

No. 679,838.

Patented Aug. 6, 1901.

J. C. FORD.  
BUGGY TOP RAISER.

(Application filed Mar. 19, 1901.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.

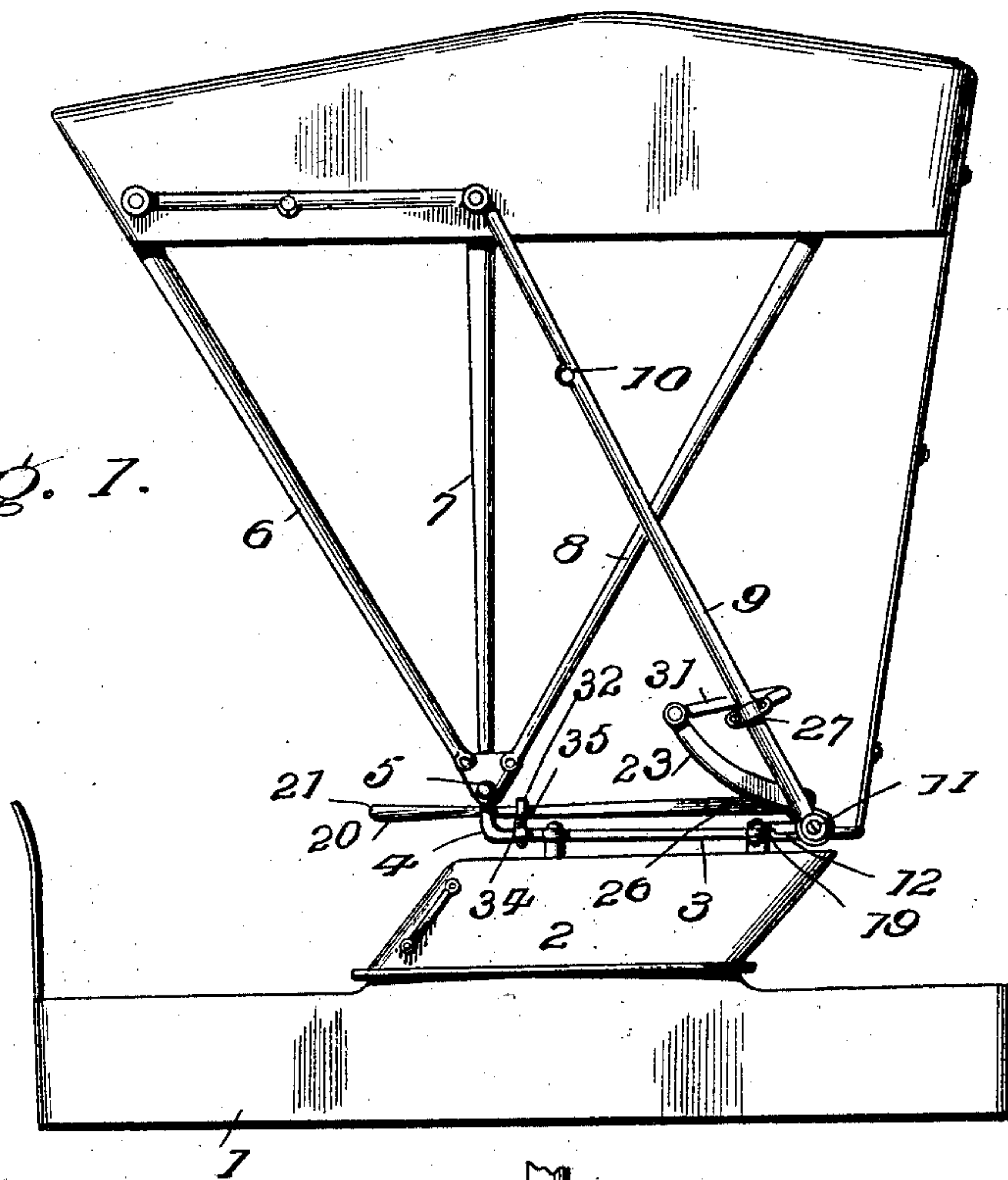


Fig. 2.

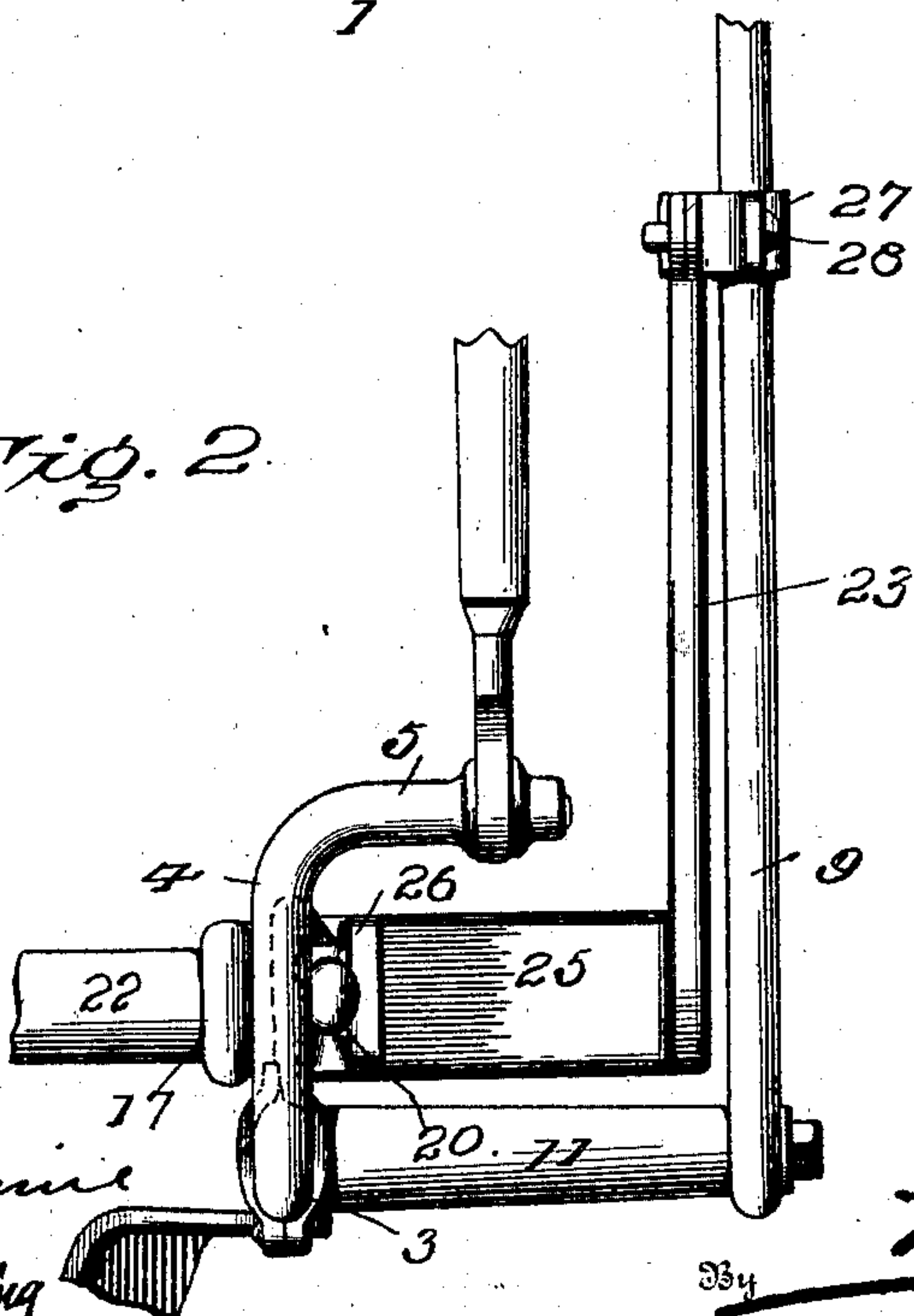
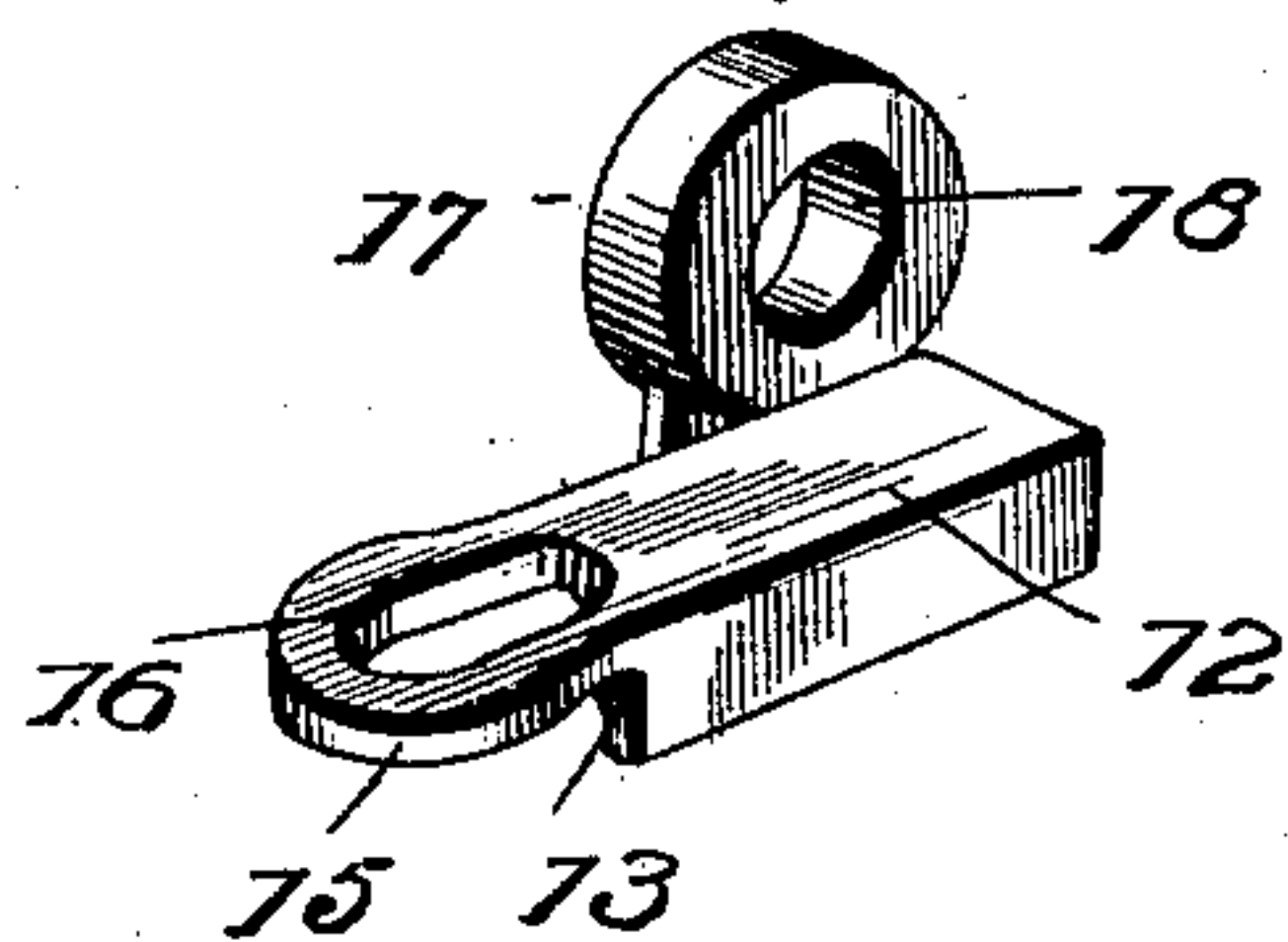


Fig. 3.



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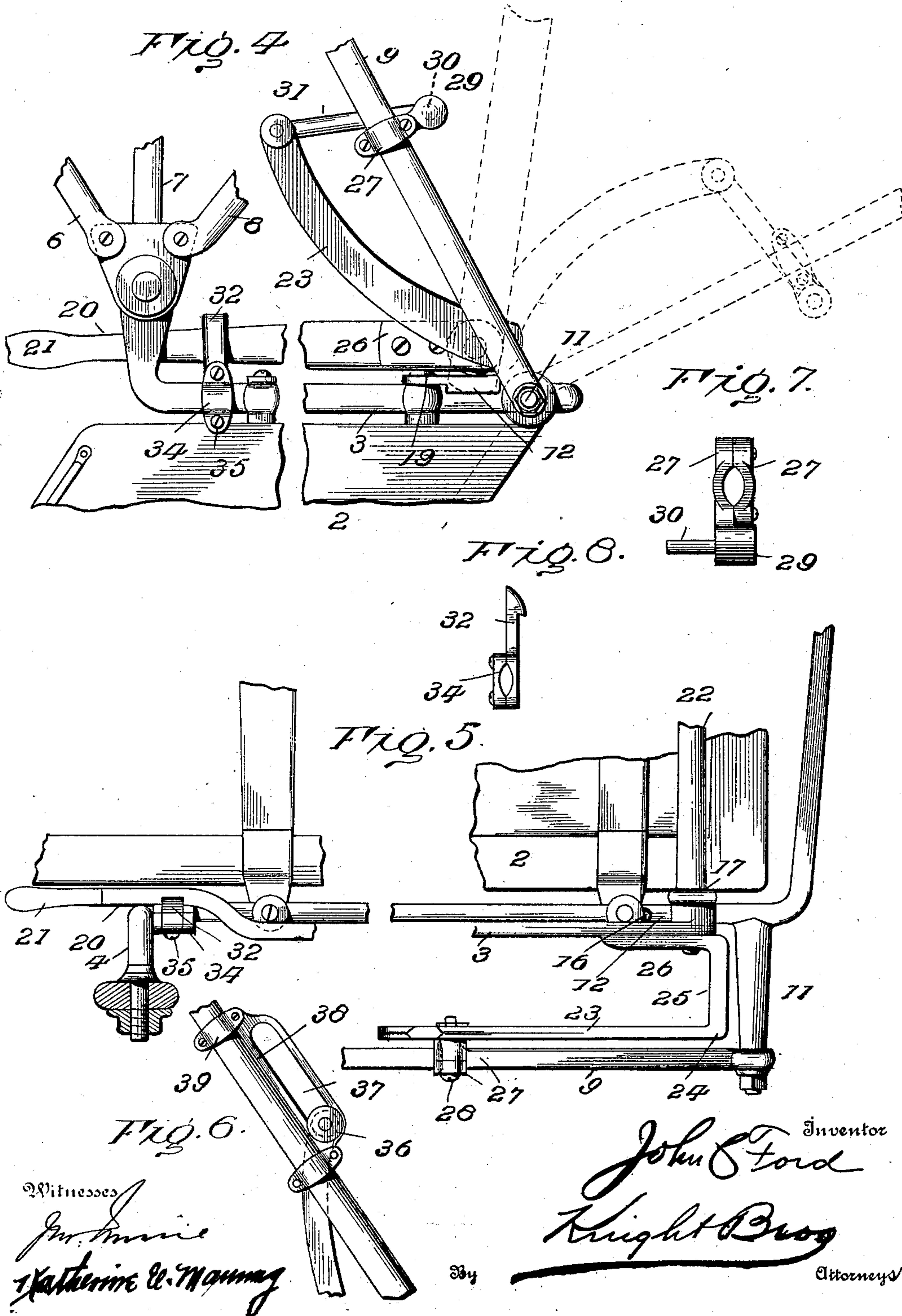
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3 Sheets—Sheet 3.

Fig. 9

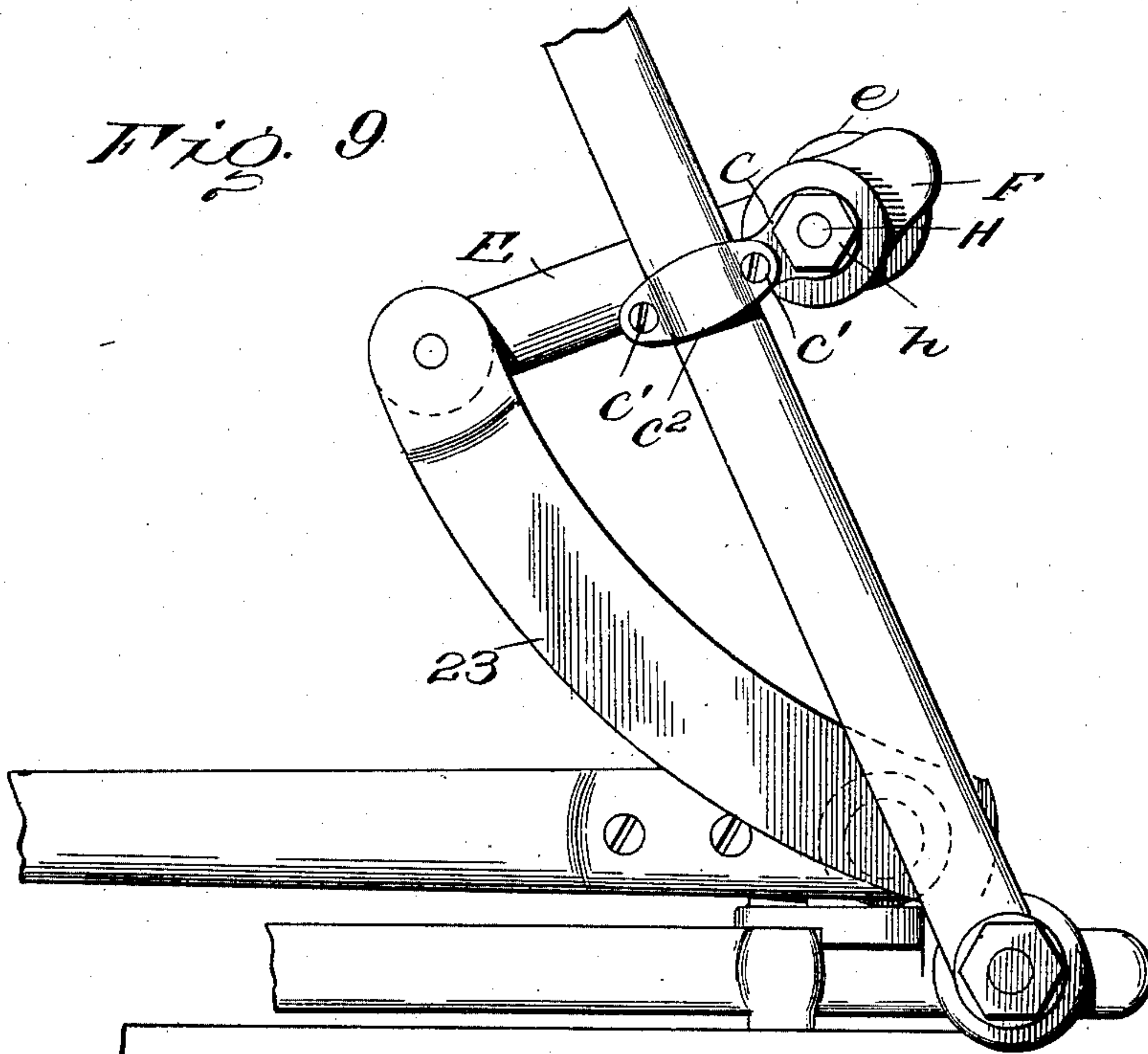


Fig. 10

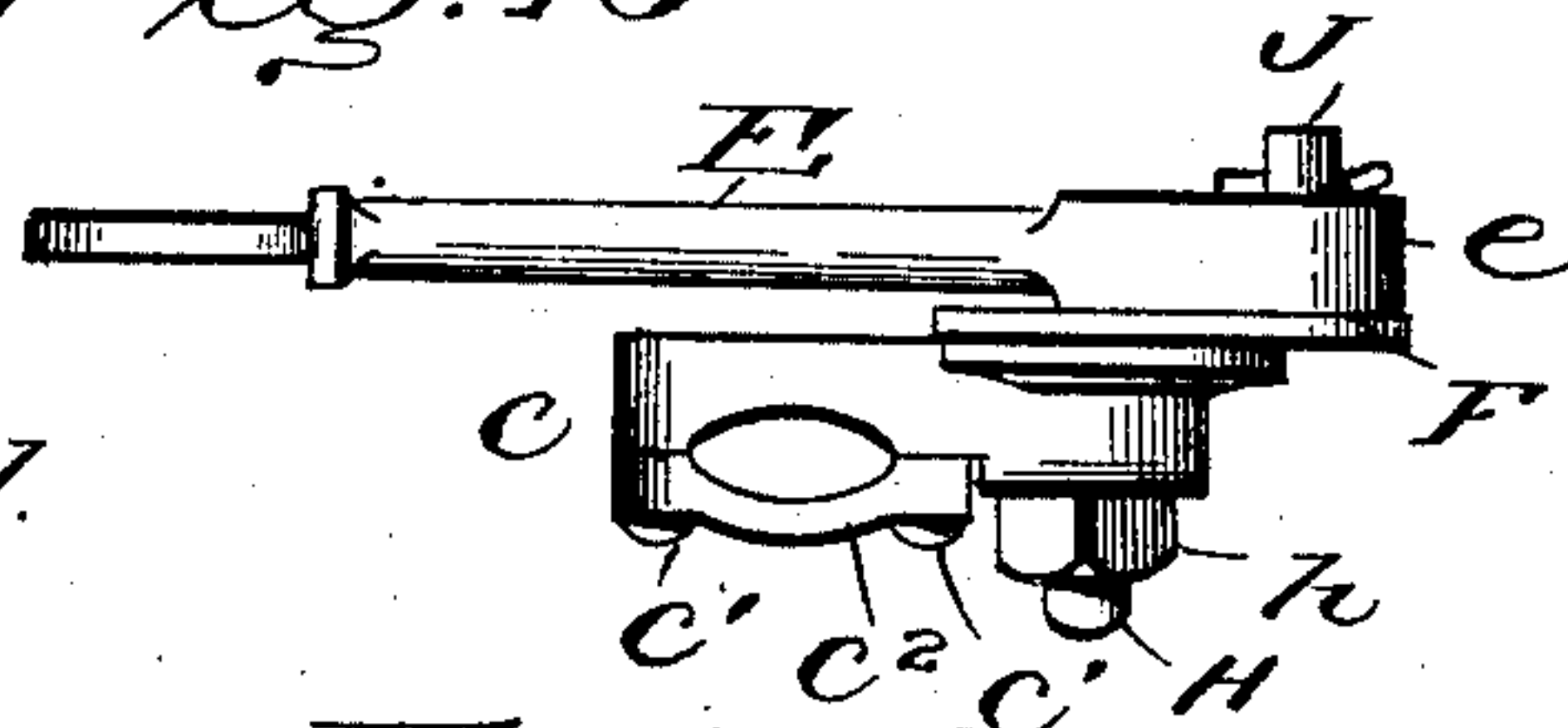


Fig. 11

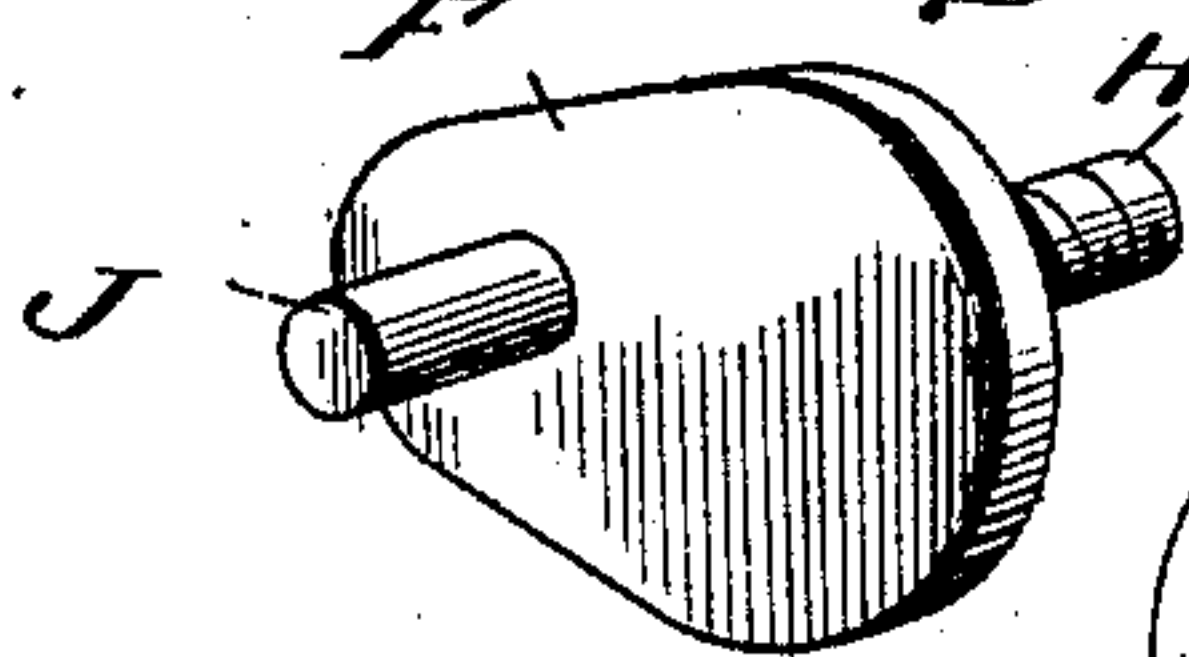


Fig. 12

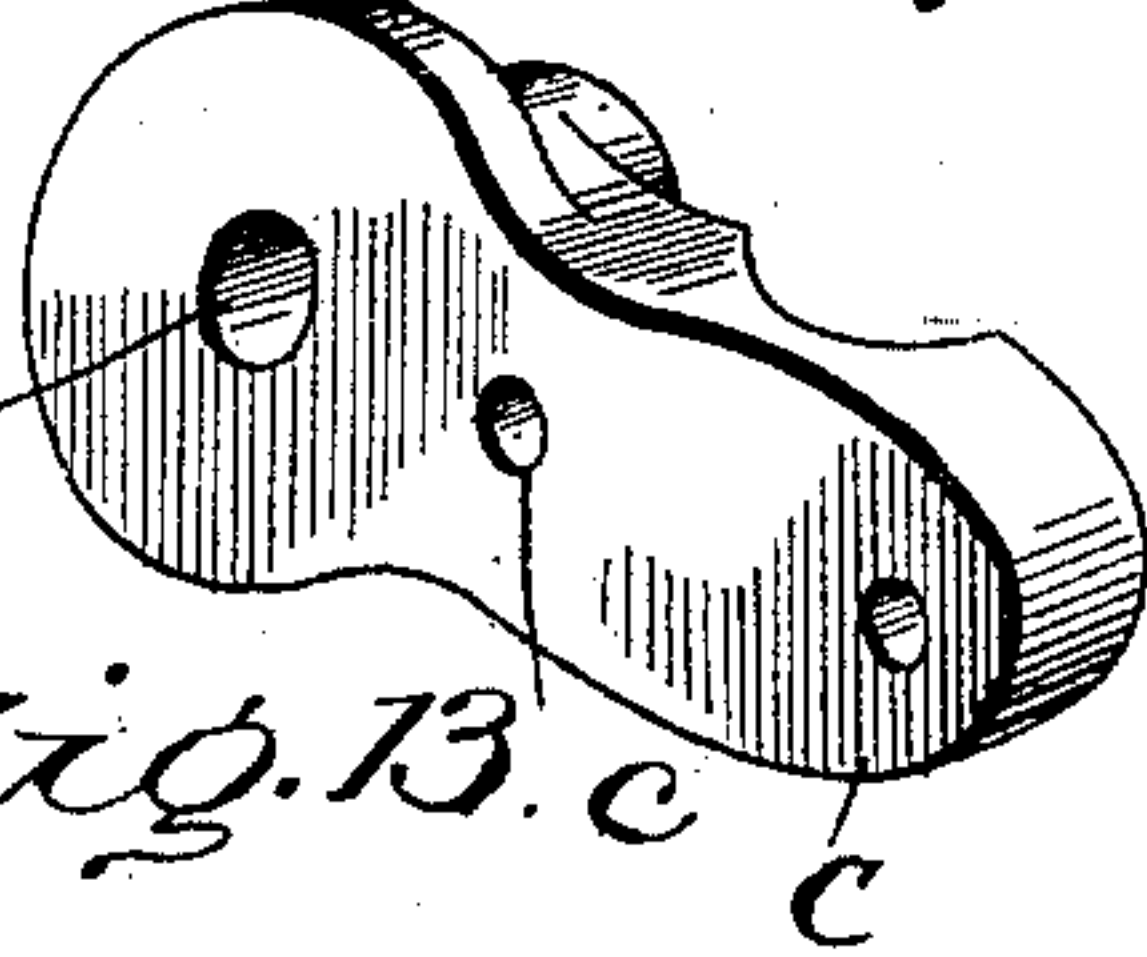
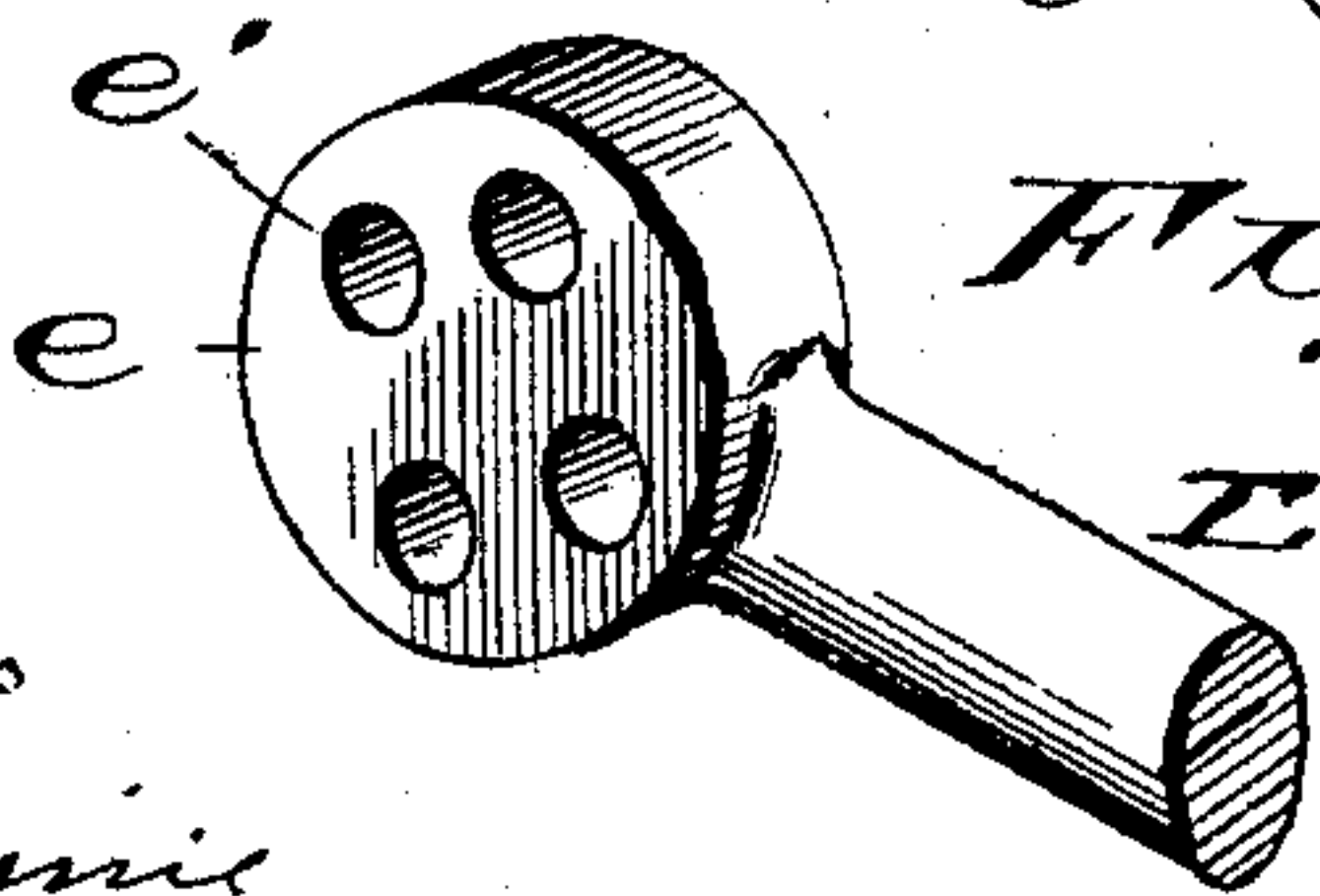


Fig. 13



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# UNITED STATES PATENT OFFICE.

JOHN C. FORD, OF MACON, MISSOURI.

## BUGGY-TOP RAISER.

SPECIFICATION forming part of Letters Patent No. 679,838, dated August 6, 1901.

Application filed March 19, 1901. Serial No. 51,852. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN C. FORD, a citizen of the United States, residing at Macon, county of Macon, State of Missouri, have invented certain new and useful Improvements in Buggy-Top Raisers, of which the following is a description.

My invention relates to devices for raising and lowering vehicle-tops, and is an improvement upon the buggy-top raiser patented to me August 14, 1900, No. 655,770; and it consists of the parts and combination of parts as will be hereinafter set out.

In the drawings, Figure 1 is a side elevation of a buggy with my invention applied. Fig. 2 is a rear elevation in detail enlarged. Fig. 3 is a perspective view of a clip forming part of my invention. Fig. 4 is an enlarged detail side elevation of my invention. Fig. 5 is a plan view of the same. Fig. 6 is a detail elevation of a modification. Fig. 7 is a detail view of the prop-clip. Fig. 8 is a detail view of the spring-catch. Fig. 9 is a side elevation, parts being broken away, of the buggy with modified form of my invention applied. Fig. 10 is a top plan view of the modified construction detached from the buggy. Fig. 11 is a perspective view of the crank-arm detached. Fig. 12 is a detail view in perspective of the clip. Fig. 13 is a detail perspective view of the arm broken away.

1 represents the body of the vehicle, having the usual seat 2, surmounted by the usual shifting rail 3, which is bent upward at its forward ends and outward, as at 5, on which the bows 6, 7, and 8 are pivoted in the usual manner.

9 is the usual back prop, having a hinge-joint 10, the lower end of said prop 9 being pivoted on the prop-support 11.

12 is a clip the lower or under face of which is concaved, as at 13. The said clip is provided with a forwardly-extending ear or projection 15, through which is formed an elongated slot or bolt-opening 16, extending in the direction of the length of the said clip.

17 is an integral upwardly-extending lug at one side of and at the rear end of the clip, having an opening 18. This clip 12 is secured on top of the shifting rail 3 by means of the bolt and nut 19, which secure the said shifting rail to the seat 2, the concaved face of the

clip conforming to the contour of the said shifting rail, as will be readily understood.

20 is an operating-lever having a handle 21. 55

22 is a shaft extending entirely across the buggy-seat and journaled in the openings 18 in the lugs 17 of the clips 12, the ends of the shaft extending beyond the said lugs, as shown in Fig. 5. The operating-lever is rigidly keyed to one end of the said shaft 22, as will be seen in Fig. 5. 60

23 is a curved crank or arm the lower end 24 of which is bent at right angles, as at 25, and then forwardly, as at 26, the forwardly-extending portion of the said arm being rigidly secured, either by welding or by rivets, to the operating-lever 20. It may be said that the rear end of the arm 23 is substantially U-shaped, as will be seen in Fig. 5. 65 70

27 is a clip comprising two members having concaved inner faces adapted to embrace the lower portion of the prop 9 when they are drawn together by the bolts or screws 28. One of the members of the clip 27 is provided with a projecting lug 29, which forms a seat for one end of the other member of the clip. 75

30 is a stud or post extending from one face of the lug 29. (See Fig. 7.)

31 is a link or arm one end of which is pivoted on the stud or post 30, while the other end of said link is pivoted to the upper end of the curved lever 23, (see Fig. 4,) thereby completing the connection between the operating-lever and the lower portion of the hinged prop 9. 80 85

32 is a catch, preferably of spring metal, the lower end of which is concaved, as at 33, to conform to the contour of the seat-rail, and 34 is a clip adapted to embrace the seat-rail opposite to the concaved face of the spring clip or catch and to be secured thereto by means of the bolts or screws 35. 90

In the modified form shown in Fig. 6 the upper end of the curved lever is provided with an antifriction-roller 36, which is adapted to roll in an elongated slot 37, formed in a plate or casting 38, said casting having depending lugs adapted to fit around the bow 9, to which are screwed or bolted the clips 39. 95 100

From the drawings it will be seen that the operating-lever 20 is locked under the spring-catch 32 when the top of the buggy is up. When it is desired to lower the top, the lever



20 is pulled slightly inward to release it from engagement with the spring-catch 32, and it is then pulled upward thereby by means of the backward thrust of the lever 23 and the link 31, the hinged joint 10 of the bow 9 is broken, and the top is lowered by a continued operation of the lever, as shown in dotted lines in Fig. 4.

In the modified construction shown, Figs. 9 to 13, inclusive, the clip C is provided with a disk D, cast integral therewith, said disk being of the same size as the stub end of the crank-arm. The clip is provided with bolt-openings *c*, through which the bolts or screws *c'* pass, whereby the supplemental clip *c''* is secured to the main clip C, as seen in Fig. 10.

The crank F is provided with a crank-pin J and with the shaft H, adapted to pass through the opening *c''* in the clip C, whereby the crank is secured to said clip by means of the nut *h*.

One end of the connecting-rod E is pivotally secured to the operating-lever 23, while the other end of said arm is provided with the enlarged head *e*, having four apertures or openings *e'* formed in said enlargement.

The parts are assembled as shown in Fig. 9. If different adjustments are desired, the crank-pin J is inserted in the respective openings *e* until the desired adjustment is obtained. By reason of these openings *e'* the connecting-rod E has an adjustment in the construction shown of at least an inch by turning the crank F upon its axis H.

I claim as my invention—

1. In a buggy-top raiser, the usual shifting-rail clips having a concaved under face and comprising a forwardly-extending lug having an elongated slot, and an upwardly-extend-

ing perforated lug, said clips being secured to the seat-rail in combination with a shaft extending across the buggy and journaled in said clips, an operating-lever rigidly secured to one end of the shaft, an upwardly-curved arm secured to said lever, a link pivoted at one end to the upper end of said arm and at its other end to a long hinged prop and a spring-catch for locking the operating-lever in its depressed position.

2. In a buggy-top raiser, the combination with the long hinged prop, of a shaft extending across the buggy, an operating-lever secured to said shaft and an upwardly-curved arm integral with the operating-lever, a connecting-rod pivotally secured at one end to the operating-lever, of a clip secured to said prop, a crank-arm removably secured to said clip and means for adjustably connecting said crank-arm to one end of the connecting-rod.

3. In a buggy-top raiser, the combination with the long hinged prop, of a shaft extending across the buggy, an operating-lever secured to said shaft, an upwardly-curved arm integral with the operating-lever, a connecting-rod having an enlarged end provided with a series of openings through the same, a clip secured to the said prop, a crank-arm secured to said clip and adjustably secured in one of the openings in the enlarged end of the connecting-rod whereby said connecting-rod is connected with the prop while the other end of the said rod is connected to the operating-lever.

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