

(No Model.)

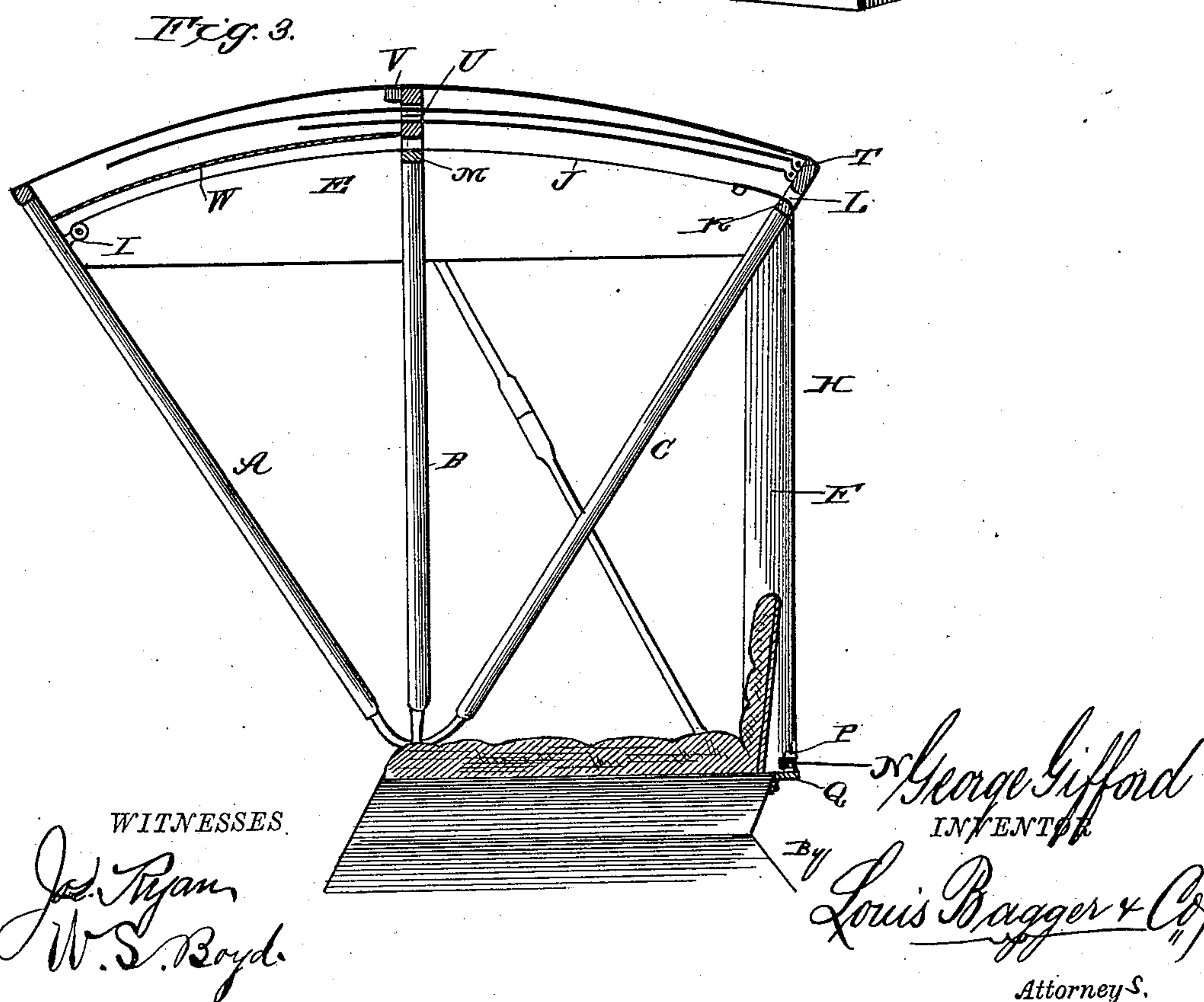
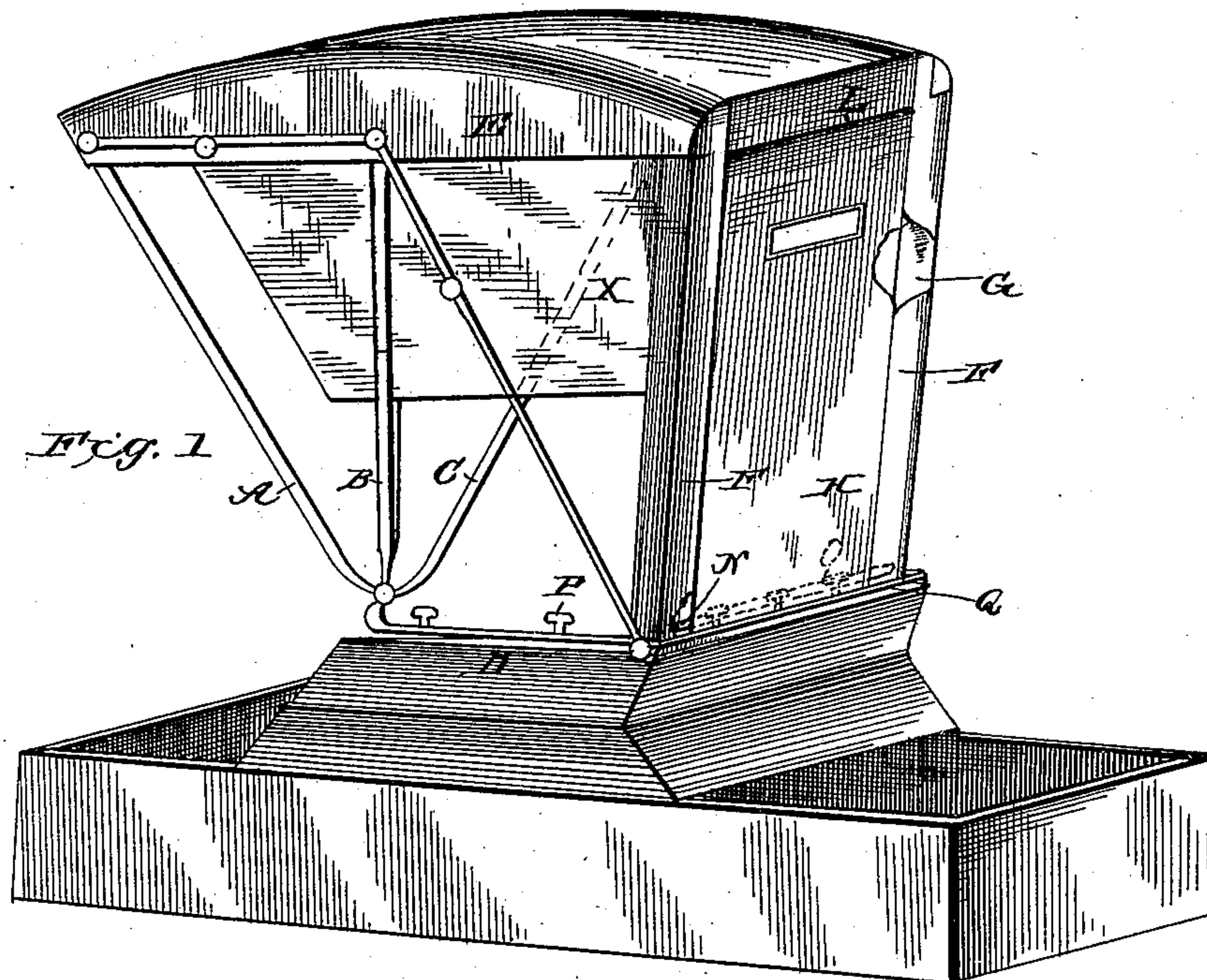
2 Sheets—Sheet 1.

G. GIFFORD.

VEHICLE TOP.

No. 352,816.

Patented Nov. 16, 1886.



WITNESSES

Joe. Ryan
W. S. Boyd.

George Gifford
INVENTOR
By Louis Bagger & Co.
Attorney S.

(No Model.)

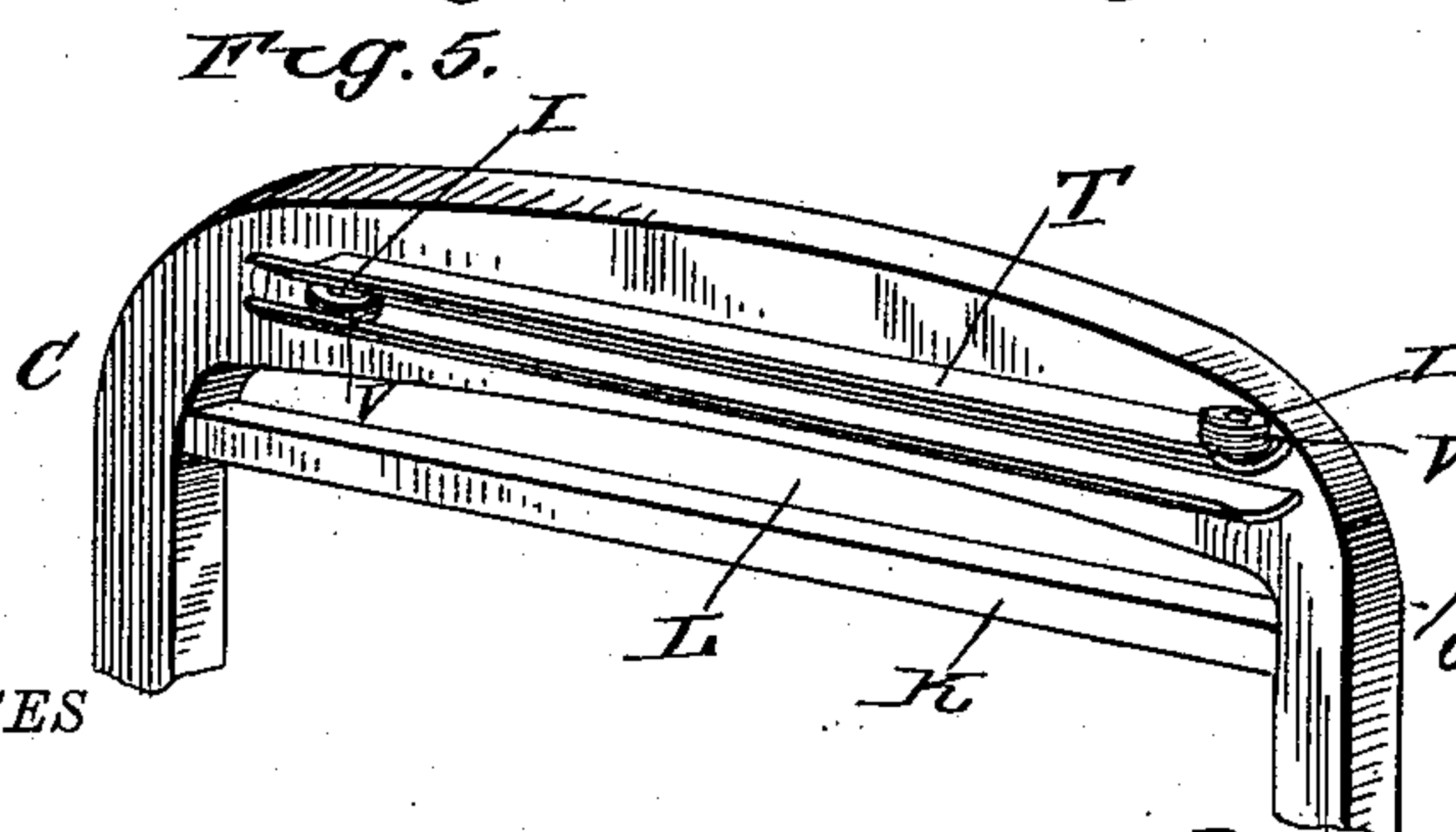
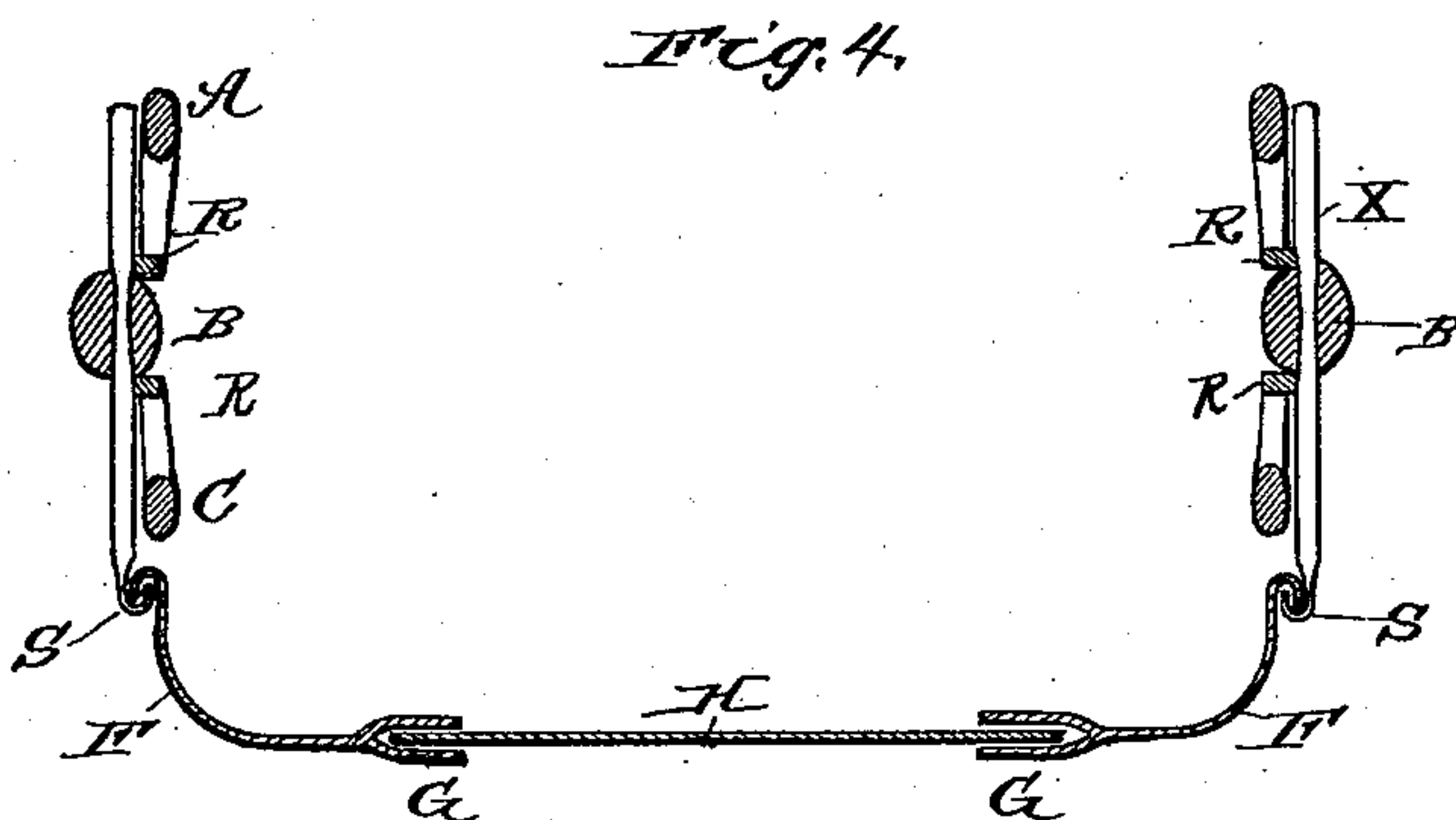
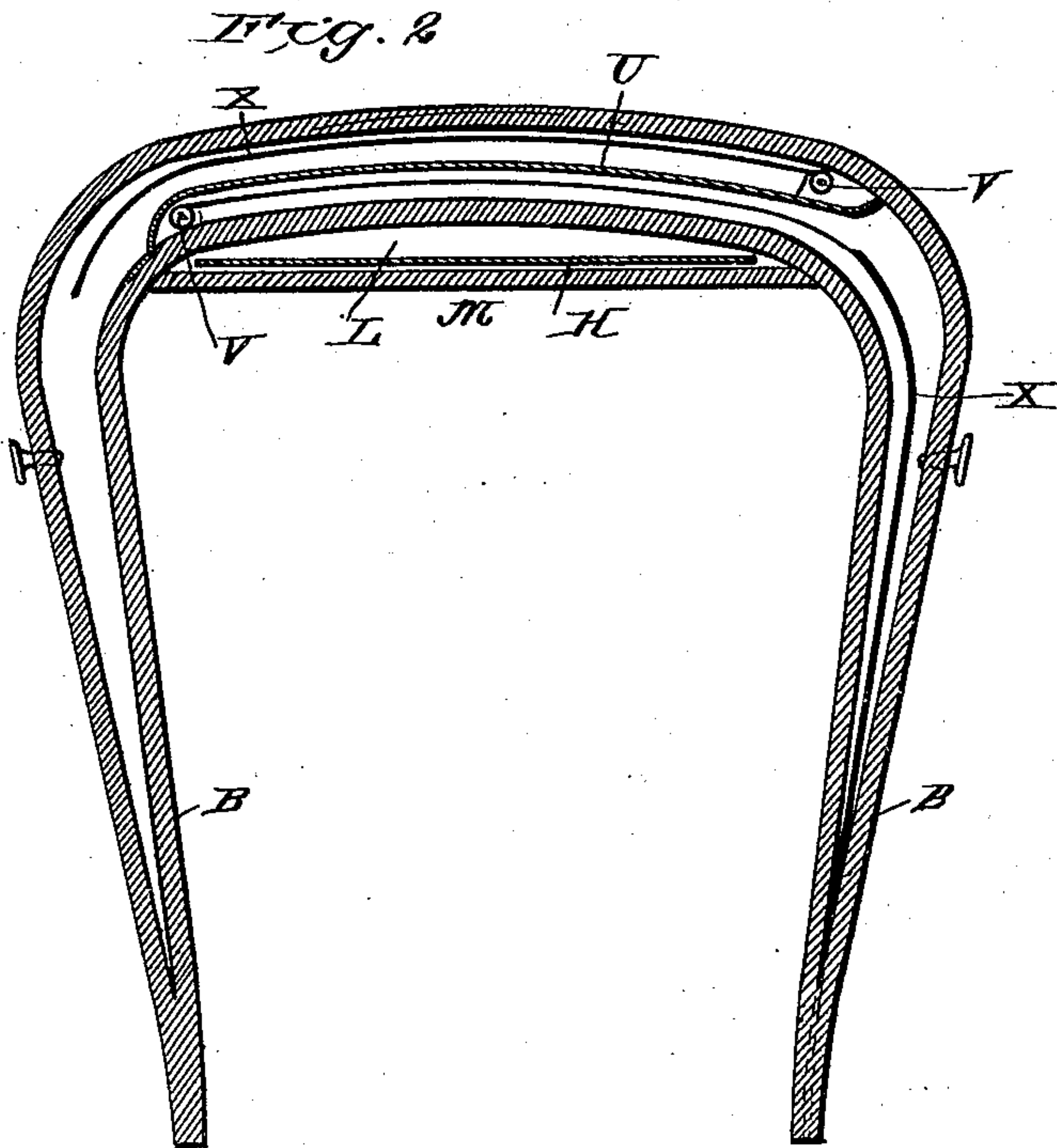
2 Sheets—Sheet 2.

G. GIFFORD.

VEHICLE TOP.

No. 352,816.

Patented Nov. 16, 1886.



WITNESSES

Joe Ryan
W.S. Boyd

INVENTOR

George Gifford
By *Louis Baggett & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

GEORGE GIFFORD, OF PHILADELPHIA, ASSIGNOR OF ONE-FOURTH TO SIMON P. WOLVERTON, OF SUNBURY, PENNSYLVANIA.

VEHICLE-TOP.

SPECIFICATION forming part of Letters Patent No. 352,816, dated November 16, 1886.

Application filed August 12, 1886. Serial No. 210,690. (No model.)

To all whom it may concern:

Be it known that I, GEORGE GIFFORD, a citizen of the United States, and a resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Vehicle-Tops; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of a buggy-top provided with my improved curtains, showing a part broken away and one of the side curtains partly raised. Fig. 2 is a transverse sectional view of the same, taken through the middle bow. Fig. 3 is a longitudinal sectional view. Fig. 4 is a horizontal sectional view, and Fig. 5 is a detail view, of the upper portion of the rear bow.

This invention relates to vehicle-tops, whereby the curtains of the same can be easily and quickly operated from the inside of the vehicle, and they are drawn up between the cover and lining out of sight; and it consists in the improved construction and combination of parts, as will be hereinafter more fully set forth.

Referring to the accompanying drawings, in which the same letters of reference indicate corresponding parts in all the figures, A, B, and C represent the bows of the top, secured to the seat D in the ordinary manner, and provided with a cover, E. Ordinary braces are secured to these bows at the side, and a pair of quarter-pieces, F, are secured at the back, in the usual manner. A groove or channel, G, is formed in the inner edge of each of the quarter-pieces by joining the lining and pieces at a distance from the edge and leaving their outer edges unjoined. The back curtain, H, is secured within these grooves, instead of upon the outside, as is commonly done, and is drawn up between the lining and cover of the top by means of three coiled springs secured upon the inner side of the front bow—one at each corner and one at the middle of the upper portion. Each of these springs is secured to and operates a

spool, I, upon which is wound a cord, J, which is attached to the upper end of the back curtain.

Upon the under side of the rear bow, C, a bar, K, is secured, which leaves a slot, L, between it and the bow of the same width as the back curtain, and through which it is drawn as it is being raised. Upon the under side of the middle bow, B, is a similar bar or roller, M, which supports the cords and curtains and keeps them from bearing down upon the lining. These bars K and M are made of some hard polished material, which will permit the curtain to slide over them with as little friction as possible, and the rear one is placed far enough from the top of the bow and at such an angle as to permit the glass window in the curtain to pass up through it without breaking.

To prevent the curtain from being drawn through the slot L, as the upper end of it is above it between the cover and lining, a cross-piece a trifle longer than the curtain is wide is secured in each end, the lower one of which, N, is provided with holes or slots O, by means of which it is fastened to the half-moon catches P on the shifting rail Q, holes being cut through the back curtain at those points where it is around the cross-piece. By turning the catches P so that they will pass through the slots O, the curtain is released from the shifting rail, when the springs on the front bow, A, will draw the curtain up into the top until the ends of the cross-bar N engage with the ends of the slot L, which prevents its going farther, and at the same time causes the curtain to be stretched taut, so that all wrinkles are kept out of it, and it remains spread out where it will take up but little room.

It is evident that the curtains of horse and steam cars, omnibusses, and carriages can be operated in the same way, and thus be drawn up into the top by means of coiled springs and cords, and that they can be easily drawn down and secured by means of hooks or half-moon catches, as described above.

To operate the side curtains, *x x*, of a buggy or carriage in the manner described for the rear curtains, the middle bow, B, is slotted from nearly one end to the other, and the curtains made to slide up and down in this slot, the curtains at that point being made thinner

than at other places. A guide-strip, R, is placed at each side of the bow at this point, for the purpose of making the curtains always draw up and down in their proper places. The rear edge of each of the side curtains is formed into a curl or hook, S, which engages with a similar curl on the front edge of each of the quarter-pieces F, and the lower edge is provided with a slotted bar similar to the one in the rear curtain. The shifting rail, which is continued around the sides of the seat, is provided with similar half-moon catches to those upon the rear portion of it.

The inner side of the rear bow at its upper portion is provided with two small troughs or gutters, T, and the middle bow with an inclined partition, U. At opposite ends of the two troughs T and at each end of the partition U is a coiled spring and spool, V, similar to the ones of the front bow, and a cord on the spools at one side connects with the curtain upon the opposite side, the cords at the rear bow running through the troughs T. To support the front portions of the side curtains and keep them from bearing down upon the lining and interfering with the cords of the rear curtain, a cloth or other pliable support, W, is stretched from side to side and from the front to the middle bows. These side curtains can be secured to the sides of the front bows in the usual manner, and each of them has a slot in its lower edge corresponding in length with the portion of the middle bow which is not slotted, the slots permitting the curtains to be drawn down to the shifting rail and secured.

By the use of my improvement the curtains are quickly put out of sight, thus avoiding the unsightly rolls as commonly used, or the necessity of removing and replacing part of them, which is often very troublesome, as when a storm comes up suddenly, and it also avoids the necessity of getting out of the vehicle, as there is enough elasticity in the springs to permit of the curtains being drawn down farther than is necessary to permit the hand of the operator to be put out underneath them, and then to draw the curtain taut as soon as the hand has been withdrawn.

Having thus described my invention, I claim—

1. In a vehicle-top, the combination of the curtains upon one side of the top, coiled springs upon the other side, and cords connecting said curtains with the springs.

2. In a vehicle-top, the combination of the quarter-pieces, the inner edges of which are provided with a groove or channel, the rear

curtain sliding therein, a series of springs secured to the front bow, and a cord secured to each of said springs and to the top of said curtain.

3. In a vehicle-top, the combination of a bar secured to the under side of the rear and middle bows, a curtain, a series of coiled springs secured to the front bow, and a cord connecting each of said springs with the top of said curtain.

4. In a vehicle-top, the combination of a bar secured to the rear bow, a curtain between said bar and said bow, a bar secured to each end of said curtain, said bars in said curtain being longer than the curtain is wide, a series of springs secured to the front bow, and a cord connecting each of said springs with the top of said curtain.

5. In a vehicle-top, the combination of a spring-actuated curtain, a bar in its lower edge having slots through it, the shifting rail, and a series of half-moon catches.

6. In a vehicle-top, the combination of the bows, one of which is slotted, a curtain in each end of said slotted bow, a spring upon the rear and slotted bows at each side of the top, and a cord connecting each spring on one side of the top with the curtain upon the opposite side of the vehicle.

7. In a vehicle-top, the combination of the bows, one of which is slotted, a curtain in each end of said slotted bow, a partition in the top or middle of said slotted bow, two troughs secured to the rear bow, a spring upon the rear and slotted bow at each side of the buggy, and a cord connecting the springs on one side of the top with the curtain upon the opposite side.

8. In a vehicle-top, the combination of the quarter-pieces, the front edge of each of which is formed with a curl, and spring-actuated side curtains, the rear edge of each of which is formed with a curl or hook.

9. In a vehicle-top, the combination of a slotted bow, a curtain in each end of said bow, and guide-strips secured to the curtains at the sides of said bow.

10. In a vehicle-top, the combination of spring-actuated side curtains and a piece of cloth in the front portion of the top.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

GEORGE GIFFORD.

Witnesses:

HAROLD M. MCCLURE,
GEORGE H. NEFF.