

(No Model.)

2 Sheets—Sheet 1.

F. P. BATES.

DIE AND BLANK FOR THE MANUFACTURE OF FIFTH WHEELS.

No. 287,407.

Patented Oct. 30, 1883.

Fig. 1.

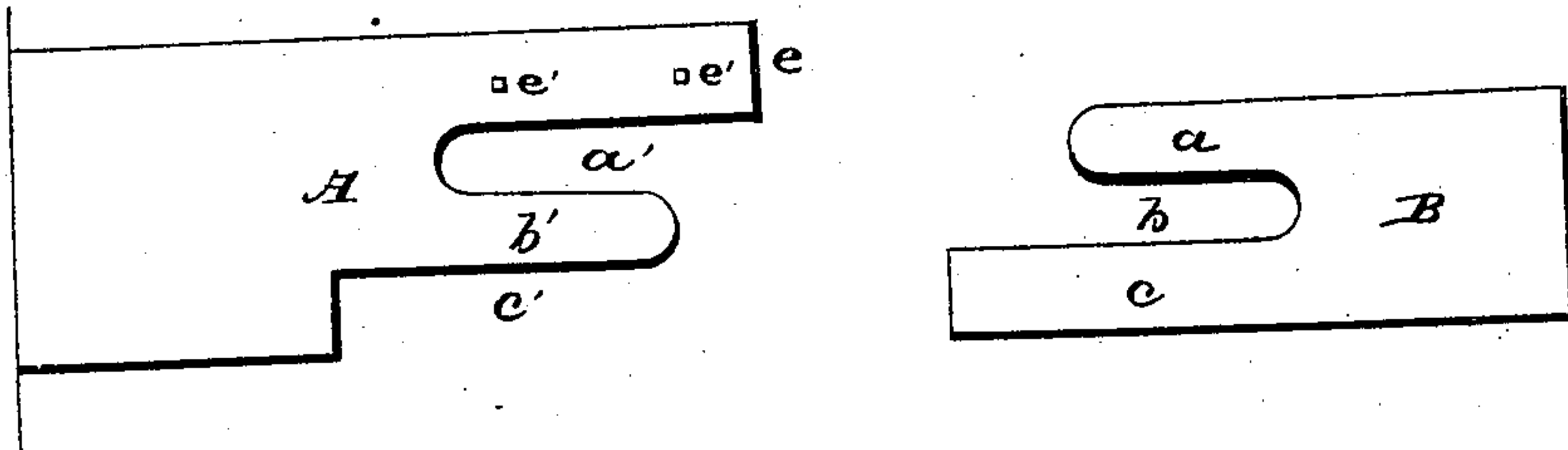


Fig. 2.

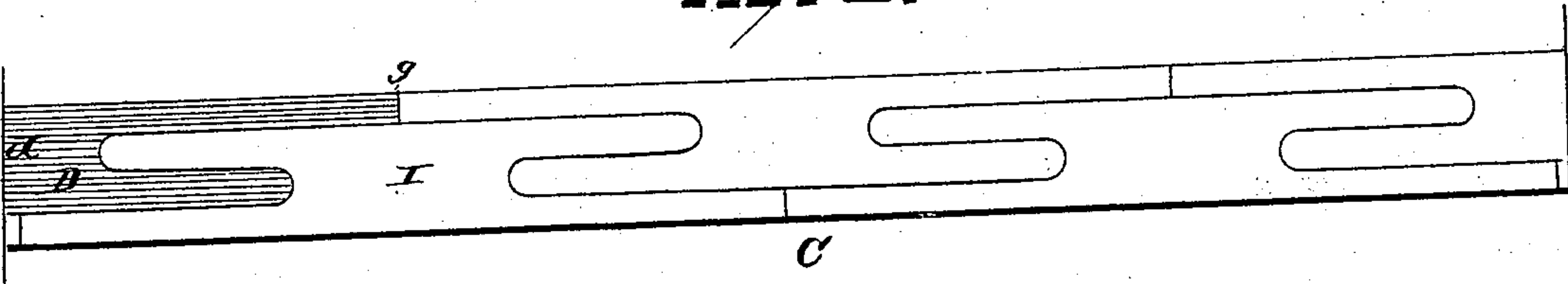


Fig. 3.

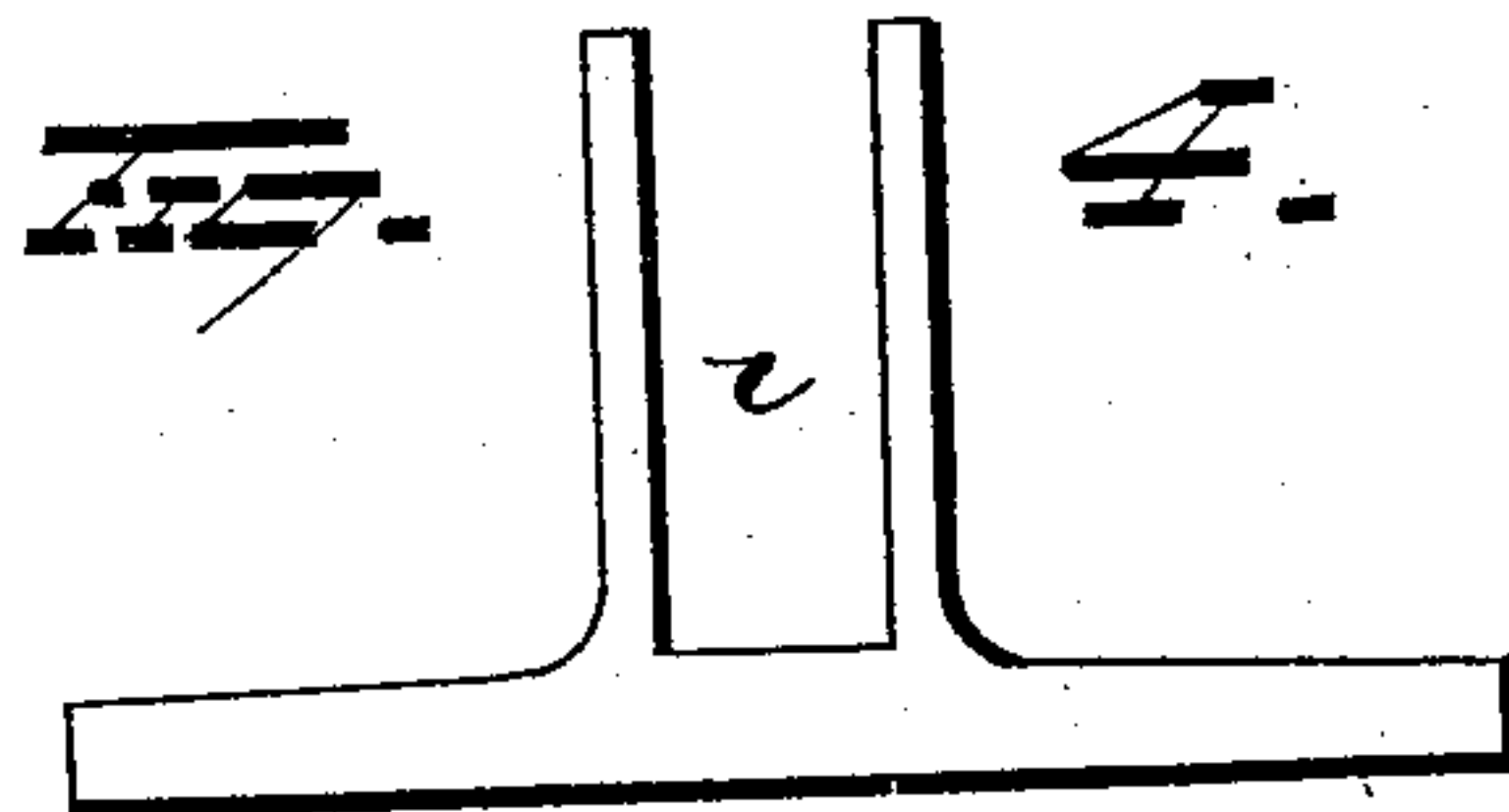
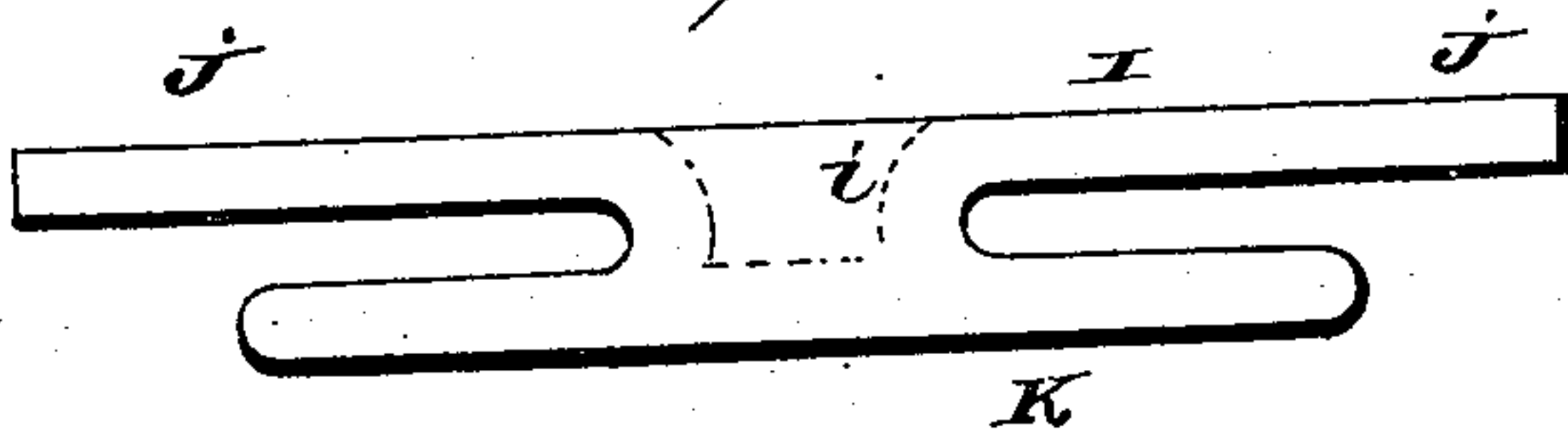


Fig. 5.

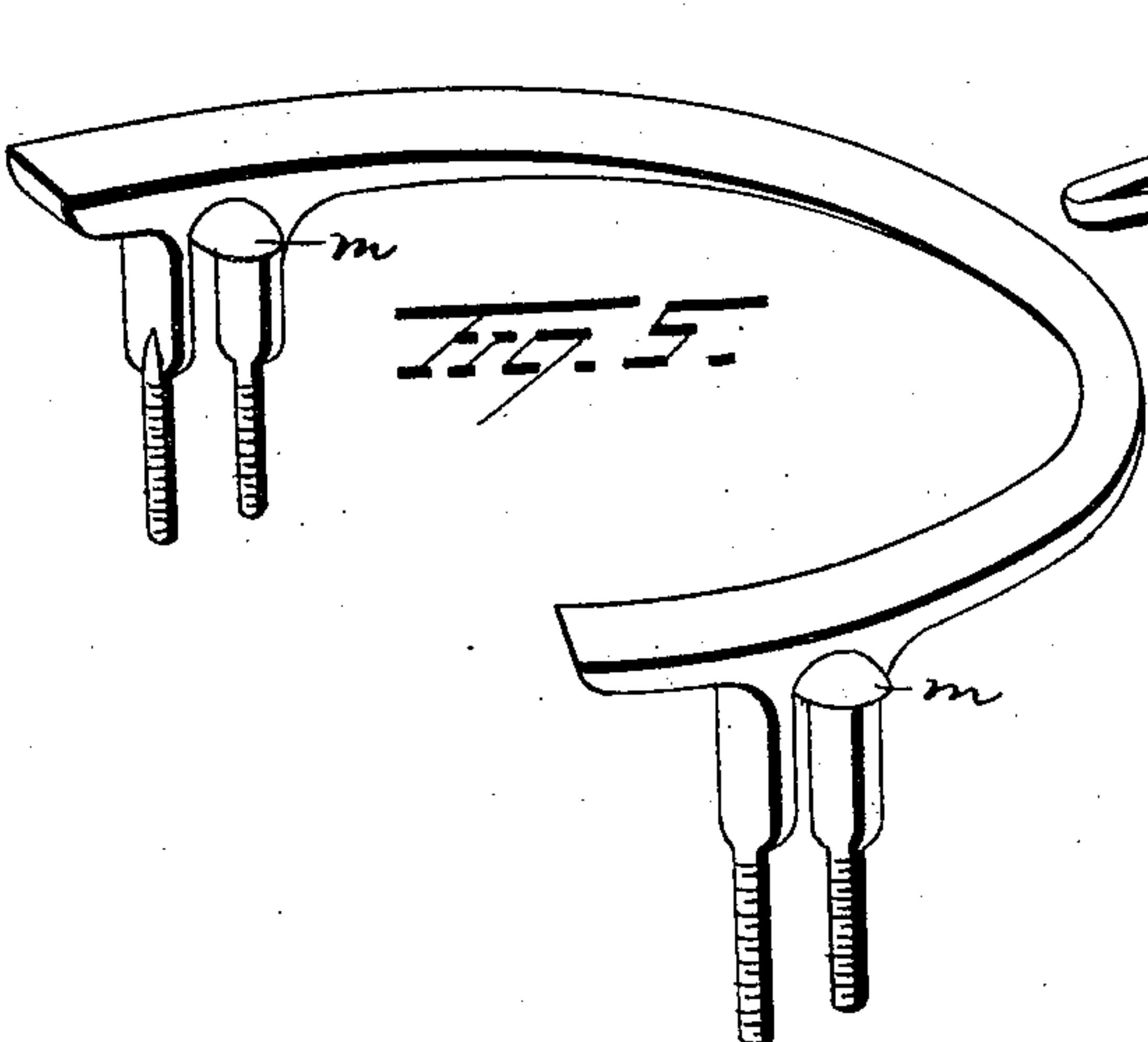
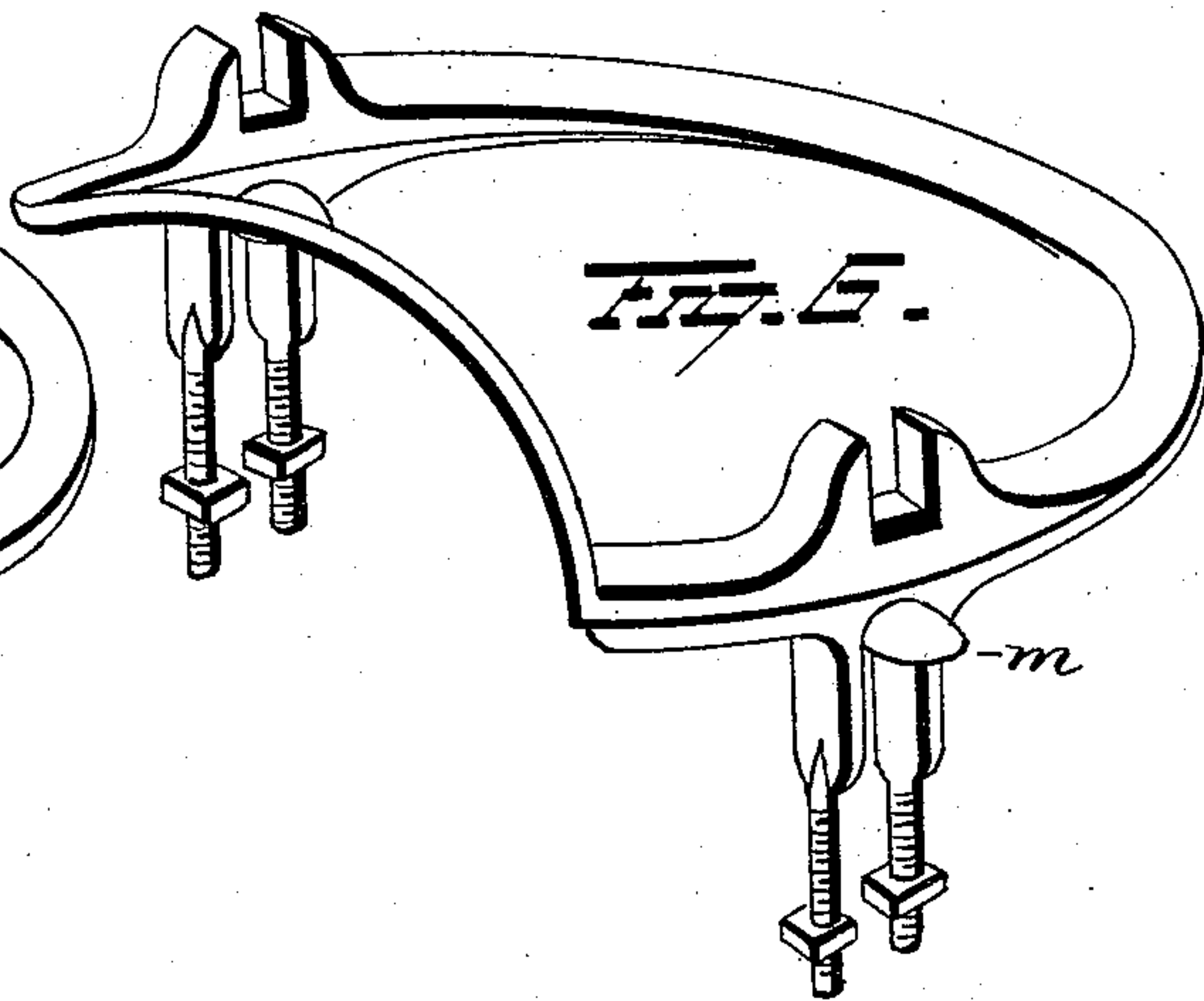


Fig. 6.



WITNESSES

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(No Model.)

2 Sheets—Sheet 2.

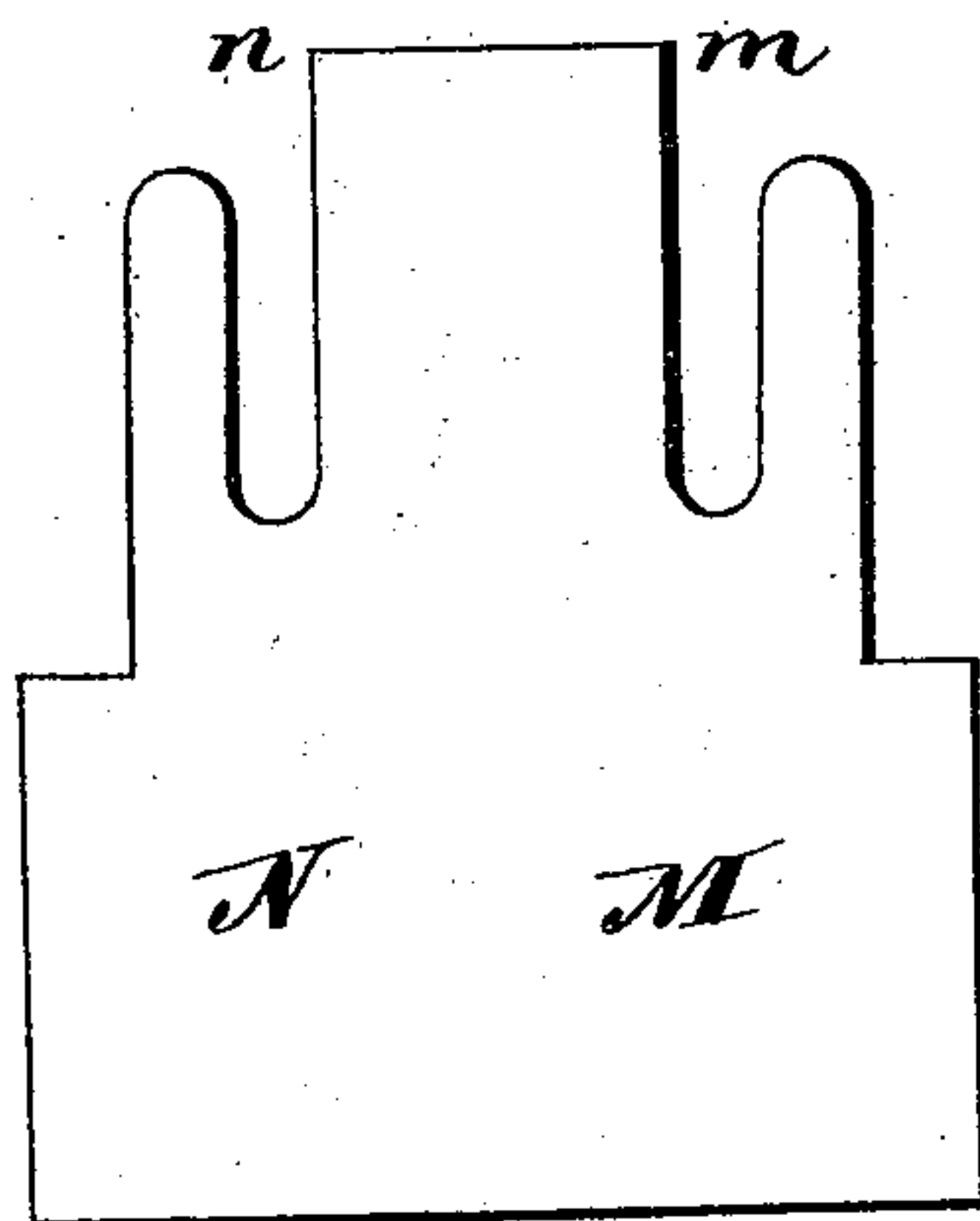
F. P. BATES.

DIE AND BLANK FOR THE MANUFACTURE OF FIFTH WHEELS.

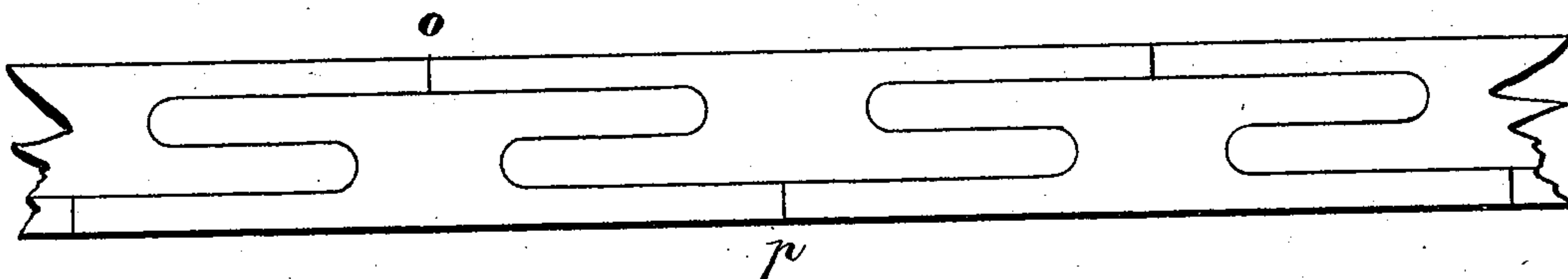
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*Fig. 7*



*Fig. 8*



WITNESSES

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# UNITED STATES PATENT OFFICE.

FRANKLIN P. BATES, OF ANSONIA, CONNECTICUT.

## DIE AND BLANK FOR THE MANUFACTURE OF FIFTH-WHEELS.

SPECIFICATION forming part of Letters Patent No. 287,407, dated October 30, 1883.

Application filed February 14, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, FRANKLIN P. BATES, of Ansonia, in the county of New Haven and State of Connecticut, have invented certain  
5 new and useful Improvements in Method of and Dies and Blanks for Manufacturing Fifth-Wheels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled  
10 in the art to which it pertains to make and use the same.

My invention relates to an improvement in the method of and dies and blanks for manufacturing fifth-wheels. Heretofore the "wheel-  
15 heads" of fifth-wheels, (which are the portions of the bottom wheel that are provided with axle-clips) have been made by taking an iron blank, splitting it the proper distance, then bending the partly-severed portions at right  
20 angles to the other portion of the blank, in order to form the clip. The blank is further drawn out by means of dies made for that purpose. As the iron is always split in the direction of its grain, there is a great liability  
25 of the split extending beyond the desired point, and to obviate this an expensive grade of iron is used, and the operation is rendered slow and difficult.

The object of my invention is to provide an  
30 improved process and dies for forming the clip portion of the bottom wheel without splitting the iron beyond the desired point, and without the employment of an expensive quality of iron; and with these ends in view my  
35 invention consists, first, in the manufacture of fifth-wheels, the method of making wheel-heads consisting in stamping out the blanks from the iron bar, and then forging the blanks into the desired shape.

40 My invention also consists in a novel form of dies and blanks, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents the male and female dies for producing my improved blank. Fig. 2 shows the bar  
45 and the method of stamping the blanks therefrom. Fig. 3 is a plan view of one of the blanks. Fig. 4 is a view in side elevation of the blank after portions of the blank have been bent to form the arms of the axle-clip. Fig.  
50 5 is a view in perspective of the completed

wheel-head. Fig. 6 is a view in perspective of a fifth-wheel embodying the construction of wheel-head referred to. Fig. 7 is a modified form of dies for producing the blank, and Fig. 55 8 represents the bar.

A is the female die, and B the male die. The extension *a* of the male die fits into the correspondingly-shaped opening, *a'*, in the female die. The opening *b* in the male die receives the correspondingly-shaped extension, *b'*, on the female die. The extension *c* of the male die fits into the correspondingly-shaped opening, *c'*, in the female die.

In operation the bar C is placed on the female die, the end *d* of the bar being forced  
65 against the end gage, *e*, and the edge of the bar brought in contact with the side gages, *e'* *e'*. The upper or male die is then forced down against the bar with sufficient force to punch  
70 or cut therefrom that part of the end of the bar designated by the shaded lines and lettered D. The bar is then given a half-turn and placed on the die again, so that the end *g* will come in contact with the end gage, *e*. The  
75 male die is again brought down onto the bar, and punches therefrom the blank I. The bar is again turned over and the operation continued, each stroke of the die producing a complete blank, excepting the first cut. To  
80 obviate turning the bar at every operation, I may use double dies and punches, the double dies being shown in Fig. 7 and the bar in Fig. 8. The end of the bar is placed on the die M, and, resting against the gage *m*, the end is cut  
85 out, as heretofore described. The bar, without turning, is then moved laterally over onto the die N, the end *o* resting against the stop *n*, and at the next change the end *p* of the bar is placed against the stop or gage *m* of die M.  
90 By this method the blank need not be turned over. Thus it will be observed that the blanks are formed very rapidly and with a slight outlay of labor and expense, and, further, but little waste metal is caused in punching the  
95 blanks from the bar. The blanks I are then forged out at their centers, as shown by dotted lines at *i*, and the arms *j j* bent around at right angles to the wheel portion K, and thereby forming the clip *l*, as illustrated in Fig. 4.  
100 The portion K of the blank is welded at one end to one end of the wheel portion proper; or, in



other words, the latter has welded to its ends the portions K of two wheel-heads, thereby forming the lower half of the fifth-wheel, as represented in Fig. 5. That portion of the blank indicated by the dotted lines at *i* is formed into the lateral flanges *m*, which insures wide and extended bearings for the bottom wheel on the axle-bed; and, again, by this displacement of metal the arms forming the clip are enabled to be bent without danger of breaking.

It is evident that slight changes may be resorted to in the construction of the dies and form of the dies and blank; and hence I would have understood that I do not restrict myself to the exact form and construction of parts shown and described.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In the manufacture of fifth-wheels, the method of making the wheel-heads, consisting

in punching from a bar a blank provided with the arms and central portion, substantially as shown and described, then forging out the central portion thereof to produce the lateral flanges, and bending two arms of the blank to form the axle-clip, substantially as set forth.

2. The dies A B, constructed substantially as shown and described, for producing blanks for wheel-heads, substantially as set forth.

3. A blank formed with a wheel portion, K, a clip portion, J' J', and a central connecting portion, *i*, intervening spaces being formed between the wheel and the clip portions, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

FRANKLIN P. BATES.

Witnesses:

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FRED. M. DREW.