod in one direction, and means to hold said rod fixed against the action of said spring.

16. In a neckband-stretcher, in combination, a fixed curved central portion, a wing extending from each end of said central portion, each of said wings being movable to and from said central portion in a path at a diverging angle from the path of the other wing.

17. In a neckband-stretcher, in combination with a fixed central portion, wings extending from the ends of said central portion, said wings being movable to and from said central portion, and a spring tending to move said wings from said central portion.

18. In a neckband-stretcher, in combination with a fixed central portion, wings extending from the ends of said central portion, said wings being movable to and from said central portion, a spring tending to move said wings from said central portion, and means to hold said wings against the action of said spring.

19. In a neckband-stretcher, in combination, with a fixed curved central portion, wings extending from the ends of said central portion, said wings being curved concentrically with the curvature of the contiguous central portion, the ends of said wings remote from their contiguous central portions having projecting portions of the same radius as the contiguous central portion, said wings each having a movement in the arc of a circle concentric with the corresponding contiguous curved central portion.

20. In a neckband-stretcher, in combination, a fixed curved central portion one half of which is eccentric with the other half, wings extending from the ends of said central portion, said wings each having a portion provided with a slot, said slots being at divergent angles with respect to each other, a fixed block in each of said slots and means to move said slotted portions of the wings away from the central portion.

21. In a neckband-stretcher, in combination, a fixed curved central portion, one half of which is eccentric with the other half, wings extending from the ends of said central portion, said wings each having a portion provided with a slot, a fixed block in each of said slots, teeth on the edge of said slotted portions of the wings, a gear for each slotted portion, each gear meshing with its respective slotted-portion teeth, and the two gears meshing with each other, and means to move one of said gears.

22. In a neckband-stretcher, in combination with a fixed curved central portion, wings extending from the ends of said central portion, said wings being curved concentrically
5 with the curvature of the contiguous central portion and having a movement in the arc of a circle concentric with the contiguous curved central portion.

23. In a neckband-stretcher, in combination, with a fixed, curved central portion, a
10 wing extending from each end of said central

portion, each of said wings being movable to and from said central portion in a path concentric with its contiguous central portion.

In testimony of which invention I have here- 15
unto set my hand at Philadelphia on this 16th day of December, 1902.

WILLIAM M. BARNES.

Witnesses:

M. M. HAMILTON,
G. I. HUTTON.