

(No Model.)

J. H. POOLE.
BICYCLE SADDLE.

No. 600,500.

Patented Mar. 8, 1898.

FIG. 1.

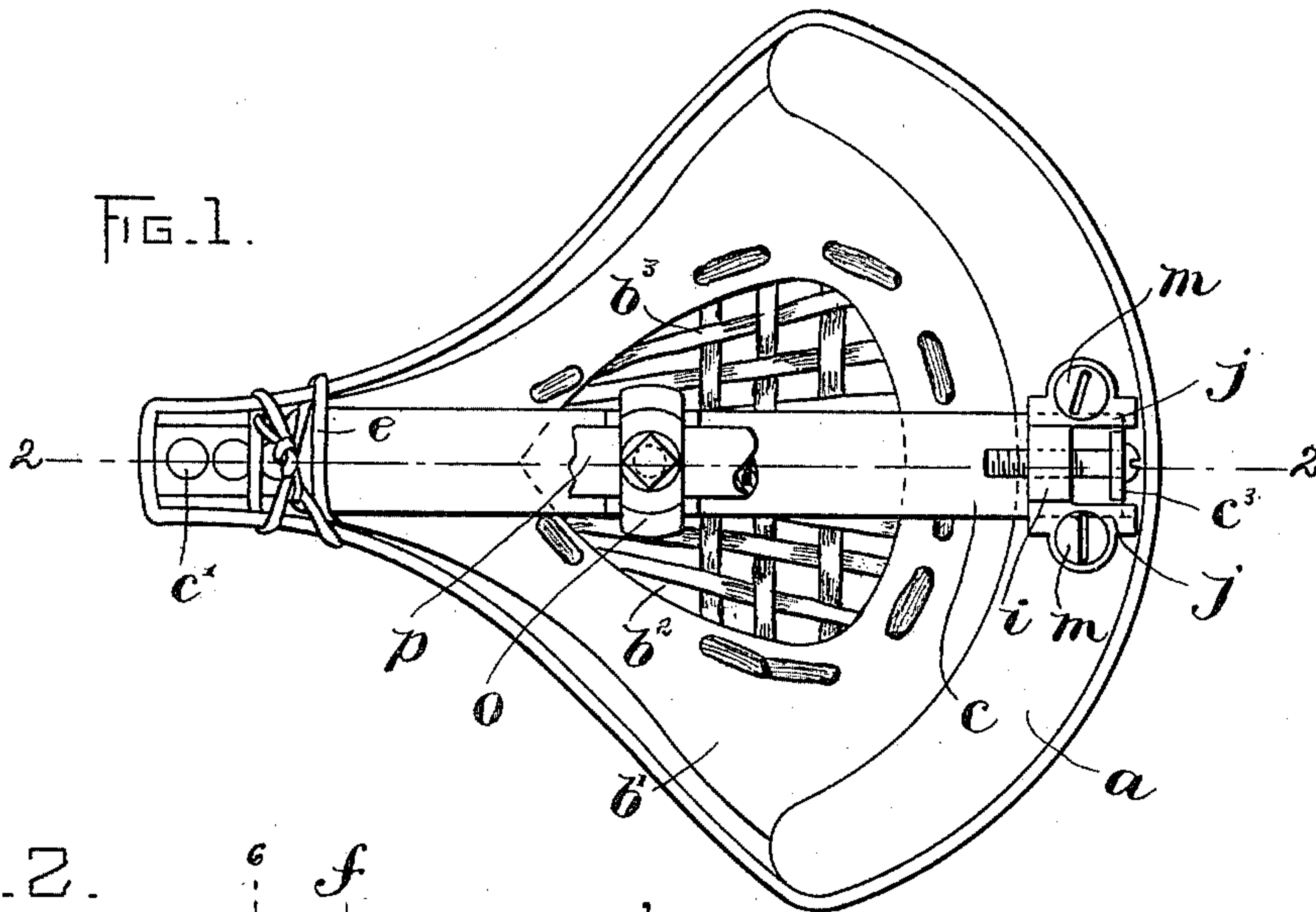


FIG. 2.

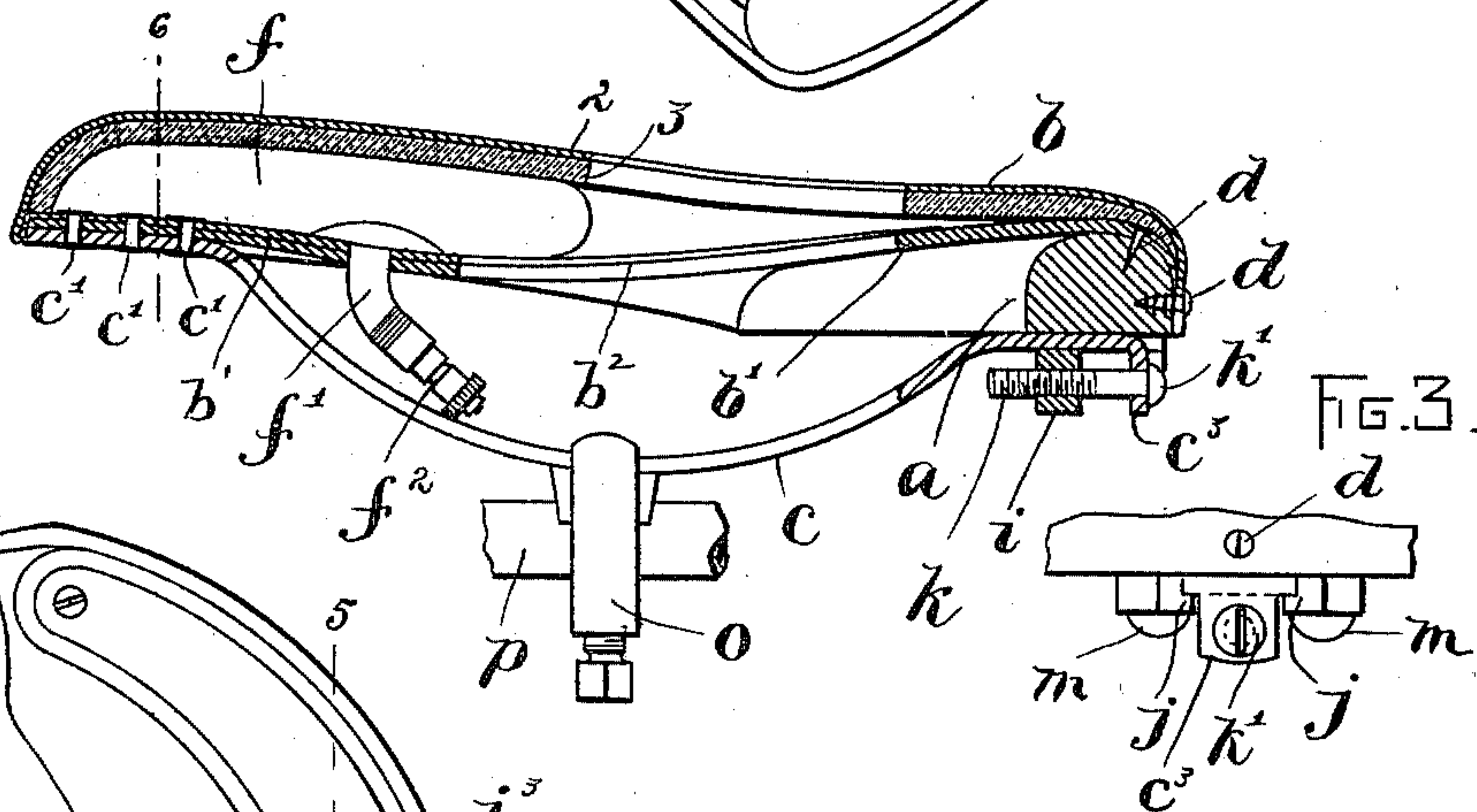


FIG. 3.

FIG. 4.

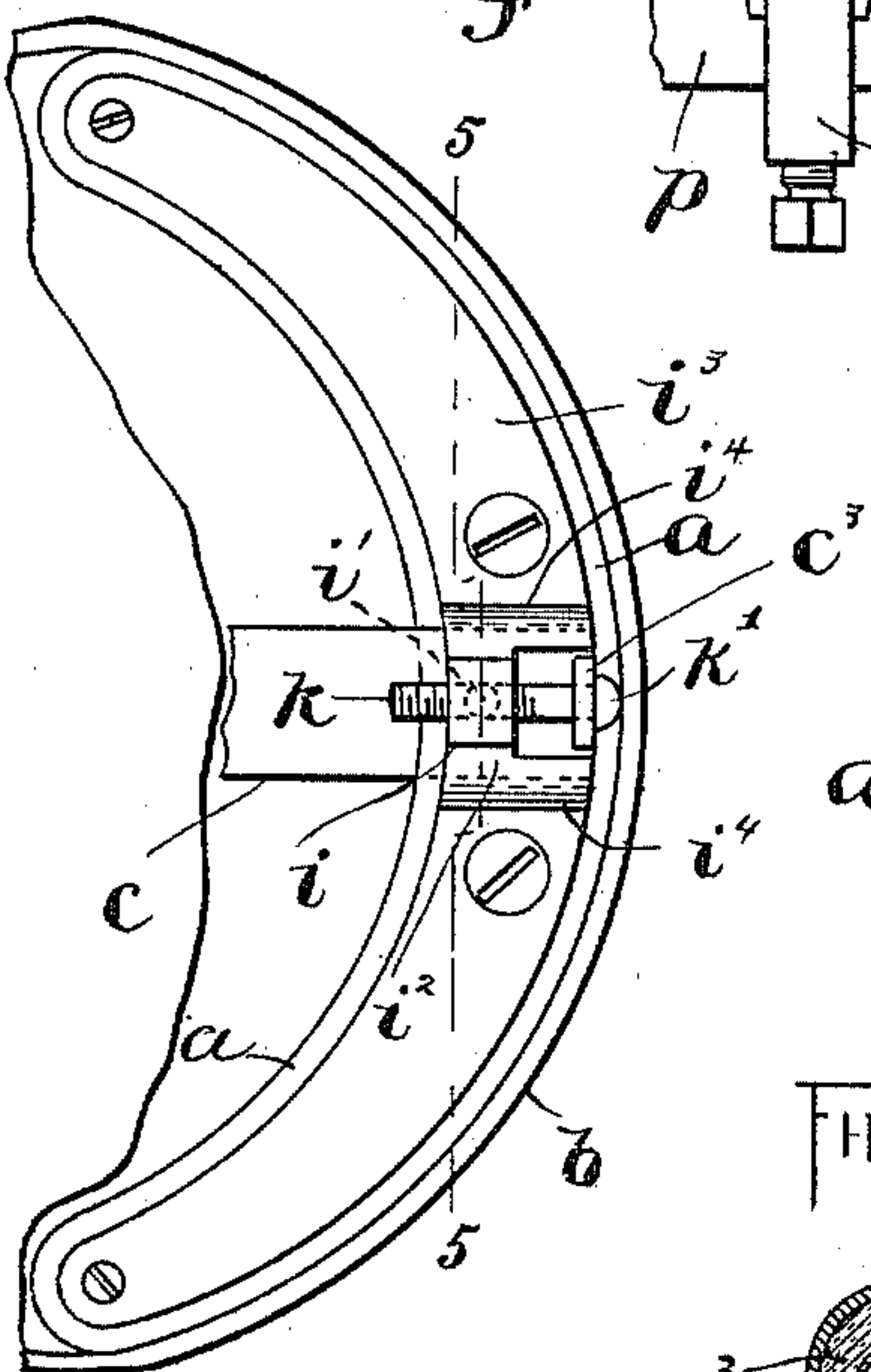


FIG. 5.

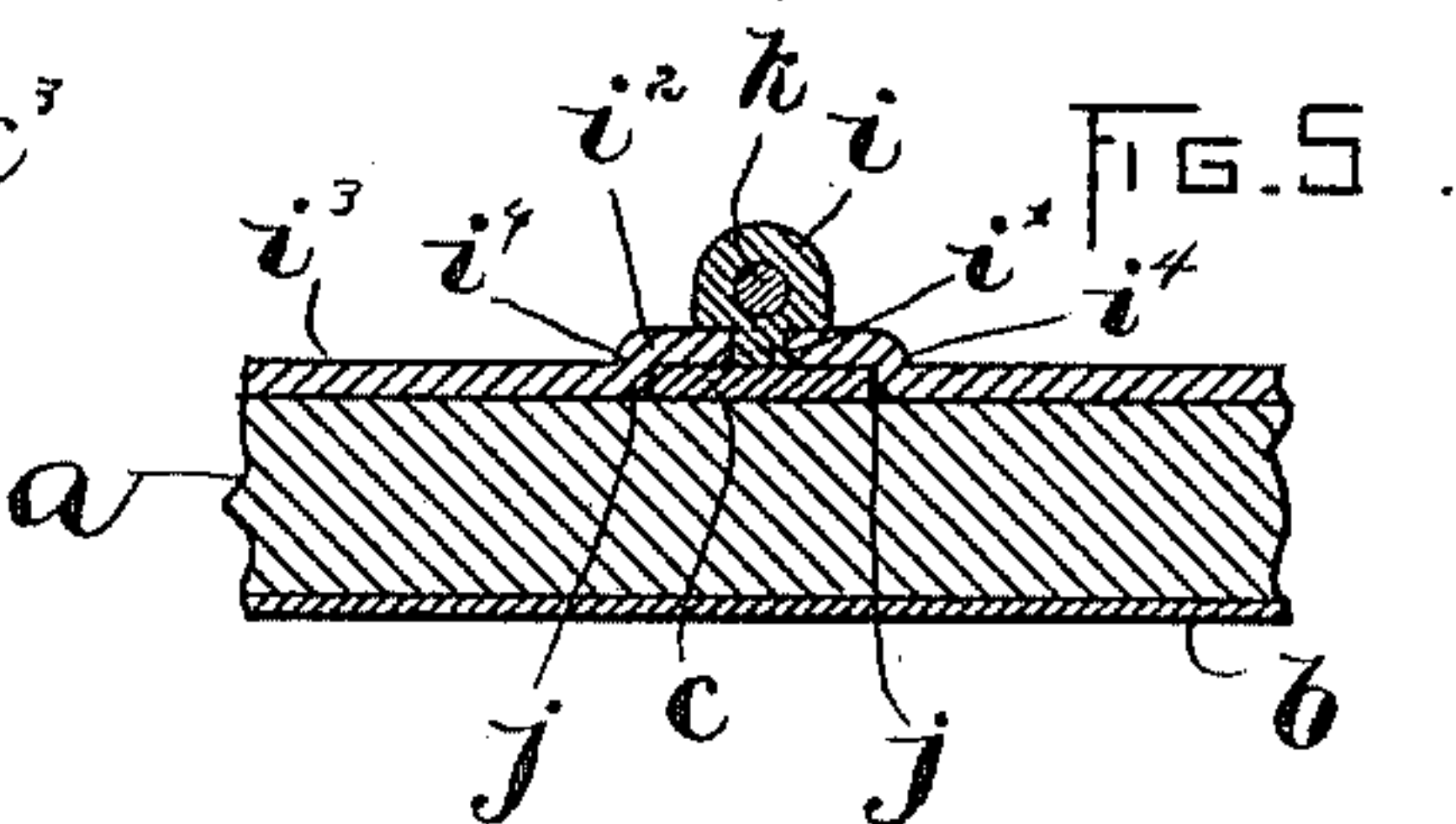
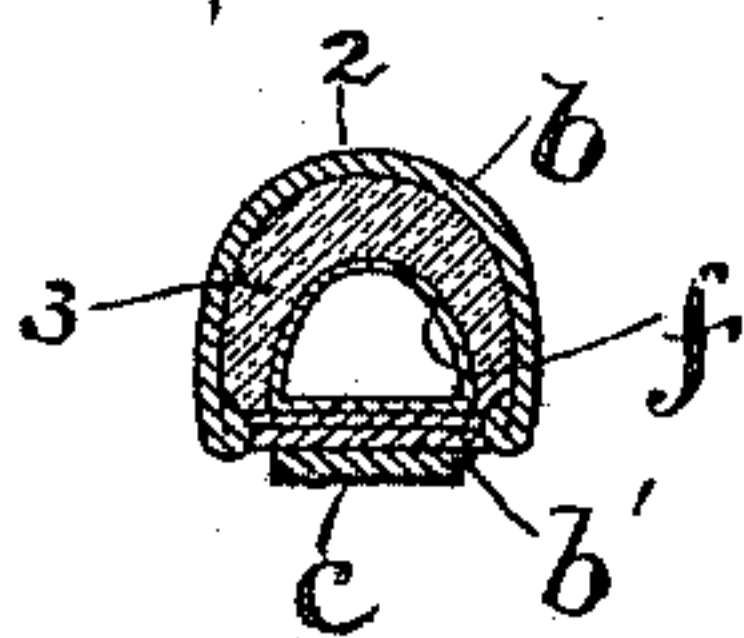


FIG. 6.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JOHN H. POOLE, OF RANDOLPH, MASSACHUSETTS.

BICYCLE-SADDLE.

SPECIFICATION forming part of Letters Patent No. 600,500, dated March 8, 1898.

Application filed January 28, 1897. Serial No. 621,073. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. POOLE, of Randolph, in the county of Norfolk and State of Massachusetts, have invented certain new and
5 useful Improvements in Bicycle-Saddles, of which the following is a specification.

This invention relates to a bicycle-saddle having a narrow horn or pommel at its front portion and a wider rear portion, the structure of the saddle including a rigid cantle supporting the rear end of the saddle and an elastic spring-bar located below the saddle and connected at its rear end to the cantle and at its forward end to the horn or pom-
15 mel, said spring having provisions for attachment at its central portion to the frame of a bicycle or other like vehicle. The body or surface portion of the saddle is of flexible construction, extending from the cantle, to
20 which its rear edge is attached, to the horn or pommel, the construction being such that the saddle can yield vertically at its central portion between the cantle and pommel.

The invention has for its object to provide
25 a saddle of the character above described which shall be capable of convenient adjustment to vary its flexibility and adapt it for the requirements or to the fancy of different riders.

30 The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents
35 a bottom plan view of a saddle embodying my invention. Fig. 2 represents a section on line 2 2 of Fig. 1. Fig. 3 represents an elevation of a portion of the rear end of the saddle. Fig. 4 represents a bottom view of a somewhat-different construction from that shown
40 in Figs. 1, 2, and 3. Fig. 5 represents a section on line 5 5 of Fig. 4. Fig. 6 represents a section on line 6 6 of Fig. 2.

The same letters and numerals of reference
45 indicate the same parts in all the figures.

In the drawings, *a* represents the rigid cantle or curved cross-bar, which supports the wider or rear end of the flexible saddle-body. Said cantle may be a bar of wood suitably
50 curved or may be of any other suitable material, the flexible saddle-body being attached to its rear portion by screws or other fasten-

ing devices *d*. The saddle-body includes a flexible foundation or bottom section *b'* and a top section *b*, each being made of a suit- 55 ably strong and flexible material, such as a sheet or sheets of leather. I prefer to make the bottom section *b'* of a comparatively thick piece of sole-leather, its central portion being cut away to form an opening *b²*, across which 60 extend interlaced strips *b³* of rawhide or other suitable material, forming a reticulated opening to permit a circulation of air through the saddle without making it unduly yielding. This is a common construction, however, and 65 is not claimed by me. The top section *b*, as here shown, comprises a surface layer 2 of relatively thin leather and a thicker layer 3 of felt.

c represents the saddle-supporting spring, 70 which is a suitably-tempered metal strip secured at its front end by rivets *c'* to the front end of the bottom section *b'* of the saddle and adjustably secured at its rear end by the means next described to the cantle *a*. The top section 75 *b* of the saddle is secured at its rear portion to the cantle *a* by the fastening devices *d*, its front portion, which is formed to cover the front end of the sides of the horn of the saddle, being secured by any suitable means, 80 such as a stout lacing-strip *e*, passed through orifices in the said top section and extending across the under side of the spring *c*.

f represents a pneumatic cushion formed to be contained in and distend the horn por- 85 tion of the saddle, said cushion being an elongated rubber bag hermetically closed and having an inflating-tube *f'*, provided with a suitable valve *f²*, adapted to be connected with an air-pump, so that the cushion *f* can 90 be inflated after the manner of a pneumatic tire. The cushion *f* is interposed between the bottom section *b'* and the top section *b* of the saddle and when inflated raises that portion of the top section which constitutes 95 the top of the horn portion. The bottom section *b'* is relatively stiff, being suitably less yielding than the top section, so that when the cushion *f* is expanded its displacement is mainly upward against the top section, rais- 100 ing the portions of the latter which rest upon the cushion, as indicated in Fig. 2. The cushion *f* is of such length that there is a considerable space between its rear end and the

cantle of the saddle, into which space the top section *b* may yield or sink, the top section being practically unsupported at its central portion between the rear end of the cushion *f* and the cantle *a*.

i represents a boss rigidly secured to the cantle and located between parallel guides *j j*, also affixed to the cantle, said guides being in contact with the edges of the rear end of the spring *c* and adapted to guide said edges. The boss *i* is separated from the cantle by a space through which the rear end of the spring passes, said boss and guides holding the spring in sliding contact with the cantle. I prefer to make the boss *i* and guides *j j* in a single piece or casting, which is attached by screws *m m* to the cantle. The boss *i* has a screw-threaded orifice extending through it, with which is engaged a screw *k*. Said screw has an unthreaded outer portion and a head *k'* adjoining said portion, the head bearing upon the outer side of an ear *c'*, formed by bending downwardly the rear end of the spring *c*. When the screw is rotated, the sliding connection between the cantle and the spring *c* enables the cantle to move in one direction or the other upon the spring, thereby increasing or decreasing the flexibility of the sections *b b'* of the saddle, and therefore making the saddle more or less soft or yielding. It will be seen that a forward movement of the cantle *a* upon the spring will loosen the flexible portions of the saddle, and thus permit the top section *b* to sag more deeply behind the cushion *f*, making the cushion more prominent, the cushion having a support which is comparatively unyielding, as above stated. The rider can therefore vary the relative height of the rear and front portions of the supporting-surface

of the saddle by adjusting the screw *k*. It will be seen that the head of the screw *k* is directly under the rear edge of the pommel of the saddle, so that it can be conveniently reached and manipulated to adjust the saddle, as above described.

o represents a clamping device which secures the spring *c* to the usual seat post or bar *p*.

In Figs. 4 and 5 I show the boss *i* formed with a rivet *i'*, which is upset in an orifice formed in an offset portion *i²* of a metal strip or plate *i³*, which is secured to the under side of the cantle *a*, the necks *i⁴ i⁴* connecting the offset portion *i²* to the body of the plate *i³* to form the guides *j j* for the spring *c*.

I claim—

In a bicycle-saddle, the combination of a rigid cantle; a comparatively stiff but somewhat yielding foundation-piece fastened at one end to the cantle; a spring rigidly connected with the said foundation-piece at its opposite end and adjustably connected with the cantle; a soft and yielding top or seat piece fastened at one end to the cantle and extending entirely over the foundation-piece without connection therewith except at the cantle, whereby said seat-piece may rise and fall relative to the foundation-piece; an inflatable cushion interposed between the latter and the seat-piece; and means to limit upward movement of the seat-piece.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 15th day of January, A. D. 1897.

JOHN H. POOLE.

Witnesses:

C. F. BROWN,
A. D. HARRISON.